



**Aastra Business Communication
Systems**



Open Interfaces Platform OIP as of R8.0 System Manual

Platforms supported:

Aastra 400

IntelliGate

OpenCom 1000

This document describes the server platform Open Interfaces Platform OIP and some of its applications as well as its operation on communication systems provided specifically for that purpose.

It is meant for planners, installers and communication system managers.

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1 Product and Safety Information

Here you will find information on the Open Interfaces Platform (OIP) product and related product series. You will also find information on safety, data protection and legal information. The final section contains information about this document.

Please read through the product and safety information as well as the legal information carefully.

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- Product information – [page 4](#)
- Data Protection – [page 7](#)
- Safety instructions – [page 8](#)
- About this System Manual – [page 9](#)

1.1 Product information

Function and Purpose

Aastra 400, Aastra IntelliGate® and OpenCom 1000 are open, modular and complete communication solutions for the business sector. Each product series comprises several communication servers with different performance levels and expansion capabilities, extensive phone portfolios, and a multitude of expansions.

The business communication solutions with all their components were designed to cover the communication needs of companies and organisations in a comprehensive, user-friendly and maintenance-friendly way. The individual products and parts are mutually co-ordinated and cannot be used for other purposes or replaced by outside products or parts (except to connect up other authorized networks, applications and phones to the interfaces certified specifically for that purpose).

The products described in this document add to the functionality of Aastra 400, Aastra IntelliGate® and OpenCom 1000 and are to be used exclusively for that purpose.

User Group

The phones, softphones and PC applications of the Aastra 400 communication solution are particularly easy to operate and can be used by all end users without any specific product training.

Phones and PC applications for professional applications such as PC operator consoles or call centre applications do require personnel training.

Specific prior knowledge of IT and telephony is assumed for planning, installation, configuration, commissioning and maintenance. Regular attendance at product training courses is urgently recommended.

Setting up and operating the Open Interfaces Platform requires not only sound knowledge of the products and of telephony, but also in-depth IT knowledge. Installation and maintenance work is to be carried out by authorized specialist personnel only.

User information

Document portal:	www.aastra.com/docfinder
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Aastra 400, Aastra IntelliGate® and OpenCom 1000 products ship complete with safety and product information, Quick User's Guides, and User's Guides.

These and all other user documents such as System Manuals can be downloaded from the Aastra document portal either as individual documents or as a documentation pack. Some user documents are accessible only via a partner login.

It is your responsibility as a specialist dealer to keep up to date with the functional scope, proper use and operation of the communication solutions you use, and to inform and instruct your customers in a user-related way about the installed Aastra communication system:

- Check that you are in possession of all the user documents needed to install, configure and commission the Aastra communication systems, and to operate them efficiently and properly.
- Check that the versions of the user documents correspond to the software level of the Aastra products used and that you have the latest editions.
- Always read the user documents first before you install, configure and commission an Aastra communication server.
- Make sure that all end users have access to the User's Guides.

Brand names

Aastra®, Aastra 400, Aastra IntelliGate® and OpenCom 1000 are registered trademarks of Aastra Technologies Limited.

Microsoft Windows®, Microsoft Exchange® and Microsoft Outlook® are registered trademarks of Microsoft Corporation.

All other brand names, product names and logos are trademarks or registered trademarks of their respective owners.

Exclusion of liability

All parts and components of the Aastra 400 communication solution are manufactured in accordance with ISO 9001 quality guidelines. The user information related was compiled with the greatest care. The functions of the Aastra 400 products have been tested and approved after comprehensive conformity tests. Faults cannot however be entirely excluded. The manufacturer is not liable for any direct or indirect damage that may occur as a result of incorrect handling, improper use or other faulty behaviour. Potential areas of particular risk are signalled in the appropriate sections of the user information. Liability for loss of profit is excluded in any case.

Use of third-party software

Aastra 400 products contain, or are based in part on, third-party software products. The licence information for these third-party products is listed in the user documentation of the relevant Aastra 400 product.

About Aastra

Aastra Technologies Limited is a leading manufacturer of communication systems worldwide. The primary focus for all development work on products and solutions is to optimise the communication processes of small, medium and large companies and reduce their costs as a result.

Aspects of modern office communications such as mobility, future viability, security and availability are as much a part of the development work as user convenience and product design. The offer covers the entire spectrum of VoIP and SIP solutions, including communication servers, gateways, system phones and process-oriented software solutions.

With its trendsetting innovations Aastra consistently promotes the convergence of voice and data communication in its solutions. Its customers include renowned phone and data network operators in North America, Europe and Africa as well as Internet Service Providers and reputable distributors.

Aastra Technologies Limited, (TSX: „AAH“) is a leading player in corporate communications. Its headquarters are in Concord, Ontario, Canada. Aastra develops and distributes innovative business communication solutions for companies of all sizes. With more than 50 million installed connections and a direct and indirect presence in more than 100 countries Aastra is represented worldwide. The broad portfolio offers function-rich Call Managers for small and medium-sized businesses as well as highly scalable Call Managers for large companies. The portfolio is rounded off by

integrated mobility solutions, call centre solutions and a large selection of phones. With its sharp focus on open standards and customized solutions Aastra enables companies to achieve more efficient communications and co-operation.

For more detailed information visit our website.

1.2 Data Protection

Protection of user data

During operation the communication system records and saves user data (e.g. call data, contacts, voice messages, etc.). Protect the data against unauthorized access by adopting a restrictive access policy:

- Set SRM (Secure IP Remote Management) for the remote management or set up the IP network so that only authorized persons have access to the IP addresses of the Aastra 400 products from the outside.
- Restrict the number of user accounts to the minimum necessary, and only assign the authorization profiles actually required to the user accounts.
- Instruct System Assistants only to open the remote maintenance access of the communication server for the duration of the necessary access.
- Instruct users with access authorizations to change their passwords regularly or keep them under lock and key.

Protection against monitoring and recording

The Aastra 400 communication solution comprises functions that allow calls to be monitored or recorded without the call parties noticing. Inform your customers that these functions can only be used in compliance with national data protection regulations.

With the right equipment, third parties may be able to record and play back unencrypted phone calls in the IP network:

- Always use encrypted voice transmission (Secure VoIP) whenever possible.
- For WAN links used to transmit calls from IP or SIP phones, try and use the customer's own dedicated leased lines or VPN encrypted connection paths.

1.3 Safety instructions

Hazard warnings

Hazard warnings are affixed where there is a danger that people might be put at risk due to improper handling or that the Aastra 400 product might be damaged. Please take note of these warnings and follow them consistently. Please also take due note of the hazard warnings in the user information.

Operating safety

Aastra 400 communication servers are operated on 230 VAC mains voltage. Interruptions in the power supply will result in a restart of the entire communication system. An upstream UPS system is required in order to ensure an interruption-free power supply. Up to a certain performance limit an Aastra 470 communication server can also be operated redundantly using an auxiliary power supply unit. For more information please refer to your communication server's System Manual.

During a first start of the communication server all the configuration data is reset. You therefore need to backup your configuration data regularly as well as before and after any changes.

Installation and operating instructions

Before you begin with the installation of the Aastra 400 communication server:

- Check that the delivery is complete and intact. Report any defects to your supplier immediately; do not attempt to install or put into operation any components that may be defective.
- Check that you have all the relevant user documents to hand.
- During installation follow the installation instructions for your Aastra 400 product and strictly observe the safety instructions they contain.

Any service, dismantling or repair work is to be carried out by competent and qualified personnel only.

1.4 About this System Manual

This document describes the Open Interfaces Platform server platform and some of its applications as well as its operation on Aastra 400, Aastra IntelliGate® and Open-Com communication servers.

It is meant for planners, installers and telephone system managers. A basic knowledge of telephony, especially ISDN and IP technology, is required to understand its content.

Read through the user guide carefully before making any modifications to or starting up the system.

Compare the version of this document with the version of the online document. If the versions do not match, download the PDF document again from the document download page of our Internet or ask your sales partner.

Document designation

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Displays

Special hazard alert messages with pictograms are used to signal areas of particular risk to people or equipment.



Hazard:

Failure to observe information identified in this way can put people and hardware at risk through electrical shock and short-circuits/defects respectively.



Warning:

Failure to observe information identified in this way can cause the product or a module to malfunction.



Note:

Failure to observe information identified in this way can lead to equipment faults or malfunctions or affect the performance of the system.

2 Open Interfaces Platform (OIP)

The Open Interfaces Platform (OIP) is a software component that is connected to one of the supported communication servers as middleware and allows the integration of data sources and applications. The applications themselves are connected directly to the OIP interface (CORBA) or the OIP TAPI service provider.

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- Applications – [page 12](#)
- Features – [page 16](#)
- Interface for connecting third-party applications – [page 24](#)

2.1 Overview

The Open Interfaces Platform (OIP) is a software component that is connected to one of the supported communication servers as middleware and allows the integration of data sources and applications. The applications themselves are connected directly to the OIP interface (CORBA) or the OIP TAPI service provider.

The applications access many powerful functions of the communication system and of OIP itself.

External data sources such as phone book directories can be connected and used fully integrated.

These added-value services significantly broaden the use of the communication servers and provide a seamless convergence of PC and telephony applications for the user. With the clearly structured interface the application manufacturer is able to gain easy access to the communication system and at the same time benefit from the integrated functionality of OIP.

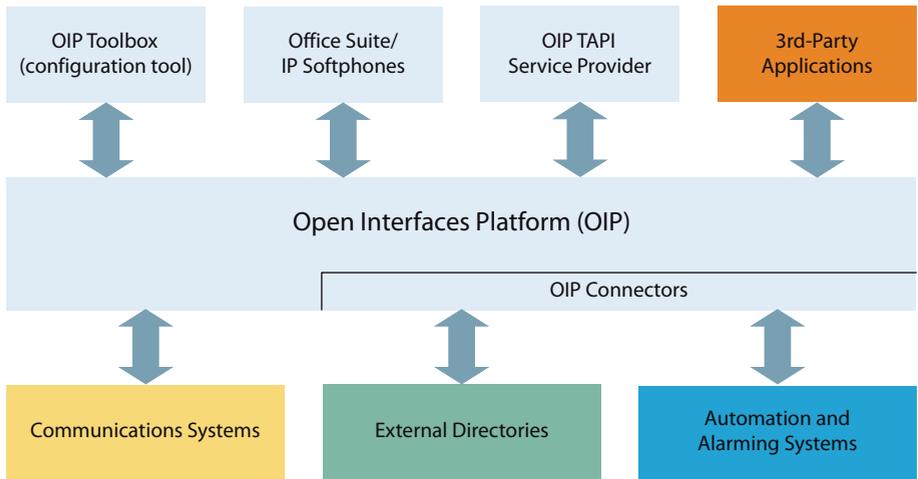


Fig. 1 OIP as middleware between communication system, external data sources and applications

Features

With OIP the applications are provided with many other features besides telephony functions. The operation and administration of the OIP and its applications is made simple and user-friendly by the OIP Toolbox.

OIP Applications

OIP applications are specific user applications such as Softphone applications which run on the OIP server. The OIP Toolbox is a collection of integrated OIP applications (Toolbox applications).

The softphones OfficeSuite and Office 1560/1560IP are OIP applications which significantly broaden the range of functions of coupled terminals. The IP version of the Office 1560IP is a fully fledged PC phone without coupling to a terminal. The media devices are then installed on the PC.

The Office 1560/1560IP is available for Aastra 400 and Aastra IntelliGate® systems.

OIP Services

The OIP services are the central components of the Open Interfaces Platform (OIP) and are responsible for controlling the system. They provide the relevant interface functions with which the system is controlled (e.g. Call Control or configuration).

OIP as a telephony server

OIP can be used as a telephony server to provide CTI functionalities on telephony clients. The Microsoft telephony server is not required. A high level of security is also guaranteed using a discriminating assignment procedure for user rights.

OIP on several communication servers

An OIP server can also be used in an Aastra Intelligent Net. For this it is integrated with the Master. In addition, several communication systems can also be connected to an OIP server. This allows for instance network-wide call logging across all systems, the display of call charge information on the system phones or the status display on the PC operator console Busy Indicator for all the users.

Connection of external data sources

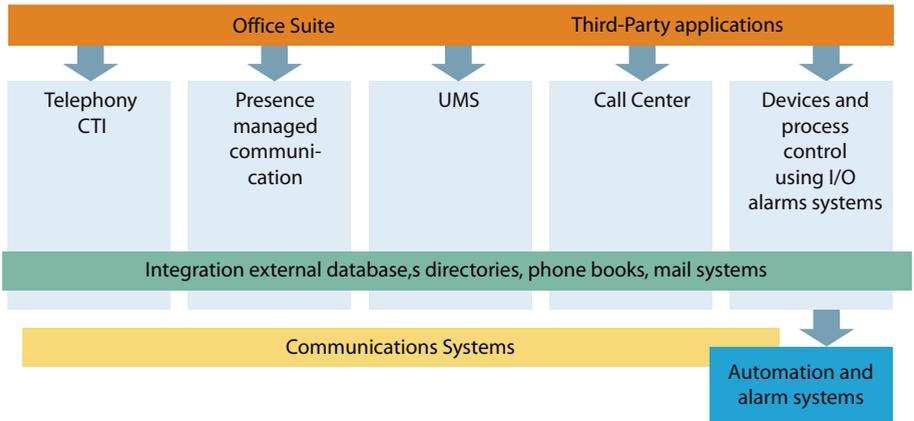
OIP supports the integration of external directories; adaptable alarming and messaging systems can also be set up.

2.2 Applications

Systems for the efficient handling of communications are a key factor in any company's success. Indeed, a company's productivity can be increased further by integrating applications in Aastra communication servers. According to the customer's requirements different applications are provided with Aastra 400, Aastra IntelliGate® and OpenCom which ideally support the communication processes within the company.

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- Presence-controlled communications – [page 13](#)
- OIP Call Centre – [page 13](#)
- Alarming, equipment and process control with the I/O-service – [page 14](#)
- Integration of contact databases and directories – [page 14](#)
- Configuration – [page 15](#)
- Free seating – [page 15](#)



[1] Topic under redaction

Fig. 2 Overview of application integration

2.2.1 Telephony

The convergence of voice communications with IT systems has meant that a number of very useful functions have now been added to telephony, such as dialling by name, caller's name indication, display of Outlook appointments on the system phone, to mention but a few.

2.2.2 Presence-controlled communications

Tailored availability for all employees, wherever they may be and whatever the situation: With the presence profiles you are able to control the call and voice mail routing as well as the notifications for each user individually and to suit his personal requirements. OIP obtains the current status either directly from Microsoft Outlook, the OIP's own calendar or through the user's direct interaction.

2.2.3 OIP Call Centre

The powerful OIP Call Centre provides all the main features such as flexible routing algorithms (cyclical, linear, longest time available, CLIP-based, last agent), skill-based agent groups as well as an analysis of the Call Centre data (online and offline) with chart-based evaluation. In the event of a network interruption the emergency routing ensures the maximum availability of the system.

The agent functionality is available on all system phones including softphones and the Toolbox. This applies equally to home workstations and to all the users on all the nodes of an Aastra Intelligent Net. The one number user concept can also be activated for agents, which provides the staff of a Call Center with maximum mobility within the company.

With the Toolbox the Call Centre is simple to administer and to configure. Various monitoring functions and the workgroup control are easy to operate using the administration interface.

2. 2. 4 Alarming, equipment and process control with the I/O-service

External alarming and building automation equipment (e.g. KNX) can easily be monitored through connection to the communication system, and information exchanged between the systems. In this way the user can use his system phone for voice communications and for monitoring external systems.

The I/O service offers a wide range of features which allows very flexible uses and versatile applications. Some of its examples are listed below:

- Alarming equipment for maintenance personnel
- Monitoring of production processes
- Forwarding messages as e-mails
- Connection to building automation systems (KNX)

With the graphical interface (tree structure) events and the relevant actions are easily linked with one another.

2. 2. 5 Integration of contact databases and directories

Connecting telephony with IT systems significantly increases the efficiency of communications within the company. Existing directories, databases and phone books can be used for dialling by name or for identifying incoming calls (displaying the name rather than just the number) on all system phones. Microsoft Outlook calendar entries are notified on system phones as a reminder. This is particularly useful with DECT cordless phones as the appointments are displayed even when the users are on the move.

Integration is compatible with many standard databases such as Microsoft Exchange, Microsoft Outlook, Microsoft Active Directory, communication server directories, LDAP and ODBC directories and electronic phone books.

2.2.6 Free seating

With Aastra 400 the Open Interfaces Platform supports the free seating functionality. If the telephony user logs in to the free seating terminal, he can log in to the relevant workstation PC under his user name, which means all his personal data is now available to him.

2.2.7 PUM - Personal User Mobility

With PUM (Aastra IntelliGate® and OpenCom 1000 only), telephony users are no longer tied down to their workstation and the free choice of workstation is supported. Call Centre agents in particular use any telephone, depending on whichever workstation happens to be free. Nonetheless the communication-relevant data should be allocatable to each particular staff member (internal call number, name, private phone book, direct dialling number, agent's statistical call analysis).

This feature is available on all system terminals in conjunction with an OIP server. The user simply logs on to the phone using a freely configurable key and the system identifies him accordingly.

2.3 Configuration

The web-based OIP Toolbox contains several configuration applications. To facilitate the system administrator's work and his overview, many OIP functions can be operated and tested directly from the various Toolbox applications. This also facilitates troubleshooting when connecting OIP and third-party applications. It contains the following applications:

- Call Manager for controlling the system phones (CTI)
- User-friendly configuration of all system phones
- Presence Indicator of required OIP users
- Application for sending and receiving messages
- Calendar that can be automatically matched up with Microsoft Outlook
- Call Center functions as well as configuration and statistics application for the OIP Call Center Manager.
- Directory indication for all connected databases.
- Tools for system administration (configuration, user management, licences, event messages, IP-PBX routing display)
- Graphical I/O management for the universal configuration of the I/O service.

2.4 Features

Overview of available OIP features

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- OIP TAPI service provider (CTI) – [page 22](#)
- Automation and Alarm Systems – [page 23](#)
- Key telephones, PC operator consoles and phones – [page 23](#)
- Interfaces for third-party applications – [page 24](#)

Tab. 1 Telephony functions/CTI

Features	Aastra 400 and Aastra IntelliGate®	OpenCom 1000	OfficeSuite ¹⁾	Licence ²⁾
Telephony functions/CTI for system phones:				
• Outgoing dialling	X	X	X	CTI Third Party Basic
• Call waiting	X	X	X	CTI Third Party Standard
• Reject call during the ringing phase	X		X	CTI Third Party Standard
• Answer call	X	X	X	CTI Third Party Basic
• End call	X	X	X	CTI Third Party Basic
• Fetch call	X	X	X	CTI Third Party Basic
• Forward call during the ringing phase (Call Deflection)	X	X	X	CTI Third Party Standard
• Call identification (CLIP)	X	X	X	CTI Third Party Basic
• Call forwardings: Unconditional (CFU), no response (CFNR), busy (CFB), do not disturb	X	X	X	CTI Third Party Standard
• Frequency dialling (DTMF)	X	X	X	CTI Third Party Basic
• Call charge information	X	X	X	CTI Third Party Basic

Features (Continued)	Aastra 400 and Aastra IntelliGate®	OpenCom 1000	OfficeSuite ¹⁾	Licence ²⁾
<ul style="list-style-type: none"> • Call transfer without prior notice • Call transfer • Hold • Conference • Brokering • Message to busy user • Park • Callback • Announcement to user • User-defined functions (macros/function commands) 	X	X	X	CTI Third Party Standard
Telephony functions/CTI for analogue phones: <ul style="list-style-type: none"> • Outgoing dialling 		X		CTI Third Party Basic

1) The OfficeSuite licence contains all features and functions of the Basic CTI and Standard CTI licence.

2) For more information about the licences, refer to "Licensing and system limits", page 353.

Tab. 2 Presence Profiles

Features	Aastra 400 and Aastra IntelliGate®	OpenCom 1000	OfficeSuite ¹⁾	Licence ²⁾
Presence Profiles <ul style="list-style-type: none"> • Create several presence profiles. • Set presence status • Forwarding destinations (CFx) for internal calls • Forwarding destinations (CFx) for external calls • CFU (unconditional) forwarding destinations • CFB forwarding destinations (on busy) • CFNR forwarding destinations (on no answer) • Display Profiles⁴⁾ • Voice mail profiles • Notification Profiles 	X		X	Profiles
<ul style="list-style-type: none"> • Create several presence profiles. 	X		X	Profiles
<ul style="list-style-type: none"> • Set presence status 	X		X	Profiles
<ul style="list-style-type: none"> • Forwarding destinations (CFx) for internal calls 			X	Profiles
<ul style="list-style-type: none"> • Forwarding destinations (CFx) for external calls 			X	Profiles
<ul style="list-style-type: none"> • CFU (unconditional) forwarding destinations 	X ³⁾		X	Profiles
<ul style="list-style-type: none"> • CFB forwarding destinations (on busy) 	X ³⁾		X	Profiles
<ul style="list-style-type: none"> • CFNR forwarding destinations (on no answer) 	X ³⁾		X	Profiles
<ul style="list-style-type: none"> • Display Profiles⁴⁾ 	X		X	Profiles
<ul style="list-style-type: none"> • Voice mail profiles 	X		X	Profiles
<ul style="list-style-type: none"> • Notification Profiles 	X		X	Profiles

Features (Continued)	Aastra 400 and Aastra IntelliGate®	OpenCom 1000	OfficeSuite ¹⁾	Licence ²⁾
<ul style="list-style-type: none"> • Display Profiles • Audio profiles • Control via OIP calendar or external calendar (e.g. Microsoft Exchange) 	X		X	Profiles
	X		X	Profiles
	X		X	Exchange/Profiles

1) The OfficeSuite licence contains all features and functions of the Basic CTI and Standard CTI licence.

2) For more information about the licences, refer to "[Licensing and system limits](#)", page 353.

3) Only a CFx type possible at the same time

4) The functions available depend on the communication server used.

Tab. 3 OIP Call Centre and Workgroups

Features	Aastra 400 and Aastra IntelliGate®	OpenCom 1000	OfficeSuite ¹⁾	Licence ²⁾
OIP Call Center: <ul style="list-style-type: none"> • Agent control (log on and log off, pause, wrap up) • Call routing (cyclical, linear, PBX cyclical, Skill, CLIP, last agent) • Call Centre statistics online and offline (export to Microsoft Excel), with chart display • Emergency routing • Business Hours • Log on and log off, pause, wrap up • Call tickets 	X	X		Agent
	X	X		OIP Call Centre / Groups
	X	X		OIP Call Centre / Groups
	X			OIP Call Centre / Groups
	X	X		OIP Call Centre / Groups
	X			Agent
	X			OIP Call Centre / Groups

1) The OfficeSuite licence contains all features and functions of the Basic CTI and Standard CTI licence.

2) For more information about the licences, refer to "[Licensing and system limits](#)", page 353.

Tab. 4 OIP server and communication server connection

Features	Aastra 400 and Aastra IntelliGate®	OpenCom 1000	OfficeSuite ¹⁾	Licence ²⁾
OIP server				
• Configuration of system phones	X		X	CTI Third Party Basic
• Call lists (e-mail notification in the case of unanswered calls)	X	X	X	CTI Third Party Basic
• PUM - Personal User Mobility (multi-user workstation sharing)	X			CTI Third Party Basic
• Time synchronization with the communication server	X			CTI Third Party Basic
Presence Indicator:				
• Presence Indicator via all OIP users	X	X	X	CTI Third Party Basic / Office-Suite
• Absence message at caller with system phones	X	X		Exchange
User access control:				
• User management (licences, access rights)	X	X		CTI Third Party Basic
• User group management	X	X		CTI Third Party Basic
Communication server connection:				
• Connection to stand-alone systems	X	X		PBX Connections for <pbx type> / PBX Connections CTI for <pbx type>
• Connection to QSIG-networked systems	X	X		
• Connection to an AIN	X			

1) The OfficeSuite licence contains all features and functions of the Basic CTI and Standard CTI licence.

2) For more information about the licences, refer to "Licensing and system limits", page 353.

Tab. 5 Notification

Features	Aastra 400 and Aastra IntelliGate®	OpenCom 1000	OfficeSuite ¹⁾	Licence ²⁾
Notification of the following events:				
• Answered and unanswered calls	X		X	CTI Third Party Basic / Office-Suite
• Voice mail messages from the standard voice mail system	X		X	CTI Third Party Basic / Office-Suite
• Text messages received	X		X	Profiles
• E-mail message	X		X	Exchange

Features (Continued)	Aastra 400 and Aastra IntelliGate®	OpenCom 1000	OfficeSuite ¹⁾	Licence ²⁾
• Calendar events	X		X	Exchange
• I/O Events:	X		X	Profiles
Notification to the following destinations:				
• Display on a phone (ATAS)	X		X	CTI Third Party Basic / Office-Suite
• Text message	X		X	CTI Third Party Basic / Office-Suite
• E-mail message	X		X	CTI Third Party Standard
• E-mail message with attached voice mail message of the standard voice mail system (wav or mp3)	X		X	CTI Third Party Standard
• Triggering of an I/O event	X		X	Profiles
Notification: Other features				
• Allocation of filtering rules	X		X	Profiles

¹⁾ The OfficeSuitelicence contains all features and functions of the Basic CTI and Standard CTI licence.

²⁾ For more information about the licences, refer to "[Licensing and system limits](#)", page 353.

Tab. 6 OIP applications and OIP configuration

Features	Aastra 400 and Aastra IntelliGate®	OpenCom 1000	OfficeSuite ¹⁾	Licence ²⁾
OIP applications:				
• OfficeSuite: PC control and configuration application for hardphones connected to the system	X			OfficeSuite
• Office 1560/1560IP: PC operator console and softphone	X			Office 1560 / Office 1560IP
• Telephony, CTI, workstation organization and groupware applications of the Toolbox	X	X		CTI Third Party Basic or CTI Third Party Standard
OIP configuration:				
• Configuration applications of the Toolbox	X	X		No licence required

¹⁾ The OfficeSuitelicence contains all features and functions of the Basic CTI and Standard CTI licence.

²⁾ For more information about the licences, refer to "[Licensing and system limits](#)", page 353.

Features (Continued)	Aastra 400 and Aastra IntelliGate®	OpenCom 1000	OfficeSuite ¹⁾	Licence ²⁾
• Search in directories with Quickdial dialling by name	X			Phonebook Connector / Exchange
• Name display	X	X	X	Phonebook Connector / Exchange
• Synchronization of communication server directories – Microsoft Exchange directories	X	X	X	Exchange
Microsoft Exchange connection:				
• Data source for private contacts.	X	X		Exchange
• Integration of the public contact folders	X	X		Exchange
• Integration of the private calendar	X			Exchange
• Integration of e-mails	X			Exchange

¹⁾ The OfficeSuitelicense contains all features and functions of the Basic CTI and Standard CTI licence.

²⁾ For more information about the licences, refer to "[Licensing and system limits](#)", page 353.

Tab. 9 OIP TAPI service provider (CTI)

Features	Aastra 400 and Aastra IntelliGate®	OpenCom 1000	OfficeSuite ¹⁾	Licence ²⁾
Microsoft TAPI 2.1	X	X		CTI Third Party Basic or CTI Third Party Standard
Telephony functions	X	X		CTI Third Party Basic or CTI Third Party Standard
Call centre functions	X	X		OIP Call Centre / Groups / Agent / CTI Third Party Standard
Key telephone functions (see Tab. 11, page 23)	X	X		CTI Third Party Standard
Operator console functions (see Tab. 11, page 23)	X	X		CTI Third Party Standard

¹⁾ The OfficeSuitelicense contains all features and functions of the Basic CTI and Standard CTI licence.

²⁾ For more information about the licences, refer to "[Licensing and system limits](#)", page 353.

Tab. 10 Automation and Alarm Systems

Features	Aastra 400 and Aastra IntelliGate®	OpenCom 1000	Licence ¹⁾
ATAS gateways with extended functional scope	X	X	ATAS Interface ²⁾ / CTI Third Party Basic
DECT locating	X	X ³⁾	ATASpro Interface ²⁾
Analyse and forward communication server alarms (e.g. as e-mail)	X		ATAS Interface ²⁾
Bidirection alarm interface (phone to external, external to phone)	X		ATAS Interface ²⁾
KNX interface (European Installation Bus)	X	X	ATAS Interface ²⁾
I/O system with extended system functions for customized adaptations	X	X	ATAS Interface ²⁾

¹⁾ For more information about the licences, refer to "Licensing and system limits", page 353.

²⁾ These OIP licences must only be activated for OpenCom 1000. For Aastra IntelliGate® activate the ATAS Interface and ATASpro Interface licences on the communication server side. OIP takes the licences from the communication server.

³⁾ Only with a single radio unit

Tab. 11 Key telephones, PC operator consoles and phones

Features	Aastra 400 and Aastra IntelliGate®	OpenCom 1000	Licence ¹⁾
Key telephones:			
• Outgoing dialling from line keys	X	X	CTI Third Party Standard
• Answering calls on line keys	X	X	CTI Third Party Standard
Operator consoles and PC operator consoles:			
• Outgoing dialling from line keys	X	X	CTI Third Party Standard
• Answering incoming calls from a queue	X	X	CTI Third Party Standard
• Parking calls in the queue	X	X	CTI Third Party Standard
• Logging on, logging off, wrap-up, break	X	X	Agent
• Operator groups	X	X	OIP Call Centre / Groups

¹⁾ For more information about the licences, refer to "Licensing and system limits", page 353.

Tab. 12 Interfaces for third-party applications

Features	Aastra 400 and Aastra IntelliGate®	OpenCom 1000
Open interface (CORBA) for application developers	X	X

2.5 Interface for connecting third-party applications

Besides Aastra’s own products you can also connect other applications by outside manufacturers to the communication system via the Open Interfaces Platform (OIP). The powerful open interface of the OIP ensures that the applications are deeply integrated with the telephony. As a result the user is able to benefit from a convergent overall system (telephony and IT system), for example:

- Complex Call Centres
- First and Third-party CTI
- Unified Messaging Systems
- IVR / Auto-Attendant
- Voice recognition systems
- Fax servers
- CRM integration
- Alarming systems

The applications can be connected via the TAPI or the open OIP interface (CORBA). All the applications, i.e. own applications or those by outside manufacturers, can be implemented and used throughout the network in an Aastra Intelligent Net, without any restrictions.

Partner Program and Certification

To offer the customer a reliable complete solution, third-party applications are to be certified on . The procedure from testing to certification is specified in a Partner Program. Aastra supports the application partner with the certification by providing a number of services:

- Use of the test infrastructure at the Aastra laboratory
- Technical support (hotline, e-mail, field support)

- Detailed information about the interfaces and features
- Access to the partner extranet
- Certificate on successful completion of the certification process

More detailed information on the Partner Program can be obtained from Aastra Telecom Schweiz AG in Solothurn (Switzerland).

3 OIP Server

The OIP has a server/client structure: The OIP applications access the OIP server as clients. The server communicates with the connected communication servers, administers all the necessary information for the OIP applications and controls all the time-related processes.

Contents:

- Installation – [page 26](#)
- OIP Home Page – [page 36](#)
- Logging in to the OIP server – [page 38](#)
- OIP Services – [page 40](#)
- OIP tasks – [page 90](#)
- Export data – [page 91](#)

3.1 Installation

Contents:

- Installation Scope – [page 26](#)
- Configuring the communication server – [page 28](#)
- OIP Server Installation – [page 29](#)
- Updating the OIP server – [page 35](#)
- Uninstalling OIP Server – [page 35](#)

3.1.1 Installation Scope

The following software components are installed during the OIP server installation:

- OIP server, consisting of the OIP installation components listed in [Tab. 13, page 27](#)
- Java Runtime Environment (JRE)
- MySQL database server
- Tomcat Web Server

Tab. 13 OIPInstallation components

OIPInstallation components	Description
<i>Synchronization of the OIP and PBX directories</i>	OIP synchronizes the OIP directories with the directories of all the connected communication servers.
<i>OIP Name Server (Dialling by name)</i>	With the OIP Name Server it is possible to access the directories connected to the OIP server from the system phones.
<i>Connection to a Microsoft Exchange Server</i>	OIP supports the connection of a Microsoft Exchange server to synchronize directories (public contact folders as well as the personal Outlook address books), to access the users' calendars and their e-mail boxes. Depending on the version of the Microsoft Exchange Server the corresponding OIP Exchange driver needs to be installed.
<i>Connection of external phone-book directories</i>	OIP supports the connection of external phone-book directories. The corresponding OIP phone-book driver has to be installed on the phone-book directory server.
<i>Alarm logging</i>	The communication server alarms are stored in the OIP database.
<i>Call logging</i>	The communication server call data are stored in the OIP database.
<i>Display Server (ATAS over OIP)</i>	The Display Server is required for controlling the displays of the system phones (e.g. calendar reminders, RSS feeds) and for the alarming and messaging functionality.
<i>Connection of the Active Directory</i>	OIP supports the connection of the Active Directory.
<i>Connection to LDAP directories</i>	OIP supports the connection of an LDAP directory.
<i>Connection to the SMTP Mail Server</i>	Connection of an external SMTP e-mail server for sending e-mails.
<i>OIP Test Manager</i>	The OIP Test Manager is used to create scripts to test the functionality of the OIP server.
<i>Connection of KNX systems</i>	Connection of KNX systems to the building services automation

Java Runtime Environment (JRE)

It is possible to install and run different versions of Java Virtual Machine on one PC. This ensures that programs already installed continue to run stably during the installation of OIP. If a Java Virtual Machine is already installed on the PC, a check is carried out to see whether it is suitable for the operation of OIP. If not, the supplied version is also installed.

If an older JRE is no longer needed, it must be uninstalled before installing the new version. A subsequent uninstalling can lead to damage of the newly installed JRE.

MySQL database server

The MySQL database server is required for the OIP database. The MySQL database server is installed to the port 3308 instead to the default port 3306. This means that

the installation of the OIP server should not depend on the already installed MySQL database. Nonetheless if necessary check before installing the OIP server that the port is not occupied by another instance of a MySQL database server.

As a matter of principle save a back-up of any existing MySQL databases before installing the OIP server.

The MySQL database server is installed to the directory `...\\astra\oip\mysql`.

The MySQL database server is started as a Windows system service *OIP Database*.

More detailed information on the MySQL database server can be found in the MySQL documentation at <http://www.mysql.com>.

3.1.2 Configuring the communication server

Aastra 400 and Aastra IntelliGate®

A user account and a user profile has to be set up for the OIP server before the OIP server is installed on the communication server.

1. Create a new user account for the OIP server access, e.g. user name "OIP", in AMS (CM_2.3.1.1) or in AIMS (CM_1_2_1_1).
2. Do not add any new user profile and assign the user account to the *OIP* user profile. If there is no *OIP* authorization profile, first create the *OIP* authorization profile and allocate it exclusively to the *OIP* interface access.
3. Save the new user account in the communication server.

OpenCom 1000

Before installing the OIP server you need to add a new interface on the PBX.

1. Create a new CI Ethernet interface using the OpenCom 1000 Service Tools under *Applications/Interfaces*, with the following settings:
 - *Interface: Ethernet*
 - *Port:* Between 8801 and 8808, whereby the last digit is used for the TAMI report (*TTC1 ... *TTC8). Check that a TAMI report is not used twice or several times (for example if you are running other applications like OpenDesk Server or OSITRON TAPI driver).
 - *Remote IP address:* OIP server address
 - *Application: CI basic setting*
2. Via the OpenCom web access, assign users to the *OIP* user group. The *OIP* user group is predefined and allows alpha-dialling access to the OIP name server.

3. 1. 3 OIP Server Installation

The OIP server can be installed on Windows Professional/Server operating systems, see "[Compatibility of OIP 8.0](#)", page 358.

To install the OIP server you must have local administrator rights.

3. 1. 3. 1 Installation preparations

Before you begin with the installation of the OIP server, make sure you have the following information, in accordance with the components to be installed.

Information on the communication server

You need following information:

- IP addresses of all the communication servers to be connected with OIP. Identify the IP address of the communication server master (see also "[Basic operation](#)", page 354).
- User name and password.
- Range of shared abbreviated dialling numbers.

Notes and additional information about the OpenCom 1000 systems:

- The IP address must correspond with the IP address of the CI interface set for OIP (see "[Configuring the communication server](#)", page 28).
- Default values: User name: *OIP*, Password: *OIP*
- user name, password, IP port, CI interface and password of the TAMI interface

Information for the Microsoft Exchange Server

You need following information:

- Address of the computer on which the OIP Exchange driver for the corresponding Microsoft Exchange Server is to be installed.
- Public Contacts Folders

See also "[Microsoft Exchange Server directories](#)", page 105.

Information for the Active Directory

You need following information:

- Address of the Active Directory server.
- Active Directory Port
- User name and password for authentication on the Active Directory.
- Active Directory Base-DN

See also "[Active Directory](#)", page 114

Information for the LDAP directories

You need following information:

- Address of the LDAP directory server
- LDAP port
- User name and password for authentication on the LDAP directory server.
- LDAP Base-DN

See also "[LDAP directories](#)", page 115.

Information for the external phone-book directories

You need following information:

- Address of the phone book directory server.
- See also "[External phone book directories](#)", page 116.

Information for the SMTP mail server

You need following information:

- Address of the SMTP mail server
- User name and password, if required for authentication on the SMTP mail server.

Information on the OIP ATAS gateway

The address of the PC on which the driver of the OIP ATAS Gateway TCP/IP or V.24 is to be installed is also required.

See also "[OIP ATAS-Gateways](#)", page 214

Information on the KNX connection

You need the address of the PC to which the KNX system is connected.

See also "[KNX connection](#)", page 207.

Information for the licensing

You need the path in which the valid licence file *oip.lic* is stored.

See also "[Licensing and system limits](#)", page 353.

Copy installation files

To simplify the installation copy the following installation files to a separate folder:

- OIP server installation file (oipsetup.exe)
- OIP licence file (oip.lic)

3. 1. 3. 2 New installation

The instructions below will guide you through the new installation of the OIP server.

Start of the installation

1. Start the installation by double-clicking oipsetup.exe.
2. Select the Installation language and click *OK*.
3. Click *Next*.
4. Read through the licence agreement carefully before accepting the terms, then click *Next*.
5. Enter the installation directory or accept the default directory (recommended) and click *Next*.
6. Select the item OIP installation and click *Next*.

Selecting the installation components and the communication server systems

1. Select the OIP installation components you want to install (see [Tab. 13, page 27](#)) and click *Next*.
2. In the installation summary click *Next*.

3. In the next dialog box click *Add PBX* to enter the communication server on which the OIP server is to be operated. Enter the data required in accordance with [Tab. 13, page 27](#).

If you want to operate more than one communication server on this OIP server, insert the communication server master as the first communication server (see also "[Basic operation](#)", page 354), followed by the others.



Tip:

Once the OIP server has been installed, the communication server access data can be modified in the *OIP configuration* under *PBX network*. Further relevant settings can be made in the OIP services *PBX Driver Ascotel* and *PBX Driver OpenCom 1000*.

Select the Installation language and click *Next*.

4. To synchronize the OIP directories with the communication server directories enter the range of shared abbreviated dialling numbers in accordance with [Tab. 13, page 27](#). This area of the communication server abbreviated dialling list is synchronized with the public OIP directory.

Enter the name of the public OIP directory in which the communication server abbreviated dialling numbers are to be synchronized (default value is *OIP*). You can also enter a public contact folder if you activated the option *Connection of a Microsoft Exchange Server* (see "[Microsoft Exchange Server directories](#)", page 105) from the OIP installation components.

To synchronize the communication server directories enter the names in the same sequence as they are entered in the communication server, e.g. name - first name.



Tip:

Once the installation is completed, the settings for the directory synchronization with the communication server can be modified in the *OIP configuration - General Settings*.

Select the Installation language and click *Next*.

Component-specific information

1. Enter the address of the OIP Exchange driver if you activated the option *Connection of a Microsoft Exchange Server* (see "[Microsoft Exchange Server directories](#)", page 105) from the OIP installation components.

**Tip:**

Once the installation is completed, the address of the OIP Exchange driver can be modified in the OIP configuration - General Settings.

Select the Installation language and click *Next*.

2. If in the OIP installation components you activated the option *Connection of the Active Directory* (see "[Active Directory](#)", page 114), the address(es) of the domain controller(s) and the Base-DN are automatically retrieved from the DNS and displayed. If there are several entries select the corresponding domain controller. Select the IP port (LDAP or Global Catalogue) and enter the authentication data. Click *Publish* to display the Base-DN of the selected domain controller and select the required entry.

**Tip:**

Once the installation is completed, the address and the access data for the Active Directory can be modified in the OIP configuration - General Settings.

Select the Installation language and click *Next*.

3. If in the OIP installation components you activated the option *Connection of LDAP directories* (see "[LDAP directories](#)", page 115), enter the address of the LDAP directory server and the authentication data. Click *Publish* to display the Base-DN of the selected LDAP directory server and select the required entry. Select the LDAP object class.

**Tip:**

Once the installation is completed, the address of the LDAP server and the access data for the LDAP directory can be modified in the OIP configuration - General Settings.

Select the Installation language and click *Next*.

4. If in the OIP installation components you activated the option *Connection of external phone-book directories (phone-book CD)* (see "[External phone book directories](#)", page 116), select the corresponding phone-book directory here and enter the address of the phone-book directory server. The corresponding OIP phone-book driver has to be installed on the phone-book directory server.

**Tip:**

Once the installation is completed, the address of the OIP phone book driver can be modified in the OIP configuration - General Settings.

Select the Installation language and click *Next*.

5. If in the OIP installation components you activated the option *Connection to an SMTP Mail Server*, enter here the address of your SMTP mail server and any authentication data required.



Tip:

Once the installation is completed, the address of the SMTP server and the access data for the authentication on the SMTP server can be modified in the OIP configuration - General Settings.

Select the Installation language and click *Next*.

6. If a web server is already installed on the OIP server (e.g. Microsoft Internet Information Server), you will be prompted for a free port for the OIP web server. Enter 8080 for example as the alternative IP port.

Select the Installation language and click *Next*.

7. If in the OIP installation components you activated the option *Connect to KNX systems* (see "KNX connection", page 207), enter here the address of the PC where the OIP KNX driver is installed.



Tip:

Once the OIP server has been installed, the address of the computer can be modified in the *I/O Manager* OIP service. When connecting several OIP KNX drivers, you need to separate the individual computer addresses with ";" when entering the data.

Select the Installation language and click *Next*.

Completing the installation

1. In the next dialog box specify the location where the OIP licence file *oip.lic* is located and click *Install*.
2. After installation of selected components you can specify in the next window whether the OIP Windows system services should be started immediately or later manually. Click *Next*.
3. Carefully read the OIP version notes. It contains some information that is not available in this documentation. Close the web browser window.
4. Exit the installation by clicking *Finish*.

The OIP Windows system services are started automatically after installation. It is essential to observe the sequence when exiting or starting the OIP Windows system services manually.

The following sequence must be observed when starting the OIP Windows system services manually: *OIP Database* -> *OIP Web Server* -> *OIP Server*.

The following sequence must be observed when exiting the OIP Windows system services manually: *OIP Server* -> *OIP Web Server* -> *OIP Database*.

3.1.4 Updating the OIP server

Installing Other Components

1. Start the installation by double-clicking oipsetup.exe, select the item *OIP Installation*, and click *Next*.
2. Select other components that were not selected in the initial installation, and click *Next*.
Make sure the OIP installation components already installed are selected or they will be uninstalled.
3. Follow the steps indicated by the Installation Assistant, see "[OIP Server Installation](#)", page 29.

Installing a New OIP Version

1. Start the installation by double-clicking oipsetup.exe, select the item *OIP Installation*, and click *Next*.
Make sure the installed OIP installation components are selected or they will be uninstalled.
2. Follow the steps indicated by the Installation Assistant, see "[OIP Server Installation](#)", page 29.

3.1.5 Uninstalling OIP Server

The OIP server is uninstalled using *Control Panel\Software* in the Windows operating system.

The Java Runtime Environment (JRE) is not uninstalled as it may be required by other applications. If you no longer require JRE, you can uninstall it using *Control Panel\Software*.

When uninstalling OIP and JRE completely, make sure you uninstall all the OIP applications and the OIP server first and then the JRE.

3.2 OIP Home Page

After installing the OIP server you access the OIP home page by entering the URL of the OIP server, e.g. <http://oip-server.aastra.com>. If a different port was specified for the web server during installation of the OIP server, you need to append the port to the URL, e.g. <http://oip-server.aastra.com:8080>. Make sure whenever possible that you enter the URL as FQDN (Fully Qualified Domain Name) as indicated.

The menu bar of the OIP home page contains the following links:

OIP Home Page

The OIP home page contains the following links:

- [OIP Toolbox login](#)

You can use this link to log in to the OIP server on a workstation PC on which for example the OIP Toolbox is not installed or which is not running under a Windows operating system. The corresponding Java Runtime Environment (JRE) must be installed before, see "[OIP Installations](#)", page 36.

The procedure for logging in to the OIP server is described in "[Logging in to the OIP server](#)", page 38.

OIP Installations

The OIP Installations page contains the following links:

- [OfficeSuite](#), see [Seite 285](#)
- [Office 1560/1560IP](#) see [Seite 288](#) .
- [Office eDial](#) see [Seite 297](#) .
- [OIP TAPI Service Provider](#), see [Seite 299](#) .
- [OIP Exchange driver](#), see [Seite 105](#) .
- [OIP Phone-book driver](#), see [Seite 116](#) .
- [OIPATAS Gateways](#), see [Seite 214](#) .
- [OIP KNX driver](#), see [KNX connection – page 207](#) .
- [Java Runtime Environment](#)

This link opens the JRE installation web page. You can start the manual installation of the JRE for the various operating systems from here.

- [Microsoft .Net Framework 3.5](#)

This link starts the installation of Microsoft .Net Frameworks 3.5.

OIP Documentation

- [OIP Online Documentation \(HTML\)](#)
This link opens the HTML version of the OIP System Manual. The Adobe® SVG Viewer® is required to view the graphics.
- [OIP Documentation](#)
This link opens the PDF version of the OIP System Manual.
- [OIP Interface documentation](#)
This link opens the OIP Interface Documentation web page.
 - [Open Interfaces Platform \(OIP\)](#)
This link opens the OIP interface documentation with which application developers can connect their applications to OIP.
 - [OIP TAPI service provider](#)
This link opens the OIP TAPI service provider interface documentation with which application developers can connect their TAPI applications.
 - [OIP Architecture Presentation](#)
This link opens the presentation on the architecture of the Open Interfaces Platform.

OIP Support

The OIP support page contains the following links:

- [Knowledge Base](#)
This link opens the Knowledge Base web page.
 - [Open Interfaces Platform](#)
This link opens the OIP Knowledge Base on the Internet. It contains further information and FAQ entries on the Open Interfaces Platform.
 - [OfficeSuite](#)
This link opens the OfficeSuite Knowledge Base on the Internet. It contains further information and FAQ entries on the OfficeSuite.
 - [Office 1560/1560IP](#)
This link opens the Office 1560/1560IP Knowledge Base on the Internet. It contains further information and FAQ entries on the Office 1560/1560IP.
 - [Office eDial](#)
This link opens the Office eDial Knowledge Base on the Internet. It contains further information and FAQ entries on the Office eDial.
 - [OIP TAPI service provider](#)

This link opens the OIP Knowledge Base on the Internet. It contains further information and FAQ entries on the Open Interfaces Platform.

- *Version notes*

This link opens the page with the version notes for the OIP components.

- *Open Interfaces Platform*

This link opens the OIP version notes. You will obtain information on the versions of the individual OIP components, and general information on the release.

- *OfficeSuite*

This link opens the OfficeSuite version notes. It contains general information on the release.

- *Office 1560/1560IP*

This link opens the Office 1560/1560IP version notes. It contains general information on the release.

- *Office eDial*

This link opens the Office eDial version notes. It contains general information on the release.

- *OIP TAPI service provider*

This link opens the OIP TAPI service provider version notes. It contains general information on the release.

OIP Server Status

The *OIP server status* page displays the version of the OIP server and the current system status.

3.3 Logging in to the OIP server

There are different ways of logging in to the OIP server. The standard login procedure is via:

- the internal communication server call numbers and PIN, or
- the Windows domain user account, if it has already been configured in the User Preferences, see "[User Profiles](#)", page 224. The Windows user password is not required to log on if you are already logged on to the PC with the Windows user.

Other possibilities for logging in to the OIP server include:

- Internal PBX user number and OIP password,

- OIP user name (e.g. user name on the communication server) and PIN or
- OIP user name (e.g. user name on the communication server) and OIP code

For this the OIP password has to be set in the user profiles, see "[User Profiles](#)", [page 224](#).

To set up the OIP server you need to log on with the standard OIP Administrator, see [Tab. 112, page 224](#) . Thereafter for security reasons you will be prompted to change the password.

When a user logs on for the first time via the internal call number and PIN, he is prompted to change the standard PIN, unless he has already done so. The domain user name is automatically added in the user profile when the user logs on for the first time.

After a successful logon the OIP Toolbox is opened. Depending on which user group the logged in user is assigned, the corresponding Toolbox applications are displayed.

3.4 OIP Services

The core of the OIP server consists of the OIP services in which the individual functions are implemented. The OIP services are functionally dependent on three levels:

- On the Driver level are the OIP services which establish the communication between the connected systems and the OIP server. The various protocols for the OIP services of the Manager and Service levels are translated there. OIP applications cannot directly access these OIP services (internal OIP services).
- The Manager level contains the OIP services in which the logic of the individual functionalities of the OIP server is implemented. OIP applications cannot directly access these OIP services (internal OIP services).
- The Service level has the OIP services which provide the OIP applications with the individual functionalities of the OIP server. Access is controlled via the OIP user groups and the access rights assigned accordingly. You will find an overview of which OIP applications can access which OIP services in [Tab. 113, page 225](#) and [Tab. 114, page 227](#).

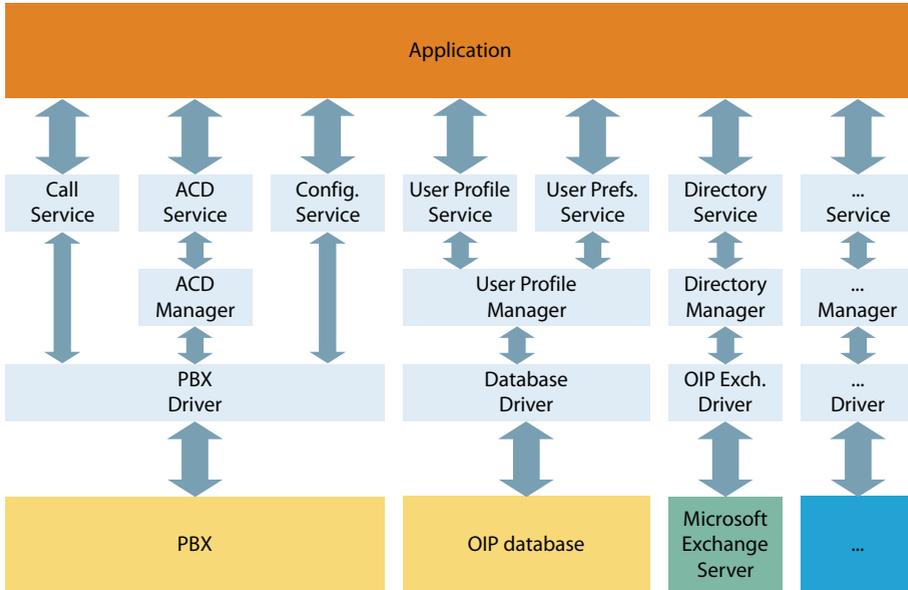


Fig. 3 OIP Service Architecture

The default settings of the OIP services are selected so that the system is ready to run without needing to be configured.

The OIP services are configured in the Toolbox application OIP Configuration Manager, see "[OIP Configuration](#)", [page 220](#). The OIP Configuration Manager displays only the OIP services activated in connection with the installation.

The following describes the individual OIP services and the setting options. Any changes made should be carried out meticulously so that the system's functionality is not impaired.

For each OIP service the following settings are possible:

- OIP service general settings
See OIP services [Tab. 109, page 222](#) .
- Settings specific to OIP Services
- OIP service access rights

The specific properties depend on the individual OIP services. Specific properties cannot be set for every OIP service.

During user group configuration, access rights can be configured to the allocated OIP Services. These access rights are inherited to the users assigned to the user group. If a user is assigned to several user groups with in part identical OIP Services, the user always has the highest access right to the OIP Service which he has inherited through the user group.

The [Tab. 14, page 41](#) lists the possible access rights.

Tab. 14 OIP Services access rights

Access right	Description
<i>admin</i>	Full access to the corresponding OIP Service.
<i>group admin</i>	The access right allows the OIP Services of all users in the same user group to be started.
<i>super user</i>	The access right allows the OIP Services of all users to be started.
<i>user</i>	The access right allows only those OIP Services assigned to the user to be started.
<i>guest</i>	Reserved for expansions.
<i>none</i>	No access to the corresponding OIP Service.

Not all OIP Services make a distinction between the different access rights. If the corresponding OIP Service does not contain any details about access rights, the OIP Services can be started using the *user* access right.

Most changes to the settings in the OIP Services can be made while the server is running. If the OIP server has to be restarted, a message appears to prompt a re-start of the OIP server.

An overview of the OIP services is listed in the [Tab. 15, page 42](#) . Details and settings for the OIP services can be found in the following sections.

Tab. 15 OIP Services

OIP Service	Description
Account Service	The Account Service is responsible for booking call charges to specific cost centres.
ACD Log Manager	ACD Log Manager (internal OIP service) is responsible for managing and generating ACD statistics.
ACD Log Service	ACD Log Service is responsible for the access to ACD statistics.
ACD Manager	ACD Manager (internal OIP service) is responsible for managing and configuring the ACD queue.
ACD Service	ACD Service is responsible for the access to ACD queue.
Active Directory Service	The Active Directory Service (internal OIP service) is responsible for managing the Active directories.
Agent Manager	The Agent Manager (internal OIP service) is responsible for the central management of the ACD agents.
Agent Service	Agent Service is responsible for the access to ACD agents.
Alarm Driver	The Alarm Driver (internal OIP service) is responsible for receiving and managing communication server alarms.
Alarm Service	Alarm Service is responsible for distributing communication server alarms.
Alpha & Quick Dial Service	The Alpha & Quick Dial Service (internal OIP service) is responsible for the name resolution, which is sent to the communication server when dialing with names.
Buddy Manager	Buddy Manager (internal OIP service) is responsible for the central management of the user fields.
Buddy Service	The Buddy Service is responsible for accessing the presence indicator and for displaying the status information.
Calendar Manager	Calendar Manager is responsible for the central management of calendar entries.
Calendar Service	Calendar Service is responsible for accessing and controlling the calendar functionality.
Calendar Synchronization Service	The Calendar Synchronization Service (internal OIP service) is responsible for synchronizing the local Microsoft Outlook contacts with the OfficeSuite.
Call Logging Driver	Call Logging Driver (internal OIP service) is the interface adapter used for accessing the charge data interface.
Call Logging Manager	Call Logging Manager (internal OIP service) is responsible for managing the call data.

OIP Service	Description
Call Logging Service	Call Logging Service is responsible for accessing and distributing charge data.
Call Service	Call Service is responsible for managing the telephony features.
Client Utility Service	Client Utility Service provides OIP-specific functions to applications.
CLIP Service	The CLIP Service (internal OIP service) is responsible for the number resolution of incoming calls in the configured directories.
Configuration Profile Manager	Configuration Profile Manager (internal OIP service) is responsible for managing the presence profiles.
Configuration Profile Service	Configuration Profile Service is responsible for accessing the presence profiles of the OIP users.
Configuration Service	Configuration Service is responsible for managing the OIP services.
DasTelefonbuch Directory Service	The DasTelefonbuch Directory Service (internal OIP service) is responsible for managing the external phone-book directories of "DasTelefonbuch Deutschland".
Database Driver	The Database Driver (internal OIP service) is the interface adapter used for accessing the OIP database.
Directory Manager	Directory Manager is responsible for managing the directories.
Directory Service	Directory Service is responsible for the access to directories.
Display Manager	Display Manager (internal OIP service) is responsible for the management of the access to the system phones' displays.
Display Service	Display Service is responsible for display control of the system phones.
Event Service	Event Service (internal OIP service) is responsible for distributing the events in the system.
Fax Manager	Fax Manager (internal OIP service) is responsible for managing the fax functionality.
Fax Service	Fax Service is responsible for the access to the fax functionality.
Feature Service	The Feature Service provides functions depending on the phone, the CTI licence and the communication server type applications.
Flow Manager	Flow Manager (internal OIP service) is responsible for managing the call sequences.
Flow Service	Flow Service is responsible for the access to licences.
Function Key Manager	Function Key Manager (internal OIP service) is responsible for managing the function keys.
Function Key Service	Function Key Service is responsible for the access to the function keys.
I/O Manager	I/O Manager is responsible for the central management of the I/O groups.
I/O Service	I/O Service is responsible for managing actors.
Jabber Driver	The Jabber Driver (internal OIP service) is the interface adapter used for accessing the external Jabber/XMPP Instant Messaging systems.
Journal Manager	Journal Manager (internal OIP service) is responsible for managing the journal entries.

OIP Service	Description
Journal Service	Journal Service is responsible for managing and deflecting the call lists to the applications.
Key Configuration Service	Key Configuration Service is responsible for key configuration of the system phones.
LDAP Directory Service	LDAP Directory Service (internal OIP service) is responsible for managing the LDAP directories.
License Manager	License Manager (internal OIP service) is responsible for managing the licences.
License Service	License Service is responsible for the access to licences.
Line Service	Line Service is responsible for managing key telephone features.
Load Balancing Service	Load Balancing Service (internal OIP service) is responsible for the load distribution within the OIP Server Networks.
Location Manager	Location Manager (internal OIP service) is responsible for managing the cordless phone localisation.
Location Service	The Location Service is used to locate cordless phones on the covered premises.
Log Service	Log Service is responsible for the central management and recording of the log files.
Login Service	Login Service is responsible for managing the login to the OIP server.
Media Manager	Media Manager (internal OIP service) is responsible for managing the OIP Media Driver.
Message Manager	Message Manager (internal OIP service) is responsible for managing messages.
Message Service	Message Service is responsible for sending and receiving messages.
Naming Service	The Naming Service (internal OIP service) is responsible for the global management of services in OIP server network systems.
Notepad Service	Notepad Service is responsible for managing the note entries and redial lists.
Notification Manager	Notification Manager (internal OIP service) is responsible for managing the notifications.
Notification Service	Notification Service is responsible for accessing and distributing the notifications.
ODBC/JDBC Directory Service	The ODBC/JDBC Directory Service is responsible for managing connected ODBC or JDBC directories.
Operator Service	Operator Service is responsible for managing the operator queue.
PBX Driver Ascotel	PBX Driver Ascotel (internal OIP service) is the interface adapter used for accessing the communication server.
PBX Driver OpenCom 1000	PBX Driver OpenCom 1000 (internal OIP service) is the interface adapter used for accessing the communication server.
PBX Information Service	PBX Information Service provides information about the connected communication servers, e.g. the communication server name, users.
PBX Manager	PBX Manager (internal OIP service) is responsible for managing of the communication servers connected to the OIP server

OIP Service	Description
PBX Setup Manager	PBX Setup Manager (internal OIP service) is responsible for the configuration of the communication servers connected to the OIP server.
PBX Setup Service	PBX Setup Service is responsible for managing the communication server configuration.
PISN Directory Service	PISN Directory Service (internal OIP service) is responsible for managing the PISN users.
Private Card Directory Service	The Private Card Directory Service (internal OIP service) is responsible for the central management of the communication server private phone book.
Private Directory Service	Private Directory Service (internal OIP service) is responsible for managing the private contacts.
Public Directory Service	Public Directory Service (internal OIP service) is responsible for managing the public contacts.
PUM Manager	PUM Manager (internal OIP service) is responsible for managing the Personal User Mobility function.
PUM Service	PUM Service is responsible for access to the Personal User Mobility data and configuration.
Registration Manager	Registration Manager (internal OIP service) is responsible for managing the registered applications.
Registration Service	Registration Service is responsible for registering applications.
Routing Manager	The Routing Manager (internal OIP service) is responsible for managing the call distribution in the communication server.
Routing Service	The Routing Service is responsible for accessing the call distribution in the communication server.
RSS Driver	The RSS Driver (internal OIP service) is the interface adapter used for accessing the RSS Feeds.
Security Service	The Security Service (internal OIP service) provides the encryption and decryption algorithms of security-relevant data for OIP Services.
Server Utility Service	Server Utility Service (internal OIP service) provides internal tools for OIP Services.
Service Manager	Service Manager (internal OIP service) is responsible for the local management of the Services on the OIP server.
Shortdial Directory Service	Shortdial Directory Service (internal OIP service) is responsible for managing the communication server Abbreviated dialling.
SMTP Driver	The SMTP Driver (internal OIP service) is the interface adapter for sending e-mails and text messages (e-mail to text message).
Subscriber Directory Service	Subscriber Directory Service (internal OIP service) is responsible for managing the PBX user.
Subscriber Configuration Manager	Subscriber Configuration Manager (internal OIP service) is responsible for managing the user settings.
Subscriber Configuration Service	Subscriber Configuration Service is responsible for user and terminal settings.

OIP Service	Description
System User Directory Service	System User Directory Service (internal OIP service) is responsible for managing all the registered users on the OIP server.
Test Manager	The Test Manager (internal OIP service) is responsible for the execution of OIP/PBX test orders.
Test Service	The Test Service is responsible for managing the OIP/ PBX test orders.
Ticket Service	Ticket Service is responsible for managing the call tickets.
Time Service	Time Service (internal OIP service) is responsible for managing time synchronization.
TwixTel Directory Service	The TwixTel Directory Service (internal OIP service) is responsible for managing the external phone-book directories TwixTel.
User Preferences Service	User Preferences Service is responsible for managing the user customized settings.
User Profile Manager	User Profile Manager (internal OIP service) is responsible for global OIP user management.
User Profile Service	User Profile Service is responsible for the access to OIP users.
User Service	User Service is responsible for controlling and monitoring applications.
Voice Mail Manager	Voice Mail Manager (internal OIP service) is responsible for managing the voice mails.
Voice Mail Service	Voice Mail Service is responsible for managing the mailboxes.
WEB Server Service	WEB Server Service (internal OIP service) is responsible for managing the Tomcat Web Server.

Account Service

The Account Service is responsible for booking call charges to specific cost centres.

ACD Log Manager

ACD Log Manager (internal OIP service) is responsible for managing and generating ACD statistics.

Tab. 16 ACD Log Manager Specific Properties

Specific properties	Description	Default setting Settings
<i>Call Centre ID</i>	Call Centre ID.	<i>OIP Call Centre</i>
<i>File format</i>	Output format for the ACD statistic data.	<i>standard</i>
<i>ACD statistics files directory</i>	Directory in which the ACD statistics are stored. The basic directory is the OIP installation directory.	<i>acdlog</i>
<i>File name for the Call Centre calls data</i>	File name for the Call Centre call statistics.	<i>acdcall-@DATE-@TIME.txt</i>
<i>Call Centre status data file name</i>	File name for the Call Centre status statistics.	<i>callcenter-@DATE-@TIME.txt</i>

Specific properties	Description	Default setting Settings
<i>Agent states data file name</i>	File name for the agent state statistics.	<i>agentstatus-@DATE-@TIME.txt</i>
<i>Agent calls data file name</i>	File name for the agent call statistics.	<i>agentcall-@DATE-@TIME.txt</i>
<i>Creation interval ACD statistics files</i>	Interval in which new ACD statistic data files are created.	1d 1m - each minute 1h - each hour 1d - each day
<i>Creation time ACD statistics files</i>	Time at which the ACD statistics files are created if the creation interval is configured to daily.	23:30
<i>Call Centre status data interval</i>	Interval (in seconds) in which the Call Centre status data (snapshot) are created.	60
<i>Save ACD statistics in database</i>	Number of days during which the ACD statistics entries are stored in the database	30 0 – Database entries are not deleted
<i>Save ACD statistic files</i>	Number of days during which the ACD statistic files are stored	30 0 – Files are not deleted

The ACD statistics are erased from the OIP database at the time listed in [Tab. 89, page 90](#), see also "[Reorganize OIP database](#)", page 90.

The OIP service ACD Log Manager is started only if the option *ACD statistics logging* was selected when the OIP server was installed.

ACD Log Service

ACD Log Service is responsible for the access to ACD statistics.

Tab. 17 ACD Log Service Access rights

Access right	admin	group admin	super user	user	guest	none
Retrieve statistics		A ¹⁾		O ²⁾		
Delete statistics		A				
Highlight the statistics record as <i>Retrieved</i>		A				

¹⁾ A – Statistics of all Skills

²⁾ O – Statistics of Skills assigned to the agent

ACD Manager

ACD Manager (internal OIP service) is responsible for managing and configuring the ACD queue.

Tab. 18 ACD Manager Specific Properties

Specific properties	Description	Default setting Settings
<i>Call display delay</i>	Time interval (in seconds) in which the answered ACD calls are displayed in the OIP Call Center Manager/Call monitoring.	15 0 - deactivated
<i>CDE/DDI synchronization interval</i>	Time interval (in minutes) in which the CDE/DDI are compared with the communication server.	5 0 - deactivated

ACD Service

ACD Service is responsible for the access to ACD queue.

Tab. 19 ACD Service Access rights

Access right	admin	group admin	super user	user	guest	none
Open ACD queue	X					
Create Skills	X					
Delete Skills	X					
Change Skills	X					
Create pause codes	X					
Delete pause codes	X					
Change pause codes	X					
Create Wrap-up codes	X					
Delete Wrap-up codes	X					
Modify Wrap-up codes	X					
Administer business hours	X					

Active Directory Service

The Active Directory Service (internal OIP service) is responsible for managing the Active directories.

Tab. 20 Active Directory Service Specific Properties

Specific properties	Description	Default setting Settings
<i>Active Directory server address</i>	DNS name or IP address of the Active Directory server.	
<i>Active Directory Port</i>	Port of the Active Directory server	<i>LDAP</i> <i>LDAP, Global Catalogue</i>
<i>User name</i>	User authentication on the Active Directory server Examples of entries: <i>CN=OIP AD Administrator, CN=Users, DC=aastra, DC=com</i> or <i>oip_ad_admin@aastra.com</i>	
<i>Password</i>	Password for the user authentication on the Active Directory server.	
<i>Active Directory Base-DN</i>	Active Directory root directory Examples of entries: <i>CN=OIP AD Administrator, CN=Users, DC=aastra, DC=com</i>	
<i>Active Directory Search filter</i>	Search filters are used to define additional search criteria to narrow down the search requests. Entered search filters overwrite the configuration of the LDAP object class. Examples of entries: <i>(&(objectCategory=person)(telephonenumber=*))</i>	<Definition of LDAP filter according to RFC 2254>
<i>Follow LDAP referrals</i>	In a distributed domain structure the search for objects is extended to the referenced domain controllers.	<i>Deactivated</i>
<i>Number of call number digits</i>	Number of call number digits from the back which are used to compare with the entries in the directory	7
<i>First data merging delay</i>	The user data from the Active Directory will be merged in the OIP user directory if the domain name is configured in the OIP user profile. • The first directory data merge will be delayed about the configured start time (in minutes) after a restart of the OIP server. The setting '0' disables the data merge.	0
<i>Data merging interval</i>	• The setting '0' disables the data merge.	0
<i>Data merging time</i>	• The user data will be merged at the configured time. The setting '00:00' disables the data merge.	00:00
<i>Manual data merging</i>	• If the manual user data merge is activated, the data merging can be executed manually in the OIP user directory in the Directory Manager.	<i>Deactivated</i>

Technical information about Active Directory is available on the internet, on the Microsoft development page.

Agent Manager

The Agent Manager (internal OIP service) is responsible for the central management of the ACD agents.

Tab. 21 Agent Manager Specific Properties

Specific properties	Description	Default setting Settings
<i>Automatic agent login</i>	All agents are logged in automatically when the OIP server starts up.	<i>Deactivated</i>
<i>Start wrap-up time</i>	If a call to the Call Centre is processed by several agents as a result of forwarding, you can set whether the wrap-up time should be started with the last agent or with all the agents.	<i>Last agent</i>

Agent Service

Agent Service is responsible for the access to ACD agents.

Tab. 22 Agent Service Access rights

Access right	admin	group admin	super user	user	guest	none
Change Skills settings	A ¹⁾	G ²⁾				
Create agent	A	G				
Remove agent	A	G				
Activate agent in a Skill	A	G	O ³⁾			
Deactivate agent in a Skill	A	G	O			
Log agent in	A	G		O		
Log agent out	A	G		O		
Start agent pause	A	G		O		
End agent pause	A	G		O		
End agent wrap-up time	A	G		O		

1) A – Management of all agents in all Skills

2) G – Management of all agents in assigned Skills

3) O – Management of own agent functionality

Alarm Driver

The Alarm Driver (internal OIP service) is responsible for receiving and managing communication server alarms.

Here the settings for the destination of the communication server alarms on OIP and the synchronization interval for checking this setting can be made with this communication server.

Tab. 23 Alarm Driver Specific Properties

Specific properties	Description	Default setting Settings
<i>IP port</i>	IP port	1062
<i>Save alarm entries in database</i>	Number of days during which the communication server alarm entries are stored in the database	10 0 – Database entries are not deleted
<i>Alarm logging</i>	Sets the alarm destination automatically to OIP.	<i>Deactivated</i>
<i>Synchronization interval</i>	Synchronization interval (in minutes) in which the settings of the alarm destination are checked on the communication server.	60
<i>Connection timeout</i>	Timeout (in seconds) after which the OIP server stops the connection to the communication server, once the last alarm have been sent by the communication server.	60
<i>Maximum connections</i>	Maximum number of connections in parallel	10

The alarm entries are erased from the OIP database at the time listed in [Tab. 89](#), [page 90](#) , see also "[Reorganize OIP database](#)", [page 90](#).

Alarm Service

Alarm Service is responsible for distributing communication server alarms.

Tab. 24 Alarm Service Specific Properties

Specific properties	Description	Default setting Settings
<i>User alarm</i>	Displays the user alarms in the alarm list.	<i>Activated</i>

Alpha & Quick Dial Service

The Alpha & Quick Dial Service (internal OIP service) is responsible for the name resolution, which is sent to the communication server when dialling with names.

Tab. 25 Alpha & Quick Dial Service Specific Properties

Specific properties	Description	Default setting Settings
<i>Root directories</i>	Directories in which the name resolution is searched.	<i>Public OIP directory / Private OIP directories / OIP user directory / PBX abbreviated dialling list / Private PBX phone book / PBX user directory / PISN user directory / Active Directory / LDAP directory / External phone-book directories</i>
<i>Expanded directories</i>	Expanded directories where the name resolution is searched. For the search in expanded directories the search prefix must be configured and made to precede the dialling by name.	<i>Public OIP directory / Private OIP directories / OIP user directory / PBX abbreviated dialling list / Private PBX phone book / PBX user directory / PISN user directory / Active Directory / LDAP directory / External phone-book directories</i>
<i>Search prefix</i>	Search prefix which must be made to precede the dialling by name in expanded directories. Multiple entries must be separated by " , ".	0;*
<i>Search sequence</i>	Search order in which the entries are searched for in the directories.	First name; Last name; Company
<i>Maximum cache entries</i>	Maximum number of entries stored in the Cache	30
<i>Maximum cache time</i>	Maximum amount of time (in minutes) during which the entries are stored in the cache.	5
<i>Maximun search entries</i>	Maximun number of search entries which are displayed in dialling by name	30
<i>Advanced name searching</i>	Activated: Finds the character string at the beginning of each word in the contact entry. Example: The character string 'MAR' finds MAREnt Peter as well as Kessler MARTin (but not AnneMARie Lustig). Slows down the search. Deactivated: Finds character strings only in the first word; in the example it would find only MAREnt Peter.	<i>Activated</i>
<i>Maximum name length</i>	Maximum name length for the entries.	20
<i>Business number extension</i>	Extension added to the name of the business call number.	<i>BUS</i>
<i>Business fax number extension</i>	Extension added to the name of the business fax call number.	<i>NOTUSED</i>
<i>Private number extension</i>	Extension added to the name of the private call number.	<i>PRIV</i>

Specific properties	Description	Default setting Settings
<i>Private fax number extension</i>	Extension added to the name of the private fax call number.	<i>NOTUSED</i>
<i>Mobile number extension</i>	Extension added to the name of the mobile call number.	<i>GSM</i>
<i>Pager extension</i>	Extension added to the name of the pager number.	<i>NOTUSED</i>
<i>Main phone extension</i>	Extension added to the name of the main phone number.	<i>NOTUSED</i>
<i>List standard call number</i>	Lists only the main phone number.	<i>Deactivated</i>
<i>Display extension</i>	The extension appended to the call number name is displayed only if several call numbers are assigned to the entry (deactivated).	<i>Deactivated</i>
<i>Simultaneous search requests</i>	Maximum number of simultaneous search requests	100
<i>Alpha Service</i>	Activates or deactivates the Alpha & Quick Dial Service.	<i>Deactivated</i>

Buddy Manager

Buddy Manager (internal OIP service) is responsible for the central management of the user fields.

Tab. 26 Buddy Manager Specific Properties

Specific properties	Description	Default setting Settings
<i>Absence timeout</i>	Standard time (in minutes) after which the automatic call forwarding should become active , see " Configuration of the presence indicator ", page 259.	0
<i>Permanent monitoring</i>	Activates the permanent monitoring of users, even if they are not logged in.	<i>Activated</i>
<i>Display calendar entries</i>	Time (in seconds) in which an existing calendar entry of a called user, who didn't answer the call, is displayed on the system phone.	0
<i>Display calendar entries with status</i>	Status of the calling user if an existing calendar entry for the called user is to be displayed.	<i>Free</i>

Buddy Service

The Buddy Service is responsible for accessing the presence indicator and for displaying the status information.

Tab. 27 Buddy Service Access rights

Access right	admin	group admin	super user	user	guest	none
Administer absence messages	A ¹⁾			O ²⁾		
Monitor line	A		A	O		
Control line	A	G ³⁾				

1) A – All users

2) O – Own user

3) G – Agents in the same Skill

CLIP Service

The CLIP Service (internal OIP service) is responsible for the number resolution of incoming calls in the configured directories.

Tab. 28 CLIP Service Specific Properties

Specific properties	Description	Default setting Settings
<i>Root directory</i>	Directories in which the number resolution is searched.	<i>Public OIP directory / Private OIP directories / OIP user directory / PBX abbreviated dialling list / Private PBX phone book / PBX user directory / PISN user directory / Active Directory / LDAP directory / External phone-book directories</i>
<i>Maximum cache entries</i>	Maximum number of entries stored in the Cache	30
<i>Maximum cache time</i>	Maximum amount of time (in minutes) during which the entries are stored in the cache.	2
<i>Search results in directory order</i>	Search results are displayed in directory order.	<i>Activated</i>
<i>Simultaneous search requests</i>	Maximum number of simultaneous search requests	100
<i>CLIP Service</i>	Activates or deactivates the CLIP Service.	<i>Activated</i>

Calendar Manager

Calendar Manager is responsible for the central management of calendar entries.

Tab. 29 Calendar Manager Specific Properties

Specific properties	Description	Default setting Settings
<i>Save calendar entries in database</i>	Number of days during which the calendar entries are stored in the database	10 0 – Database entries are not deleted
<i>OIPExchange Driver Address</i>	DNS name or IP address of the OIP Exchange driver.	
<i>Heartbeat OIP Exchange driver</i>	Heartbeat interval (in minutes) between the OIP server and the OIP Exchange driver.	1

The calendar entries are erased from the OIP database at the time listed in [Tab. 89, page 90](#) , see also "[Reorganize OIP database](#)", [page 90](#).

Calendar Service

Calendar Service is responsible for accessing and controlling the calendar functionality.

Tab. 30 Calendar Service Access rights

Access right	admin	group admin	super user	user	guest	none
Create calendar entry	A ¹⁾		A	O ²⁾		
Delete calendar entry	A		A	O		
Change calendar entry	A		A	O		
View calendar entry	A		A	O		

¹⁾ A – Calendar entries of all users

²⁾ O – Own calendar entries

Calendar Synchronization Service

The Calendar Synchronization Service (internal OIP service) is responsible for synchronizing the local Microsoft Outlook contacts with the OfficeSuite.

Call Logging Driver

Call Logging Driver (internal OIP service) is the interface adapter used for accessing the charge data interface.

Here the settings for the destination of the call data on OIP and the synchronization interval for checking this setting can be made with this communication server.

Tab. 31 Call Logging Driver Specific Properties

Specific properties	Description	Default setting Settings
<i>Call logging</i>	Setting of the destination for the call data acquisition automatically to OIP.	<i>Deactivated</i>
<i>Synchronization interval</i>	Synchronization interval (in minutes) in which the settings of the call data destination are checked on the communication server.	60
<i>IP port</i>	IP port	1080
<i>Connection timeout</i>	Timeout (in seconds) after which the OIP server stops the connection to the communication server, once the last call charge data have been sent by the communication server.	60
<i>Maximum connections</i>	Maximum number of connections in parallel	10

Call Logging Manager

Call Logging Manager (internal OIP service) is responsible for managing the call data.

Tab. 32 Call Logging Manager Specific Properties

Specific properties	Description	Default setting Settings
<i>Save call data in database</i>	Number of days during which the call charge data is to be stored in the database	10 0 – Database entries are not deleted
<i>Save call data in file system</i>	Number of days after which the call charge data files are deleted	0 0 – Files are not deleted
<i>File extension for call data files</i>	File extension for call charge data files	<i>tax</i>
<i>Directory for call data files</i>	Directory in which the call charge files are stored	<i>tax</i>
<i>Create call data files</i>	Number of days after which the call data is written from the database to the file	1 0 – No file written. 1 to 5, depending on the data volume
<i>Data protection, business calls</i>	Number of digits of the call number that are deleted from the back in the call data in the case of business calls.	0 0 to 7
<i>Data protection, private calls</i>	Number of digits from the call number that are deleted from the back in the call data in the case of private calls.	0 0 to 7
<i>Merge call data</i>	CL tickets in the network are merged and stored as a ticket in the database	<i>Activated</i>
<i>Log external calls</i>	All external CL tickets are logged.	<i>Activated</i>

Specific properties	Description	Default setting Settings
<i>Log internal calls</i>	All internal CL tickets (i.e. within the network) are logged.	<i>Deactivated</i>
<i>Log incoming calls</i>	Incoming CL tickets are logged	<i>Activated</i>
<i>Log outgoing calls</i>	Outgoing CL tickets are logged	<i>Activated</i>
<i>Show display text</i>	Time (in seconds) in which the charge information is shown on the system phone.	0
<i>Format display text</i>	Formatting of the display text The text can be adapted using variables. , see Tab. 33, page 57 .	
<i>Gateway PBX call charges</i>	Call charge information is shown on the system phone if the outgoing call is made via a gateway communication server. The ATAS Licence is required to display the call charges from the gateway communication server , see "The OIP licences", page 354 .	<i>Activated</i>
<i>Update journal entry</i>	The journal entry corresponding to this call is complemented with the call charges.	<i>Activated</i>
<i>CLIP prefix</i>	If the DDI does not correspond to the internal call number (e.g. DDI 32655xxxx, internal call number xxxx), "32655" has to be entered as the CLIP prefix so that the call data in the QSIG network can be assigned to the extension. Multiple entries must be separated by "," ,".	

Tab. 33 Display text variables

Variable	Description
<i>@SUBSCRIBERNAME</i>	User name
<i>@SUBSCRIBERNUMBER</i>	Call number
<i>@COSTCENTRE</i>	Cost centre number
<i>@STARTDATE</i>	Date of start of connection
<i>@STARTTIME</i>	Time of start of connection
<i>@TIMETOANSWER</i>	Response time
<i>@DURATION</i>	Call duration
<i>@TAXCHARGES</i>	Call charges
<i>@TAXPULSES</i>	Charge pulses
<i>@CALLERID1</i>	Caller identification 1
<i>@CALLERID2</i>	Caller identification 2
<i>@DESTINATIONNUMBER1</i>	Destination number 1
<i>@DESTINATIONNUMBER2</i>	Destination number 2
<i>@ORIGINSUBSCRIBER</i>	call number from which the call is set up
<i>@CURRENCY</i>	Currency value

In the standard settings the following character sequence is displayed on the system phone as the display text:

Currency unit call charges/call duration sec.

The export file of call data is created at the configured interval at the time listed in table [Tab. 90, page 91](#) , see also "[Create export data](#)", [page 91](#).

The call data is erased from the OIP database at the time listed in [Tab. 89, page 90](#) , see also "[Reorganize OIP database](#)", [page 90](#).

Call Logging Service

Call Logging Service is responsible for accessing and distributing charge data.

Tab. 34 Call Logging Service Access rights

Access right	admin	group admin	super user	user	guest	none
Administer call data settings	X					
Retrieve call data			A ¹⁾	O ²⁾		
Delete call data			A			
Highlight call data record as <i>Retrieved</i>			A			
Reset call charge counter			A			

¹⁾ A – Call data of all users

²⁾ O – Own call data

Call Service

Call Service is responsible for managing the telephony features.

Tab. 35 Call Logging Manager Specific Properties

Specific properties	Description	Default setting Settings
<i>Direct blind transfer</i>	Calls can be transferred during call proceeding.	<i>Deactivated</i>

Client Utility Service

Client Utility Service provides OIP-specific functions to applications.

Tab. 36 Client Utility Service Access rights

Access right	admin	group admin	super user	user	guest	none
Start the OIP services		G ¹⁾	A ²⁾	O ³⁾		
Start OIP services for users with monitoring rights on their line		X				
Start OIP services for users with control rights on their line		X				

¹⁾ G – User in the same user group

²⁾ A – All users

³⁾ O – OIP services assigned to the user

Configuration Profile Manager

Configuration Profile Manager (internal OIP service) is responsible for managing the presence profiles.

Configuration Profile Service

Configuration Profile Service is responsible for accessing the presence profiles of the OIP users.

Tab. 37 Configuration Profile Service Access rights

Access right	admin	group admin	super user	user	guest	none
Read presence profile	A ¹⁾	P ^{2)/O³⁾}	P/O	P/O	P/O	
Activate/deactivate presence profile	A	P/O	P/O	P/O		
Create presence profile	A		O			
Delete presence profile	A		O			
Modify presence profile	A		O			

¹⁾ A - All: Access right applies to the presence profiles of all users

²⁾ P - Public: Access right applies to the public presence profiles

³⁾ O - Own: Access right applies to the personal, private presence profiles

Configuration Service

Configuration Service is responsible for managing the OIP services.

DasTelefonbuch Directory Service

The DasTelefonbuch Directory Service (internal OIP service) is responsible for managing the external phone-book directories of “DasTelefonbuch Deutschland”.

Tab. 38 DasTelefonbuch Directory Service Specific Properties

Specific properties	Description	Default setting Settings
<i>Phonebook server address</i>	DNS name or IP address of the server on which the external phone-book directories are installed.	
<i>Number of call number digits</i>	Number of call number digits from the back which are used to compare with the entries in the directory	0
<i>Alias name order</i>	Format of the alias	<i>Last name - First name</i>
<i>Use generated default alias</i>	Generates a default alias (display name) for each contact defined in the ContactNameOrder setting.	<i>Activated</i>
<i>Data source</i>	Displays the version of DasTelefonbuch Deutschland used.	

Database Driver

The Database Driver (internal OIP service) is the interface adapter used for accessing the OIP database.

This is where the settings for backing up the OIP database and the OIP configuration file are made.

Tab. 39 Database Driver Specific Properties

Specific properties	Description	Default setting Settings
<i>Database type</i>	Database type	<i>rdubs</i>
<i>Database path</i>	Path to the database	<i>jdbc:mysql://localhost/AXPDB</i>
<i>Password</i>	Password for database access.	
<i>User</i>	User for database access.	
<i>Database driver</i>	Database driver.	<i>org.gjt.mm.mysql.Driver</i>
<i>Communication channels</i>	Number of communication channels possible in parallel	10
<i>Maximum number of entries for search requests</i>	Maximum number of entries returned during database search requests	10000
<i>Backup directory</i>	Directory for the OIP data backup.	<i>backup</i>
<i>Backup time</i>	Directory for the OIP data backup.	<i>backup</i>

Specific properties	Description	Default setting Settings
<i>Save OIP backup files</i>	Number of days the OIP backup files are stored in the file system.	5 0 – OIP backup files are not deleted
<i>Database Heartbeat</i>	Heartbeat interval (in minutes) between the OIP server and the OIP database.	1
<i>Delete interval for entries in database tables</i>	Interval at which entries in the database tables are deleted once the maximum number of entries configured has been exceeded.	1d 1m - each minute 1h - each hour 1d - each day
<i>Delete time for entries in database tables</i>	Time at which entries in the database tables are deleted if the delete interval is set on daily	03:45
<i>Maximum number of entries in database table (global)</i>	Global setting for the maximum number of entries in each database table	50000
<i>Maximum number of entries in log database table</i>	Setting for the maximum number of entries in the database table of log entries	50000
<i>Database version</i>	Database version	1

Backing up the OIP configuration is done once after starting the OIP Windows system services after one hour. Thereafter the backup is carried out daily at the time listed in [Tab. 91, page 91](#) , see also "OIP backup", [page 91](#).

Directory Manager

Directory Manager is responsible for managing the directories.

Tab. 40 Directory Manager Specific Properties

Specific properties	Description	Default setting Settings
<i>Root directory</i>	Directories in which entries are searched for	<i>Public OIP directory / Private OIP directories / OIP user directory / PBX abbreviated dialling list / Private PBX phone book / PBX user directory / PISN user directory / Active Directory / LDAP directory / External phone book directories</i>
<i>Update directory list</i>	Time interval (in minutes) in which the availability of the configured directories are checked. The connection to directories which cannot be reached is then automatically restored as soon as these directories can be reached again.	5

Directory Service

Directory Service is responsible for the access to directories.

Tab. 41 Directory Service Specific Properties

Specific properties	Description	Default setting Settings
Root directory	Directories in which entries are searched for	Public OIP directory / Private OIP directories / OIP user directory / PBX abbreviated dialling list / Private PBX phone book / PBX user directory / PISN user directory / Active Directory / LDAP directory / External phone-book directories

Tab. 42 Directory Service Access rights

Access right	admin	group admin	super user	user	guest	none
PISN users	R ¹⁾	R	R	R	R	
Private PBX phone books	R/W ²⁾	R/W ³⁾	R/W ³⁾	R/W ³⁾		
Private OIP directories	R/W	R/W ³⁾	R/W ³⁾	R/W ³⁾		
Public OIP directories	R/W	R/W	R/W	R	R	
PBX abbreviated dialling list	R/W	R/W	R/W	R	R	
PBX user directory	R	R	R	R	R	
OIP user directory	R/W	R/W	R/W	R/W ⁴⁾	R	
Active Directory	R	R	R	R	R	
LDAP directories	R	R	R	R	R	
External phone book directories	R	R	R	R	R	

1) Read rights to the directory

2) Read and write rights to all private directories

3) Read and write rights to one's own directory only

4) Write rights for own contact only

Display Manager

Display Manager (internal OIP service) is responsible for the management of the access to the system phones' displays.

Display Service

Display Service is responsible for display control of the system phones.

Event Service

Event Service (internal OIP service) is responsible for distributing the events in the system.

Tab. 43 Event Service Specific Properties

Specific properties	Description	Default setting Settings
<i>Server address</i>	DNS name or IP address of the server on which the Event Service is installed.	<i>localhost</i>
<i>IP port</i>	IP port of the Event Service.	2500

Fax Manager

Fax Manager (internal OIP service) is responsible for managing the fax functionality.

Tab. 44 Fax Manager Specific Properties

Specific properties	Description	Default setting Settings
<i>Maximum number of redials</i>	Maximum number of redials if connection is busy.	3
<i>Redial interval</i>	Interval (in minutes) in which the fax is resend.	1

Fax Service

Fax Service is responsible for the access to the fax functionality.

Tab. 45 Fax Service Access rights

Access right	admin	group admin	super user	user	guest	none
Create fax box	A ¹⁾					
Delete fax box	A					
Modify fax-box settings	A					
Send/receive faxes	A			O ²⁾		

¹⁾ A – All users

²⁾ O – Own fax box

Feature Service

The Feature Service provides functions depending on the phone, the CTI licence and the communication server type applications.

Flow Manager

Flow Manager (internal OIP service) is responsible for managing the call sequences.

Flow Service

Flow Service is responsible for the access to licences.

Tab. 46 Flow Service Access rights

Access right	admin	group admin	super user	user	guest	none
Create call sequences	X					
Delete call sequences	X					
Modify call sequences	X					

Function Key Manager

Function Key Manager (internal OIP service) is responsible for managing the function keys.

Function Key Service

Function Key Service is responsible for the access to the function keys.

I/O Manager

I/O Manager is responsible for the central management of the I/O groups.

Tab. 47 I/O Manager Specific Properties

Specific properties	Description	Default setting Settings
<i>Server address</i>	DNS name or IP address of the server on which the driver for the OIP EIB Service is installed.	
<i>Double-click interval</i>	Time interval for double-click evaluation.	300
<i>Long-click interval</i>	Time interval for long-click evaluation	500
<i>Save actions in database</i>	Number of days during which the log entries are stored in the database	10
<i>Creating action log files</i>	Number of days after which the logged actions are written from the database in the file.	

The export file of logged actions is created at the configured interval at the time listed in [Tab. 90, page 91](#) , see also "[Create export data](#)", [page 91](#).

The action entries are erased from the OIP database at the time listed in [Tab. 89, page 90](#) , see also "[Reorganize OIP database](#)", [page 90](#).

I/O Service

I/O Service is responsible for managing actors.

Jabber Driver

The Jabber Driver (internal OIP service) is the interface adapter used for accessing the external Jabber/XMPP Instant Messaging systems.

Journal Manager

Journal Manager (internal OIP service) is responsible for managing the journal entries.

Tab. 48 Journal Manager Specific Properties

Specific properties	Description	Default setting Settings
<i>Save journal entries in database</i>	Number of days during which the journal entries are stored in the database	10 0 – Database entries are not deleted
<i>Journal entries, operator calls</i>	Creates journal entries for operator calls.	<i>Activated</i>

The journal entries are erased from the OIP database at the time listed in [Tab. 89, page 90](#) , see also "[Reorganize OIP database](#)", [page 90](#).

Journal Service

Journal Service is responsible for managing and deflecting the call lists to the applications.

Key Configuration Service

Key Configuration Service is responsible for key configuration of the system phones.

Tab. 49 Key Configuration Service Access rights

Access right	admin	group admin	super user	user	guest	none
Manage system phone settings	A ¹⁾			O ²⁾		
Manage keys on the system phone	A			O		
Manage locked keys on the system phone	A					

1) A – All system phones

2) O – Own system phone

LDAP Directory Service

LDAP Directory Service (internal OIP service) is responsible for managing the LDAP directories.

Tab. 50 LDAP Directory Service Specific Properties

Specific properties	Description	Default setting Settings	
<i>LDAP server address</i>	DNS name or IP address of the LDAP server	Example: <i>CN=Directory Manager</i> <i>user / user / inetOrgPerson / organizationalPerson / person / contact</i>	
<i>LDAP port</i>	IP port of the LDAP server		
<i>User name</i>	User authentication on the LDAP server.		
<i>Password</i>	Password for user authentication on the LDAP server		
<i>LDAP Base-DN</i>	LDAP root directory		
<i>LDAP object class</i>	LDAP object class		
<i>LDAP search filter</i>	Search filters are used to define additional search criteria to narrow down the search requests. Entered search filters overwrite the configuration of the LDAP object class.		
<i>Follow LDAP referrals</i>	In a distributed directory structure the search for objects is extended to the referenced LDAP servers.		<i>Deactivated</i>
<i>First name</i>			<i>DEFAULT-MAPPING</i>
<i>Middle Names</i>			<i>DEFAULT-MAPPING</i>
<i>Last name</i>		<i>DEFAULT-MAPPING</i>	
<i>Home address - Street</i>		<i>DEFAULT-MAPPING</i>	
<i>Home address - Postal code</i>		<i>DEFAULT-MAPPING</i>	
<i>Home address - City</i>		<i>DEFAULT-MAPPING</i>	

Specific properties	Description	Default setting Settings
<i>Home address - State</i>		DEFAULT-MAPPING
<i>Home address - Country</i>		DEFAULT-MAPPING
<i>Business address - Street</i>		DEFAULT-MAPPING
<i>Business address - Postal code</i>		DEFAULT-MAPPING
<i>Business address - City</i>		DEFAULT-MAPPING
<i>Business address - State</i>		DEFAULT-MAPPING
<i>Business address - Country</i>		DEFAULT-MAPPING
<i>Business call number</i>		DEFAULT-MAPPING
<i>Business fax number</i>		DEFAULT-MAPPING
<i>Private call number</i>		DEFAULT-MAPPING
<i>Private fax number</i>		DEFAULT-MAPPING
<i>Mobile number</i>		DEFAULT-MAPPING
<i>Pager number</i>		DEFAULT-MAPPING
<i>Main number</i>		DEFAULT-MAPPING
<i>Alias</i>		DEFAULT-MAPPING
<i>Company</i>		DEFAULT-MAPPING
<i>Job title</i>		DEFAULT-MAPPING
<i>E-mail</i>		DEFAULT-MAPPING
<i>E-mail</i>		DEFAULT-MAPPING
<i>E-mail</i>		DEFAULT-MAPPING
<i>Web page</i>		DEFAULT-MAPPING
<i>Manager's name</i>		DEFAULT-MAPPING
<i>Assistant's name</i>		DEFAULT-MAPPING
<i>Department</i>		DEFAULT-MAPPING
<i>User-defined 1</i>		DEFAULT-MAPPING
<i>User-defined 2</i>		DEFAULT-MAPPING
<i>User-defined 3</i>		DEFAULT-MAPPING
<i>User-defined 4</i>		DEFAULT-MAPPING
<i>User-defined 5</i>		DEFAULT-MAPPING
<i>Notes</i>		DEFAULT-MAPPING
<i>Number of call number digits</i>	Number of call number digits from the back which are used to compare with the entries in the directory	7

In the default setting the attributes listed in [Tab. 51, page 68](#) are used for the *DEFAULT-MAPPING*. Depending on the object class selected, the attributes of the subordinate object class are used.

Tab. 51 Default allocation of LDAP attributes

Specific properties	Attribute	Object class
First name	givenName	organizationalPerson / contact / user / inetOrgPerson
Middle Names	middleName	user / inetOrgPerson
Last name	sn	person / organizationalPerson / contact / user / inetOrgPerson
Home address - Street		
Home address - Postal code		
Home address - City		
Home address - State		
Home address - Country		
Business address - Street	streetAddress	organizationalPerson / contact / user / inetOrgPerson
Business address - Postal code	postalCode	organizationalPerson / contact / user / inetOrgPerson
Business address - City	l	organizationalPerson / contact / user / inetOrgPerson
Business address - State	st	organizationalPerson / contact / user / inetOrgPerson
Business address - Country	c	organizationalPerson / contact / user / inetOrgPerson
Business call number	telephoneNumber	person / organizationalPerson / contact / user / inetOrgPerson
Business fax number	facsimileTelephoneNumber	organizationalPerson / contact / user / inetOrgPerson
Private call number	homePhone	user / inetOrgPerson
Private fax number		
Mobile number	mobile	organizationalPerson / contact / user / inetOrgPerson
Pager number	pager	user / inetOrgPerson
Main number		
Alias	displayName	person / organizationalPerson / contact / user / inetOrgPerson
Company	company	organizationalPerson / contact / user / inetOrgPerson
Job title	title	organizationalPerson / contact / user / inetOrgPerson
E-mail	mail	organizationalPerson / contact / user / inetOrgPerson
E-mail	mail	organizationalPerson / contact / user / inetOrgPerson

Specific properties	Attribute	Object class
<i>E-mail</i>	<i>mail</i>	<i>organizationalPerson / contact / user / inetOrgPerson</i>
<i>Web page</i>	<i>wwwHomePage</i>	<i>user</i>
<i>Manager's name</i>	<i>manager</i>	<i>inetOrgPerson</i>
<i>Assistant's name</i>		
<i>Department</i>	<i>department</i>	<i>organizationalPerson / contact / user / inetOrgPerson</i>
<i>User-defined 1</i>		
<i>User-defined 2</i>		
<i>User-defined 3</i>		
<i>User-defined 4</i>		
<i>User-defined 5</i>		
<i>Notes</i>	<i>notes</i>	<i>contact</i>

License Manager

License Manager (internal OIP service) is responsible for managing the licences.

Tab. 52 License Manager Specific Properties

Specific properties	Description	Default setting Settings
<i>Licences log file</i>	Directory in which the log file for the licences registered in the system are stored. The basic directory is the OIP installation directory.	.logs/license.txt

License Service

License Service is responsible for the access to licences.

Line Service

Line Service is responsible for managing key telephone features.

Tab. 53 Line Service Specific Properties

Specific properties	Description	Default setting Settings
<i>Automatic parking of private calls</i>	If during the call on the private line a call is answered on the line key, the private call is parked.	<i>Activated</i>
<i>Synchronization interval</i>	Interval (in minutes) in which the line key configuration is synchronized with the communication server.	10

Tab. 54 Line Service Access rights

Access right	admin	group admin	super user	user	guest	none
Create line key	X					
Clear line key	X					
Configure CDE	X					
Bar phone configuration	X					
Configure outgoing barring	X					
Configure terminating line	X					
Configure ring settings for line key	X			X		
Configure incoming / outgoing seizure	X			X		
Configure priority	X			X		
Configure call list	X			X		

Load Balancing Service

Load Balancing Service (internal OIP service) is responsible for the load distribution within the OIP Server Networks.

Location Manager

Location Manager (internal OIP service) is responsible for managing the cordless phone localisation.

Tab. 55 Location Manager Specific Properties

Specific properties	Description	Default setting Settings
<i>Number of parallel search requests</i>	Number of parallel requests for locating DECT handsets	10
<i>Storage time</i>	Time during which the requests for locating cordless phones are buffered	10s 1s – every second 1m - each minute

Location Service

The Location Service is used to locate cordless phones on the covered premises.

Log Service

Log Service is responsible for the central management and recording of the log files.

Tab. 56 Log Service Specific Properties

Specific properties	Description	Default setting Settings
<i>Days, log entries</i>	Number of days during which the log entries are stored in the database	10 0 – Database entries are not deleted
<i>Exception output destination</i>	Output destination for the exception log entries.	<i>Database / Screen / File / System</i>
<i>Output destination, error</i>	Output destination for the error log entries.	<i>Database / File</i>
<i>Output destination, warning</i>	Output destination for the warning log entries.	<i>Database / File</i>
<i>Output destination, security</i>	Output destination for the security log entries.	<i>Database / File</i>
<i>Output destination, information</i>	Output destination for the information log entries.	<i>File</i>
<i>Output destination, debug</i>	Output destination for the debug log entries.	<i>File</i>
<i>Log details</i>	Level of detail for the log entries	<i>All</i>
<i>Log file size</i>	Maximum size of the log files (in bytes).	10000000 min. 1025
<i>Log files, days</i>	Number of days during which the log files are stored in the file system	5
<i>Log Memory</i>	Interval (in seconds) in which the status of the used and allocated memory is written in the log file.	0 0 - deactivated >1 - activated

The log entries are erased from the OIP database at the time listed in [Tab. 89, page 90](#) , see also "Reorganize OIP database", page 90.

Login Service

Login Service is responsible for managing the login to the OIP server.

Tab. 57 Login Service Specific Properties

Specific properties	Description	Default setting Settings
<i>Automatic login</i>	Enables or disables automatic login to the OIP server.	<i>Activated</i>

Media Manager

Media Manager (internal OIP service) is responsible for managing the OIP Media Driver.

Tab. 58 Media Manager Specific Properties

Specific properties	Description	Default setting/ Settings
<p><i>Server address</i></p> <p><Address>:60901@CAPI#<n></p>	<p>DNS name or IP address of the server on which the EIB Service driver is installed.</p> <p><Address>: DNS name or IP address <n>=ISDN interface No.) The installed ISDN interfaces are displayed. Depending on which communication server the ISDN interfaces are connected, the PBX ID has to be specified. In the OIP Configuration Manager each communication server ID can be determined via the menu item communication server network.</p>	<p><PBX ID></p>

Message Manager

Message Manager (internal OIP service) is responsible for managing messages.

Tab. 59 Message Manager Specific Properties

Specific properties	Description	Default setting/ Settings
<p><i>Save messages in database</i></p>	<p>Number of days during which the messages are stored in the database</p>	<p>10 0 – Database entries are not deleted</p>
<p><i>Create journal entry</i></p>	<p>A journal entry is created for each message received and sent.</p>	<p><i>Activated</i></p>
<p><i>OIPExchange Driver Address</i></p>	<p>DNS name or IP address of the OIP Exchange driver.</p>	
<p><i>Heartbeat OIP Exchange driver</i></p>	<p>Heartbeat interval (in minutes) between the OIP server and the driver for the Microsoft Exchange server.</p>	<p>1</p>
<p><i>E-mail sender address</i></p>	<p>Standard e-mail sender address used when sending e-mails. If you do not specify the domain (<sender> instead of <sender>@<domain.xxx>), the domain from the settings in the SMTP Driver or the e-mail domain of the Microsoft Exchange Server is used.</p>	<p><i>OIP-noreply</i></p>
<p><i>Send messages to all</i></p>	<p>Messages which are sent to all the users of the communication server are sent to all users in the communication server network which are connected to the OIP server.</p>	<p><i>Activated</i></p>

The message entries are erased from the OIP database at the time listed in [Tab. 89, page 90](#) , see also "Reorganize OIP database", [page 90](#).

Message Service

Message Service is responsible for sending and receiving messages.

Naming Service

The Naming Service (internal OIP service) is responsible for the global management of services in OIP server network systems.

Tab. 60 Naming Service Specific Properties

Specific properties	Description	Default setting Settings
<i>Time to live</i>	Time to live, number of hops	128
<i>Multicast host IP address</i>	Multicast host IP address	234.5.6.7
<i>Multicast IP port</i>	Multicast IP port	9001
<i>Heartbeat interval</i>	Heartbeat interval (in milliseconds) with the clients.	300000
<i>Garbage Collection</i>	Clears the main memory	<i>Activated</i>

Notepad Service

Notepad Service is responsible for managing the note entries and redial lists.

Tab. 61 Notepad Service Specific Properties

Specific properties	Description	Default setting Settings
<i>Number of note entries</i>	Number of note entries	20
<i>Delete duplicated note entries</i>	Deletes duplicated note entries.	<i>Activated</i>
<i>Number of redial entries</i>	Number of entries on the redial list.	20
<i>Delete duplicated redial entries</i>	Deletes duplicated entries on the redial list.	<i>Activated</i>

Notification Manager

Notification Manager (internal OIP service) is responsible for managing the notifications.

Notification Service

Notification Service is responsible for accessing and distributing the notifications.

ODBC/JDBC Directory Service

The ODBC/JDBC Directory Service is responsible for managing connected ODBC or JDBC directories.

Tab. 62 ODBC/JDBC Directory Service Specific Properties

Specific properties	Description	Default setting Settings
<i>Phone book server address</i>	DNS name or IP address of the server on which the OIP ODBC/JDBC Driver is installed.	
<i>Number of call numbers</i>	Number of call number digits from the back which are used to compare with the entries in the directory	0
<i>Alias name order</i>	Format of the alias name	<i>Last name - First name</i>
<i>Use generated default alias</i>	Generates a default alias (display name) for each contact defined in the ContactNameOrder setting.	<i>Activated</i>
<i>Data source</i>	Displays the source of the data	

Operator Service

Operator Service is responsible for managing the operator queue.

Tab. 63 Operator Service Specific Properties

Specific properties	Description	Default setting Settings
<i>Automatic parking of private calls</i>	If an operator call is answered during a call on the private line, the private call is parked if this feature is activated.	<i>Activated</i>

PBX Driver Ascotel

PBX Driver Ascotel (internal OIP service) is the interface adapter used for accessing the communication server.

Tab. 64 PBX Driver Ascotel Specific Properties

Specific properties	Description	Default setting Settings
<i>IP port</i>	IP port	1061
<i>PBX authentication level</i>	Authorization level with which the OIP server communicates with the communication server. This setting is required for the communication server generation Aastra IntelliGate® I6.1, I6.2 and I6.5 only.	<i>Attendant</i>
<i>OIP Name server</i>	The OIP Name Server is activated	<i>Activated</i>
<i>Display Server</i>	Activates the ATAS messaging/alarms interface on the OIP server.	<i>Activated</i>
<i>Ascotel OIP Information Link</i>	The Ascotel-OIP Information Link is activated on the OIP server.	<i>Activated</i>

Specific properties	Description	Default setting Settings
<i>Number of parallel search requests</i>	Number of parallel requests for locating cordless phones	10
<i>Storage time</i>	Time during which the requests for locating cordless phones are buffered	10s 1s – every second 1m – each minute
<i>Maximun search entries</i>	Maximun number of search entries which are displayed in dialling by name	30
<i>Maximum name length</i>	Maximum name length for the entries.	20
<i>Business number extension</i>	Extension added to the name of the business call number.	<i>BUS</i>
<i>Business fax number extension</i>	Extension added to the name of the business fax call number.	<i>NOTUSED</i>
<i>Private number extension</i>	Extension added to the name of the private call number.	<i>PRIV</i>
<i>Private fax number extension</i>	Extension added to the name of the private fax call number.	<i>NOTUSED</i>
<i>Mobile number extension</i>	Extension added to the name of the mobile call number.	<i>GSM</i>
<i>Pager extension</i>	Extension added to the name of the pager number.	<i>NOTUSED</i>
<i>Main phone extension</i>	Extension added to the name of the main phone number.	<i>NOTUSED</i>
<i>Extension VoIP number</i>	Extension added to the name of the VoIP number.	<i>NOTUSED</i>
<i>Extension PBX internal number</i>	Extension added to the name of the communication server internal number.	<i>NOTUSED</i>
<i>List standard call number</i>	Lists only the main phone number.	<i>Deactivated</i>
<i>Display extension</i>	The extension appended to the call number name is displayed only if several call numbers are assigned to the entry (deactivated).	<i>Deactivated</i>
<i>Ignored journal entries</i>	All journal entries beginning with the configured prefix are deleted from the journal. Example: If '*06' is configured, the following journal entries are deleted: *061234*216789#. Multiple entries must be separated by ";".	<i>*33;#33;*47;#36;#46;*06</i>

Only the standard call number is synchronized in the standard setting. If all the call numbers of a contact are to be synchronized, you need to deactivate the *Synchronize standard call number* setting. A name extension for the various call number types should also be configured so that all the numbers do not appear under one name in the communication server's private phone book. For example enter the setting *_B* under *Synchronize business call number* for the business call number.

Make sure the name extension you choose is not too long as the length of names is limited in the communication server. If a call number type is not to be synchronized, enter the setting *NOSYNC*.

PBX Driver OpenCom 1000

PBX Driver OpenCom 1000 (internal OIP service) is the interface adapter used for accessing the communication server.

Tab. 65 PBX Driver OpenCom 1000 Specific Properties

Specific properties	Description	Default setting Settings
<i>OIP Name server</i>	The OIP Name Server is activated	<i>Activated</i>
<i>OIP Name server: Display business number</i>	When dialling by name on the system phone over the OIP Name Server the business number is displayed in the search list.	<i>Activated</i>
<i>OIP Name server: Business Fax number</i>	When dialling by name on the system phone over the OIP Name Server the business fax number is displayed in the search list.	<i>Deactivated</i>
<i>OIP Name server: Display company number</i>	When dialling by name on the system phone over the OIP Name Server the company number is displayed in the search list.	<i>Deactivated</i>
<i>OIP Name server: Display home number</i>	When dialling by name on the system phone over the OIP Name Server the private number is displayed in the search list.	<i>Activated</i>
<i>OIP Name server: Display home fax number</i>	When dialling by name on the system phone over the OIP Name Server the private fax number is displayed in the search list.	<i>Deactivated</i>
<i>OIP Name server: Display mobile number</i>	When dialling by name on the system phone over the OIP Name Server the mobile number is displayed in the search list.	<i>Activated</i>
<i>OIPName server: Display Pager number</i>	When dialling by name on the system phone over the OIP Name Server the Pager number is displayed in the search list.	<i>Deactivated</i>
<i>OIP Name server: Display VoIP number</i>	When dialling by name on the system phone over the OIP Name Server the VoIP number is displayed in the search list.	<i>Deactivated</i>
<i>OIPName server: Display PBX internal number</i>	When dialling by name on the system phone over the OIP Name Server the PBX internal number is displayed in the search list.	<i>Deactivated</i>
<i>Automatic trigger without busy tone</i>	Automatically clears down a connection without busy tone (call party hangs up).	<i>Deactivated</i>

Specific properties	Description	Default setting Settings
<i>Pause direct call transfer</i>	Pause (in milliseconds) which is waited during the blind transfer until the call is switched through.	0
<i>Display operator as key telephone</i>	The PC operator consoles and phones are displayed as key telephones.	<i>Activated</i>
<i>Ignored journal entries</i>	All journal entries beginning with the configured prefix are deleted from the journal. Example: If '*06' is configured, the following journal entries are deleted: '*061234*216789#!'. Multiple entries must be separated by ";".	*33;#33;*47;#36;#46;*06
<i>ACD queue number PBX ID</i> <PBX-ID>	The ACD queue is mapped to a user group in the OpenCom. The ACD queue number is equal the user group number.	
<i>Virtual ACD queue numbers PBX-ID</i> <PBX ID>	The virtual ACD queue numbers are users which are member of the ACD queue (ACD user group). The number of the parallel ACD queue calls depend on the number of ACD queue users. The virtual ACD queue numbers are configured as software users on the OpenCom.	
<i>Skill DDI's PBX-ID</i> <PBX-ID>	The Skill DDI's are these DDI's on which the OIP Call Centre skills are reachable. The Skill DDI's are configured as software users on the OpenCom.	
<i>Skill DDI Name PBX ID</i> <PBX ID>	The Skill DDI names are the names to the appropriate Skill DDI's. They must be entered in the order of the Skill DDI's.	

PBX Information Service

PBX Information Service provides information about the connected communication servers, e.g. the communication server name, users.

PBX Manager

PBX Manager (internal OIP service) is responsible for managing of the communication servers connected to the OIP server

Tab. 66 PBX Manager Specific Properties

Specific properties	Description	Default setting Settings
<i>Synchronization interval</i>	Synchronisation interval with the communication server (in minutes).	15
<i>Minimum length external numbers</i>	All phone numbers which are equal or longer as the configured length will be dialled as external number from the application (e.g. OfficeSuite), i.e. the external access code will be added automatically. The setting '0' deactivates this function.	5

PBX Setup Manager

PBX Setup Manager (internal OIP service) is responsible for the configuration of the communication servers connected to the OIP server.

PBX Setup Service

PBX Setup Service is responsible for managing the communication server configuration.

Tab. 67 PBX Setup Service / PBX Setup Manager Access rights

Access right	admin	group admin	super user	user	guest	none
Administer communication server date and time settings	X		X			
Administer time synchronization settings	X					
Execute time synchronization	X					

PISN Directory Service

PISN Directory Service (internal OIP service) is responsible for managing the PISN users.

Tab. 68 PISN Directory Service Specific Properties

Specific properties	Description	Default setting Settings
<i>Synchronization interval</i>	Synchronisation interval with the communication server (in minutes).	30 0 – No synchronization
<i>Name order</i>	Format of the name entries in the communication server's PISN users directory.	<i>First name - Last name</i>
<i>Number of call number digits</i>	Number of call number digits from the back which are used to compare with the entries in the directory	7

PUM Manager

PUM Manager (internal OIP service) is responsible for managing the Personal User Mobility function.

PUM Service

PUM Service is responsible for access to the Personal User Mobility data and configuration.

Tab. 69 PUM Service Access rights

Access right	admin	group admin	super user	user	guest	none
Create a PUM workstation	X					
Delete a PUM workstation	X					
Modify PUM workstation settings	X					
Create PUM users	X					
Delete PUM users	X					
Modify PUM users settings	X					

Private Card Directory Service

The Private Card Directory Service (internal OIP service) is responsible for the central management of the communication server private phone book.

Tab. 70 Private Card Directory Service Specific Properties

Specific properties	Description	Default setting Settings
<i>Synchronization interval</i>	Synchronization interval (in minutes) in which the private communication server phone books are cached in the OIP database.	30 0 – No synchronization
<i>Name order</i>	Format of the name entries in the private communication server phone books	<i>First name - Last name</i>
<i>Number of call number digits</i>	Number of call number digits from the back which are used to compare with the entries in the directory	7

Private Directory Service

Private Directory Service (internal OIP service) is responsible for managing the private contacts.

The settings for synchronization with the private phone books of the communication servers on the one hand and the private contacts in the OIP database or the private Outlook address books on the Microsoft Exchange Server on the other can be made here.

Tab. 71 Private Directory Service Specific Properties

Specific properties	Description	Default setting Settings
<i>OIP Exchange driver address</i>	DNS name or IP address of the OIP Exchange driver.	
<i>Heartbeat OIP Exchange driver</i>	Heartbeat interval (in minutes) between the OIP server and the driver for the Microsoft Exchange server.	1
<i>Synchronization start delay</i>	Start time (in minutes) after which the first synchronization begins after a restart of the OIP server.	5
<i>PBX synchronization</i>	Synchronises private OIP directories with private communication server phone-books. The OIP directories are the master directories.	<i>OIP Master</i>
<i>Synchronization interval</i>	Interval in which the private OIP directories are synchronized with the private communication server phone books. If a Microsoft Exchange Server is connected the personal Outlook address books are also synchronized with the private OIP directories.	1d 1m - each minute 1h - each hour 1d - each day

Specific properties	Description	Default setting Settings
<i>Synchronization time</i>	Time at which the private OIP directories are synchronized with the private communication server phone books if the synchronization interval is set to daily. If a Microsoft Exchange Server is connected the personal Outlook address books are also synchronized with the private OIP directories.	01:30
<i>Delete entries in external directories</i>	Deleting entries in the communication server's private phone book also deletes the entries in the OIP database or in the private Outlook address book (depending on the connection).	<i>Deactivated</i>
<i>Name order</i>	Format of the name entries in the private directories.	<i>Last name - First name</i>
<i>Number of call number digits</i>	Number of call number digits from the back which are used to compare with the entries in the directory	7

Public Directory Service

Public Directory Service (internal OIP service) is responsible for managing the public contacts.

The settings for synchronization with the abbreviated dialling list of the communication servers on the one hand and the public contacts in the OIP database or the public contacts folder on the Microsoft Exchange Server on the other can be made here.

Tab. 72 Public Directory Service Specific Properties

Specific properties	Description	Default setting Settings
<i>OIPExchange Driver Address</i>	DNS name or IP address of the OIP Exchange driver.	
<i>Standard public contact folder</i>	Public contact folder on the Microsoft Exchange Server in which new contacts are stored if they are not entered in Microsoft Outlook.	
<i>Heartbeat OIP Exchange driver</i>	Heartbeat interval (in minutes) between the OIP server and the driver for the Microsoft Exchange server.	1

Specific properties	Description	Default setting Settings
<i>Synchronization, business call number</i>	Extension added to the name of the business call number during synchronization with the communication server abbreviated dialling list.	
<i>Synchronization, business fax number</i>	Extension added to the name of the business fax number during synchronization with the communication server abbreviated dialling list.	<i>NOSYNC</i>
<i>Synchronization, private call number</i>	Extension added to the name of the private call number during synchronization with the communication server abbreviated dialling list.	<i>NOSYNC</i>
<i>Synchronization, private fax number</i>	Extension added to the name of the private fax number during synchronization with the communication server abbreviated dialling list.	<i>NOSYNC</i>
<i>Synchronization, mobile number</i>	Extension added to the name of the Mobile number during synchronization with the communication server abbreviated dialling list.	<i>NOSYNC</i>
<i>Synchronization, pager</i>	Extension added to the name of the Pager number during synchronization with the communication server abbreviated dialling list.	<i>NOSYNC</i>
<i>Synchronization, main phone</i>	Extension added to the name of the main phone number during synchronization with the communication server private card file.	<i>NOSYNC</i>
<i>Standard phone number</i>	Call number type set as standard when searching in the Call Manager for example.	<i>Business</i>
<i>Synchronize standard call number</i>	Setting that specifies that only the main phone number is synchronized.	<i>Activated</i>
<i>Maximum name length</i>	Maximum name length of the abbreviated dialling entries in the communication server.	17
<i>Synchronization start delay</i>	Start time (in minutes) after which the first synchronization begins after a restart of the OIP server.	10
<i>PBX synchronization</i>	Setting for synchronizing the public OIP directory with the communication server abbreviated dialling list.	<i>Activated</i>
<i>Synchronization interval</i>	Interval in which the public OIP directory is synchronized with the communication server abbreviated dialling list. If a Microsoft Exchange Server is connected to the configured public contact folders are also synchronized with the public OIP directory.	1d 1m - each minute 1h - each hour 1d - each day

Specific properties	Description	Default setting Settings
<i>Synchronization time</i>	Time at which the public OIP directory is synchronized with the communication server abbreviated dialling list if the synchronization interval is set to daily. If a Microsoft Exchange Server is connected the configured public contact folders are also synchronized with the public OIP directory.	01:30
<i>Delete entries in external directories</i>	Deleting entries in the communication server's abbreviated dialling list also deletes the entries in the OIP database or in the public contacts folder on the Microsoft Exchange server (depending on the connection).	<i>Deactivated</i>
<i>Synchronizing public contact folders</i>	List of public contact folders on the Microsoft Exchange Server which are to be synchronized with the public OIP directory.	
<i>Name order</i>	Format of the name entries in the public directories.	<i>Last name - First name</i>
<i>Number of call number digits</i>	Number of call number digits from the back which are used to compare with the entries in the directory	7
<i>Display extension</i>	The extension appended to the call number name is displayed only if several call numbers are assigned to the entry (deactivated).	<i>Deactivated</i>

Only the standard call number is synchronized in the standard setting. If all the call numbers of a contact are to be synchronized, you need to deactivate the *Synchronize standard call number* setting. A name extension for the various call number types should also be configured so that all the numbers do not appear under one name in the communication server's private phone book. For example enter the setting *_B* under *Synchronize business call number* for the business call number. Make sure the name extension you choose is not too long as the length of names is limited in the communication server. If a call number type is not to be synchronized, enter the setting *NOSYNC*.

RSS Driver

The RSS Driver (internal OIP service) is the interface adapter used for accessing the RSS Feeds.

Registration Manager

Registration Manager (internal OIP service) is responsible for managing the registered applications.

Tab. 73 License Manager Specific Properties

Specific properties	Description	Default setting Settings
<i>Registered applications log file</i>	Directory in which the log file with the applications registered on the OIP server is stored. The basic directory is the OIP installation directory.	.logs/registration.txt

Registration Service

Registration Service is responsible for registering applications.

Routing Manager

The Routing Manager (internal OIP service) is responsible for managing the call distribution in the communication server.

Routing Service

The Routing Service is responsible for accessing the call distribution in the communication server.

SMTP Driver

The SMTP Driver (internal OIP service) is the interface adapter for sending e-mails and text messages (e-mail to text message).

The settings for connecting to the external e-mail server are made here.

Tab. 74 SMTP Driver Specific Properties

Specific properties	Description	Default setting Settings
<i>SMTP server address</i>	DNS name or IP address of the SMTP mail server	25
<i>IP port</i>	IP port of the SMTP mail server	
<i>User name</i>	User name for authentication on the SMTP mail server	
<i>Password</i>	Password for authentication on the SMTP mail server	
<i>SMS server address</i>	DNS name or IP address of the alternative SMS mail server, if not identical to the SMTP mail server.	
<i>SMS Server IP Port</i>	IP port of the alternative SMS mail server	
<i>SMS Gateway Address</i>	SMS gateway address appended to the mobile call number to create the e-mail address (...@example.com).	

Security Service

The Security Service (internal OIP service) provides the encryption and decryption algorithms of security-relevant data for OIP Services.

Server Utility Service

Server Utility Service (internal OIP service) provides internal tools for OIP Services.

Service Manager

Service Manager (internal OIP service) is responsible for the local management of the Services on the OIP server.

Tab. 75 Service Manager Specific Properties

Specific properties	Description	Default setting Settings
<i>Maximum memory</i>	Maximum memory (in megabytes) allocated to the OIP client to run the OIP Toolbox.	128m

Shortdial Directory Service

Shortdial Directory Service (internal OIP service) is responsible for managing the communication server Abbreviated dialling.

The setting for the range of the common communication server abbreviated dialling in the Aastra 400 and Aastra IntelliGate® network can be made here.

Tab. 76 Shortdial Directory Service Specific Properties

Specific properties	Description	Default setting Settings
<i>Synchronization interval</i>	Synchronization interval (in minutes) in which the communication server abbreviated dialling list is cached in the OIP database.	30 0 – No synchronization
<i>Synchronization range</i>	Range of shared abbreviated dialling numbers in the communication server	7000-7999
<i>Name order</i>	Format of the name entries in the communication server's abbreviated dialling directory.	<i>Last name - First name</i>
<i>Number of call number digits</i>	Number of call number digits from the back which are used to compare with the entries in the directory	7
<i>Call number displayed in the case of dialling by name</i>	This setting lets you specify whether the abbreviated dialling number or the call number is displayed during a name search using dialling by name in the public PBX phone book.	<i>Abbreviated dialling No.(default value), call number.</i>

Subscriber Directory Service

Subscriber Directory Service (internal OIP service) is responsible for managing the PBX user.

Tab. 77 Subscriber Directory Service Specific Properties

Specific properties	Description	Default setting Settings
<i>Name order</i>	Format of the name entries in the PBX's user directory.	<i>First name - Last name</i>
<i>Number of call number digits</i>	Number of call number digits from the back which are used to compare with the entries in the directory	7

Subscriber Configuration Manager

Subscriber Configuration Manager (internal OIP service) is responsible for managing the user settings.

Subscriber Configuration Service

Subscriber Configuration Service is responsible for user and terminal settings.

System User Directory Service

System User Directory Service (internal OIP service) is responsible for managing all the registered users on the OIP server.

Tab. 78 System User Directory Service Specific Properties

Specific properties	Description	Default setting Settings
<i>Name order</i>	Format of the name entries in the OIP user directory.	<i>First name - Last name</i>
<i>Number of call number digits</i>	Number of call number digits from the back which are used to compare with the entries in the directory	7

TTS Manager

The TTS Manager (internal OIP service) is responsible for managing the TTS (Text-To-Speech) resources, synthesizing the speech files and providing the wav-files.

Tab. 79 TTS Manager Specific Properties

Specific properties	Description	Default setting Settings
<i>Default speaker</i>	The default speaker is used if no other speaker was found.	
<i>Installed speech packets</i>	List of installed speech packets.	

Test Manager

The Test Manager (internal OIP service) is responsible for the execution of OIP/PBX test orders.

Tab. 80 Test Manager Specific Properties

Specific properties	Description	Default setting Settings
<i>Save test results in database</i>	Number of days the test results are stored in the database.	10 0 – Database entries are not deleted

Test Service

The Test Service is responsible for managing the OIP/ PBX test orders.

Tab. 81 Test Service Specific Properties

Specific properties	Description	Default setting Settings
<i>dummy</i>		

Ticket Service

Ticket Service is responsible for managing the call tickets.

Tab. 82 Ticket Service Specific Properties

Specific properties	Description	Default setting Settings
<i>Save tickets in database</i>	Number of days during which the call tickets are stored in the database	10 0 – Database entries are not deleted

The call tickets are erased from the OIP database at the time listed in [Tab. 89, page 90](#), see also "[Reorganize OIP database](#)", [page 90](#).

Time Service

Time Service (internal OIP service) is responsible for managing time synchronization.

Tab. 83 Time Service Specific Properties

Specific properties	Description	Default setting Settings
<i>Time synchronization</i>	Activate or deactivate the time synchronization between the communication server and OIP server.	<i>Deactivated</i>
<i>Synchronization interval</i>	Interval (in hours) in which the time synchronization is carried out.	24 1 to 24
<i>Time synchronization from the OIP server</i>	Activate or deactivate whether the OIP server is linked to the time synchronization.	<i>Deactivated</i>
<i>Synchronization command</i>	Command for the time synchronization on the OIP server.	<i>date dd.mm.yyyy; time hh:mm:ss</i>

If no communication server settings are configured in the communication server as time master, the OIP server is automatically activated as time master.

TwixTel Directory Service

The TwixTel Directory Service (internal OIP service) is responsible for managing the external phone-book directories TwixTel.

Tab. 84 TwixTel Directory Service Specific Properties

Specific properties	Description	Default setting Settings
<i>Phonebook server address</i>	DNS name or IP address of the server on which the external phone-book directories are installed.	
<i>Number of call number digits</i>	Number of call number digits from the back which are used to compare with the entries in the directory	0
<i>Alias name order</i>	Format of the alias	<i>Last name - First name</i>
<i>Use generated default alias</i>	Generates a default alias (display name) for each contact defined in the ContactNameOrder setting.	<i>Activated</i>
<i>Data source</i>	Displays the version of DasTelefonbuch Deutschland used.	

User Preferences Service

User Preferences Service is responsible for managing the user customized settings.

User Profile Manager

User Profile Manager (internal OIP service) is responsible for global OIP user management.

Tab. 85 User Profile Manager Specific Properties

Specific properties	Description	Default setting Settings
<i>Datasourceusername</i>	The user name data source can be configured. Corresponding to the setting the user name will be adapted in the OIP and PBX user directory.	<i>Active Directory / OIP users directory / PBX users directory</i>

User Profile Service

User Profile Service is responsible for the access to OIP users.

User Service

User Service is responsible for controlling and monitoring applications.

Tab. 86 User Service Specific Properties

Specific properties	Description	Default setting Settings
<i>Heartbeat interval</i>	Heartbeat interval (in milliseconds) between OIP and application.	60000

Voice Mail Manager

Voice Mail Manager (internal OIP service) is responsible for managing the voice mails.

Tab. 87 Voice Mail Manager Specific Properties

Specific properties	Description	Default setting Settings
<i>Save voice mails</i>	Number of days the voice mails are stored	10
<i>Voice mail file type</i>	Type (wav or mp3) of the voice mail file.	
<i>Bit rate for mp3 voice mail file</i>	Bit rate for mp3 voice mail file	
<i>Voice mail number of the PBX<PBX ID></i>	Voice mail number in the communication server	

Voice Mail Service

Voice Mail Service is responsible for managing the mailboxes.

WEB Server Service

WEB Server Service (internal OIP service) is responsible for managing the Tomcat Web Server.

The web server port can be changed here if the OIP server is started in console mode. If the port is changed, remember that the OIP server has to be restarted and all the OIP Clients re-installed or re-configured.

Tab. 88 WEB Server Service Specific Properties

Specific properties	Description	Default setting Settings
<i>IP port</i>	IP port of the OIP Web server.	<defined during installation>
<i>Root directory</i>	Root directory of the OIP web server.	<i>axp</i>

3.5 OIP tasks

Contents:

- OIP backup – [page 91](#)
- Create export data – [page 91](#)
- OIP backup – [page 91](#)

3.5.1 Reorganize OIP database

The OIP server reorganizes the database at set times. Depending on the configuration in the corresponding OIP services the older entries are then deleted. [Tab. 89, page 90](#) lists the times at which the database reorganization of the individual OIP services takes place.

Tab. 89 OIP database reorganization times

Database entries	OIP Service	Time
<i>ACD statistics</i>	<i>ACD Log Manager</i>	02:17:00
<i>Alarms</i>	<i>Alarm Driver</i>	00:55:00
<i>Calendar entries</i>	<i>Calendar Manager</i>	01:00:00
<i>Call data</i>	<i>Call Logging Manager</i>	01:15:00
<i>Actions entries</i>	<i>I/O Manager</i>	01:17:00
<i>Journal entries</i>	<i>Journal Manager</i>	01:55:00
<i>OIP Log data</i>	<i>Log Service</i>	00:50:00
<i>Message entries</i>	<i>Message Manager</i>	00:35:00
<i>Call tickets</i>	<i>Ticket Service</i>	01:09:00

3.5.2 Create export data

The export data is created or deleted at the times listed in [Tab. 90, page 91](#) if so configured in the OIP services.

Tab. 90 Export data create times

Export data	OIP Service	Time
<i>ACD statistics</i>	<i>ACD Log Manager</i>	Configurable in ACD Log Manager
<i>Call data</i>	<i>Call Logging Driver</i>	23:45:00
<i>I/O Data</i>	<i>I/O Manager</i>	01:00:00 if configured daily

3.5.3 OIP backup

The backup of the OIP database and OIP configuration file takes place at the times listed in [Tab. 91, page 91](#). See "OIP Configuration Backup", page 317.

Tab. 91 OIP Backup times

Backup files	Time
<i>axpconfig_####-mm-dd.xml</i>	00:30:00
<i>axpdb_####-mm-dd.sql</i>	00:30:00

3.6 Export data

Contents:

- OIP Call Centre Statistic Data – [page 91](#)
- Call data – [page 94](#)
- I/O Data – [page 97](#)

3.6.1 OIP Call Centre Statistic Data

The OIP Call Centre statistic data are stored into four files on the OIP server if so selected during the user-defined installation of the OIP server.

- Call Centre status data (*callcentre-@DATE-@TIME.txt*)
- Call Centre calls data (*acdcall-@DATE-@TIME.txt*)
- Agent states data (*agentstatus-@DATE-@TIME.txt*)
- Agent calls data (*agentcall-@DATE-@TIME.txt*)

In the standard settings a new file is written daily in the directory ...*aastra\oip\acd-log*. The files are created in .txt format. The file names contain time variables so that the time stamp is added each time a new file is created. With fixed file names no new file is created before the existing file is not deleted from the folder.

The OIP Call Centre statistics data can be made in the OIP service ACD Log Manager.

Call Centre status data

A snapshot of the Call Centre is mapped in the OIP Call Centre status data. The snapshot interval can be configured in the OIP Service ACD Log Manager.

Tab. 92 Designator for the Call Centre status data

Designator	Description
<i>CallCenterID</i>	Call Centre ID. The Call Centre ID can be set in the ACD Log Manager.
<i>LogID</i>	Unique Log ID
<i>SkillID</i>	Skill ID
<i>Date</i>	Date of the snapshot.
<i>Time</i>	Time of the snapshot.
<i>AgentsLoggedIn</i>	Number of agents logged on.
<i>AgentsReady</i>	Number of agents who are in the <i>Ready</i> state.
<i>AgentsRinging</i>	Number of agents who are in the <i>Ringing</i> state.
<i>AgentsConnected</i>	Number of agents who are in the <i>Connected</i> state.
<i>AgentsPause</i>	Number of agents who are in the <i>pause</i> state.
<i>AgentsWrapUp</i>	Number of agents who are in the <i>Wrap up</i> state.
<i>CallsWaiting</i>	Number of calls waiting in the ACD queue.

Call Centre calls data

In the Call Centre Calls Data each incoming call to the Call Centre is listed in the ACD Queue.

Tab. 93 Designator for the OIP Call Centre calls data

Designator	Description
<i>CallCenterID</i>	Call Centre ID. The Call Centre ID can be set in the ACD Log Manager.
<i>LogID</i>	Unique Log ID
<i>Date</i>	Date of the call to the Call Centre.
<i>RingTime</i>	Time at which the call in the ACD Queue is first signalled.
<i>ConnectTime</i>	Time at which the call in the ACD Queue was answered. If Courtesy is activated, the call is considered answered when Courtesy starts up.
<i>AgentRingTime</i>	Time at which the call is signalled to the first agent.
<i>AgentAnswerTime</i>	Time at which the call was answered by the agent.

Designator	Description
<i>DisconnectTime</i>	Time at which the call in the ACD Queue was completed.
<i>DDI</i>	DDI dialled by the caller.
<i>CLIP</i>	Caller CLIP.
<i>SkillID</i>	Skill ID of the called Skill.
<i>CallStateBeforeIdle</i>	Status of the call to the Call Centre before it switches to the <i>available</i> status. <i>0 - unknown / 1 - available / 2 - call to ACD queue / 3 - connected / 4 - on hold / 5 - call to agent</i>
<i>ExtWaitDuration</i>	Caller ringing time in (in seconds) before the Call Centre call was answered.
<i>ExtConvDuration</i>	Caller call duration (in seconds)

Agent States Data

The agent status data lists every change in agent status.

Tab. 94 Designator of the agent status data

Designator	Description
<i>CallCenterID</i>	Call Centre ID. The Call Centre ID can be set in the ACD Log Manager.
<i>LogID</i>	Unique Log ID
<i>UserID</i>	Unique OIP user ID of the agent.
<i>AgentCallLogID</i>	Reference to the Log ID in the agent call data.
<i>Date</i>	Date
<i>Time</i>	Time
<i>State</i>	Agent status after status change <i>0 - logged out / 1 - logged in / 2 - busy (Call Center or private call) / 3 - pause / 4 - wrap-up / 5 - unknown</i>
<i>WrapupCode</i>	Wrap-up code - 0 if no wrap-up code is defined.
<i>PauseCode</i>	Pause code - 0 if no pause code is defined.
<i>SkillID</i>	Skill ID assigned to the call.
<i>ReadyAgents</i>	Number of agents logged on and ready at the time of the agent status change.
<i>LoginState</i>	<i>0 - Agent logged on during status change / 1 - Agent was logged on during status change / 2 - Agent logged out during status change / 3 - Agent was logged out during status change</i>

Agent Calls Data

In the agent call data each incoming Call Centre call of the agents is listed.

Tab. 95 Designator of the agent call data

Designator	Description
<i>CallCenterID</i>	Call Centre ID. The Call Centre ID can be set in the ACD Log Manager.
<i>LogID</i>	Unique Log ID
<i>UserID</i>	Unique OIP user ID.
<i>AcdCallID</i>	Unique Call Centre Call ID.
<i>Date</i>	Date
<i>RingTime</i>	Ringling time of the call on the ACD Queue.
<i>AnswerTime</i>	Time at which the call was answered.
<i>DisconnectTime</i>	Time at which the call was completed.
<i>WrapupTime</i>	Time at which the wrap-up time was completed.
<i>WrapupCode</i>	Wrap-up code - 0 if no wrap-up code is defined.
<i>CallStateBeforeIdle</i>	Status of the call to the Call Centre with the agent before he switches to the <i>available</i> status. <i>0 - available / 1 - dialling tone / 2 - dialling / 3 - ringing phase / 4 - proceeding / 5 - busy / 6 - connected / 7 - hold / 8 - on hold / 9 - incoming call / 10 - call deleted / 11 - conference / 12 - callback / 13 - reminder call / 14 - incoming announcement / 15 - outgoing announcement / 16 - function successfully completed / 17 - park / 18 - intrusion / 19 - unknown</i>
<i>SkillID</i>	Skill ID assigned to the call.
<i>DDI</i>	DDI dialled by the caller.
<i>CLIP</i>	Caller CLIP.
<i>RingDuration</i>	Ringling time with the agent (in seconds)
<i>ConvDuration</i>	Duration of the Call Centre call (in seconds)
<i>WrapupDuration</i>	Duration of the wrap-up time of the Call Centre call (in seconds)

3. 6. 2 Call data

The call data is stored as a file on the OIP server if so selected during the user-defined installation of the OIP server.

In the standard settings a new file is written daily in the directory `...\\astra\oip\tax`. The files are created in .csv format. The file name is `taxdata-jjjj-mm-dd.tax`, with `<jjjj-mm-dd>` representing year-month-day.

The Call Logging settings can be made in the OIP service Call Logging Driver.

The [Tab. 96, page 95](#) lists the designators of the call data records. The column *Designator PC5 format* lists the relevant data fields of the PC5 format. More details on the PC5 format can be found in the *Aastra 400 and Aastra IntelliGate® System Manuals*.

Tab. 96 Designators of the call data records

Designator	Description	Designator PC5 Format
<i>ticketId</i>	Unique Ticket ID	
<i>serialId</i>	Serial ID While the serial number is unique for each communication server, it can be assigned several times within the communication server network. If the option <i>Update Journal Entry</i> is activated in the OIP Service Call Logging Driver in the OIP configuration, the CallID is added instead of the serial ID.	LAUFNR
<i>sequenceId</i>	Sequence ID While the sequence number is unique for each communication server, it can be assigned several times within the communication server network.	SEQNR
<i>pbxId</i>	PBX ID ID of the communication server on which the user is created. The ID is assigned during the installation of the OIP server or when other communication servers are added.	
<i>userId</i>	User ID ID of the user on the OIP server.	
<i>subscriber</i>	Call number	NR
<i>name</i>	User name	
<i>costCentre</i>	Cost centre number	KST
<i>direction</i>	Call direction <i>0 - unknown / 1 - incoming / 2 - outgoing</i>	SZ x
<i>destination</i>	Destination or source network / <i>0 - unknown / 1 - exchange / 2 - PISN</i>	SZ x
<i>type</i>	Network access type <i>0 - unknown / 1 - Network access, business, transferred / 2 - Network access, business, subscriber dialled / 3 - Incoming / 4 - Incoming to ACD destination / 5 - PISN transit / 6 - Network access with cost centre selection, transferred / 7 - Network access with cost centre selection, subscriber dialled / 8 - Network access, private, transferred / 9 - Network access, private, subscriber dialled</i>	SZ y
<i>handling</i>	Call Handling Incoming calls <i>0 - unknown / 1 - transferred / 2 - answered directly / 3 - unanswered / 4 - answered / 5 - transferred to network / 6 - data service call / 7 - rejected call</i> Call Handling Outgoing Calls <i>0 - unknown / 1 - normal call / 2 - transferred by CFU/CFNR/CD to network / 3 - transferred by internal user / 4 - data service call / 5 - booth call / 6 - room call</i>	SZ z
<i>startDate</i>	Date of start of connection	DATE
<i>startTime</i>	Time of start of connection	TIME
<i>timeToAnswer</i>	TTA time to answer	TTA

Designator	Description	Designator PCS Format
<i>duration</i>	Call duration	<i>DURATION</i>
<i>charge</i>	Call charges	<i>CHARGES</i>
<i>pulses</i>	Charge pulses	<i>CHIMP</i>
<i>pbx</i>	Home PBX ID	
<i>nodeld</i>	AIN node ID	
<i>board</i>	Home PBX network card no.	<i>EXCH</i>
<i>port</i>	Home PBX network interface no.	<i>EXCH</i>
<i>channelGroup</i>	Home PBX channel group no.	<i>EXCH</i>
<i>callerId1</i>	Caller identification 1	<i>ID1</i>
<i>callerId2</i>	Caller identification 2	<i>ID2</i>
<i>destination1</i>	Destination number 1	<i>Destination no.1</i>
<i>destination2</i>	Destination number 2	<i>Destination no.2</i>
<i>publicPbxId</i>	Gateway PBX ID ID of the communication server connected with the public exchange as a gateway.	
<i>publicNodeId</i>	AIN node ID ID of the AIN node connected with the public exchange as a gateway.	
<i>publicBoard</i>	Gateway card no.	
<i>publicPort</i>	Gateway network interface no.	
<i>publicChannelGroup</i>	Gateway channel group no.	
<i>pbxHops</i>	Number of communication servers that sent call data records for the ticket.	
<i>origPBXId</i>	Origin PBX ID	
<i>origSubscriber</i>	Origin call number	
<i>origUserId</i>	Origin user ID ID of the user on the OIP server.	
<i>tickets</i>	Number of call data records from which the ticket was created.	
<i>complete</i>	Ticket state <i>0 – not completed / 1 – completed</i>	
<i>ticketDate</i>	ticket creation date	
<i>ticketTime</i>	Ticket creation time	
<i>callId</i>	Call ID	

3.6.3 I/O Data

The I/O Manager can be used to set for each configured action whether the action in question should be monitored. If monitoring is activated, a new file is written daily in the directory ...*\astra\oip\iolog* in the standard settings. The files are created in .csv format. The file name is *iolog-dd-mm-jjjj-hh-mm-ss*, with <dd-mm-jjjj> representing day-month-year and <hh-mm-ss> hour-minute-second.

The settings for creating the I/O data can be made in the OIP service I/O Manager.

[Tab. 97, page 97](#) lists the designators for the I/O data records.

Tab. 97 Designation for the I/O data records

Designator	Description
<i>Date</i>	Date on which the action was carried out.
<i>Time</i>	Time at which the action was carried out.
<i>ActionId</i>	Action ID of the action carried out.
<i>DataType</i>	Data type
<i>DataSubType</i>	Other data type if action is supported.
<i>Data</i>	Data sent with the action.

4 Connecting directories

OIP supports the connection of internal and external directories, which can be accessed via the OIP applications and via the system phones (OIP Name Server).

Contents:

- Configuring the Directory Connection – [page 99](#)
- Directories Synchronization – [page 99](#)
- Searching in directories – [page 102](#)
- OIP Name server – [page 104](#)
- Microsoft Exchange Server directories – [page 105](#)
- Active Directory – [page 114](#)
- LDAP directories – [page 115](#)
- External phone book directories – [page 116](#)

Figure Fig. 4 provides an overview of the various directories.

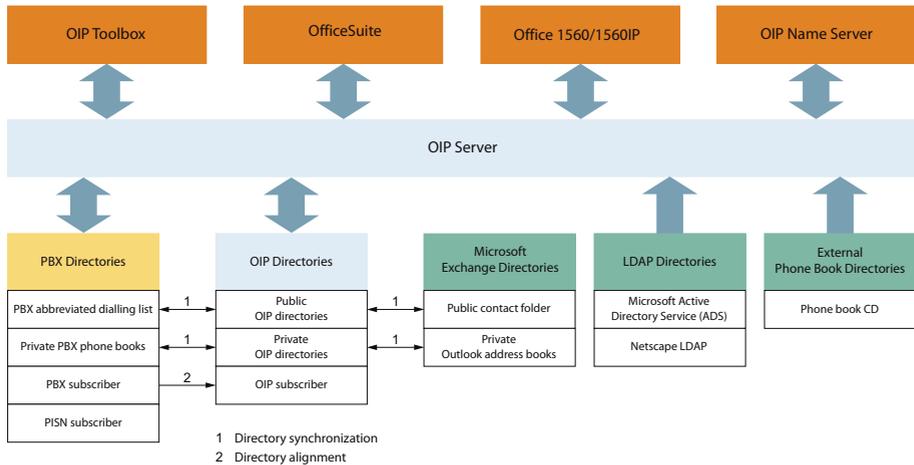


Fig. 4 Overview of directories

Access to the communication server, OIP, Active Directory, LDAP and external phone-book directories from the OIP server is direct. The Microsoft Exchange directories are accessed indirectly via the OIP directories by being synchronized with one another.

The communication server, OIP and Microsoft Exchange directories have not just read rights but also write rights so that new contact entries can be created and existing entries edited. By contrast the LDAP and external phone-book directories (e.g. phone-book CD) have read rights.

The access rights (read and write privileges) to the individual directories can be configured in the user profiles using different user groups which have been assigned the OIP service Directory Service.

4.1 Configuring the Directory Connection

When connecting a communication server or communication server network to the OIP server, no configuration of the communication server is required.

The configuration for connecting the directories is carried out during the installation of the OIP server. Subsequent adaptations can be made under General Settings in the OIP configuration.

To connect new directories that were not installed during the installation of the OIP server, re-install the OIP server, see "[Updating the OIP server](#)", page 35.

In a communication server network with an OIP server the following requirements have to be satisfied:

- The number range of the common abbreviated dialling numbers must be identical in the numbering plan on all the networked communication servers.
- If there are abbreviated dialling numbers, they must be available on all the networked communication servers.
- During installation of the OIP server the number range of the common abbreviated dialling numbers must be configured so that it is identical to the number range on the communication server. A subsequent change to the number range can be made under General Settings in the OIP configuration.

The configuration of the corresponding OIP directory drivers is listed in the following chapters.

4.2 Directories Synchronization

Contents:

- Communication server directories – [page 100](#)
- Microsoft Exchange Server directories – [page 102](#)

Directory synchronization takes place between the communication server and OIP directories. If the option *Connection of a Microsoft Exchange Server* was selected during the installation of the OIP server, the Microsoft Exchange directories are also synchronized with the OIP directories. The Active Directory, the LDAP directories and the external phone-book directories are not synchronized.

Figure Fig. 5 shows the synchronization of the directories, and the relevant OIP services.

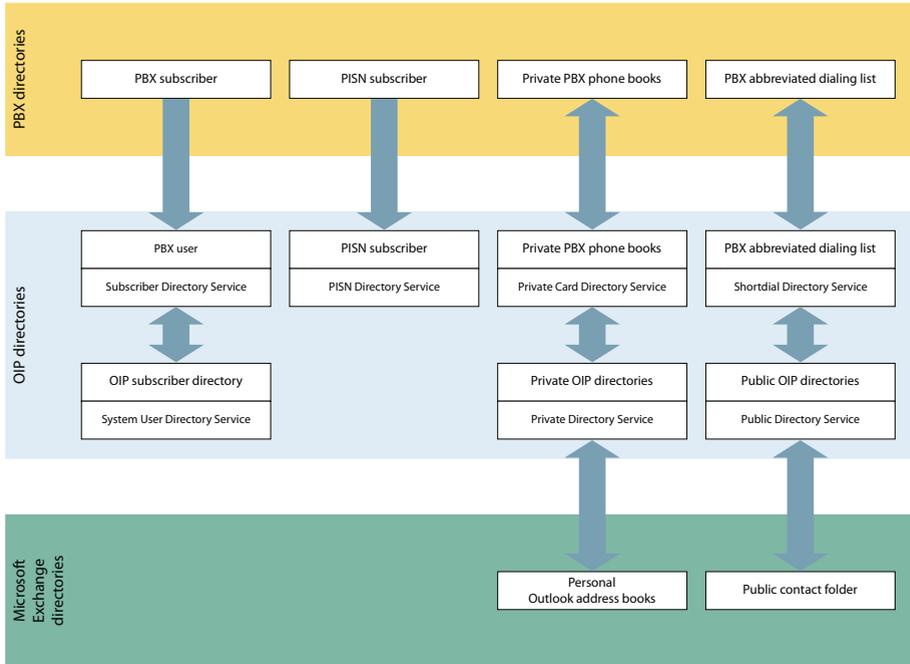


Fig. 5 Directories Synchronization

In the communication server network the contact entries in the synchronized directories must be administered via the OIP Toolbox application *Directory Manager* in the public OIP directory. The synchronized directories can also be managed via the OfficeSuite, via Office 1560/1560IP or via Microsoft Outlook.

4. 2. 1 Communication server directories

The communication server and OIP directories are synchronized via the communication server directories temporarily stored on the OIP server, see Fig. 5 . In the OIP

configuration the OIP services *Shortdial Directory Service*, *Private Card Directory Service* and *PISN Directory Service* can be used using the option *Synchronization interval* to configure the interval (default setting 30 mins) in which changes in the PBX directories are accepted in the temporarily stored PBX directories on the OIP server. Changes made in the OIP directories are directly accepted in the communication server directories.

The option *Synchronization of OIP and communication server directories* is activated during the standard installation of the OIP server.

During the installation a folder name created in the OIP public directory has to be entered for the communication server abbreviated dialling list (default setting *OIP*). The communication server abbreviated dialling numbers are synchronized in this folder. Contact entries in the public OIP directory including entries in the subfolders are also synchronized in the communication server abbreviated dialling list.

Contacts in the private communication server phone books are synchronized in the private OIP directory. Contact entries in the private OIP directories including entries in the subfolders are also synchronized in the private communication server phone books.

After starting the OIP Server, the first synchronisation (synchronization start delay) is carried out in accordance with the times defined in the OIP services Public Directory Service and Private Directory Service. If multiple communication servers or a communication server network are connected, synchronization is carried out sequentially.

Bear in mind when setting up the synchronisation between the OIP and communication server directories that the number of entries in the communication server directories is limited (see Aastra 400 and Aastra IntelliGate® System Manuals), which means that all of the contact entries of the OIP directories may not be synchronised with the communication server directories. It is therefore recommended that you only synchronize certain types of call numbers. The relevant settings can be made in the OIP services *PBX Driver Ascotel/PBX Driver OpenCom 1000* and *Public Directory Service*. Only the business call number is synchronized in the standard settings.

The synchronization of the OIP directories with the communication server's directories can be deactivated in the OIP configuration in the OIP services Public Directory Service and Private Directory Service using the *Communication server synchronisation* option.

4.2.2 Microsoft Exchange Server directories

Synchronizing Public Contacts Folders

The public contact folders on the Microsoft Exchange Server are synchronized with the public OIP directories. In the OIP configuration in the OIP service Public Directory Service you can use the option *Synchronize public contact folders* to select the public contact folders on the Microsoft Exchange Server that are to be synchronized with the public OIP directories. The folder structure of the public folders on the Microsoft Exchange Server is transferred to the public OIP directories.

If a public contact folder on the Microsoft Exchange Server is also to be synchronized in the communication server abbreviated dialling list, the path to the folder must be entered in the OIP service Public Directory Service using the option *Standard public contact folder*. Only one public contact folder on the Microsoft Exchange Server can be synchronized with the communication server abbreviated dialling list.

In the OIP service Public Directory Service you can use the option *Delete entries in external directories* to configure whether the relevant entries in the public contacts folders are also to be deleted whenever entries in the communication server abbreviated dialling list are deleted.

Synchronizing private Outlook address books

The private Outlook address books (contacts) and their subfolders are synchronized with private OIP directories. The folder structure of the subfolders is transferred to the private OIP directories.

In the OIP service Private Directory Service you can use the option *Delete entries in external directories* to configure whether the relevant entries in the private Outlook address books are also to be deleted whenever entries in the private communication server phone books are deleted.

4.3 Searching in directories

There are three different ways of searching through directories:

- Full-text search (Directory Service)
With a full-text search the string of search characters entered is searched for in all the contact data fields.

- Name searching (Alpha & Quick Dial Service)
With a name search the string of search characters entered is searched for in the contact's name fields.
- Search CLIP (CLIP Service)
With the CLIP search the contact corresponding to the phone number entered is searched for.

The sequence of the string of search characters (e.g. Name - First name) can be configured in the corresponding OIP service.

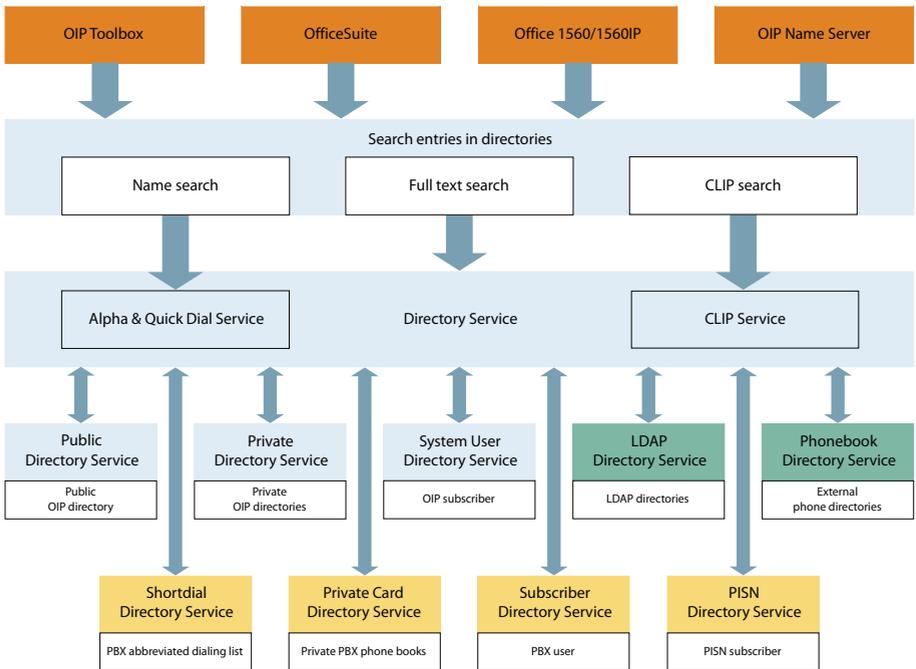


Fig. 6 Search in directories

All the search requests are sent to the OIP service Directory Service. With a full-text search the search request is forwarded directly to the configured directories. With the name and CLIP search the search request is made via the OIP services Alpha & Quick Dial Service and CLIP Service.

The setting defining the search directories is made globally in the OIP service Directory Service for the OIP applications. The setting for the OIP Name Server is made

accordingly in the OIP services Alpha & Quick Dial Service and CLIP Service. The directories displayed by the OIP server depend on the OIP components installed.

In the OIP applications the global setting can be restricted further for each user, where configurable. The search for entries in the OIP applications is carried out in the directories in accordance with [Tab. 98, page 104](#).

Tab. 98 Directory search in OIP applications

Directories	OfficeSuite ¹⁾	Office 1560/1560IP ¹⁾²⁾	OIP Name Server ¹⁾
Abbreviated dialling list of the communication server	X		X
PISN users	X	X	X
Private phone books of the communication server	X		X
PBX user directory	X	X	X
OIP user directory	X		X
Private OIP directories	X	X	X
Public OIP directories	X	X	X
Active Directory	X		X
LDAP directories	X		X
External phone book directories	X		X

¹⁾ Configurable directories.

²⁾ A full-text search is possible in all directories using the advanced contact search.

4.4 OIP Name server

The OIP name server provides the communication server with access to various directories. This means that name searching when dialling from the system phone is not limited to just the communication server's directories such as the user list, the abbreviated dialling list, the PISN users and the private phone book; depending on the connection it can be complemented with external OIP directories, Microsoft Exchange directories, LDAP directories and external phone book directories.

Dialling by name

The directories covered by the name search and the sequence in which the directories are to be searched can be configured in the OIP service Alpha & Quick Dial

Service. The user is shown all the possible entries that are found in the various directories.

If the OIP directories are to be synchronized with the communication server directories, it is important to make sure when selecting the root directories that both redundant directories are not selected.

Dialling by name can be carried out in two ways from the system phone to minimise the list of search results, e.g. for frequent internal name searches.

With dialling by name without search prefix the search is made only in the basic directories configured in the Alpha & Quick Dial Service. In the default setting those directories are the communication server and OIP directories, depending on the installation.

With dialling by name with the search prefix configured in the Alpha & Quick Dial Service, the search is made only in the expanded directories. In the default setting those directories are the LDAP and external phone-book directories, depending on the installation.

CLIP analysis

The directories configured in the OIP service CLIP Service are accessed for the CLIP analysis of incoming calls. If the OIP directories are to be synchronized with the communication server directories, it is important to make sure when selecting the root directories that both redundant directories are not selected. The difference with dialling by name, however, is that with CLIP analysis only the first found entry is displayed to the user. Whether or not the search entries are to be displayed in the sequence of directories can be configured in the OIP service CLIP Service. If this option is deactivated, the search for a suitable entry is first carried out in the communication server directories. If no entry is found there, the search is expanded to the OIP directories and the external directories.

The OIP Name Server is automatically activated when the OIP server is started, i.e. no settings have to be made on the communication server. The relevant can be activated or deactivated in the OIP services Alpha & Quick Dial Service or CLIP Service.

4.5 Microsoft Exchange Server directories

Contents:

- Connecting a Microsoft Exchange Server 2007 or 2010 – [page 106](#)
- Connecting a Microsoft Exchange Server 2003 or 2007 – [page 111](#)
- Updating the OIP Exchange driver – [page 113](#)

- Uninstalling the OIP Exchange driver – [page 113](#)
- Configuring the OIP Exchange driver – [page 113](#)

By connecting Microsoft Exchange Server to OIP it is possible to access the following Microsoft Exchange directories:

- Public Contacts Folders
- Mailboxes of the domain user
 - Personal Outlook address book
 - Calender
 - E-mail folder

To access the Microsoft Exchange directories, you need to select the option *Connection to a Microsoft Exchange Server* when installing the OIP server.

Once you have accessed the mailboxes of the domain users you can synchronize the contact entries of the personal Outlook address book with the OIP directory. Existing calendar entries can also be displayed in the Presence Indicator.

The presence state of Microsoft Outlook calendar entries is displayed in the OIP calendar by the OIP presence state (see "[Presence status in the OIP:](#)", [page 260](#))

Access to the e-mail folder is required for storing voice mails as e-mails in the Inbox.

The settings for connecting a Microsoft Exchange Server can be made in the *OIP configuration/General Settings* once the OIP server installation is completed.

Depending on the version of the Microsoft Exchange Server the connection of the Microsoft Exchange Server is made using the corresponding OIP Exchange driver.

4. 5. 1 Connecting a Microsoft Exchange Server 2007 or 2010

Contents:

- Configuring the Microsoft Exchange server – [page 107](#)
- Installing the OIP Exchange driver – [page 109](#)
- Updating the OIP Exchange driver – [page 110](#)
- Uninstalling the OIP Exchange driver – [page 110](#)
- Configuring the OIP Exchange driver – [page 110](#)

4.5.1.1 Configuring the Microsoft Exchange server

We recommend that the Microsoft Exchange Server administrator be on hand when configuring the OIP Exchange connection.

User account for the OIP Exchange driver

The OIP Exchange driver needs a separate user account in the Active Directory to access the mailboxes of the domain users. The user account set up for the OIP Exchange Administrator (e.g. `oip_msx_admin`) must satisfy the following requirements:

- The user account must have a mailbox on the Microsoft Exchange Server.
- The user must be a member of the *Domain Users* group. In a Microsoft Windows Small Business Server 2008 environment the user must also be a member of the *Domain Admins* group.
- The user must have *Impersonation rights* in order to access the mailboxes of the domain users.

The impersonation rights are assigned using the Exchange Management Shell. The procedure differs depending on whether you are using Microsoft Exchange Server 2007 or 2010.

Open the Exchange Management Shell and enter the following lines.

Microsoft Exchange Server 2007

Add impersonation rights to the user account:

```
Get-ExchangeServer | where {$_.IsClientAccessServer -eq $TRUE} | ForEach-Object {Add-ADPermission -Identity $_.distinguishedname -User (Get-User -Identity oip_msx_admin | select-object).identity -extendedRight ms-Exch-EPI-Impersonation}
```

Here *oip_msx_admin* needs to be replaced with the user name you gave the OIP Exchange Administrator.

Remove impersonation rights from the user account:

```
Get-ExchangeServer | where {$_.IsClientAccessServer -eq $TRUE} | ForEach-Object {Remove-ADPermission -Identity $_.distinguishedname -User (Get-User -Identity oip_msx_admin | select-object).identity -extendedRight ms-Exch-EPI-Impersonation}
```

Here *oip_msx_admin* needs to be replaced with the user name you gave the OIP Exchange Administrator.

Microsoft Exchange Server 2010

Add impersonation rights to the user account:

```
New-ManagementRoleAssignment -Name:impersonationAssignmentName -Role:ApplicationImpersonation -User:oip_msx_admin
```

Here *oip_msx_admin* needs to be replaced with the user name you gave the OIP Exchange Administrator.

Remove impersonation rights from the user account:

```
Remove-ManagementRoleAssignment -Identity impersonationAssignmentName
```

Public folders

No further configuration is needed to access the public folders providing the public folders are not to be synchronized with the OIP server. If the public folders are to be synchronized, you need to add the following rights to the OIP Exchange Administrator's user account:

- The user must be a member of the *Public Folder Management* Active Directory group.
- In addition the user account must be a member of the *Public Folder Management* group on the Microsoft Exchange Server. Select the mailbox of the OIP Exchange Administrator under *Recipient Configuration/Mailbox* on the Exchange Management Console and open the context menu. Click *Manage Full Access Permission ...* and add the group *Public Folder Management*.
- As of Microsoft Exchange Server 2010 SP1 the assignment described above can also be made via the Public Folders Management Console. There it is possible to give the OIP Exchange Administrator rights (e.g. Publishing Editor) to specific public folders.
- If you do not have access to the public folders on a Windows Small Business Server 2008, you need to give the OIP Exchange Administrator additional rights. In this case the OIP Exchange Administrator must be a member of the Active Directory groups *Domain Admins*, *Exchange Servers* and *Exchange Organization Administrators*.

4. 5. 1. 2 Installing the OIP Exchange driver

The OIP Exchange driver for Microsoft Exchange Server 2007 & 2010 can be installed on any PC in the local network. The following requirements need to be in place before the installation of the OIP Exchange driver can proceed:

- The PC's operating system is Windows XP SP3 or higher
- Microsoft .NET Framework 3.5 SP1 must be installed. If required, it can be installed directly from the OIP server homepage under *OIP Installations*.
- Microsoft .NET Framework 3.5 SP1 is pre-installed with Windows Server 2008; however it still needs to be activated in the system.
- With Windows Server 2008 R2 the role *Application server* needs to be installed with the option *.NET Framework 3.5.1*.

Start the installation via the OIP web page.

1. Start the web browser and enter the URL for the OIP server home page, e.g. `http://oip-server.aastra.com<:Port>`.
2. On the menu bar click *OIP Installations* and then *OIP Exchange driver*.
3. Start the installation by clicking *OIP Exchange driver for Microsoft Exchange Server 2007 & 2010*.
4. Take note of the safety warnings before proceeding with *Run*.
5. Select the Installation language and click *Next*.
6. In the next dialog box click *Next*.
7. Read through the licence agreement carefully before accepting the terms, then click *Next*.
8. Enter the installation directory or accept the default directory (recommended) and click *Next*.
9. In the next dialog box start the installation by clicking *Install*.
10. Exit the installation by clicking *Finish*.
11. Close all the web browser windows.

The OIP Exchange driver is started as a Windows system service.

4. 5. 1. 3 Updating the OIP Exchange driver

To upgrade the OIP Exchange driver for the OIP Exchange Service you must first exit the running Windows System Service.

Before starting the installation to upgrade the OIP Exchange driver, make sure the registered user account has the appropriate rights, see "[Configuring the Microsoft Exchange server](#)", page 107.

Start the installation using the OIP Installations web page and follow the steps of the installation assistant, see "[Installing the OIP Exchange driver](#)", page 109.

4. 5. 1. 4 Uninstalling the OIP Exchange driver

The OIP Exchange driver is uninstalled using *Control Panel \Software* in the Windows operating system.

4. 5. 1. 5 Configuring the OIP Exchange driver

Once the installation of the OIP Exchange driver is completed, the configuration window appears. Carry out the settings listed in table [Tab. 99, page 110](#).

Tab. 99 Configuration parameters for the OIP Exchange driver

<i>Microsoft Exchange Server Version</i>	<ul style="list-style-type: none">• ExchangeServer2007_SP1 for Microsoft Exchange Server 2007 SP1, SP2 and SP3• ExchangeServer2010 for Microsoft Exchange Server 2010• ExchangeServer2010_SP1 for Microsoft Exchange Server 2010 SP1
<i>Microsoft Exchange Server Address</i>	DNS name or IP address of the Microsoft Exchange server. If the network has several Microsoft Exchange Servers you need to specify the address of the server that is defined in the Client Access Server (CAS) role.
<i>Domain</i>	Domain assigned to the Microsoft Exchange Server, e.g. company.com.
<i>User Name/Password</i>	User and password of the OIP Exchange Administrator
<i>Notification Interval</i>	Time interval during which the OIP Exchange driver checks the changes on the Microsoft Exchange Server.

<p><i>Log level</i></p>	<p>The log level setting is required in case the OIP service malfunctions. The log level determines the number of entries in the log file. Depending on the operating system the log files are written into the following directory:</p> <ul style="list-style-type: none"> • Windows XP: <i>c:\Documents and Settings\All Users\Application-Data\Aastra\Oip\MsxDrv\Log\</i> • Windows Server 2008/2008 R2 and Windows 7/Vista: <i>c:\Program-Data\Aastra\Oip\MsxDrv\Log\</i> <p>To display the log files you need to select the folder option <i>Show hidden files, folders, and drives</i>.</p>
<p><i>Delete Log Files Older Than</i></p> <p><i>Maximum log file size</i></p>	<p>Number of days after which older log files are deleted</p> <p>Maximum size for the log file Once this size is reached, a new log file is created.</p>

Once the OIP Exchange driver has been configured, the configuration can be modified at any time. Open the configuration via the Start menu entry.

4.5.2 Connecting a Microsoft Exchange Server 2003 or 2007

Contents:

- Configuring the Microsoft Exchange server – [page 111](#)
- Installing the OIP Exchange driver – [page 112](#)
- Updating the OIP Exchange driver – [page 113](#)
- Uninstalling the OIP Exchange driver – [page 113](#)
- Configuring the OIP Exchange driver – [page 113](#)

4.5.2.1 Configuring the Microsoft Exchange server

We recommend that the Microsoft Exchange Server administrator be on hand when configuring the OIP Exchange connection.

User account for the installation of the OIP Exchange driver

For the installation of the OIP Exchange driver the registered user account has to satisfy the following requirements:

- The user account must be either a member of the group of domain administrators or the Exchange administrator.

- The user account has to have an Exchange mailbox.
- The SMTP main address of the user account must correspond to the one in the default policy during installation.

Rights on the Microsoft Exchange server.

For the installation of the OIP Exchange driver the following rights have to be assigned to the registered user account on the Microsoft Exchange Server.

1. Start the Exchange System Manager and select the Microsoft Exchange Server on which the OIP Exchange Service is to be installed, then open the submenu *First Storage Group \ Public folder store \ Public Folder instances..*
2. On the right-hand side select the public folder instance *globalevents*, open the folder properties and click the *Permissions* tab.
3. Click *Client permissions*. Add the user account under which the OIP Exchange driver is to be installed and assign it the *Owner* permission.

Public Contacts Folders

The administrator must create a public contacts folder (e.g. OIP contacts) on the Microsoft Exchange Server with which the OIP server is to be synchronized.

The administrator should also assign the client permission *Editor (level 6)* to those Windows users who are to manage the public contacts folder.

More information on setting up and managing the Microsoft Exchange Server can be found in the Microsoft TechNet on the internet.

4.5.2.2 Installing the OIP Exchange driver

The installation requires that the *Connection to a Microsoft Exchange Server* has been selected during the installation of the OIP server.

The settings on the Microsoft Exchange Server must also be carried out, see "[Configuring the Microsoft Exchange server](#)", page 111.

Start the installation via the OIP web page.

1. Start the web browser and enter the URL for the OIP server home page, e.g. <http://oip-server.aastra.com<:Port>>.
2. On the menu bar click *OIP Installations* and then *OIP Exchange driver*.

3. Start the installation by clicking *OIP Exchange driver for Microsoft Exchange Server 2003 & 2010*.
4. Take note of the safety warnings before proceeding with *Yes*.
5. Select the Installation language and click *Next*.
6. In the next dialog box click *Next*.
7. Read through the licence agreement carefully before accepting the terms, then click *Next*.
8. Enter the installation directory or accept the default directory (recommended) and click *Next*.
9. In the next dialog box start the installation by clicking *Install*.
10. Exit the installation by clicking *Finish*.
11. Close all the web browser windows.

The OIP Exchange driver is started as a Windows system service.

4. 5. 2. 3 **Updating the OIP Exchange driver**

To upgrade the OIP Exchange driver for the OIP Exchange Service you must first exit the running Windows System Service.

Before starting the installation to upgrade the OIP Exchange driver, make sure the registered user account has the appropriate rights, see "[Configuring the Microsoft Exchange server](#)", page 111.

Start the installation using the OIP Installations web page and follow the steps of the installation assistant, see "[Installing the OIP Exchange driver](#)", page 112.

4. 5. 2. 4 **Uninstalling the OIP Exchange driver**

The OIP Exchange driver is uninstalled using *Control Panel \Software* in the Windows operating system.

4. 5. 2. 5 **Configuring the OIP Exchange driver**

Usually it is not necessary to configure the OIP Exchange driver.

However if the active directory domain (e.g. <domain name>.local) differs from the standard mail domain (e.g. <domain name>.com), you will need to carry out the following settings once the OIP Exchange driver has been installed.

1. On the Microsoft Exchange Server open the *Internet Information Services Manager* and expand *Websites\Standard website*.
2. Select the Exchange Web Site, open the context menu and click Properties.
3. The *Virtual Directory* tab indicates the local path (...\- 4. Deactivate and then exit the Windows System Service *OIP Exchange Service*.
- 5. Open the installation directory of the OIP Exchange driver (...\[aastra\OIPExchangeService](#)) and use a text editor to open the file [msexchangedriverconfig.oip](#). After the entry `oip.exchangeconnector.smtpdomain=` enter the standard mail domain you made a note of in Step 3 and save the changes.
- 6. Set the Windows System Service *OIP Exchange Service* to *automatic* and then start it.

In the user profiles you must now enter the primary SMTP e-mail address without the domain as the mailbox alias.

4.6 Active Directory

Contents:

- Configuration in the Active Directory – [page 115](#)
- Configuration on the OIP server – [page 115](#)

The Active Directory connection provides the possibility of connecting the Active Directory to the OIP server. To access the Active Directory, you need to select the option *Connection to Active Directory* when installing the OIP server.

The Active Directory is accessed in read only mode, i.e. it is not possible to modify the data in the Active Directory.

The contact data of the communication servers are made available via the OIP Name Server, see "[OIP Name server](#)", [page 104](#).

4.6.1 Configuration in the Active Directory

Before you install the OIP server with the Active Directory connection you need to make the following configuration in the Windows domain.

1. In the domain create a user account for the OIP AD Administrator (e.g. oip_ad_admin).
2. The OIP AD Administrator has to be a member of the *Domain Users* Group.

4.6.2 Configuration on the OIP server

The settings for connecting the Active Directory can be made during the installation of the OIP server or later on in the OIP Service Active Directory Service, see "OIP Services", page 40, OIP service "Active Directory Service", page 48.

4.7 LDAP directories

Contents:

- Configuration in the Network – page 115
- Configuration on the OIP server – page 115

The LDAP Directory Service allows you to connect external LDAP directories to the OIP server. To access the LDAP directories, you need to select the option *Connection of LDAP directories* when installing the OIP server.

The LDAP directories are accessed in read mode, i.e. it is not possible to modify the data in the LDAP directory. One LDAP directory can be connected per OIP server.

The contact data of the communication servers are made available via the OIP Name Server, see "OIP Name server", page 104.

4.7.1 Configuration in the Network

No settings need to be made in the Windows domain before you install the OIP server with the Netscape Directory Server connection.

4.7.2 Configuration on the OIP server

The settings for connecting external LDAP directories depend on the LDAP directory type and can be made during the installation of the OIP server or later on in

the OIP Service LDAP Directory Service, see "OIP Services", page 40, OIP service "LDAP Directory Service", page 66.

4.8 External phone book directories

External telephone directory connection to OIP refers to phone book CDs or ODBC directories, for instance, from spreadsheet applications.

Contents:

- TwixTelConnection – [page 116](#)
- DasTelefonbuch Germany connection – [page 118](#)
- ODBC directory connection – [page 119](#)

To access the external phone-book directories, you need to select the option *Connection of external phone-book directories (phone-book CD)* when installing the OIP server.

The settings for connecting the phone book CD server in the OIP server can be made either when the OIP server is installed or later in the OIP service Phonebook Directory Service.

Not all phone-book CD manufacturers provide an interface on which the OIP server can access. As a result only those phone-book CDs that have an appropriate interface can be connected. External phone-book CDs are connected via a corresponding driver, which has to be installed on the PC on which the phone-book CD is placed in the CD-ROM drive or has been installed.

An overview of the drivers currently available can be found in [Tab. 217, page 361](#) .

4.8.1 TwixTelConnection

Contents:

- Installing an TwixTel – [page 116](#)
- OIP Installing the TwixTel driver – [page 117](#)
- OIP Upgrading the TwixTel driver – [page 117](#)
- OIP Uninstalling the TwixTel driver – [page 118](#)

4.8.1.1 Installing an TwixTel

Install the TwixTel on the PC on which the OIP TwixTel driver is to be installed.

4. 8. 1. 2 OIP Installing the TwixTel driver

The installation requires that the *Connection of external phone-book directories* has been selected during the installation of the OIP server.

To install the driver, you must have local administrator rights.

Start the installation via the OIP web page.

1. Start the web browser and enter the URL for the OIP server home page, e.g. `http://oip-server.aastra.com<:Port>`.
2. Click *OIP Installations* on the menu bar.
3. Start the installation by clicking *OIP TwixTel driver*.
4. Take note of the safety warnings before proceeding with *Run*.
5. Select the Installation language and click *Next*.
6. In the next dialog box click *Next*.
7. Read through the licence agreement carefully before accepting the terms, then click *Next*.
8. Enter the installation directory or accept the default directory (recommended) and click *Next*.
9. Specify the drive on which the phone book CD is available and click *OK*.
10. In the next dialog box start the installation by clicking *Install*.
11. Exit the installation by clicking *Finish*.
12. Close all the web browser windows.

The OIP TwixTel driver is started as a Windows system service.

4. 8. 1. 3 OIP Upgrading the TwixTel driver

To upgrade the OIP TwixTel driver for the OIP TwixTel Service you must first exit the running Windows System Service.

Start the installation using the OIP Installations web page and follow the steps of the installation assistant, see "[OIP Installing the TwixTel driver](#)", page 117.

4.8.1.4 OIP Uninstalling the TwixTel driver

The OIP TwixTel driver is uninstalled using *Control Panel\Software* in the Windows operating system.

4.8.2 DasTelefonbuch Germany connection

Contents:

- Installing an DasTelefonbuch – [page 118](#)
- Installing the OIP driver for DasTelefonbuch – [page 118](#)
- Upgrading the OIP driver for DasTelefonbuch – [page 119](#)
- Uninstalling the OIP driver for DasTelefonbuch – [page 119](#)

4.8.2.1 Installing an DasTelefonbuch

Install the DasTelefonbuch Germany on the PC on which the OIP DasTelefonbuch driver is to be installed.

4.8.2.2 Installing the OIP driver for DasTelefonbuch

The installation requires that the *Connection of external phone-book directories* has been selected during the installation of the OIP server.

To install the driver, you must have local administrator rights.

Start the installation via the OIP web page.

1. Start the web browser and enter the URL for the OIP server home page, e.g. <http://oip-server.aastra.com<:Port>>.
2. Click *OIP Installations* on the menu bar.
3. Start the installation by clicking *OIP DasTelefonbuch driver*.
4. Take note of the safety warnings before proceeding with *Run*.
5. Select the Installation language and click *Next*.
6. In the next dialog box click *Next*.
7. Read through the licence agreement carefully before accepting the terms, then click *Next*.

8. Enter the installation directory or accept the default directory (recommended) and click *Next*.
9. Specify the drive on which the phone book CD is available and click *OK*.
10. In the next dialog box start the installation by clicking *Install*.
11. Exit the installation by clicking *Finish*.
12. Close all the web browser windows.

The OIP driver for the DasTelefonbuch is started as a Windows system service.

4. 8. 2. 3 **Upgrading the OIP driver for DasTelefonbuch**

To upgrade the OIP driver for the DasTelefonbuch you must first exit the running OIP DasTelefonbuch Service Windows System Service.

Start the installation using the OIP Installations web page and follow the steps of the installation assistant, see "[Installing the OIP driver for DasTelefonbuch](#)", page 118.

4. 8. 2. 4 **Uninstalling the OIP driver for DasTelefonbuch**

The OIP driver for the DasTelefonbuch is uninstalled using *Control Panel\Software* in the Windows operating system.

4. 8. 3 **ODBC directory connection**

Directories with ODBC-interfaces are connected via the OIP driver for ODBC directories.

Contents:

- Setting ODCB directories – [page 120](#)
- Installing the OIP Driver for the ODBC directory – [page 120](#)
- Configuring the ODBC interface – [page 121](#)

4.8.3.1 Setting ODCB directories

Proceed as follows to set an ODBC directory in Windows:

1. Log on as Administrator to the computer which contains the ODBC directory.
2. In *Control Panel/Administration* start the system service *Data sources (ODBC)*.
3. Open the *System DSN* window and click *Add*. The wizard for adding data sources launches.
4. Follow the instructions given by the wizard and add the data source you want with the corresponding driver.
5. Give the data source a name and save the new entry.
6. Close the system service *Date sources (ODBC)*.

4.8.3.2 Installing the OIP Driver for the ODBC directory

Installation Requirement : The OIP component *Connection of external phone-book directories* must be installed while installing the OIP server.

To install the driver, you must have local administrator rights.

To install the ODBC driver, proceed as follows:

1. Make sure that the OIP component *Connection of external phone-book directories* is also installed. If this is not the case or if you are uncertain, install OIP again and during the installation process select the required OIP component.
2. Log on as Administrator to the computer which contains the ODBC directory you want to connect to with OIP.
3. Start the web browser and enter the URL for the OIP server home page, e.g. <http://oip-server.aastra.com<:Port>>.
4. Click *OIP Installations* on the menu bar.
5. Start the installation by clicking *OIP phonebook driver / OIP ODBC/JDBC driver*.
6. Take note of the safety warnings before proceeding with *Run*.
7. Follow the installation routine instructions until the configuration dialogue box opens.
8. If the computer does not have a Java Runtime environment or if it is the wrong version, an error message appears and the installation process is cancelled. If

this is the case, install the correct version of Java Runtime from the OIP home page and begin again at point 4.

9. Configure the ODBC interface as described in the following chapter.

4.8.3.3 Configuring the ODBC interface

Configuring the OIP driver

To install and configure the OIP driver, proceed as follows:

1. In the configuration dialogue under *Database connections* add a new ODBC directory; in the *Settings* tab give it the same name as the ODBC directory that you used in the previous section ("*Installing the OIP Driver for the ODBC directory*", page 120).
2. Under the *Driver* setting, select the available JDBC driver.
The *jdbc:odbc:* prefix is entered in the *URL* input field. entered.
3. Directly after the prefix in the *URL* input field, enter the same name for the ODBC directory as you entered at point 1.
4. Save the settings and read out the database a first time (*Read out database* button).
5. Choose the data range containing the data you want (*Table name* setting). If the data source is a list of a spreadsheet application (e.g. Microsoft Excel), the data range can be defined as an entire table or as several columns of a named range.
 - Select the name of the spreadsheet or named range from the selection list.
 - Place brackets around the selected name (e.g. "[Phone-book]").
6. Save the settings and read in the database again.
7. Change to the *Assignment* tab. In the *Database assignment* area the designators of the ODBC data sources should now be listed. Assign these designators of the row to the OIP designators by simply moving them into the column of the OIP designators using the mouse.
8. Save the settings and read in the database again. Check the intended database connection:
 - If the database connection name is displayed in green, this means that connection had been set up, and the data read out.
 - If the database connection name is displayed in yellow, this means that connection had been set up but the data could not be read out.

- If the database connection name is displayed in red, this means that no connection has been set up to the database.

You will find additional status information in the *Info*. tab.

9. The connection of the ODBC source is now completed.

Check and modify OIP settings

Proceed as follows to check and modify the settings in the OIP for connecting the ODBC data source:

1. Open the OIP configuration and select *ODBC/JDBC Directory Service*.
2. In *Phone-book server address* enter the IP address of the PC where the ODBC data source is located.
3. Select the *Directory Manager* and *Directory Service* services and set up the ODBC directory according to the specifications about these services under "*OIP Services*", page 40.
4. Select the *Alpha & Quick Dial Service* service and set up the ODBC directory according to the specifications about this service under "*OIP Services*", page 40.

5 Automation and Alarm Systems

OIP offers the possibility of expanding the internal Aastra 400 and Aastra IntelliGate® messaging and alarming interfaces into a comprehensive automation and alarm systems.

The various I/O applications are structured and configured in the I/O Manager, see "[I/O Manager](#)", [page 244](#). The I/O applications consist of one or more action trees in which the individual actions are logically linked with one another.

The OIP KNX driver is used to connect external KNX systems to OIP, see "[KNX connection](#)", [page 207](#).

More detailed information on the OIP I/O system and the I/O actions can be found in the OIP I/O documentation. It is available from the [OIP documentation](#) menu on the OIP homepage.

Contents:

- I/O system – [page 123](#)
- KNX connection – [page 207](#)
- OIP ATAS-Gateways – [page 214](#)

5.1 I/O system

The actions work according to the IPO principle. In other words they have an input, a processing and an output component. The logical processing of the incoming events is based on the defined actions. The results of the processing are sent on as results either to the subordinate actions or to addressed actions within the same action tree or in other action trees.

The incoming results can be for example character strings stored in the Red-key function on the system phone or PBX alarms. They can also be calendar entries to be evaluated according to certain criteria when a Microsoft Exchange Server is connected. These events are processed in the corresponding actions and the output is effected on the display of the system phone, in an e-mail or in a file.

Contents:

- I/O Action – [page 124](#)
- OIP I/O actions – [page 132](#)

5.1.1 I/O Action

An action is a black box in its own right with different inputs and outputs. The events are processed on the basis of the action type and the parameters configured.

Figure Fig. 7 shows the general functional diagram of an I/O action.

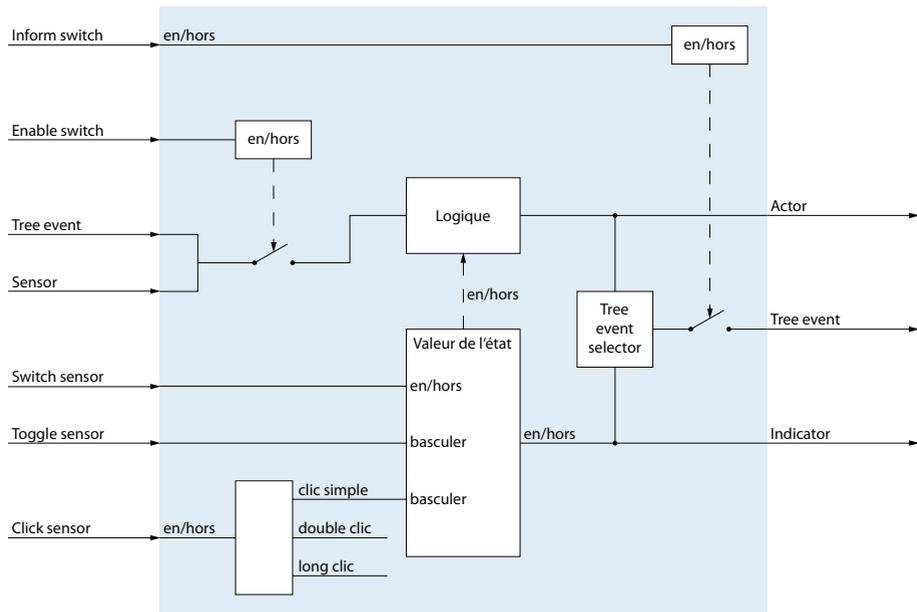


Fig. 7 Functional diagram of an I/O action

The meaning of the general inputs and outputs shown in Figure Fig. 7 and their parameters are identical in all the actions. They are listed in [Tab. 100, page 125](#). The action-specific inputs and outputs are described in the individual actions, see "[OIP I/O actions](#)", [page 132](#).

Tab. 100 General parameter of an I/O action

Parameter	Description
<i>Owner</i>	This parameter is not used at moment and should be left empty.
<i>Tree event</i>	The Tree event is as well input as output. With the Tree event the events are sent from on action to another along the action tree. The Tree event can carry the state of the action (Indicator), the result of the action (Actor) or both.
<i>Tree event selector</i>	The Tree event selector is a switch, which defines the event that is sent along the tree. The following settings are selectable: <ul style="list-style-type: none"> • No event • Actor event • Indicator event • Actor & Indicator event If nothing is selected for the Tree event selector, <i>No event</i> is used as default.
<i>Inform switch</i>	The Inform switch is an input, which acts as a switch. It switches the sending of the Tree event on or off. Receives the Inform switch a 0 (off) from the specified address the sending of the Tree event is switched off. If it receives a 1 (on) the sending of the Tree event is switched on. If no address is specified the sending of the Tree event is switched on.
<i>Enable switch</i>	The Enable switch is an input, which acts as a switch. It switches the processing of the Tree event on or off. Receives the Inform switch a 0 (off) from the specified address the processing of the Tree event is switched off. If it receives a 1 (on) the processing of the Tree event is switched on. If no address is specified the processing of the Tree event is switched on.
<i>Sensor</i>	The Sensor is an input. It receives events with the specified address from other actions (e.g. form other action trees, from actions which are not directly above the receiving action or form external systems like KNX).
<i>Switch Sensor</i>	The Switch sensor is an input, which acts as a switch. Receives the switch a 0 (off) from the specified address the state of the action is set to off, if it receives a 1 (on) the state of the action is set to on.
<i>Toggle Sensor</i>	The Toggle sensor is an input, which acts as a toggle switch. Independent of the value received from the specified address the Toggle sensor toggles the state of the action (from 1 (on) to 0 (off) and vice versa).
<i>Click Sensor</i>	The Click sensor is a special input to receive multi click events from KNX switches. The KNX switch muss send a 1 (on) if pressed and a 0 (off) if released.
<i>Actor</i>	The Actor is an output. It sends the result of the action to the specified address (e.g. to other action trees, to actions which are not directly below the sending action or to external systems like KNX).
<i>Indicator</i>	The Indicator is an output. It sends the state of the action to the specified address (e.g. to other action trees, to actions which are not directly below the sending action or to external systems like KNX).

Events can be sent and received via the tree structure or the direct addressing of an action.

No addresses need to be defined within the same action tree as the events are sent from the higher-level action to the subordinate action.

An address is required if events are to be sent to actions that are outside the action tree, that are not directly below the sending action or if it is an KNX device. The same applies to receiving events.

The events sent by the actions consist of three parts.

Tab. 101 Constituent part of an event

Constituent part	Description
<i>Address</i>	This is the event's address (e.g. the defined address for an actor; in the tree structure it is the action ID if no explicit address was indicated).
<i>Data</i>	This is the event's actual data. There are different types of data.
<i>User ID</i>	This is the OIP internal user ID. It is used if an event was successfully assigned to an OIP user (e.g. PBXUserCommand or PBXRedKey); if not, it is blank.
<i>Monitoring</i>	The I/O Manager can be used to set for each configured action whether the action in question should be monitored.

The address can be entered in different formats:

Tab. 102 Address of an I/O action

Address	Description
Freely selectable character string e.g. MYEVENT	The freely selectable character string should be used if events are to be sent from one I/O action to one or more other I/O actions. The actions received are not a subordinate action within the tree structure.
<i>Action ID</i>	The action ID should be used if events are to be sent to a specific I/O action. Each action has its own unique ID within the system.
<i>Action type</i>	The action type should be used if events are to be sent to a specific action type. In this case the events are sent to all the actions of the same type within the system.
<i>KNX group address</i> (two or three digits) e.g. KNX:5/3/8	The KNX group address should be used if events are to be sent to KNX devices.

Multiple entries of group addresses or user numbers are possible; they must be separated with ";".

The data of the events sent can correspond to different types of data.

Tab. 103 Data types

Data type	Description
<i>Switching</i>	Boolean value (on/off, 1/0)
<i>String</i>	Text
<i>Char</i>	ASCII characters (A, B, 1, ä, etc.)

Data type	Description
<i>Time</i>	Time in the format hh:mm:ss:ms
<i>Date</i>	Date in the format dd/mm/yyyy
<i>Value</i>	2-byte floating comma value (range: -671'088.64 ... 0 ... +670'760.96)
<i>Scaling</i>	Percentage value 0-100%
<i>Float</i>	Positive or negative floating comma value (IEEE754)
<i>Counter8Bit</i>	1-byte integer, with subtypes for unsigned (0 to 255) and signed (-128 to 127).
<i>Counter16Bit</i>	2-byte integer, with subtypes for unsigned (0 to 65,535) and signed (-32,768 to 32,767).
<i>Counter32Bit</i>	4-byte integer, with subtypes for unsigned (0 to 232) and signed (-231 to 231).
<i>Dimming</i>	Dimmer structure according to KNX specifications with subtypes for on/off, steps and absolute values.
<i>DriveControl</i>	Drive control structure according to KNX specifications with subtypes for start/stop and steps.
<i>Priority</i>	Priority structure according to KNX specifications with subtypes for position and control.
<i>Access</i>	Access structure according to KNX specifications.

The data types Char, Time, Date, Value, Scaling, Counter8Bit, Counter16Bit, Counter32Bit, Dimming, DriveControl, Priority and Access are of relevance only to the KNX extension.

If no user is specified for user-related actions (e.g. PBXDisplay, PBXACDAGENTState, etc.), the event's user ID is used as standard user.

If in an action the data type string is assigned to the event, it is possible to add variables to the string which are then replaced with the corresponding value at the runtime. The string data type is normally used if the result of the action (actor) is forwarded. It is also possible to use a special identification to embed a substring into a string so that the substring can be reused by the next action. The [Tab. 104, page 128](#) lists the possible variables. The assignment as to which variable can be used in which parameter is described in the corresponding action.

Tab. 104 Variables

Variable	Description
@ALARMNAME	PBX alarm name
@ALARMTYPE	PBX Alarm ID
@CALLSTATE	Call status output as value: 0 - Idle 1 - Ringing 2 - Busy 3 - Alerting 4 - Connected 5 - conference
@CALLSTATENAME	Call state output as text, see description of values for the variable @CALLSTATE.
@DATE	Current date
@ENDDATE	End date of the calendar entry
@ENDTIME	End time of the calendar entry
@GROUP	Address of the event
@KEYID	Character string configured for the Redkey
@LF	Adds a line feed
@LOCATION	Location of the calendar entry
@MESSAGE	Message text
@NAME	Action name configured in the I/O Manager.
@NODEID	AIN node ID
@NODENAME	AIN node name
@PARAM1	PBX alarm parameter 1
@PARAM2	PBX alarm parameter 2
@PARAM3	PBX alarm parameter 3
@PARAMTITLE1	Title, PBX alarm parameter 1
@PARAMTITLE2	Title, PBX alarm parameter 2
@PARAMTITLE3	Title, PBX alarm parameter 3
@PARAMTEXT	Data field of the event as text. With the string data type, it's the text; with the switching data type, it's on or off.
@PARAMVALUE	Data field of the event as value. With the string data type, it's the text; with the switching data type, it's 1 or 0.
@PBXID	OIP PBX ID
PBXNAME	OIP PBX name
@PRESENCENAME	Presence state output as text, see description of values for the variable @PRESENCESTATE.

Variable	Description
@PRESENCESTATE	Presence state output as value: 0 – Unknown 1 - Available 2 - Meeting 3 - Busy 4 – Not available 5 - Absent
@SENDERID	User ID of the sender of a message
@SENDERNAME	User name of the sender of a message
@SENDERNUMBER	User number of the sender of a message
@STARTDATE	Start date of the calendar entry
@STARTTIME	Start time of the calendar entry
@STATE	State of the action as value (0/1).
@STATENAME	State of the action as text (on/off).
@SUBJECT	Text in the subject line of a calendar entry or subject line of an e-mail.
@SUBSCRIBERID	User ID
@SUBSCRIBERNAME	User name
@SUBSCRIBERNUMBER	User number
@SUBTYPETEXT	Data subtype output as text, see description of values for the variable @SUBTYPEVALUE.
@SUBTYPEVALUE	Data subtype output as value: 0 - <i>Unknown</i> 1 - <i>DimPosition</i> 2 - <i>DimControl</i> 3 - <i>DimValue</i> 4 - <i>CtrlMove</i> 5 - <i>CtrlStep</i> 6 - <i>PrioPosition</i> 7 - <i>PrioControl</i> 8 - <i>CtrlSigned</i> 9 - <i>CtrlUnsigned</i>
@TAB	TAB separation character

Variable	Description
@TIME	Current time
@TYPETEXT	Data type output as text, see description of values for the variable @TYPEVALUE.
@TYPEVALUE	Data type output as value: 0 - <i>Unknown</i> 1 - <i>Switching</i> 2 - <i>Dimming</i> 3 - <i>Time</i> 4 - <i>Date</i> 5 - <i>Value</i> 6 - <i>Scaling</i> 7 - <i>DriveControl</i> 8 - <i>Priority</i> 9 - <i>FloatValue</i> 10 - <i>CounterValue16Bit</i> 11 - <i>CounterValue32Bit</i> 12 - <i>Access</i> 13 - <i>Char</i> 14 - <i>CounterValue8Bit</i> 15 - <i>String</i>

There are also special variables that contain certain functions or which can retrieve detailed information by means of identification.

Tab. 105 Special variables

Variable	Description
@EMPTY	Forwards a blank string.
@OFF	Corresponds to value 0.
@ON	Corresponds to value 1.
@PARTNERNAME	Caller's name, if known.

Variable	Description
@PARTNERNUMBER	Caller's CLIP, if transmitted.
@PARTNERTYPE	Type of call in relation to the caller: 0 - <i>Unknown</i> 1 - <i>internal</i> 2 - <i>extern</i> 3 - <i>CDE</i> 4 - <i>CDE/DDI</i> 5 - <i>UG</i> 6 - <i>CFU</i> 7 - <i>CFNR</i> 8 - <i>CFB</i> 9 - <i>DND</i> 10 - <i>CFU Text</i> 11 - <i>CFU Pager</i> 12 - <i>CFNR Pager</i> 13 - <i>Follow Me</i> 14 - <i>deflected</i> 15 - <i>Pick up</i> 16 - <i>CFU first</i> 17 - <i>Call transferred</i> 18 - <i>Firm</i> 19 - <i>dialled numbers</i> 20 - <i>Operator</i>
@SUBSTRINGx	Contains the embedded substring from the higher-order string.

If a blank string is sent, for instance to clear a terminal display through an action of the type `PBXDisplay`, the variable `@EMPTY` must be used.

With the variables `@ON` and `@OFF` it is possible to activate or deactivate an action using a string or to influence the status of an action. If for example the string "`@ON 220`" is sent to the action of the type `PBXPUMState`, user 220 is logged on to the terminal configured in the action.

If a substring of the sent string is to be used in a new string, the variable `@SUB-STRINGx` is used. Here x is replaced by a number from 1 to 10. In other words up to ten substrings can be transmitted. The substrings must be identified as follows in the original string: `@<Substring>@`. The start designator "`@<`" and the end designator "`>@`" are mandatory. `@SUBSTRING1` references the first substring in the original string, etc.

`@PARTNERNUMBER`, `@PARTNERNAME`, `@PARTNERTYPE` contain further information on telephone calls. They are used in actions that concern telephone calls (e.g. `PBX-CallState`). With these variables the required partner information can be specified by adding a number.

With external calls three different information segments can be called up:

- @PARTNERNUMBER1: Caller CLIP
- @PARTNERNUMBER2: Called CDE/DDI
- @PARTNERNUMBER3: Redirect info

With internal calls two different information segments can be called up:

- @PARTNERNUMBER1: Caller CLIP
- @PARTNERNUMBER2: Redirect info

The same information can be called up accordingly for the variables @PARTNER-NAME and @PARTNERTYPE.

5.1.2 OIP I/O actions

Tab. 106, page 132 lists an overview of the OIP I/O actions.

The availability of the actions on the various platforms is listed in columns [A] to [C]:

- Aastra 400 = column [A]
- IntelliGate = column [B]
- OpenCom 1000 = column [C]

Tab. 106 List of OIP I/O Actions

Icon	Action	Description	[A]	[B]	[C]	ATAS licence
	Area	The Area action is used to group different geographic areas (e.g. premises, buildings, storeys or individual rooms). The events entered are sent on to all the sub-actions. Events can also be forwarded recursively to specific types of sub-actions.	X	X	X	
	AstroCalendar	The AstroCalendar action calculates sunrise and sunset times for the configured location based on astronomic calculations.	X	X	X	
	Blinker	The Blinker action activates or deactivates actions depending on the time interval.	X	X	X	
	CalendarEntry	The CalendarEntry action evaluates calendar entries according to the start and end time.	X	X	X	

Icon	Action	Description	[A]	[B]	[c]	ATAS licence
	CalendarNotification	The CalendarNotification action evaluates calendar reminders.	X	X	X	
	ConfigurationProfile	The ConfigurationProfile action is bidirectional. It is used to activate predefined presence profiles on the one hand and can be triggered by presence profiles on the other.	X	X	X	
	ConfigurationProfile-Display	The ConfigurationProfileDisplay action is used to display and select the set presence profiles on the system phones.	X	X	X	
	EmailMessage	The EmailMessage action sends an e-mail to a defined group of recipients.	X	X	X	
	EmailTrigger	The EmailTrigger action evaluates received e-mails according to their content.	X	X	X	
	Enabler	The Enabler action activates or deactivates the actions directly subordinated to this action, depending on the parameters supplied.	X	X	X	
	Execute	The Execute action starts an external application.	X	X	X	
	FileWriter	The FileWriter action writes the data received in the configured I/O export data file.	X	X	X	
	Filter	The Filter action compares incoming events with the configured filter criteria. If they match up, the events are forwarded.	X	X	X	
0.01	FloatingValue	The FloatingValue action sends floating point numbers in accordance with the IEEE754 standard with an accuracy of 4 bytes.	X	X	X	
	FlowExecution	The FlowExecution action is not supported at present.	X	X	X	
	Heartbeat	The Heartbeat action periodically sends a switch-on message to the defined I/O group.	X	X	X	
	Initializer	The Initializer action is activated after the configured delay once the OIP server is started.	X	X	X	
	Inverter	The Inverter action inverts Boolean-type input signals (true \rightarrow false or false \rightarrow true).	X	X	X	

Icon	Action	Description	[A]	[B]	[c]	ATAS licence
	IOSystem	The IOSystem action is a placeholder for creating new node points for a clearer overview.	X	X	X	
	JabberAccount	The JabberAccount action sets up a connection to an external Jabber/XMPP-compatible instant messaging account (e.g. Google Talk). The presence status in OIP (Absent, Meeting, ...) is transmitted on the instant messaging status and vice versa. Chat messages can be received as system messages.	X	X	X	
	LogicAND	The LogicAND action checks input signals for "AND operation" and sends the output signals for activating and deactivating actions.	X	X	X	
	LogicNOT	The LogicNOT action checks input signals for "NOT operation" and sends the output signals for activating and deactivating actions.	X	X	X	
	LogicOR	The LogicOR action checks input signals for "OR operation" and sends the output signals for activating and deactivating actions.	X	X	X	
	LogicXOR	The LogicXOR action checks input signals for "EXCLUSIVE-OR operation" and sends the output signals for activating and deactivating actions.	X	X	X	
	MessageWaitingIndication	The MessageWaitingIndication action	X	X	X	
	Notification	The Notification action	X	X	X	
	ParameterSetup	The ParameterSetup action allows the properties of actions directly subordinated to it to be adapted during runtime.	X	X	X	
	PBXACDAgentCall	The PBXACDAgentCall action is used to trigger an action based on the agent status.	X	X	X	
	PBXACDAgentSkill	The PBXACDAgentSkill action changes the status (activated, deactivated) of the agent for the configured Skill. If the configured agent is activated or deactivated in a Skill, the status is forwarded accordingly.	X	X	-	

Icon	Action	Description	[A]	[B]	[c]	ATAS licence
	PBXACDAgentState	The PBXACDAgentState action sets and evaluates the status of the OIP Call Centre agents. If the agent status received corresponds to the configured status, the corresponding events are forwarded. If an event is received, the agent status can be set for the configured user.	X	X	-	
	PBXACDSkillCalls	The PBXACDSkillCalls action monitors the number of unanswered calls in the ACD queue for the configured Skill.	X	X	-	
	PBXACDSkillState	The PBXACDSkillState action changes the status (open, closed) for the configured Skill. If the status of the configured (open, closed) is modified, the status is forwarded accordingly.	X	X	-	
	PBXActiveTerminal	The PBXActiveTerminal action is used to determine the currently active phone in a One Number or parallel switch configuration.	X	X	X	
	PBXAlarm	The PBXAlarm action evaluates received PBX alarms in accordance with the parameters.	X	X	-	
	PBXApplication	The PBXApplication action is used to define a menu which can be displayed on a system phone using the PBXApplicationMenu action.	X	X	X	
	PBXApplicationMenu	The PBXApplicationMenu action is used to call up a menu defined in the PBXApplication action and to display the menu on a system phone.	X	X	X	
	PBXCallState	The PBXCallState action evaluates the call status of the configured users.	X	X	X	
	PBXChargeContact	The PBXChargeContact action evaluates the charge contact of the configured DECT handsets.	X	X	X	ATAS
	PBXClipSetup	The PBXClipSetup action configures the outgoing CLIP number for the configured user.	X	X	-	
	PBXDectSubscriber	The PBXDectSubscriber action evaluates the localization data of a DECT handsets in a configured area.	X	X	X	ATAS pro ¹⁾
	PBXDectSystemBase	The PBXDectSystemBase action is used to display a DECT radio unit connected to the PBX.	X	X	X	ATAS pro ¹⁾

Icon	Action	Description	[A]	[B]	[C]	ATAS licence
	PBXDestinationState	The PBXDestinationState action sets or evaluates the CFU state of an user.	X	X	X	
	PBXDisplay	The PBXDisplay action controls the display of the system phone.	X	X	X	ATAS
	PBXDisplayOption	The PBXDisplayOption action is responsible for displaying and evaluating the Foxkeys. An action of the PBXDisplayOption action type is always a subordinate action of the PBXDisplay action type.	X	X	X	ATAS
	PBXGreeting	The PBXGreeting activates the configured greeting.	X	X	X	
	PBXMacro	The PBXMacro action sends PBX macros configured in the parameters.	X	X	X	
	PBXMessage	The PBXMessage action sends a message to the configured users.	X	X	X	
	PBXMessageIndication	The PBXMessageIndication action responds to MWI events (e.g. receiving a new voice mail, deleting a voice mail) from the PBX. The OIP internal MWI status can be set based on the events received and forwarded accordingly.	X	X	X	
	PBXMessageTrigger	The PBXMessageTrigger action evaluates received messages according to their content.	X	X	X	
	PBXNetworkMessage	The PBXNetworkMessage action sends messages to the QSIG network.	X	X	0	
	PBXPresenceKey	The PBXPresenceKey action indicates the presence status on a configured Redkey.	X	X	0	
	PBXPresenceState	The PBXPresenceState action evaluates the presence status of the configured user. The presence status can also be set.	X	X	-	
PUM	PBXPUMState	The PBXPUMState action sets and evaluates the PUM status of the configured user.	X	X	-	
	PBXRedKey	The PBXRedKey action evaluates the received character string stored on a programmed Redkey, and sends Boolean-type output signals to the addressed actions.	X	X	X	ATAS
	PBXRedKeyLED	The PBXRedKeyLED action controls the LED for the configured Redkey function on the system phone.	X	X	X	ATAS

Icon	Action	Description	[A]	[B]	[c]	ATAS licence
	PBXSubscriber	The PBXSubscriber action forwards the status (on/off) of a configured PBX user. The status might be a particular call status or a new voice mail. The status can be used for the chart display.	X	X	X	ATAS
	PBXSwitchGroup	The PBXSwitchGroup action sets and evaluates the status of the switch position (day, night, weekend).	X	X	-	
	PBXTeamCall	The PBXTeamCall action allows the configuration of teams. All the team members see on the display of the system phone the calls made to the team members and can use the Fox-key to fetch the calls.	X	X	X	
	PBXTeamKey	The PBXTeamKey action simulates a team key that is available in the QSIG network.	X	X	-	
	PBXTerminalEvent	The PBXTerminalEvent action	X	X	X	
	PBXTimeCall	The PBXTimeCall action is used to generate a time alarm call in the case of one or more users..	X	X	X	
	PBXUserCommand ¹⁾	The PBXUserCommand action evaluates alarms sent via the */# procedure *77xxxx#.	X	X	-	
	PBXUserGroup	The PBXUserGroup action sets and evaluates the status of the configured users in the user group.	X	X	X	
	PBXVoiceMail ¹⁾	The PBXVoiceMail action responds to voice mails received by the configured user.	X	X	-	
	RandomSwitch	The RandomSwitch action activates or deactivates the status of any subordinated actions randomly in the configured time interval.	X	X	X	
	Routing	The Routing action is used to change the dynamic routing of calls in the Routing Manager.	X	X	X	ATAS
	RSSNews	The RSSNews action indicates messages in RSS file format on the display of the system phone.	X	X	X	
	ScalingValue	The ScalingValue action sends a configured floating point number to a configured I/O group.	X	X	X	

Icon	Action	Description	[A]	[B]	[C]	ATAS licence
	Sequence	The Sequence action activates the subordinated actions in sequence.	X	X	X	
	SmallFloatValue	The SmallFloatValue action sends floating point numbers in accordance with the IEEE754 standard with an accuracy of 2 bytes.	X	X	X	
	State	The State action indicates the status of the action.	X	X	X	
	StringFilter	The StringFilter action compares received messages with the configured filter criteria. If they match, the configured text is forwarded.	X	X	X	
	StringTrigger	The StringTrigger action evaluates received messages according to their content.	X	X	X	
	StringValue	The StringValue action sends configured character strings to the corresponding actions.	X	X	X	
	Switching	The Switching action receives and sends events depending on the internal status of the action.	X	X	X	
	SwitchingValue	The SwitchingValue action sends Boolean-type values if events are received.	X	X	X	
	Timeout	The Timeout action delays the sending of output signals.	X	X	X	
	TimerSwitch	The TimerSwitch action is a timer switch which activates or deactivates the addressed actions at specific times.	X	X	X	
	WebPage	The WebPage action is used to display a website in the OfficeSuite or Toolbox of the user who is logged in. Application example: Webcam view of a door intercom	X	X	X	

¹⁾ For OpenCom 1000 the licence is ATAS Gateway pro

Area



The *Area* action is used to group different geographic areas (e.g. premises, buildings, storeys or individual rooms). The events entered are sent on to all the sub-actions. Events can also be forwarded recursively to specific types of sub-actions.

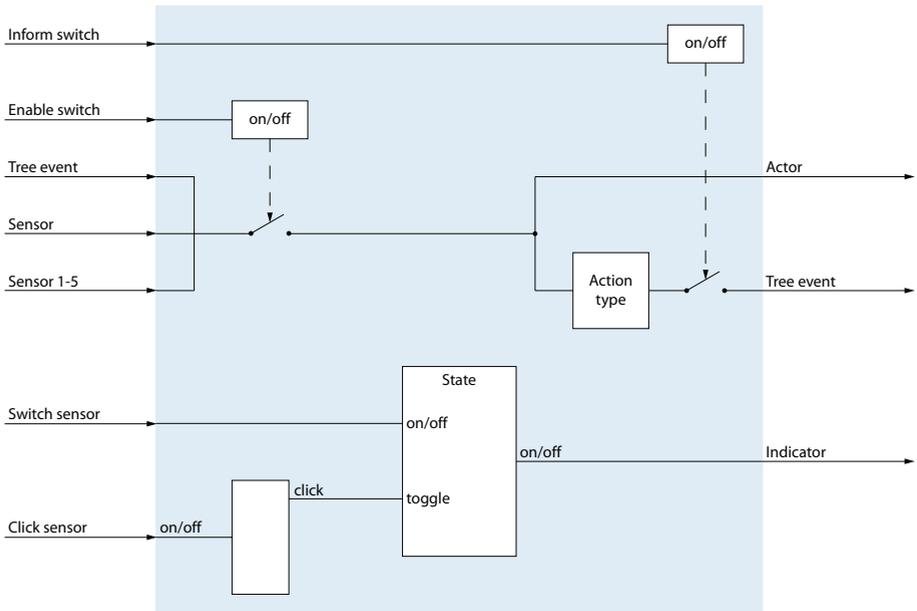


Fig. 8 I/O Action Area

Example:

All the lights on a particular storey are switched off using a configured Redkey on the system phone.

AstroCalendar



The *AstroCalendar* action calculates sunrise and sunset times for the configured location based on astronomic calculations.

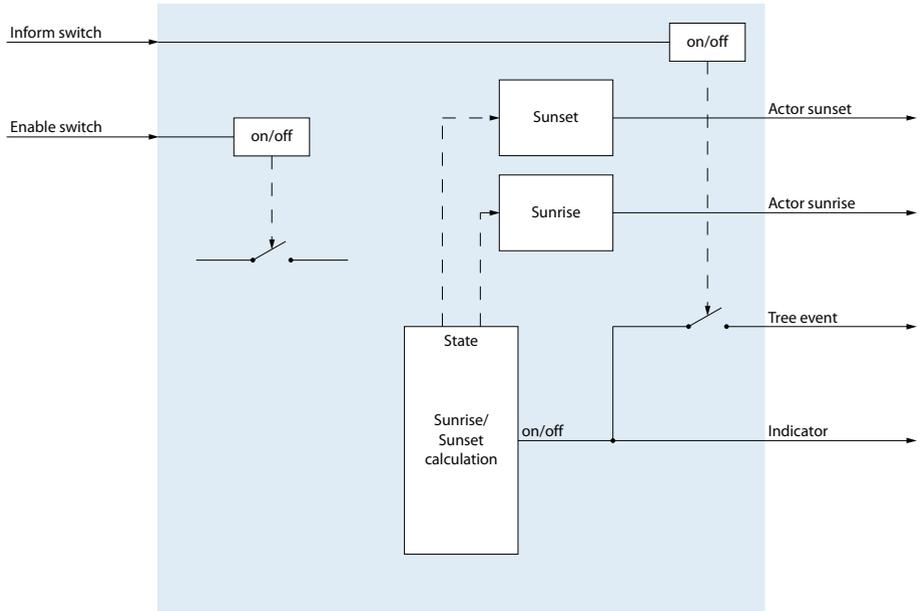


Fig. 9 I/O Action AstroCalendar

CalendarEntry



The *CalendarEntry* action evaluates calendar entries according to the start and end time.

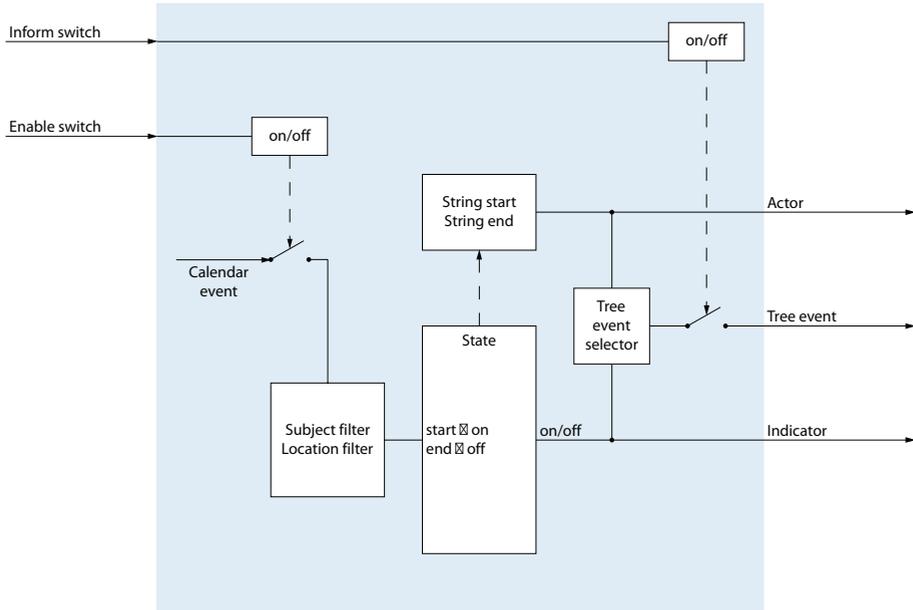


Fig. 11 I/O Action *CalendarEntry*

CalendarNotification



The *CalendarNotification* action evaluates calendar reminders.

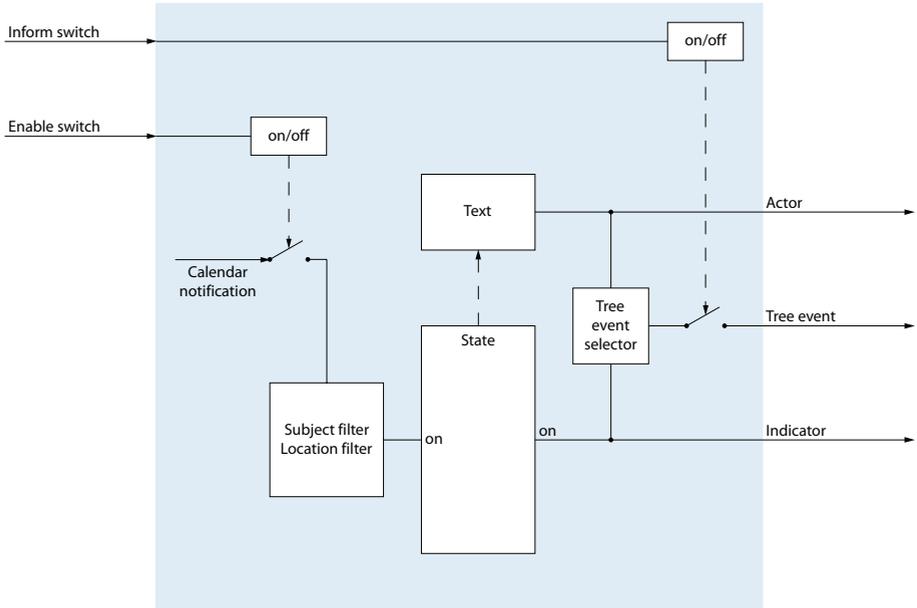


Fig. 12 I/O Action *CalendarNotification*

Example:

Using a specific calendar entry the system phone can automatically be forwarded to a configured destination and presence status set accordingly.

EmailMessage



The *EmailMessage* action sends an e-mail to a defined group of recipients. For the *EmailMessage* action the installation component *Connection to an SMTP Mail Server* must be selected and configured during the installation of the OIP service.

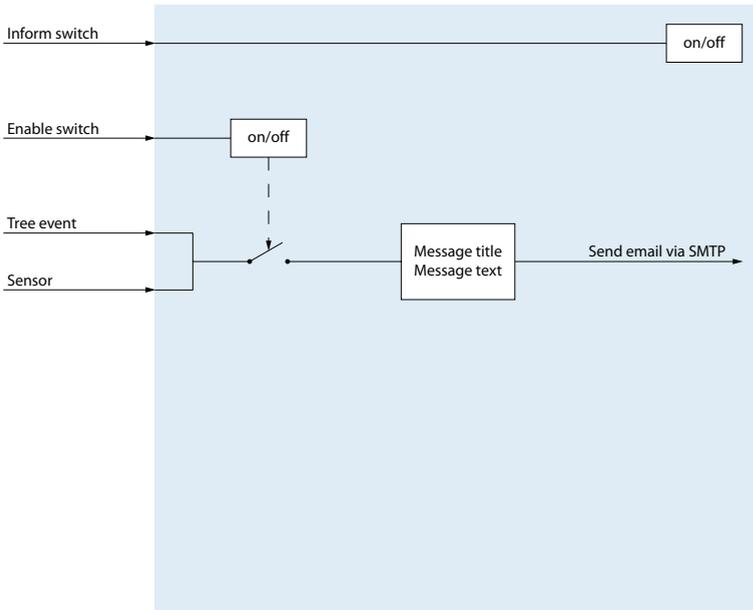


Fig. 13 I/O Action *EmailMessage*

EmailTrigger



The *EmailTrigger* action evaluates received e-mails according to their content.

The analysis of received e-mails is available only with the connection to a Microsoft Exchange server; the user's mailbox must also be configured in the user profile.

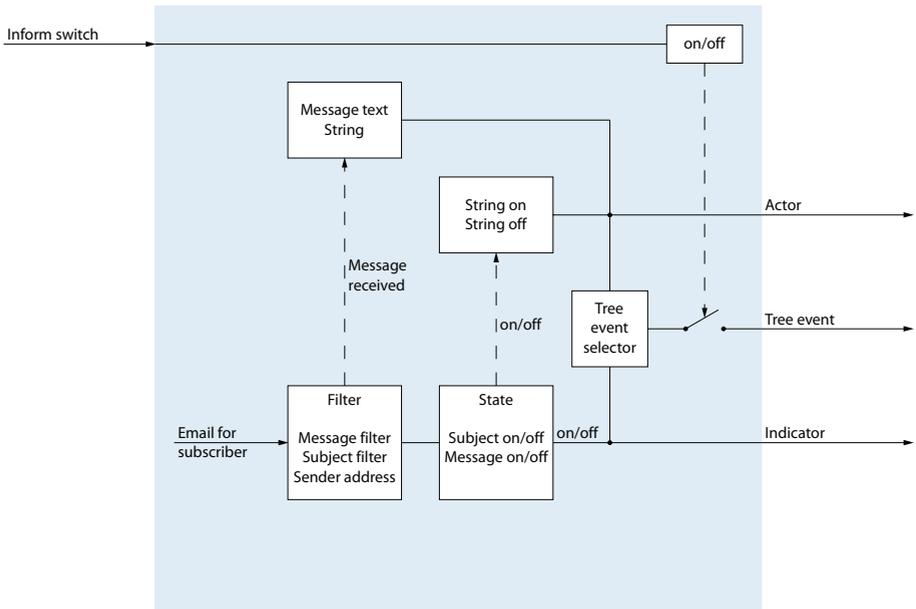


Fig. 14 I/O Action *EmailTrigger*

Enabler



The *Enabler* action activates or deactivates the actions directly subordinated to this action, depending on the parameters supplied.

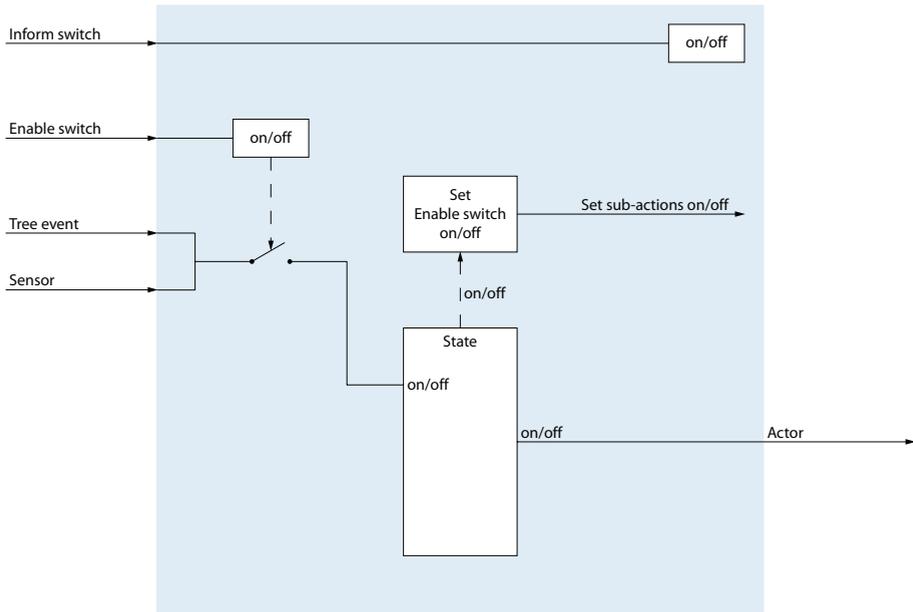


Fig. 15 I/O Action *Enabler*

Execute

The *Execute* action starts an external application.

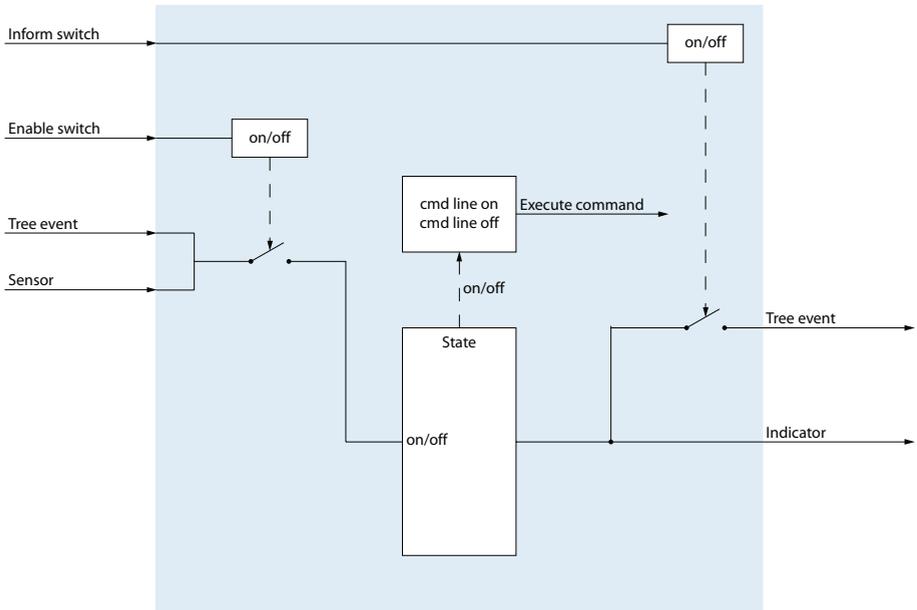


Fig. 16 I/O Action *Execute*

FileWriter



The *FileWriter* action writes the data received in the configured I/O export data file.

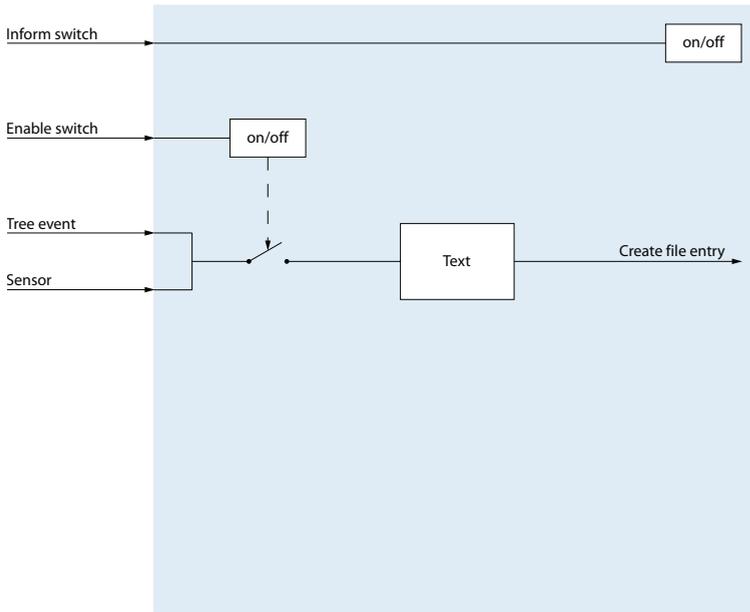


Fig. 17 I/O Action *FileWriter*

Filter



The *Filter* action compares incoming events with the configured filter criteria. If they match up, the events are forwarded.

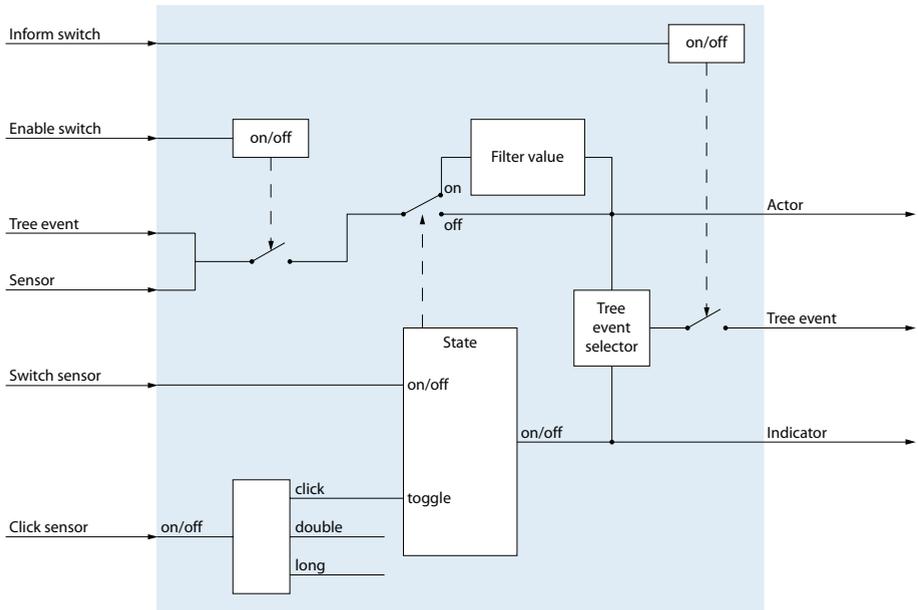


Fig. 18 I/O Action Filter

FloatingValue

0.01

The *FloatingValue* action sends floating point numbers in accordance with the IEEE754 standard with an accuracy of 4 bytes.

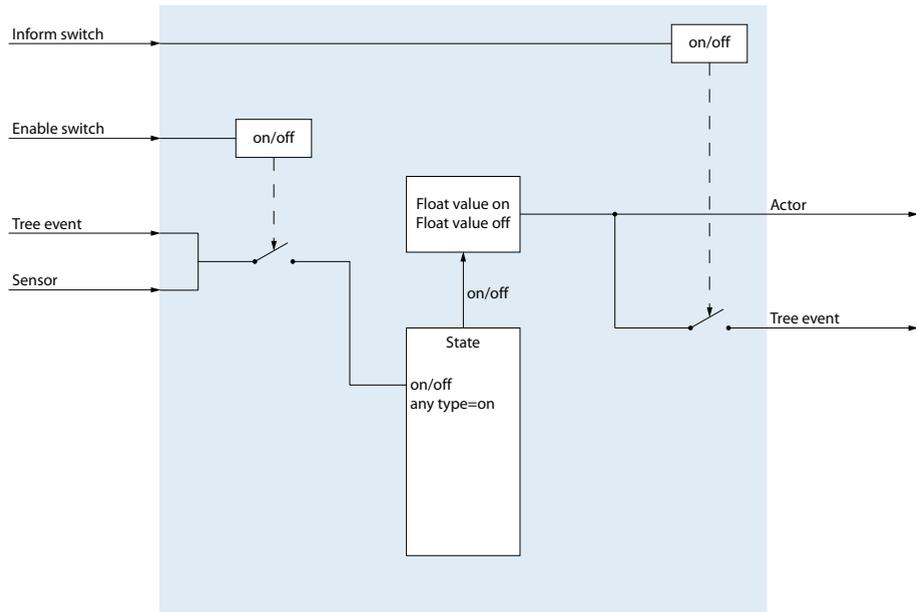


Fig. 19 I/O Action *FloatingValue*

Heartbeat



The *Heartbeat* action periodically sends a switch-on message to the defined I/O group.

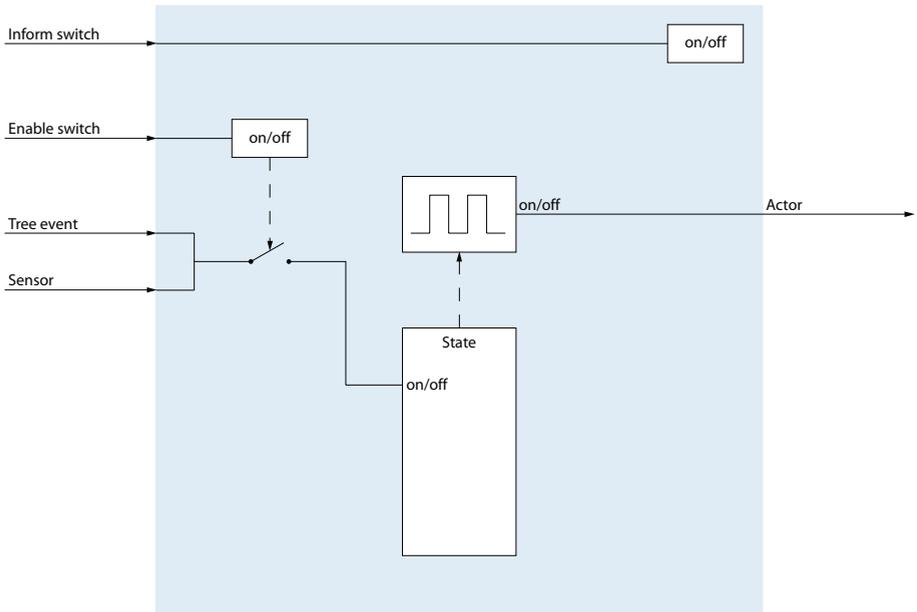


Fig. 20 I/O Action *Heartbeat*

Initializer



The *Initializer* action is activated after the configured delay once the OIP server is started.

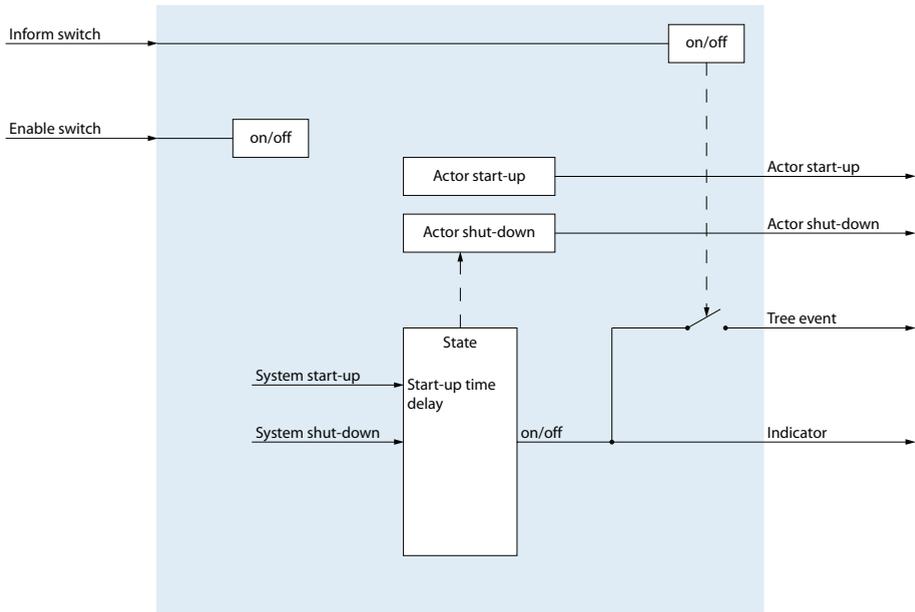


Fig. 21 I/O Action *Initializer*

Inverter



The *Inverter* action inverts Boolean-type input signals (true \rightarrow false or false \rightarrow true).

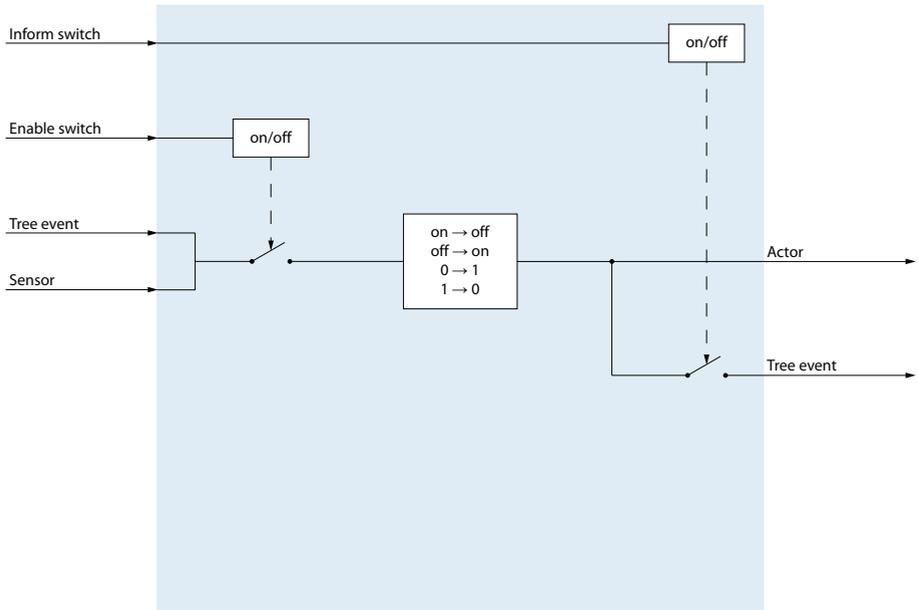


Fig. 22 I/O Action Inverter

***I*OSystem**



The *I*OSystem action is a placeholder for creating new node points for a clearer overview.

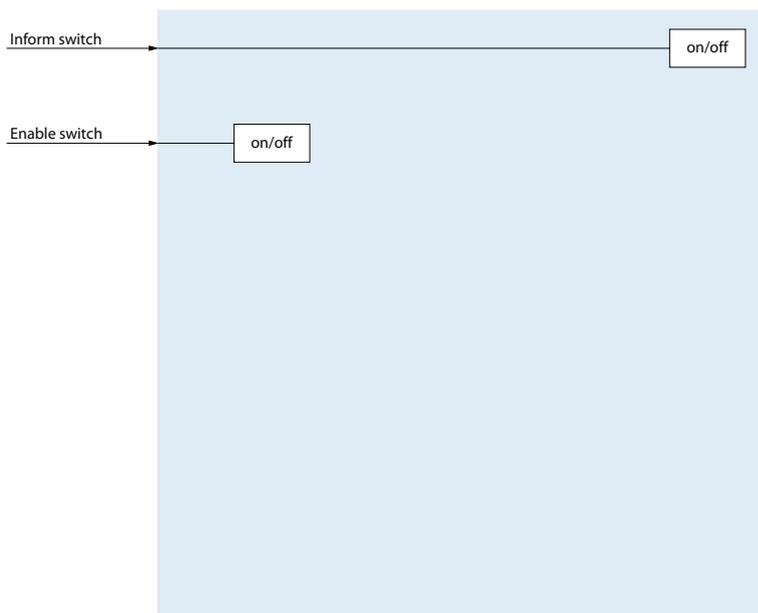


Fig. 23 I/O Action *I*OSystem

Events sent to the action via the tree structure or by addressing are not routed through by the action. This means that the action tree is interrupted at this point.

JabberAccount



The *JabberAccount* action sets up a connection to an external Jabber/XMPP-compatible instant messaging account (e.g. Google Talk). The presence status in OIP (Absent, Meeting, ...) is transmitted on the instant messaging status and vice versa. Chat messages can be received as system messages.

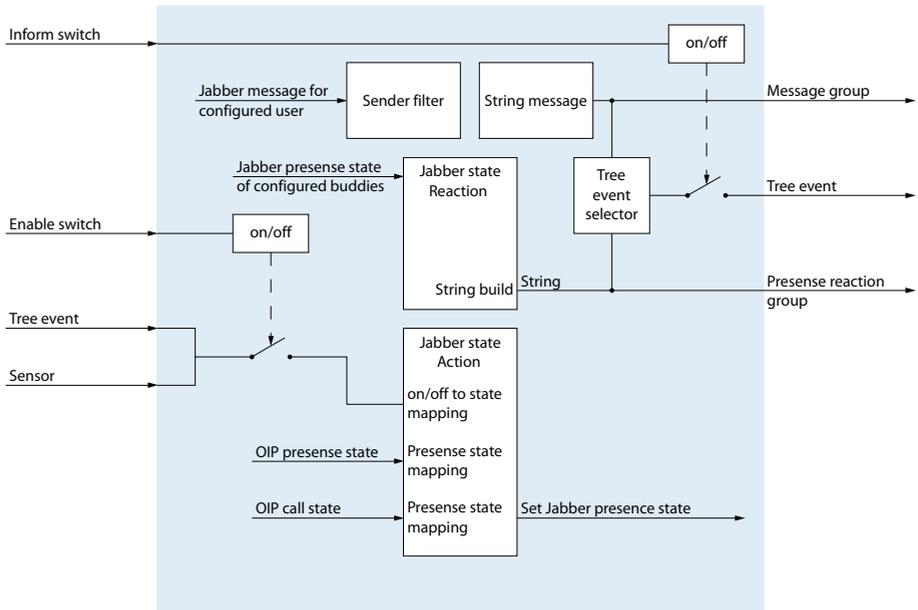


Fig. 24 I/O Action *JabberAccount*

LogicAND

8

The *LogicAND* action checks input signals for "AND operation" and sends the output signals for activating and deactivating actions.

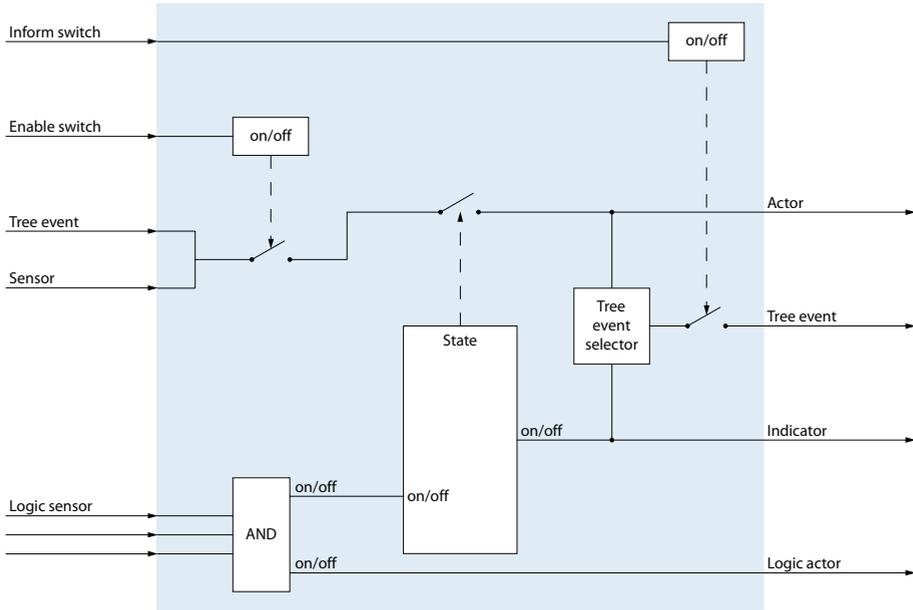


Fig. 25 I/O Action *LogicAND*

LogicNOT



The *LogicNOT* action checks input signals for "NOT operation" and sends the output signals for activating and deactivating actions.

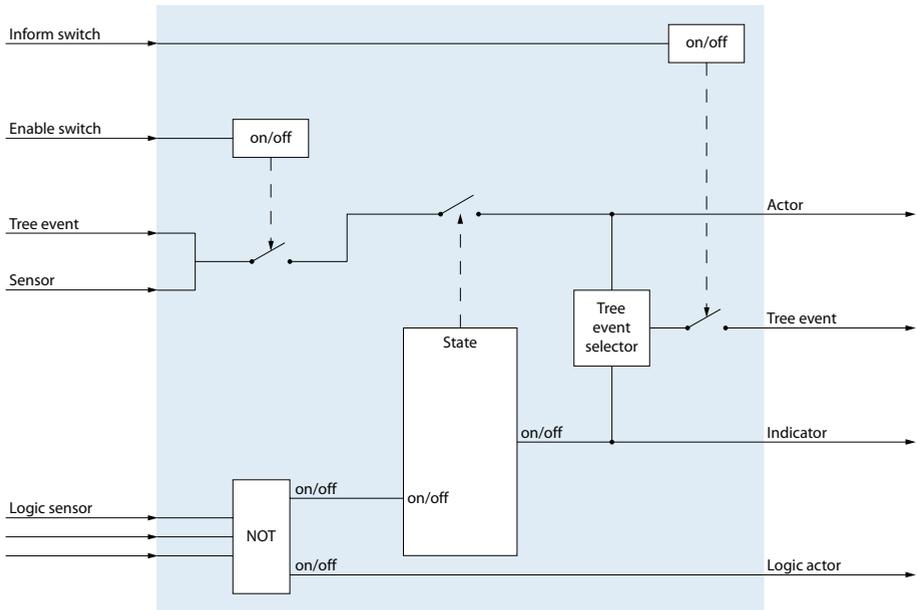


Fig. 26 I/O Action *LogicNOT*

LogicOR

OR

The *LogicOR* action checks input signals for "OR operation" and sends the output signals for activating and deactivating actions.

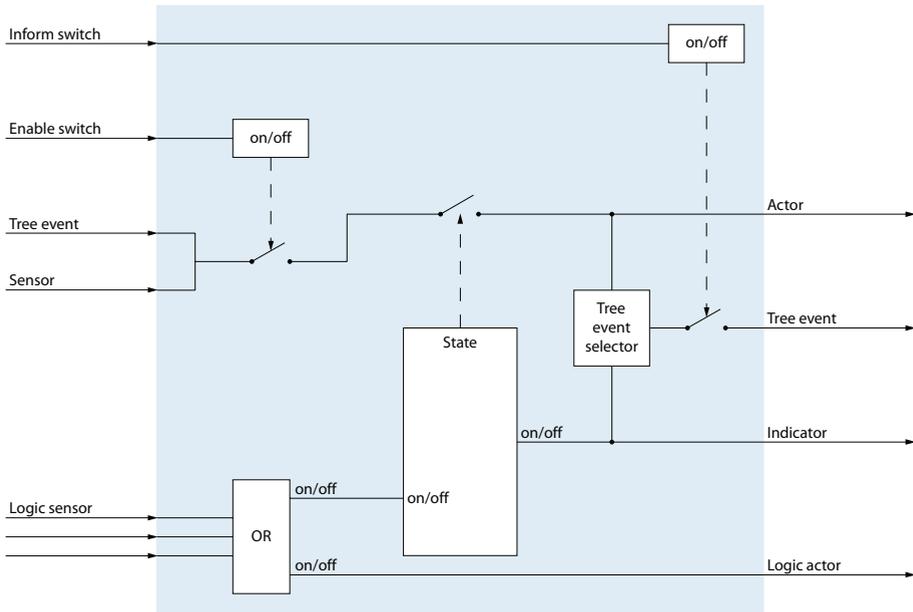


Fig. 27 I/O Action LogicOR

LogicXOR



The *LogicXOR* action checks input signals for "EXCLUSIVE-OR operation" and sends the output signals for activating and deactivating actions.

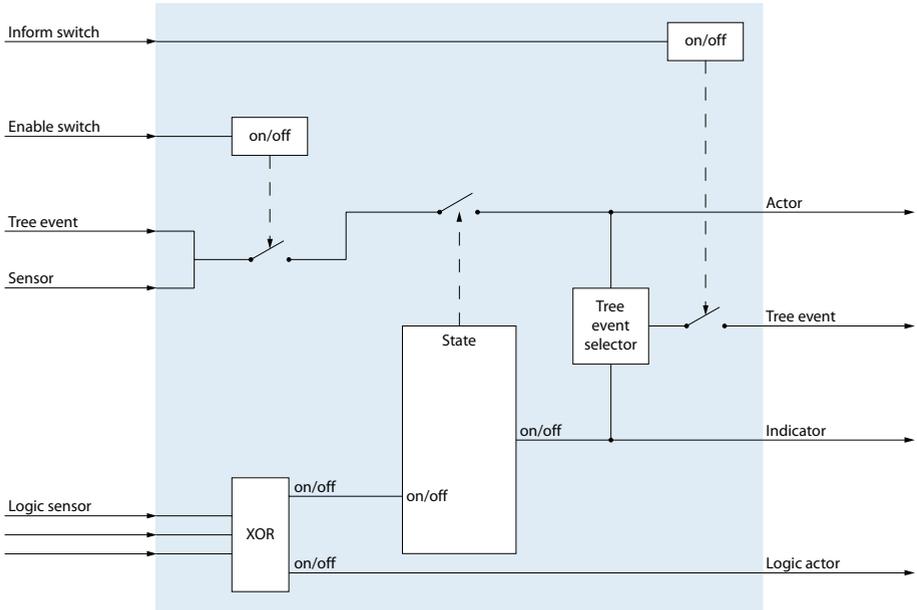


Fig. 28 I/O Action *LogicXOR*

Notification



The *Notification* action

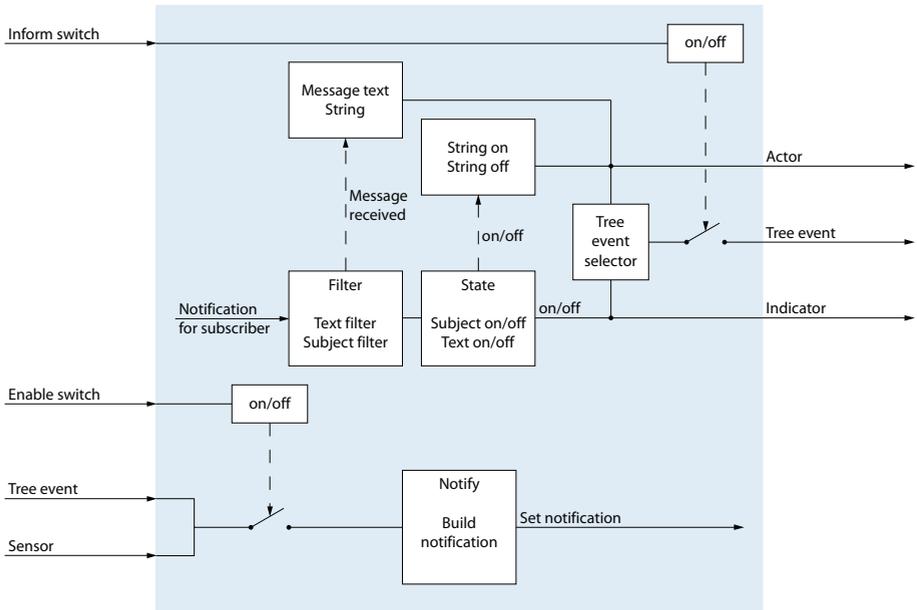


Fig. 30 I/O Action *Notification*

ParameterSetup



The *ParameterSetup* action allows the properties of actions directly subordinated to it to be adapted during runtime.

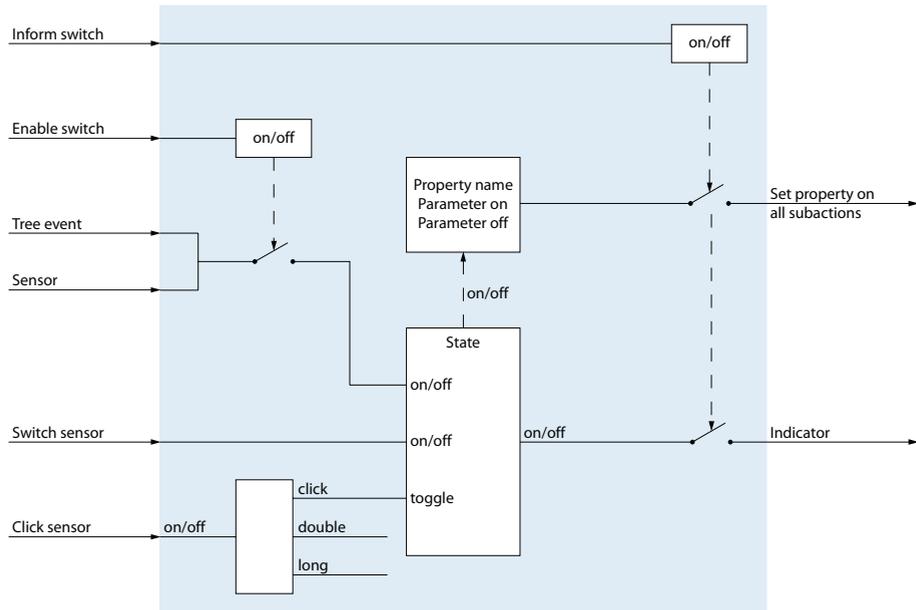


Fig. 31 I/O Action *ParameterSetup*

PBXACDAgentSkill

The *PBXACDAgentSkill* action changes the status (activated, deactivated) of the agent for the configured Skill. If the configured agent is activated or deactivated in a Skill, the status is forwarded accordingly.

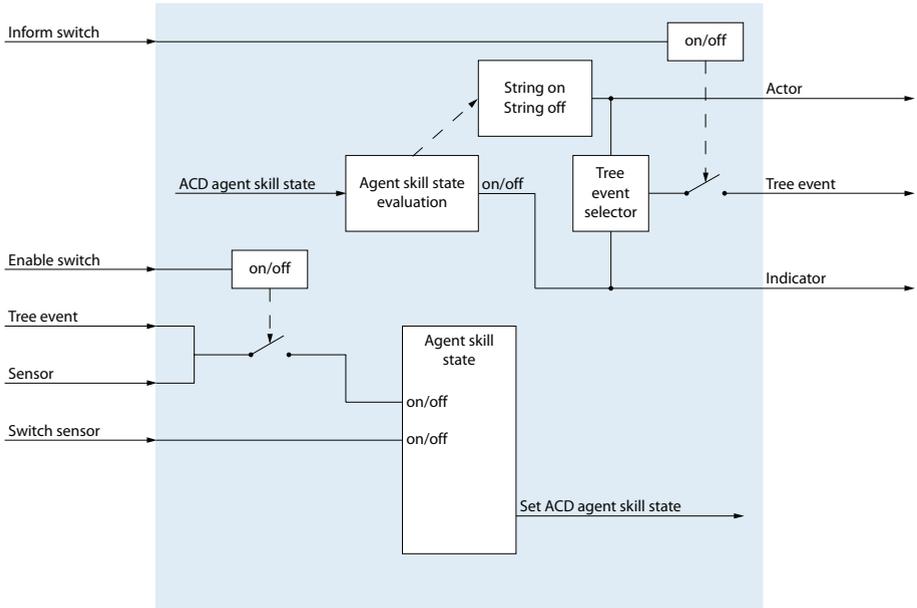


Fig. 32 I/O Action *PBXACDAgentSkill*

PBXACDAgentState



The *PBXACDAgentState* action sets and evaluates the status of the OIP Call Centre agents. If the agent status received corresponds to the configured status, the corresponding events are forwarded. If an event is received, the agent status can be set for the configured user.

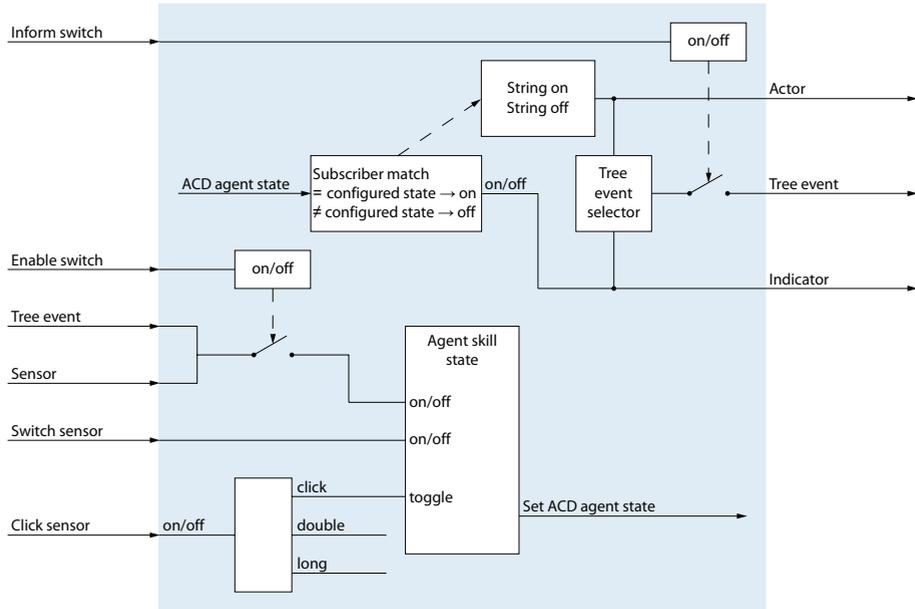


Fig. 33 I/O Action *PBXACDAgentState*

PBXACDSkillCalls



The *PBXACDSkillCalls* action monitors the number of unanswered calls in the ACD queue for the configured Skill.

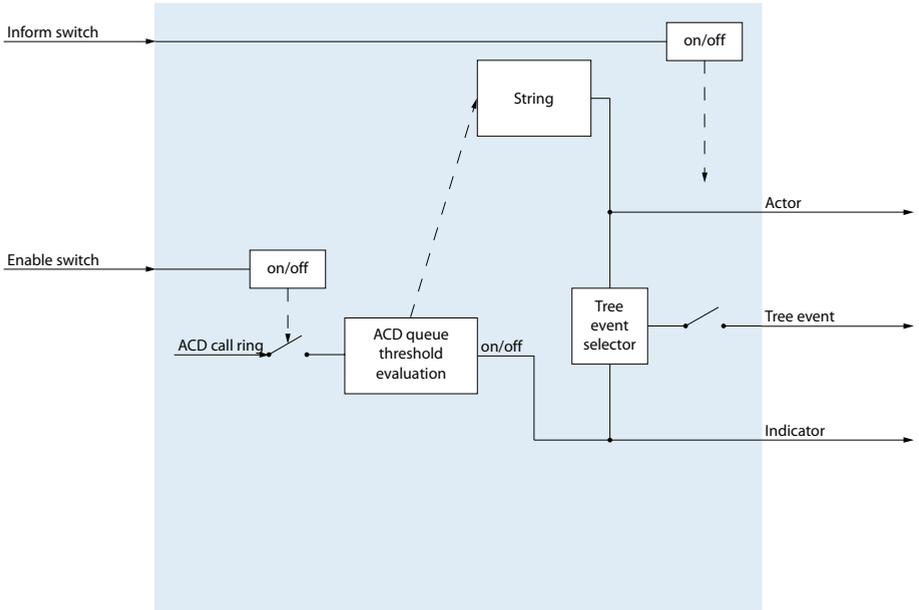


Fig. 34 I/O Action *PBXACDSkillCalls*

PBXACDSkillState

The *PBXACDSkillState* action changes the status (open, closed) for the configured Skill. If the status of the configured (open, closed) is modified, the status is forwarded accordingly.

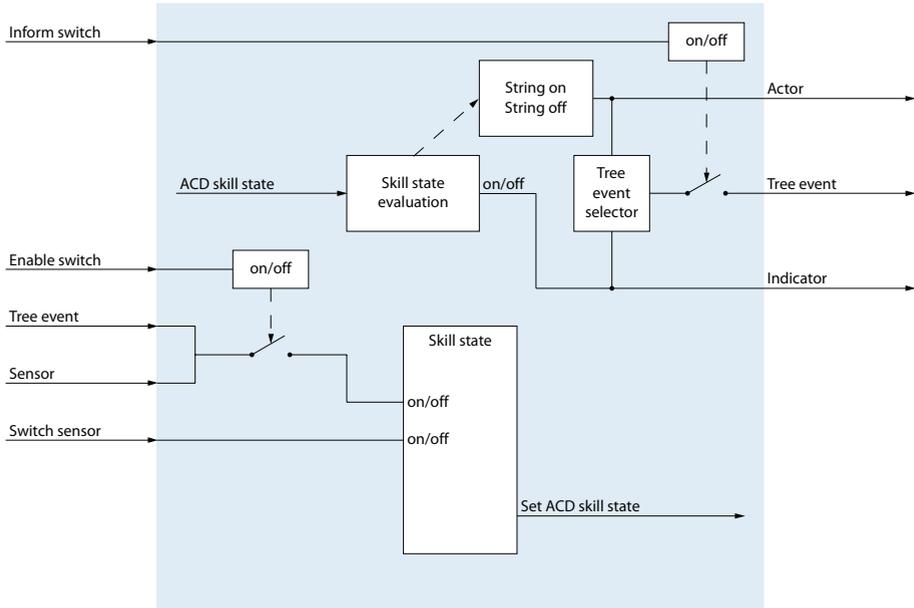


Fig. 35 I/O Action *PBXACDSkillState*

PBXAlarm

The *PBXAlarm* action evaluates received PBX alarms in accordance with the parameters.

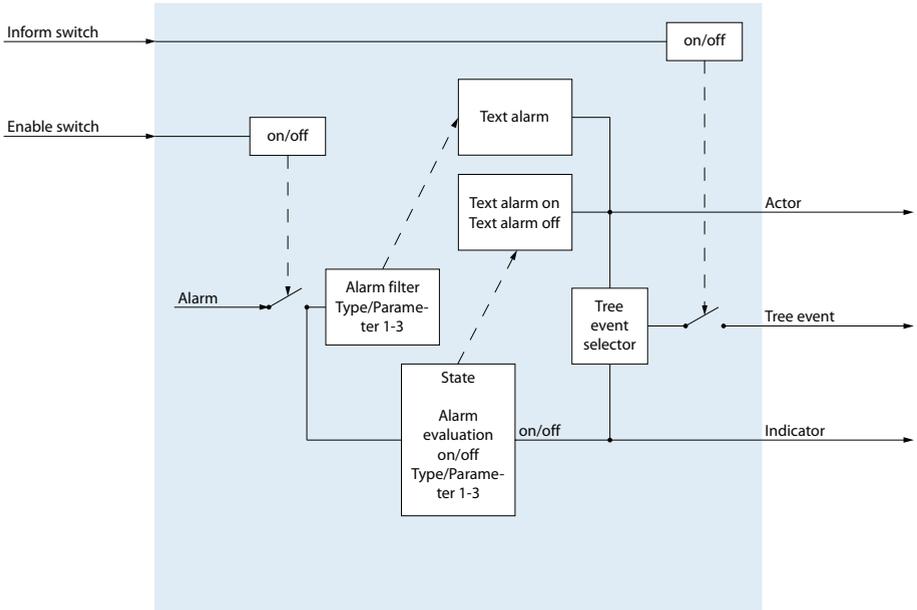


Fig. 36 I/O Action *PBXAlarm*

PBXCallState



The *PBXCallState* action evaluates the call status of the configured users.

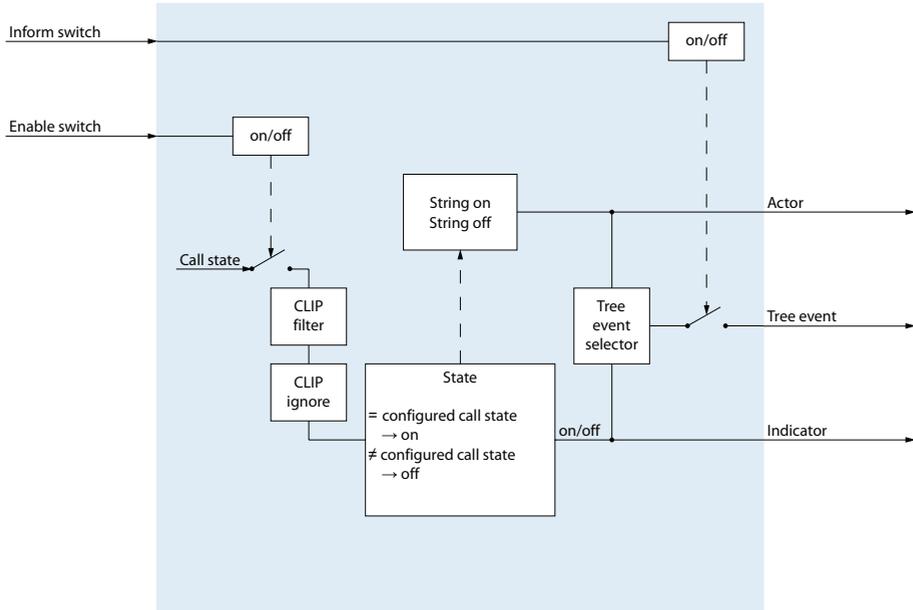


Fig. 37 I/O Action *PBXCallState*

PBXChargeContact

The *PBXChargeContact* action evaluates the charge contact of the configured DECT handsets.

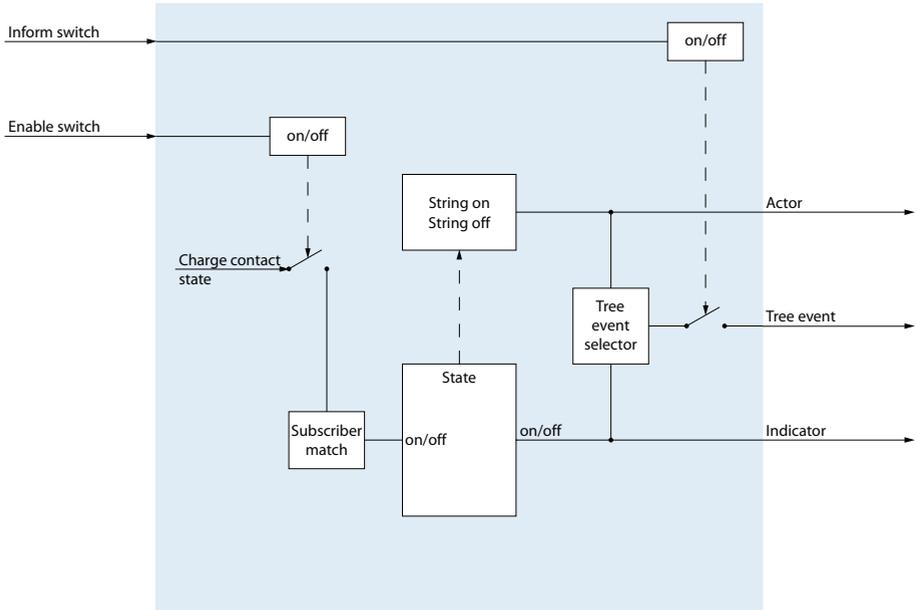


Fig. 38 I/O Action *PBXChargeContact*

PBXClipSetup



The *PBXClipSetup* action configures the outgoing CLIP number for the configured user.

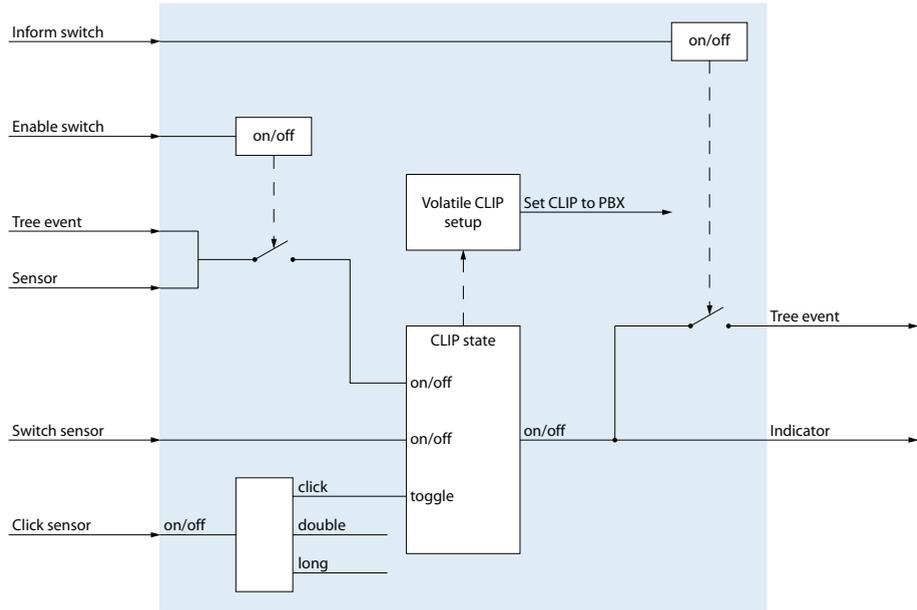


Fig. 39 I/O Action *PBXClipSetup*

PBXDectSubscriber



The *PBXDectSubscriber* action evaluates the localization data of a DECT handsets in a configured area.

The *PBXDectSubscriber* action is available only if at least three DECT radio units are connected to the communication server.

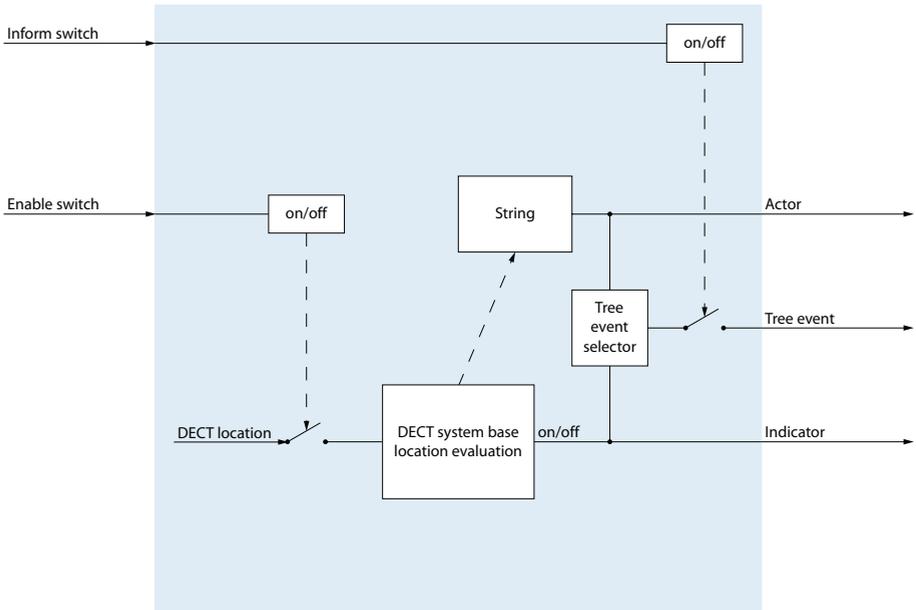


Fig. 40 I/O Action *PBXDectSubscriber*

In the interval configured in the action the location of the DECT handset is calculated using the data of the three strongest DECT radio units. The availability of the DECT handset (e.g. DECT deactivated, outside the configured area, DECT on the charging bay) can also be determined and forwarded.

The *PBXDectSubscriber* action can be displayed in the chart view, see also "[DECT locating](#)", page 314.

PBXDectSystemBase



The *PBXDectSystemBase* action is used to display a DECT radio unit connected to the PBX.

The *PBXDectSystemBase* action is available only if at least three DECT radio units are connected to the communication server.

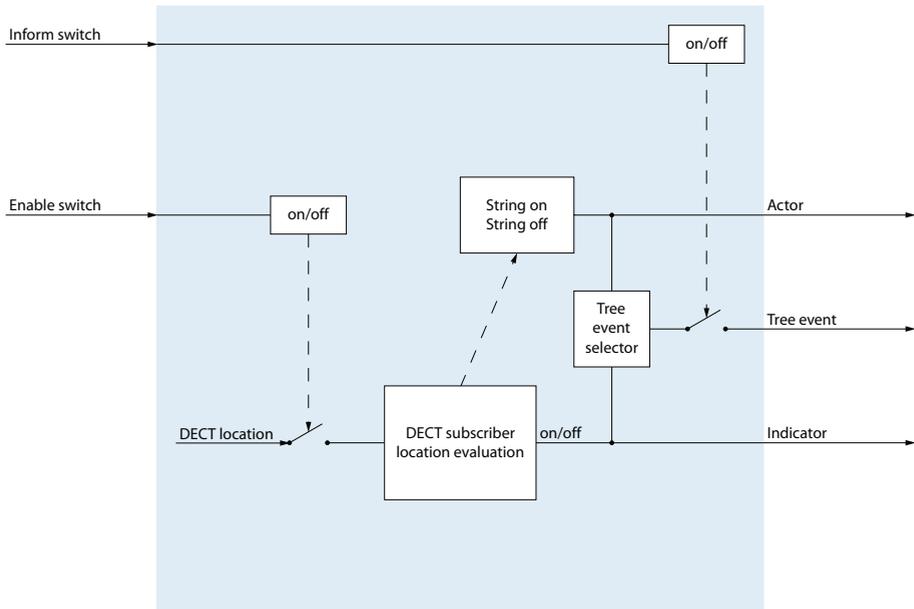


Fig. 41 I/O Action *PBXDectSystemBase*

In conjunction with the DECT localization this action is shown or hidden if a configured DECT handset is located in the area of the DECT radio unit.

The *PBXDectSystemBase* action can be displayed in the chart view, see also "[DECT locating](#)", page 314.

PBXDestinationState



The *PBXDestinationState* action sets or evaluates the CFU state of an user.

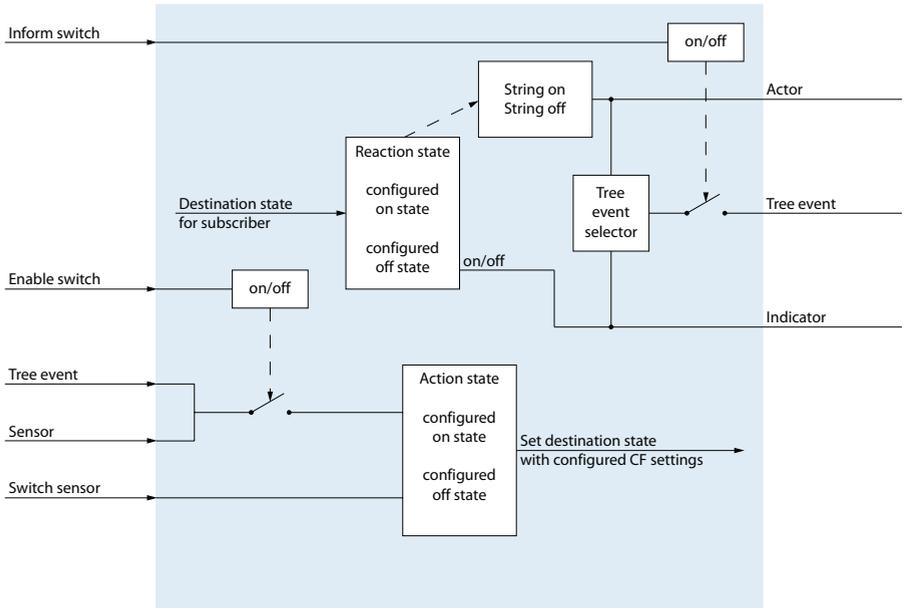


Fig. 42 I/O Action *PBXDestinationState*

PBXDisplay



The *PBXDisplay* action controls the display of the system phone.

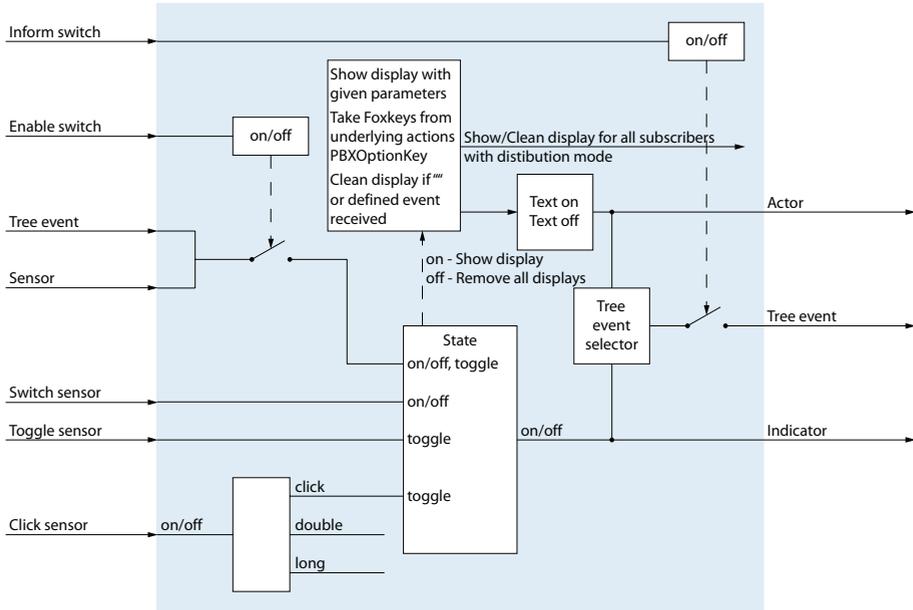


Fig. 43 I/O Action *PBXDisplay*

PBXDisplayOption



The *PBXDisplayOption* action is responsible for displaying and evaluating the Foxkeys. An action of the *PBXDisplayOption* action type is always a subordinate action of the *PBXDisplay* action type.

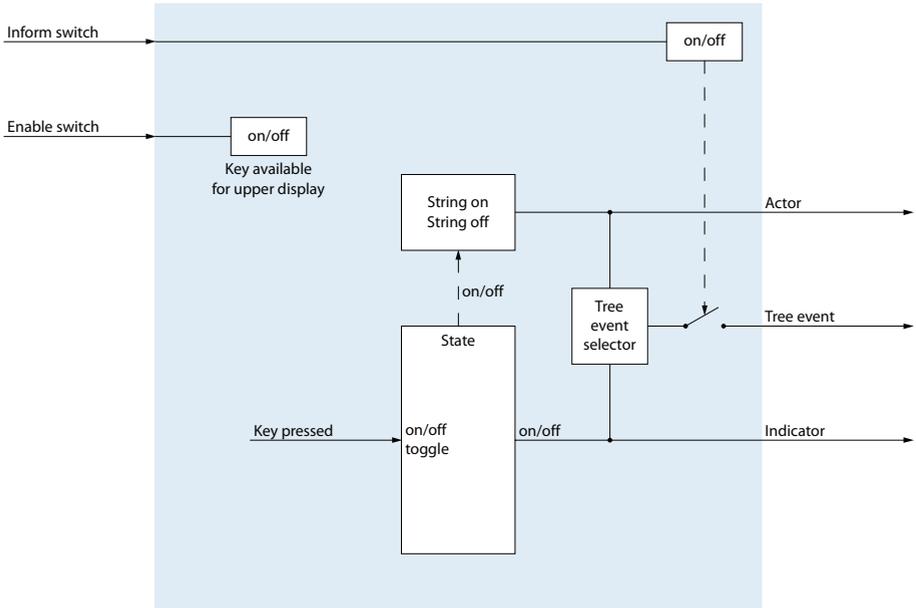


Fig. 44 I/O Action *PBXDisplayOption*

PBXMacro



The *PBXMacro* action sends PBX macros configured in the parameters.

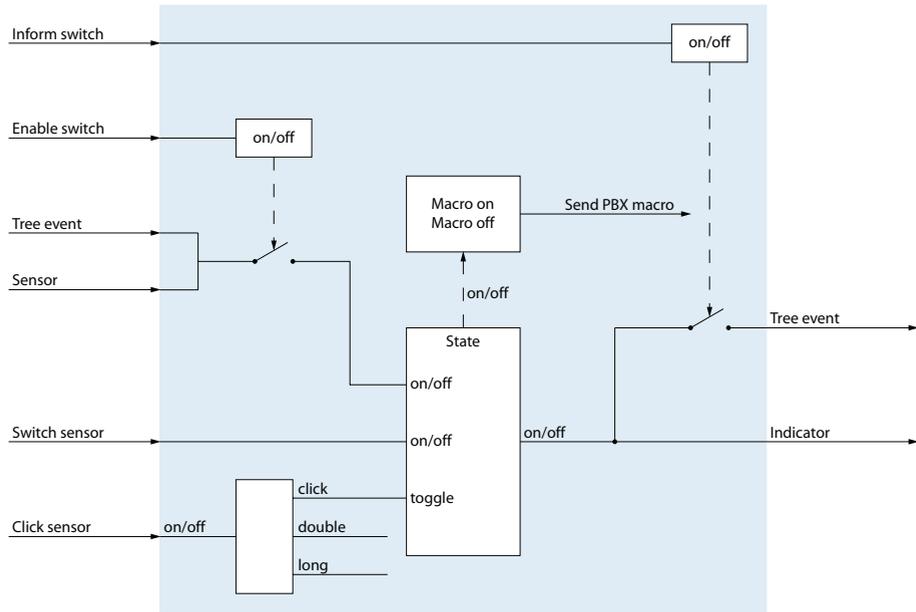


Fig. 45 I/O Action *PBXMacro*

PBXMessage



The *PBXMessage* action sends a message to the configured users.

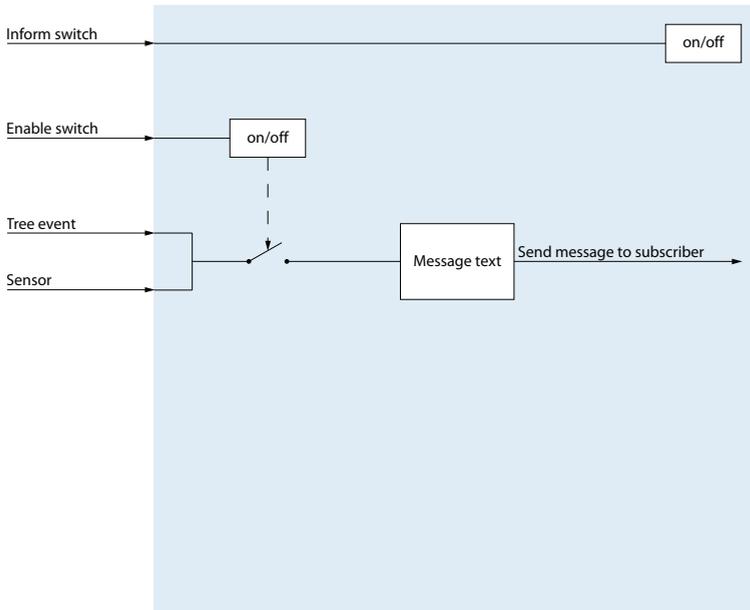


Fig. 46 I/O Action *PBXMessage*

PBXMessageIndication



The PBXMessageIndication action responds to MWI events (e.g. receiving a new voice mail, deleting a voice mail) from the PBX. The OIP internal MWI status can be set based on the events received and forwarded accordingly.

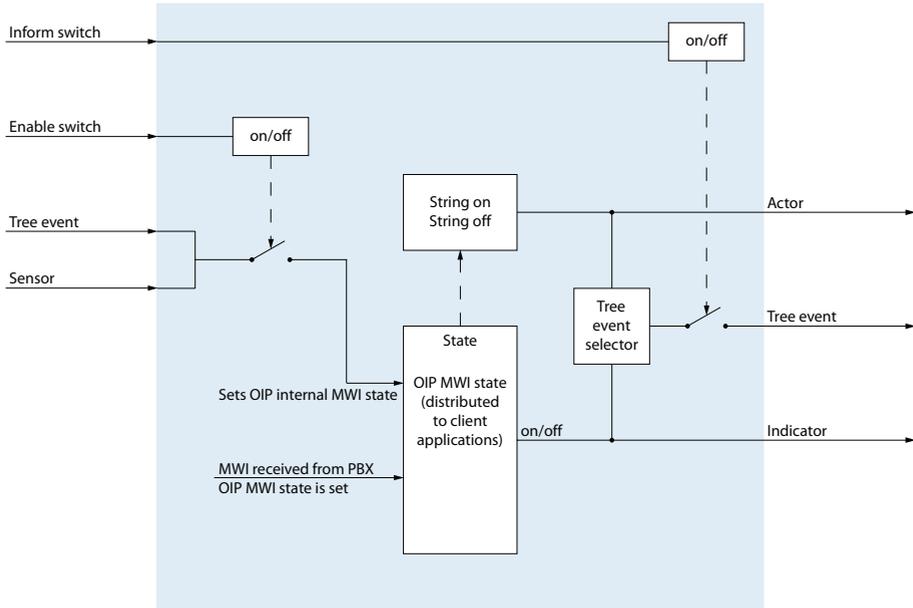


Fig. 47 I/O Action PBXMessageIndication

PBXMessageTrigger



The *PBXMessageTrigger* action evaluates received messages according to their content.

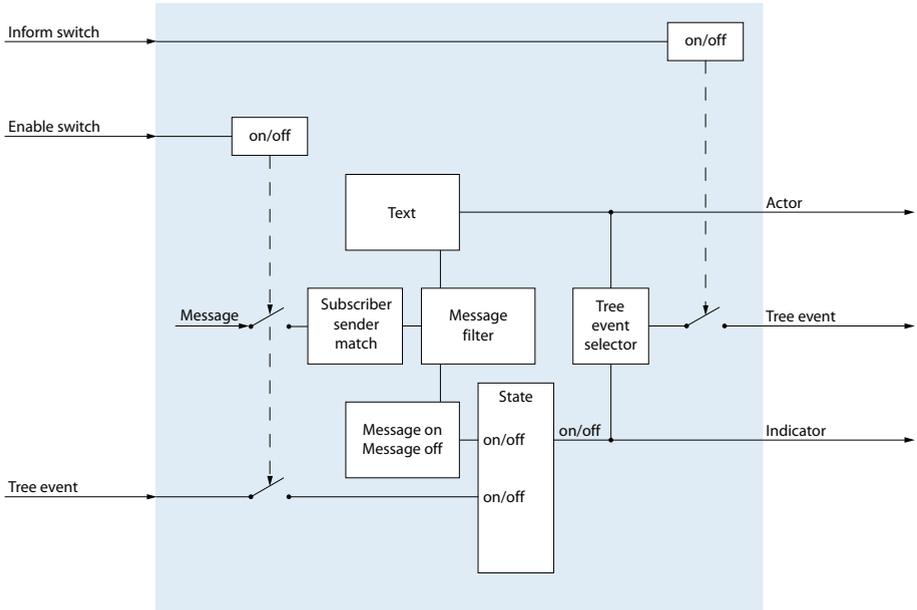


Fig. 48 I/O Action *PBXMessageTrigger*

PBXNetworkMessage



The *PBXNetworkMessage* action sends messages to the QSIG network.

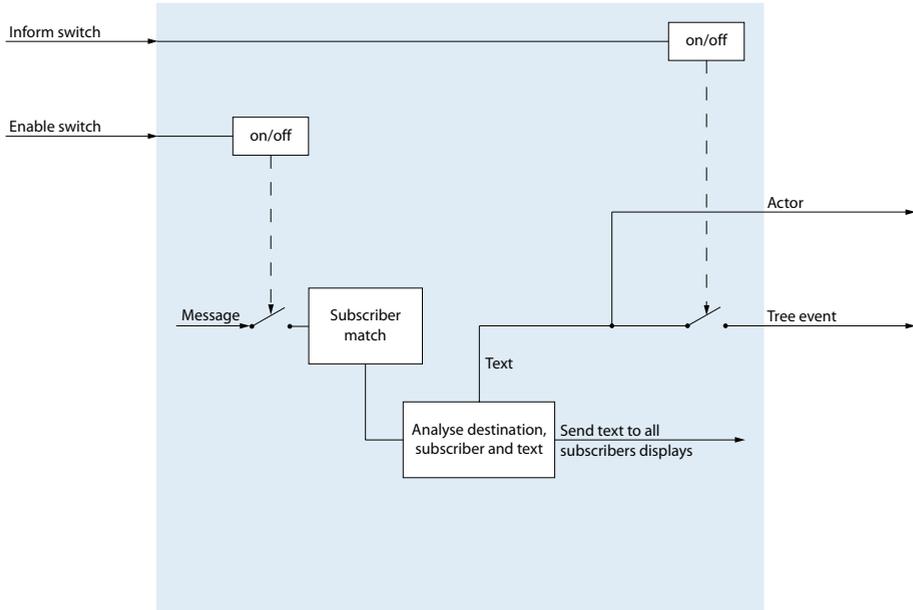


Fig. 49 I/O Action *PBXNetworkMessage*

PBXPresenceKey

The *PBXPresenceKey* action indicates the presence status on a configured Redkey.

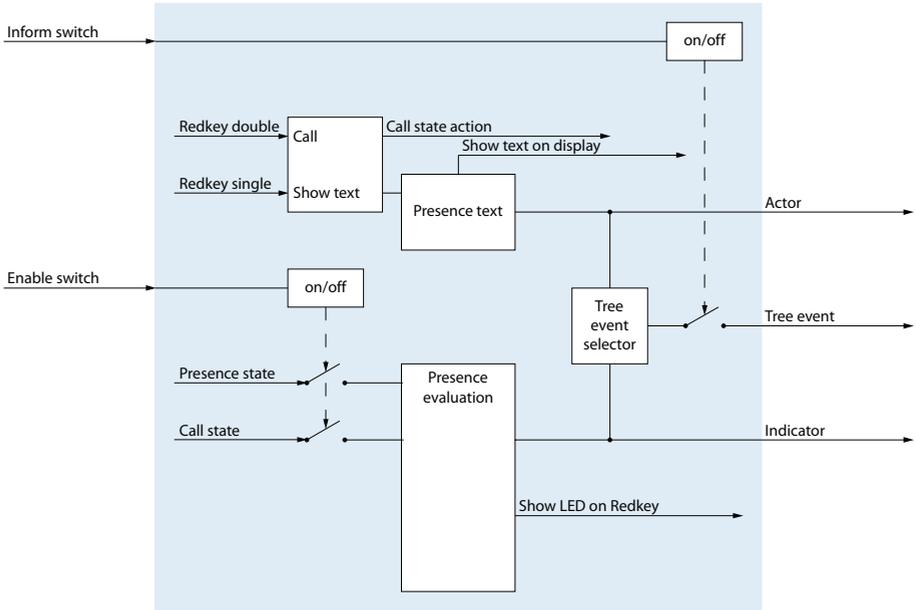


Fig. 50 I/O Action *PBXPresenceKey*

PBXPresenceState



The *PBXPresenceState* action evaluates the presence status of the configured user. The presence status can also be set.

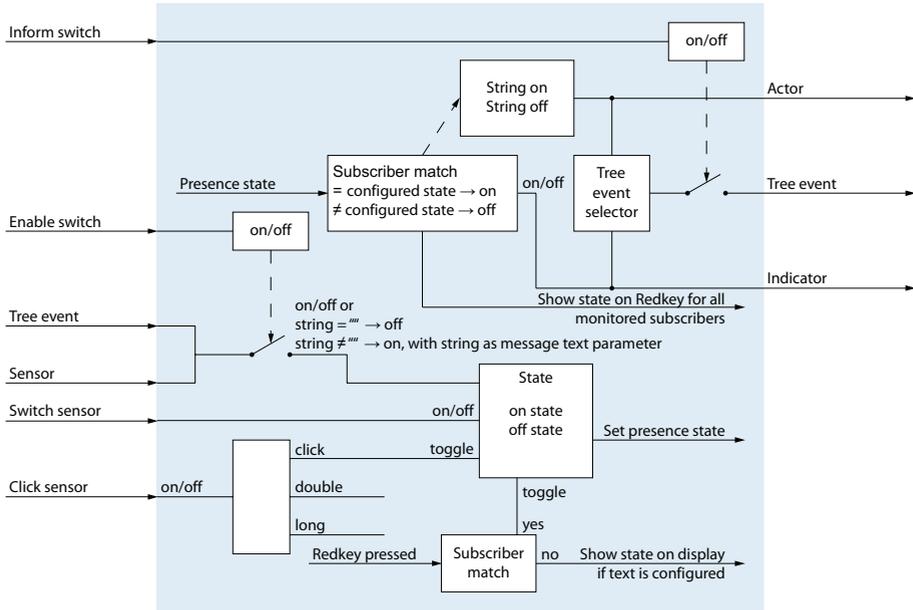


Fig. 51 I/O Action *PBXPresenceState*

PBXPUMState**PUM**

The *PBXPUMState* action sets and evaluates the PUM status of the configured user.

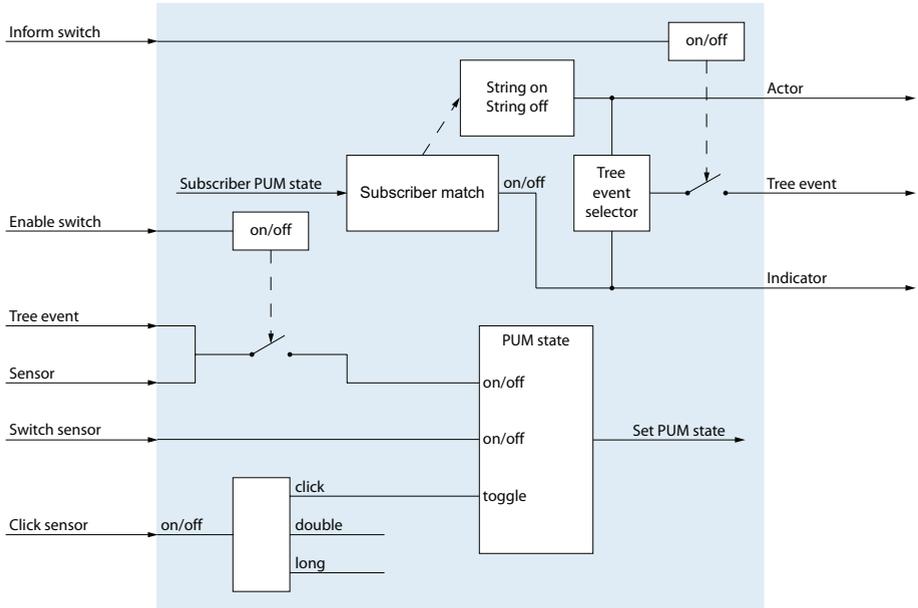


Fig. 52 I/O Action *PBXPUMState*

PBXRedKey



The *PBXRedKey* action evaluates the received character string stored on a programmed Redkey, and sends Boolean-type output signals to the addressed actions.

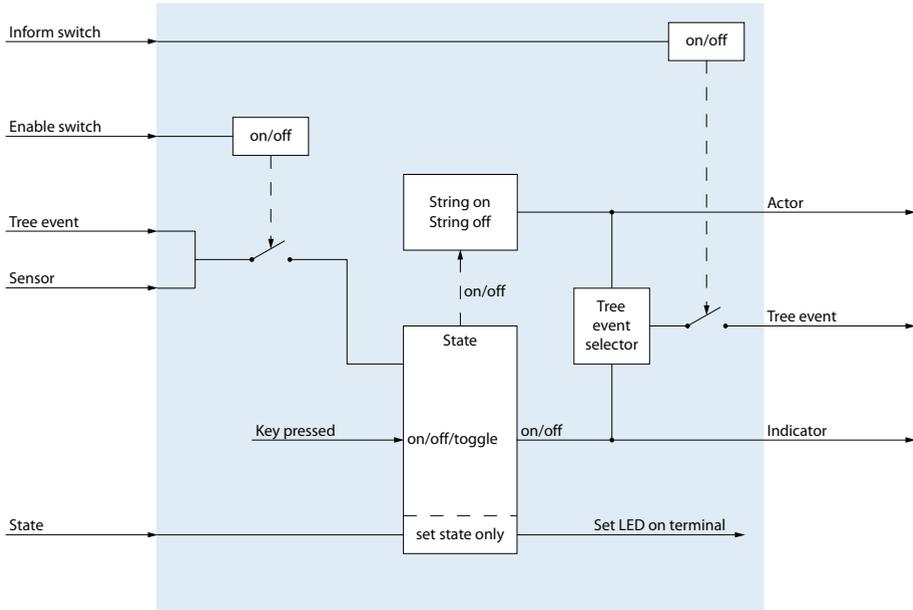


Fig. 53 I/O Action *PBXRedKey*

PBXSubscriber

The *PBXSubscriber* action forwards the status (on/off) of a configured PBX user. The status might be a particular call status or a new voice mail. The status can be used for the chart display.

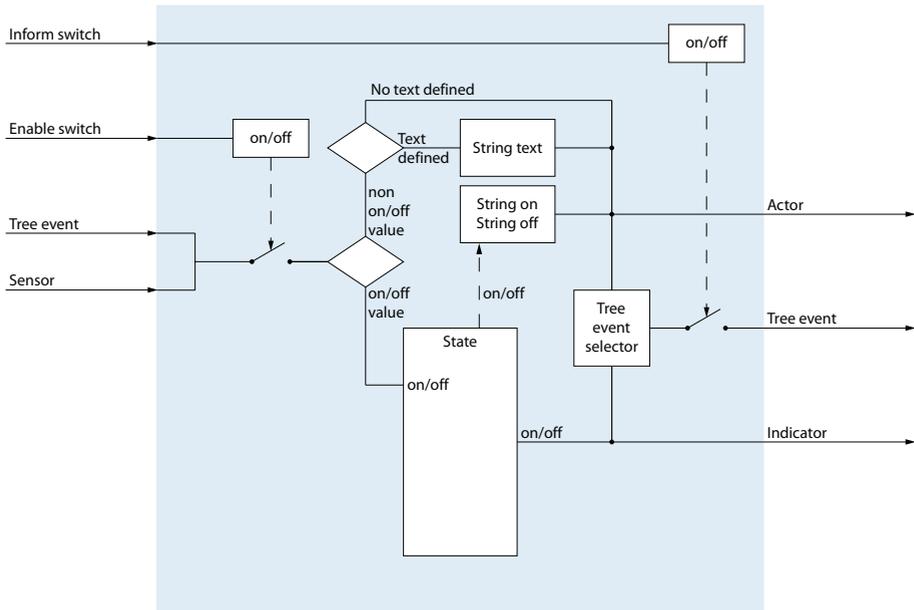


Fig. 55 I/O Action *PBXSubscriber*

PBXSwitchGroup



The *PBXSwitchGroup* action sets and evaluates the status of the switch position (day, night, weekend).

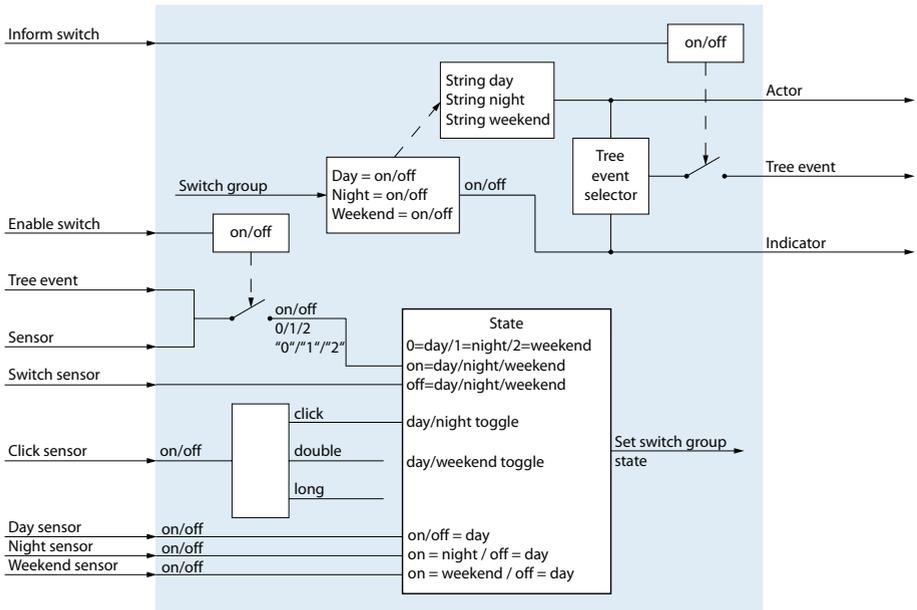


Fig. 56 I/O Action *PBXSwitchGroup*

PBXTeamCall



The *PBXTeamCall* action allows the configuration of teams. All the team members see on the display of the system phone the calls made to the team members and can use the Foxkey to fetch the calls.

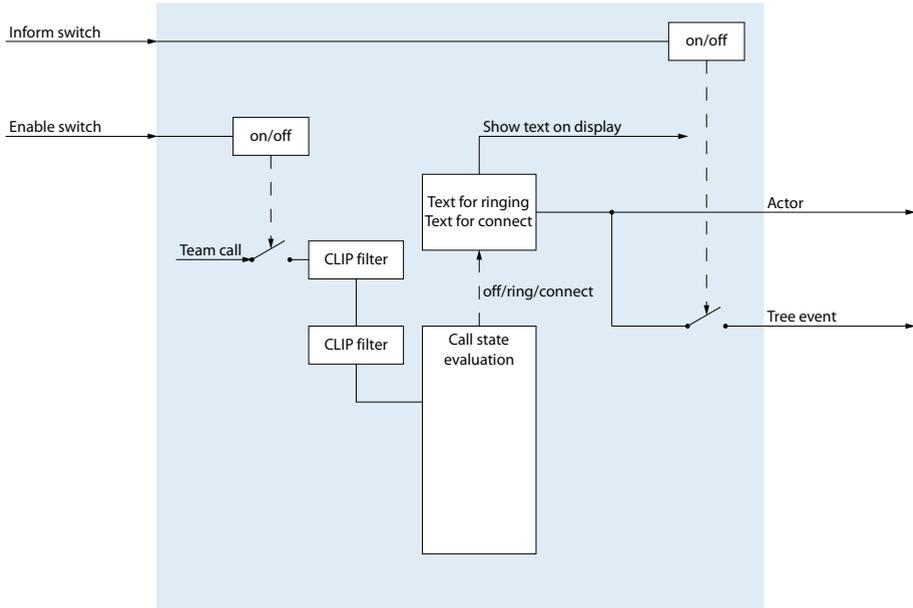


Fig. 57 I/O Action PBXTeamCall

PBXTeamKey



The *PBXTeamKey* action simulates a team key that is available in the QSIG network.

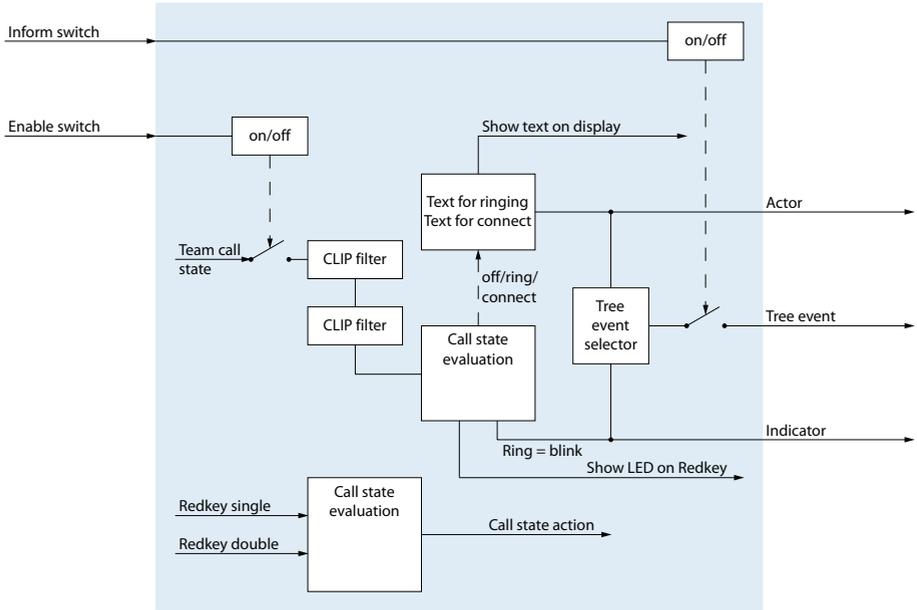


Fig. 58 I/O Action *PBXTeamKey*

PBXTerminalEvent



The *PBXTerminalEvent* action

Fig. 59 I/O Action *PBXTerminalEvent*

PBXUserCommand



The *PBXUserCommand* action evaluates alarms sent via the */# procedure *77xxxx#.

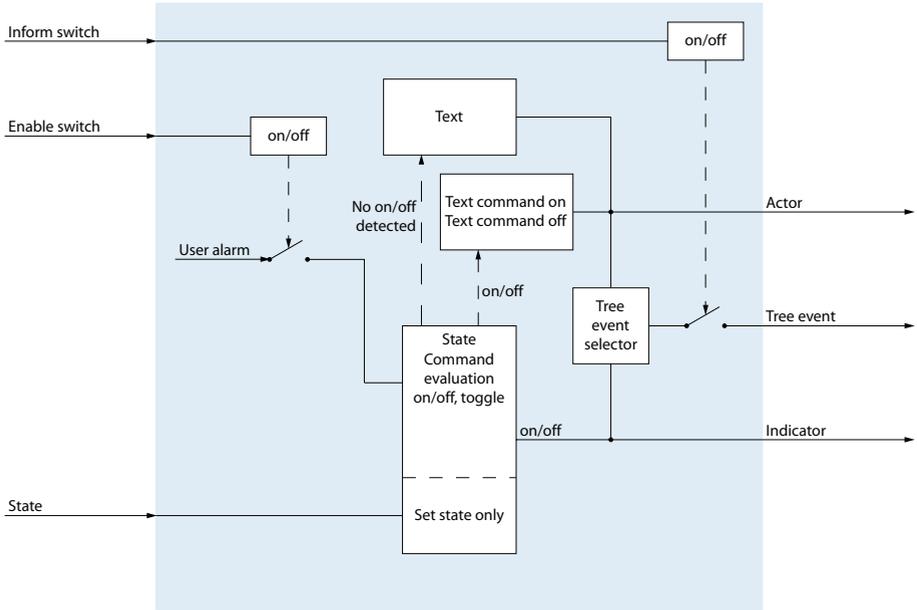


Fig. 60 I/O Action *PBXUserCommand*

PBXUserGroup



The *PBXUserGroup* action sets and evaluates the status of the configured users in the user group.

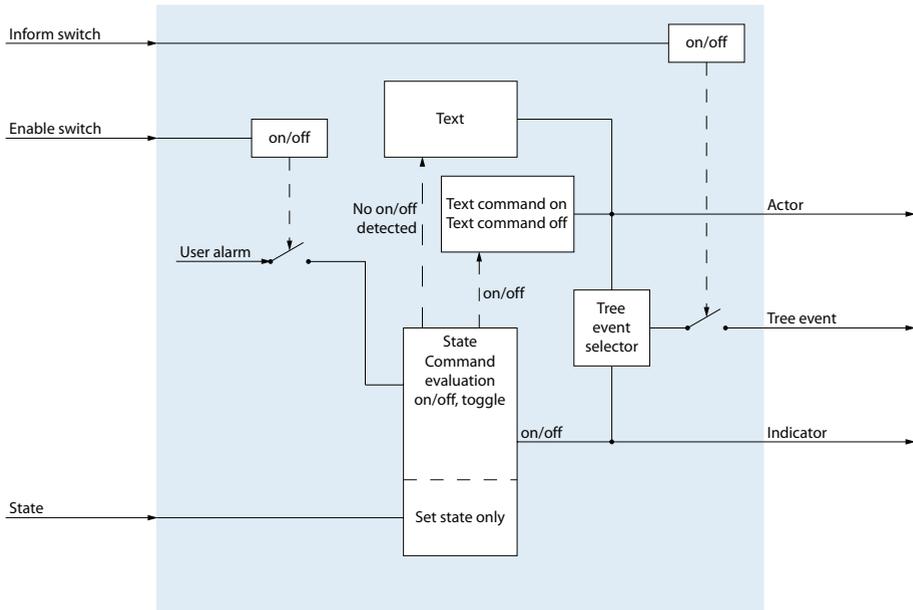


Fig. 61 I/O Action *PBXUserGroup*

PBXVoiceMail



The *PBXVoiceMail* action responds to voice mails received by the configured user.

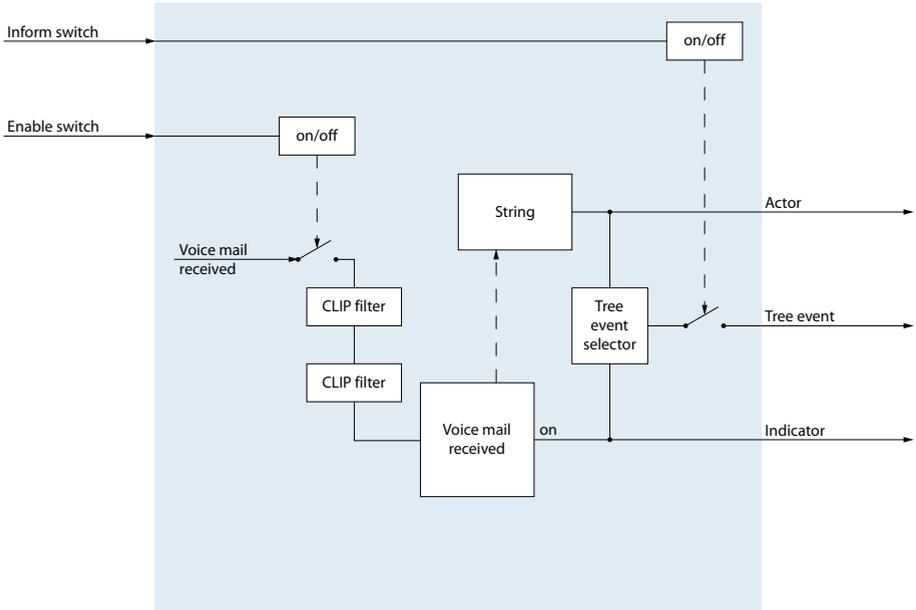


Fig. 62 I/O Action *PBXVoiceMail*

RandomSwitch



The *RandomSwitch* action activates or deactivates the status of any subordinated actions randomly in the configured time interval.

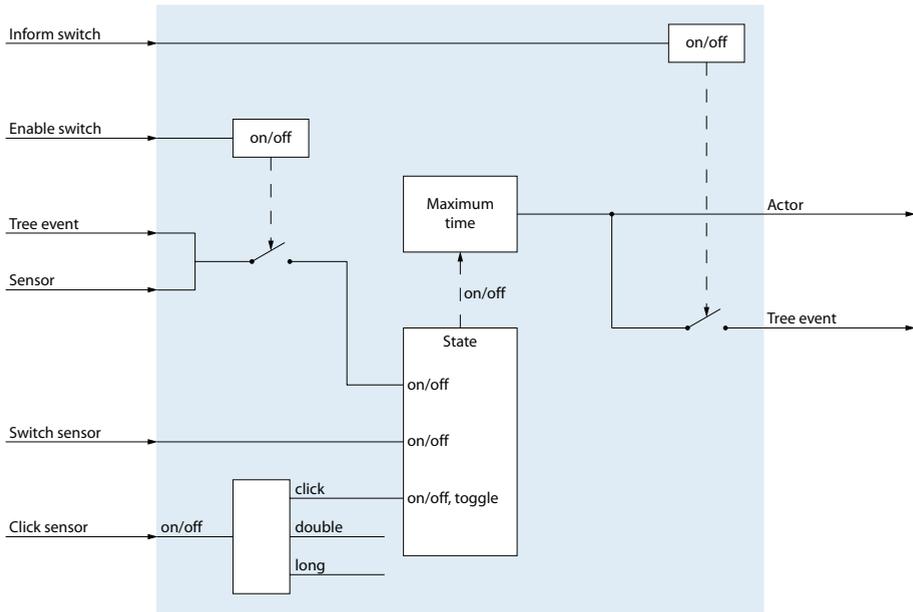


Fig. 63 I/O Action *RandomSwitch*

Example:

During an absence the lights in various rooms of a house are to be switched on and off again randomly.

RSSNews



The *RSSNews* action indicates messages in RSS file format on the display of the system phone.

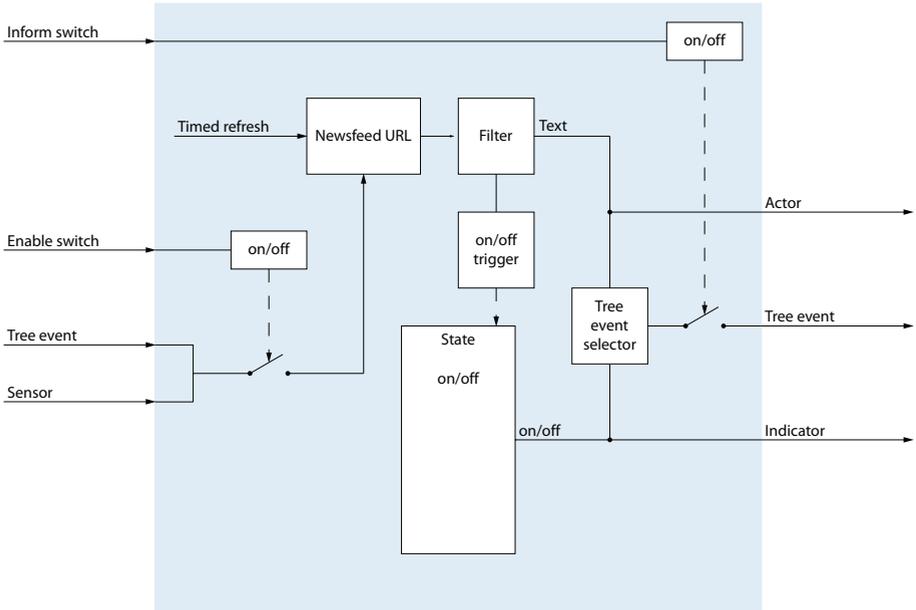


Fig. 64 I/O Action *RSSNews*

ScalingValue

50%

The *ScalingValue* action sends a configured floating point number to a configured I/O group.

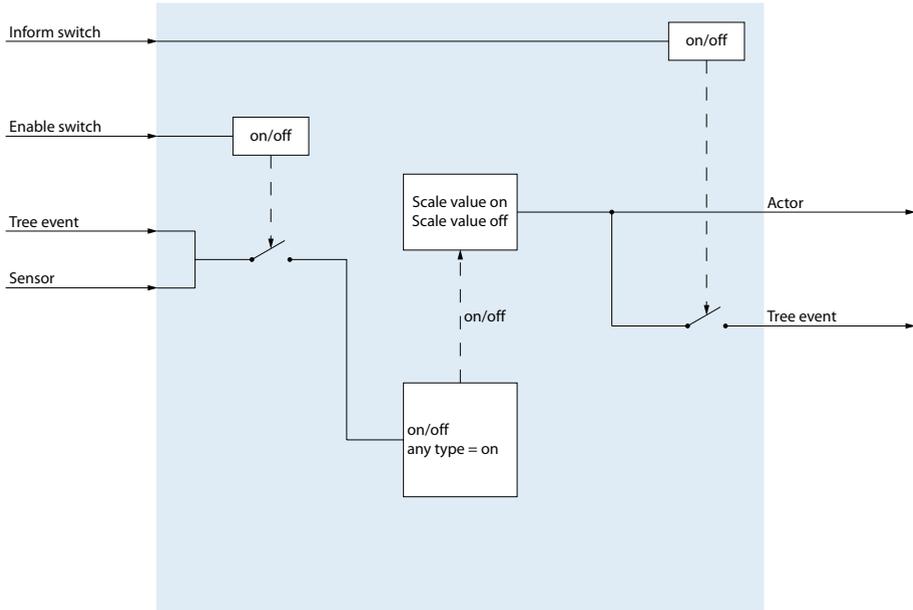


Fig. 65 I/O Action ScalingValue

Sequence

12
3

The *Sequence* action activates the subordinated actions in sequence.

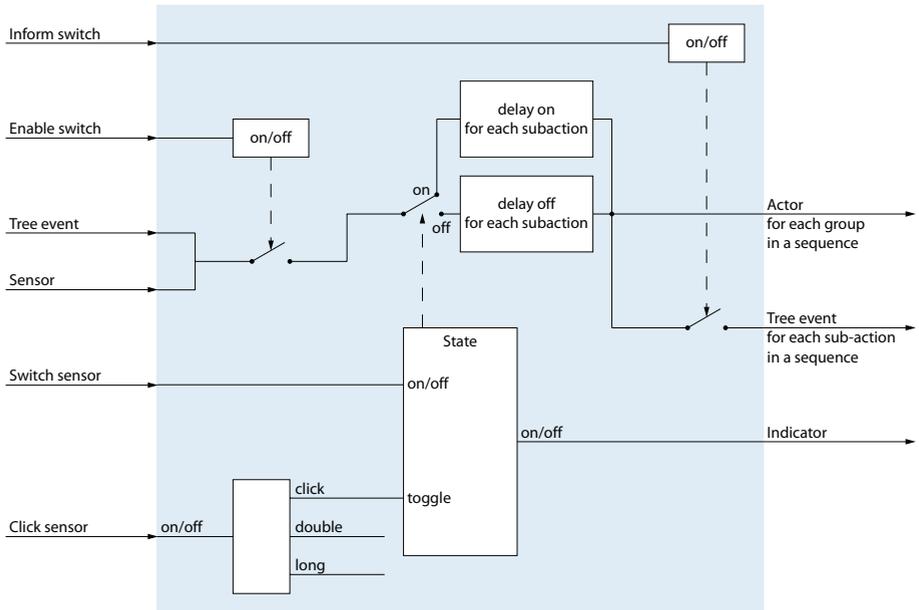


Fig. 66 I/O Action Sequence

SmallFloatValue

01

The *SmallFloatValue* action sends floating point numbers in accordance with the IEEE754 standard with an accuracy of 2 bytes.

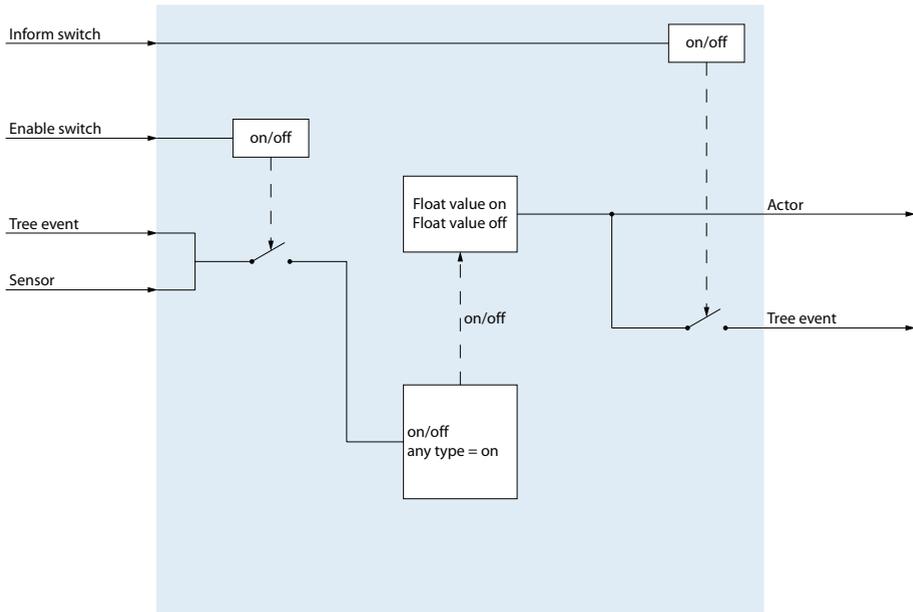


Fig. 67 I/O Action *SmallFloatValue*

State



The *State* action indicates the status of the action.

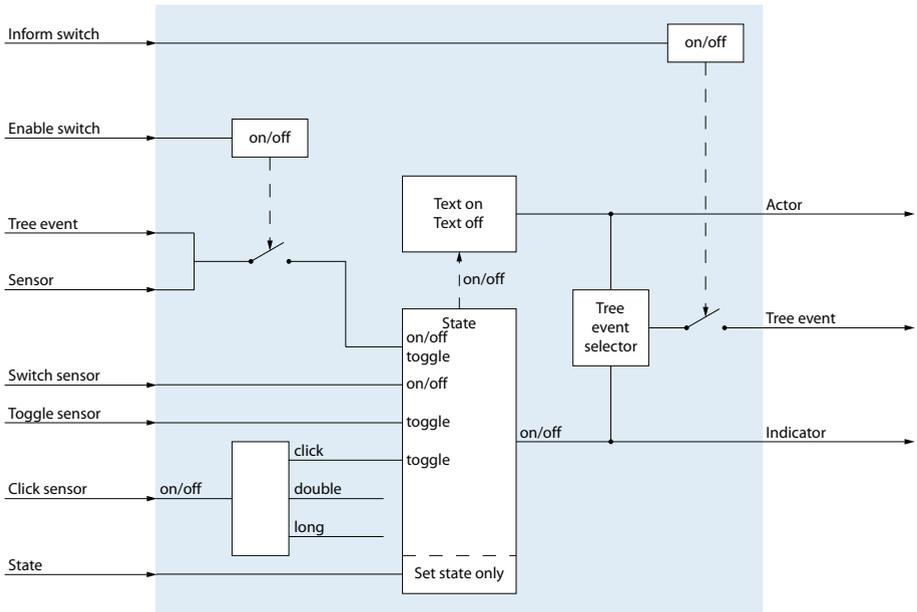


Fig. 68 I/O Action State

StringFilter



The *StringFilter* action compares received messages with the configured filter criteria. If they match, the configured text is forwarded.

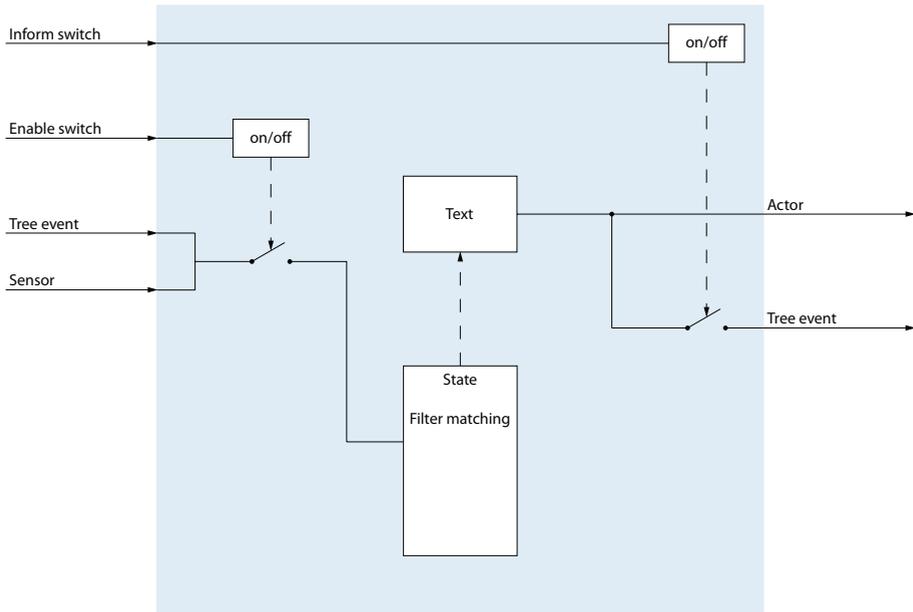


Fig. 69 I/O Action *StringFilter*

StringTrigger



The *StringTrigger* action evaluates received messages according to their content.

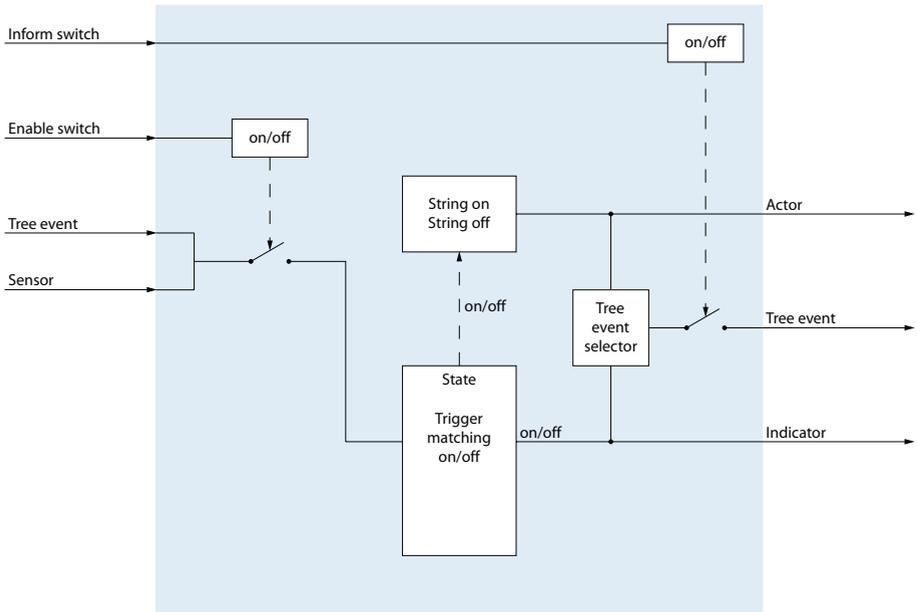


Fig. 70 I/O Action *StringTrigger*

StringValue

Text

The *StringValue* action sends configured character strings to the corresponding actions.

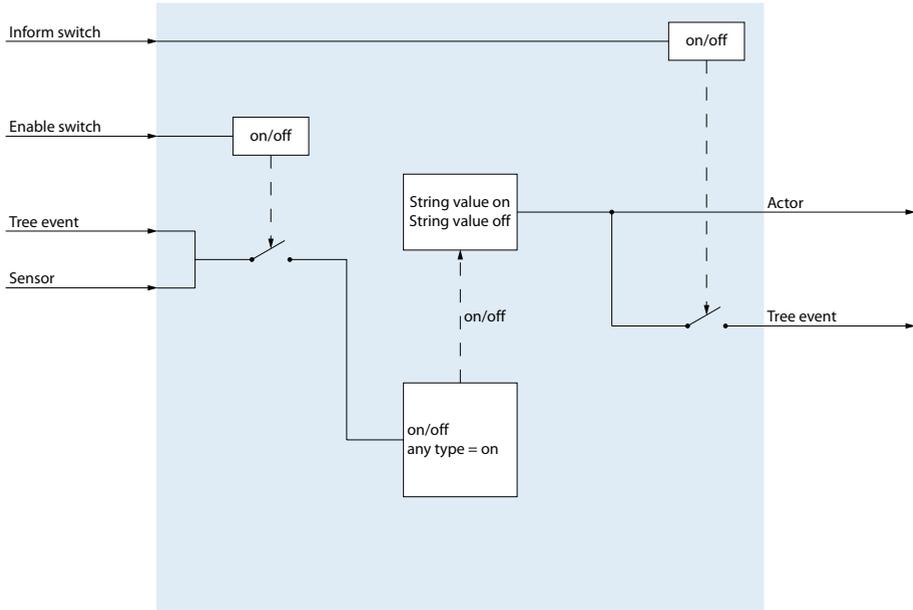


Fig. 71 I/O Action *StringValue*

Switching



The *Switching* action receives and sends events depending on the internal status of the action.

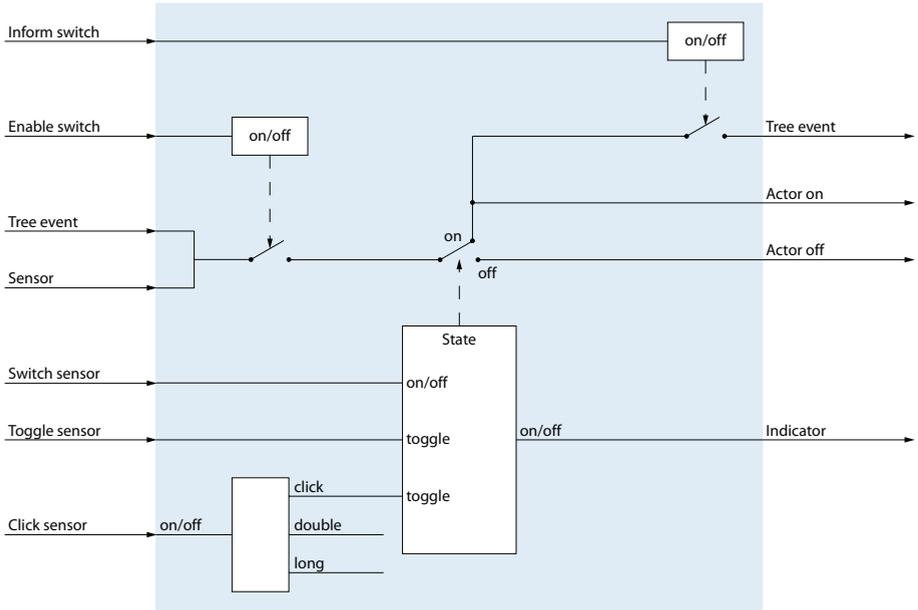


Fig. 72 I/O Action Switching

SwitchingValue

true

The *SwitchingValue* action sends Boolean-type values if events are received.

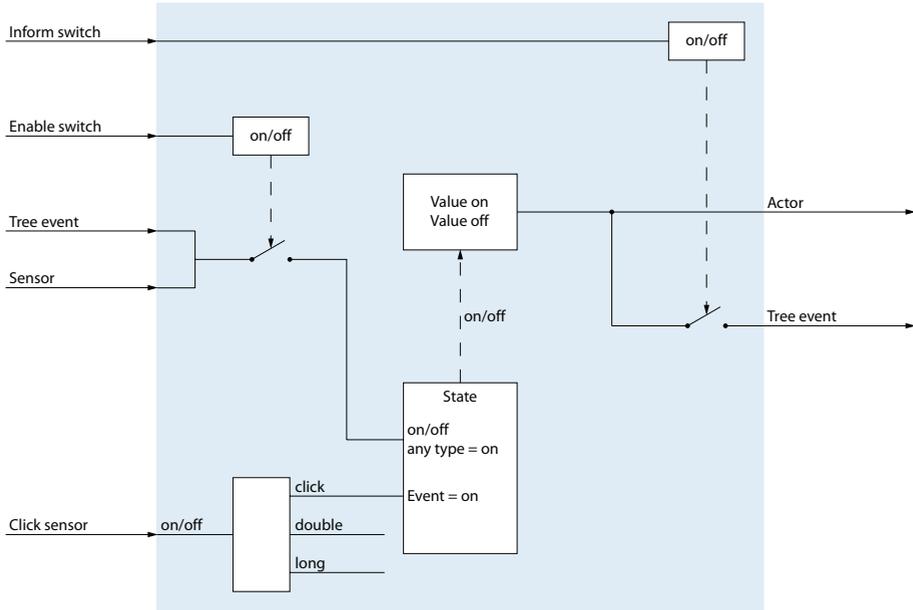


Fig. 73 I/O Action *SwitchingValue*

Timeout



The *Timeout* action delays the sending of output signals.

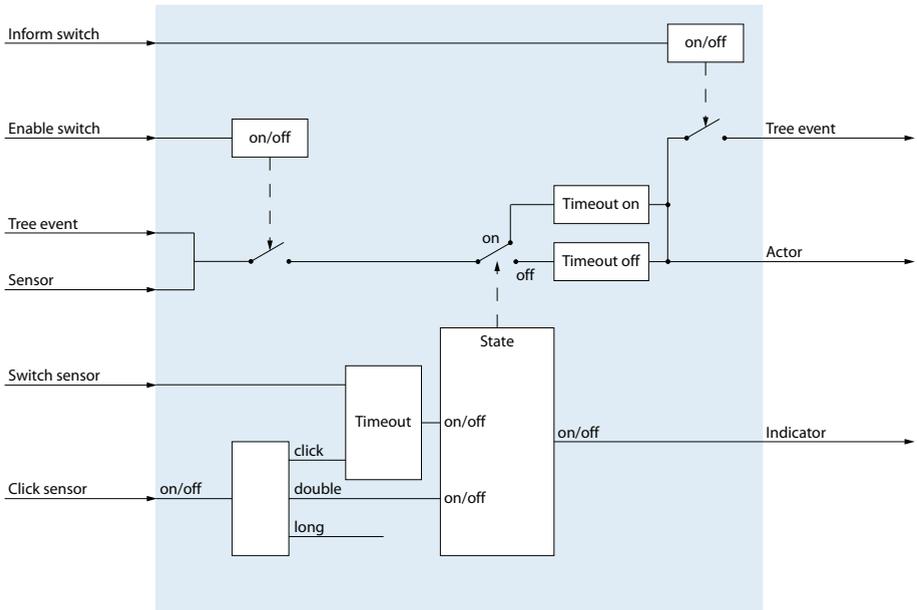


Fig. 74 I/O Action *Timeout*

TimerSwitch



The *TimerSwitch* action is a timer switch which activates or deactivates the addressed actions at specific times.

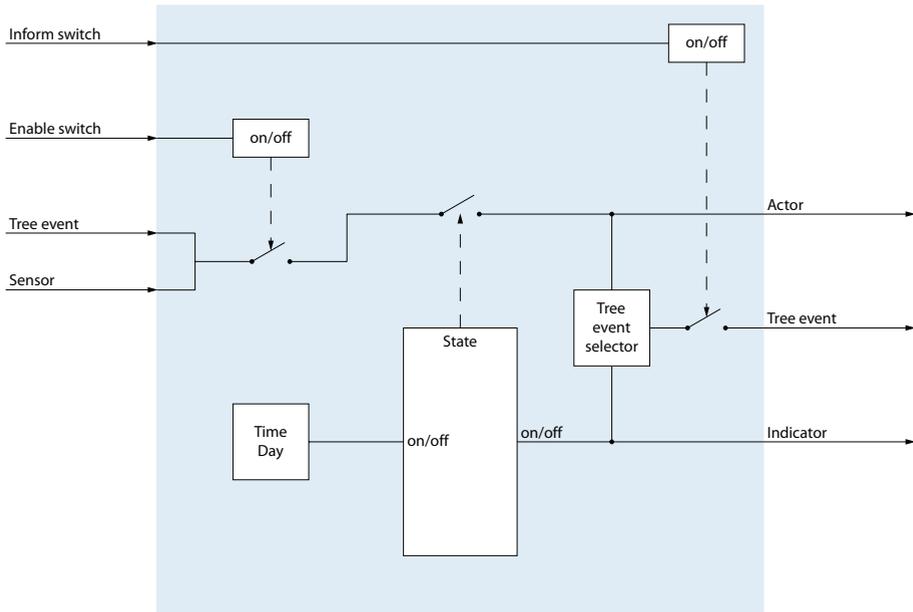


Fig. 75 I/O Action *TimerSwitch*

5.2 KNX connection

Building management systems integrate intelligent computer systems for controlling and monitoring electric building equipment. The connection is based on the European KNX standard (KNX=Konnex), which ensures that systems by different manufacturers are mutually compatible.

Contents:

- KNX I/O Actions – [page 207](#)
- OIP KNX driver – [page 211](#)

5.2.1 KNX I/O Actions

The [Tab. 107, page 207](#) lists an overview of the KNX I/O actions.

Tab. 107 List of KNX I/O Actions

Icon	Action	Description
	Absence	The Absence action monitors the status of the configured I/O group. The action is activated if the I/O group remains inactive during the configured time.
	Bell	The Bell action controls bell systems with short impulses if the action is activated.
	Brightness	The Brightness action evaluates the brightness values using the configured values.
	Dimmer	The Dimmer action controls KNX dimmers and evaluates multi-click signals.
	DimValue	The DimValue action sends the settings for KNX dimmers.
	HeatDevice	The HeatDevice action controls heating systems for example.
	HeatValve	The HeatValve action controls KNX heating valves depending on the values received.
	LevelControl	The LevelControl action controls the water level.
	Light	The Light action controls light sources and evaluates multi-click signals.
	Presence	The Presence action controls PIR sensors.
	Pump	The Pump action controls external devices (e.g. pumps).
	RainSensor	The RainSensor action evaluates the rain status using I/O group events.
	Scene	The Scene action activates all subactions and configured actions.

Icon	Action	Description
	Shutter	The Shutter action controls shutters and the configured positions.
	Shuttergroup	The Shuttergroup action controls shutter groups.
	Sunblind	The Sunblind action is a control action for sun blinds.
	Temperature	The Temperature action evaluates the temperature received.
	Ventilator	The Ventilator action controls the on and off times of fans.
	Watering	The Watering action controls the automatic garden sprinkler system based on the data from the rainwater and humidity sensors, temperature and/or configured time intervals.
	WindSpeed	The WindSpeed action evaluates the wind speed.

Absence



The Absence action monitors the status of the configured I/O group. The action is activated if the I/O group remains inactive during the configured time.

Bell



The Bell action controls bell systems with short impulses if the action is activated.

Brightness



The Brightness action evaluates the brightness values using the configured values.

Dimmer



The Dimmer action controls KNX dimmers and evaluates multi-click signals.

DimValue



The DimValue action sends the settings for KNX dimmers.

HeatDevice



The HeatDevice action controls heating systems for example.

HeatValve



The HeatValve action controls KNX heating valves depending on the values received.

LevelControl



The LevelControl action controls the water level.

Light



The Light action controls light sources and evaluates multi-click signals.

Presence



The Presence action controls PIR sensors.

Pump



The Pump action controls external devices (e.g. pumps).

RainSensor



The RainSensor action evaluates the rain status using I/O group events.

Scene



The Scene action activates all subactions and configured actions.

Shutter



The Shutter action controls shutters and the configured positions.

Shuttergroup



The Shuttergroup action controls shutter groups.

Sunblind



The Sunblind action is a control action for sun blinds.

Temperature



The Temperature action evaluates the temperature received.

Ventilator



The Ventilator action controls the on and off times of fans.

Watering



The Watering action controls the automatic garden sprinkler system based on the data from the rainwater and humidity sensors, temperature and/or configured time intervals.

WindSpeed



The WindSpeed action evaluates the wind speed.

5.2.2 OIP KNX driver

KNX systems are connected to OIP via the OIP KNX driver.

Contents:

- Installing the OIP KNX driver – [page 211](#)
- Upgrading the OIP KNX driver – [page 213](#)
- Uninstalling the OIP KNX driver – [page 214](#)

5.2.2.1 Configuring PBX and OIP server

KNX is configured via I/O actions in I/O manager. Specific I/O actions for KNX are available, see "[KNX I/O Actions](#)", [page 207](#). Some actions can only be performed with these specific I/O actions (for example the I/O action *Shutter*).

Control is via group addresses, for instance 1/7/2.

ATAS Gateway and CTI Basic licences are required to use KNX, see "[Licensing and system limits](#)", [page 353](#).

You will find further information about configuration in the description of individual I/O actions under "[OIP I/O actions](#)", [page 132](#) and "[KNX I/O Actions](#)", [page 207](#).

5.2.2.2 Installing the OIP KNX driver

Installation requirement:

- The *KNX connection* option must be installed, see "[Installation](#)", [page 26](#).
- OIP server must be running.

After installing the OIP server you need to install the OIP KNX driver on the PC to which the KNX system is connected. The driver is installed via the web installation of the OIP server. To install the driver, you must have local administrator rights.

The web-based installation of the OIP KNX driver requires an installed Java Runtime Environment (JRE) on the PC. If one is not installed, the Java Runtime Environment (JRE) must first be installed manually from the OIP home page.

KNX connection can be set up via a V.24 or Ethernet connector.

Installation with V.24 connector

Before you begin with the installation, make sure you have the following information:

- DNS name or, if no DNS server, IP address of the OIP server.
- IP port of the OIP web server if it differs from the standard IP port.
- COM port and rate with which the KNX system is connected.

Proceed as follows:

1. Start the web browser and enter the URL for the OIP server home page, e.g. `http://oip-server.aastra.com<:Port>`.
2. In the menu strip click *OIP installations* and start the installation by clicking on *OIP KNX driver*. In the first dialog box click *Next*.
3. Enter the installation directory or simply accept the default directory (recommended) by clicking *Next*.
4. Choose the interface type (*BCU1* or *BCU 2.1*).
Interface type transmission rates:
 - *BCU1*: 9600 kbit/s
 - *BCU2.1*: 19200 kbit/s.
5. Enter the COM port and the rate with which the KNX system is connected and click *Next*.
6. Exit the installation by clicking *Finish*.
7. Close the web browser window.
The OIP KNX driver is started as a Windows system service.
8. Check in the OIP server log whether the service has been installed and whether the KNX module is working.
9. Check in the KNX driver log whether the KNX module has been initialised:
The BCU component can be protected against unauthorised use, which may prevent mutual communication between OIP KNX driver and the KBNX BCU module. To initialise the BCU component correctly, you must reset it to initialisation mode, see "[Restoring the default values of the BCU component](#)", page 212.
You will find the KN connector log files in the log subdirectory of the connector installation directory.

Restoring the default values of the BCU component

1. Power off the bus.

2. Short-circuit PIN 5 and PIN 6 with a bridge.
3. Press the PROG key and power on the bus at the same time.
4. Release the PROG key after 3 seconds.
5. Remove the bridge between PIN 5 and PIN 6.

Then restart the OIP KNX driver in Windows system service.

Installation with Ethernet connector

Before you begin with the installation, make sure you have the following information:

- DNS name or, if no DNS server, IP address of the OIP server.
- IP port of the OIP web server if it differs from the standard IP port.
- IP address of the KNX LAN module used

Proceed as follows:

1. Start the web browser and enter the URL for the OIP server home page, e.g. `http://oip-server.aastra.com<:Port>`.
2. In the menu strip click *OIP installations* and start the installation by clicking on *OIP KNX driver*. In the first dialog box click *Next*.
3. Enter the installation directory or simply accept the default directory (recommended) by clicking *Next*.
4. Choose the interface type.
5. Choose the interface type *NetVersion* then: Enter the KNX LAN module IP address.
6. Exit the installation by clicking *Finish*.
7. Close the web browser window.
The OIP KNX driver is started as a Windows system service.
8. Check in the OIP server log whether the service has been installed and whether the KNX module is working.

5. 2. 2. 3 Upgrading the OIP KNX driver

To upgrade the OIP driver for the OIP EIB Service you must first exit the running Windows System Service.

Start the installation using the OIP Installations web page and follow the steps of the installation assistant, see "[Installing the OIP KNX driver](#)", page 211.

5.2.2.4 Uninstalling the OIP KNX driver

The OIP KNX driver is uninstalled using *Control Panel\Software* in the Windows operating system.

The Java Runtime Environment (JRE) is not uninstalled as it may be required by other applications. If you no longer require the JRE, you can uninstall it using *Control Panel\Software*.

When uninstalling OIP KNX driver and JRE completely, make sure you uninstall all the OIP KNX drivers first and then the JRE.

5.3 OIP ATAS-Gateways

Contents:

- [Configuring PBX/OIP server – page 214](#)
- [Installing OIP ATAS gateways – page 215](#)
- [Upgrading OIP ATAS-Gateways – page 216](#)
- [Uninstalling OIP ATAS gateways – page 217](#)
- [Using OIP ATAS-Gateways – page 217](#)

With the OIP ATAS Gateways it is possible to use the ATAS functionality of the OIP server (display server) and one or more external ATAS applications in parallel.

For connecting external ATAS applications one OIP ATAS Gateway has to be installed for each application. OIP provides one version of the OIP ATAS Gateway for the network connection and the serial connection.

- OIP ATAS Gateway TCP/IP
- OIP ATAS Gateway V.24

5.3.1 Configuring PBX/OIP server

The following settings have to be made on the PBX and the OIP server to be able to use the OIP ATAS Gateways.

1. Acquire an *ATAS gateway* licence.

**Note (only for Aastra 400 and Aastra IntelliGate®):**

You can also activate these licences in the PBX (recommended). OIP then reads them from the PBX and enables the gateway.

2. Start the Toolbox application *User Profiles* and create a new OIP user for the ATAS administrator (e.g. atasadmin). Enter the access data (username and password). They are predefined by the application.

**Note:**

For emergency operation, enter the access data set by the application in the PBX.

3. Assign the following user groups to the ATAS administrator:
 - *ATAS_ADMINISTRATORS*
 - *OIP_ADMINISTRATORS*
 - *OIP_USER*
 - *TAPI_ADMINISTRATORS* (only if CTI commands are used on the ATAS Gateway).
4. Add the following lines in the *Lines* window:
 - Lines of all users seen as alarm targets.
 - Lines of all users which should otherwise be controlled via the application
5. Save the settings.

5.3.2 Installing OIP ATAS gateways

The installation requires that the *OIP ATAS Gateways* has been selected during the installation of the OIP server and that the OIP server has been started.

After installing the OIP server, you need to install the OIP ATAS Gateway on the PC to which the external ATAS application is connected. The driver is installed via the web installation of the OIP server. To install the driver, you must have local administrator rights.

The web-based installation of the OIP ATAS Gateways requires an installed Java Runtime Environment (JRE) on the PC. If one is not installed, the Java Runtime Environment (JRE) must first be installed manually from the OIP home page.

Before you begin with the installation of the OIP ATAS Gateways, make sure you have the following information:

1. DNS name or, if no DNS server, IP address of the OIP server.
2. IP port on which the external ATAS application connects during the network connection.

**Note:**

IP port 1088 must be used if you also set the application for emergency operation.

3. COM port and communication parameters with which the external ATAS application is connected during the serial connection.

Start the installation via the OIP web page.

1. Start the web browser and enter the URL for the OIP server home page, e.g. `http://oip-server.aastra.com<:Port>`.
2. In the menu strip click *OIP installations*, select *OIP ATAS Gateways* and start the installation by clicking on the corresponding OIP ATAS Gateway. In the first dialog box click *Next*.
3. Enter the installation directory or simply accept the default directory (recommended) by clicking *Next*.
4. When installing the OIP ATAS Gateway TCP/IP enter the IP port on which the external ATAS application sets up the connection (default setting: 1088). When installing the OIP ATAS Gateway V.24 enter the COM port and the communication parameters with which the external ATAS application is connected. Click *Next*.
5. Enter the priority of the messages sent by the external ATAS application and click *Next*.

**Note:**

Use a priority level between 1 and 8, since priority levels 0 and 9 cannot be over or under-controlled.

6. Enter the address of the OIP server and click *Next*.
7. In the next dialog box click *Next* to confirm the components to be installed.
8. Exit the installation by clicking *Finish*.
9. Close all the web browser windows.

The OIP ATAS Gateways are executed as a Windows System Service.

5.3.3 Upgrading OIP ATAS-Gateways

To upgrade the OIP ATAS Gateways you must first exit the OIP ATAS Windows System Service that is currently running.

Start the installation using the OIP Installations web page and follow the steps of the installation assistant, see "Installing OIP ATAS gateways", page 215.

5.3.4 Uninstalling OIP ATAS gateways

The OIP ATAS-Gateways are uninstalled using *Control Pane\Software* in the Windows operating system.

The Java Runtime Environment (JRE) is not uninstalled as it may be required by other applications. If you no longer require the JRE, you can uninstall it using *Control Pane\Software*.

When uninstalling the OIP ATAS Gateways and the JRE completely, make sure you uninstall the OIP ATAS Gateways first and then the JRE.

5.3.5 Using OIP ATAS-Gateways

When you start a connection the external ATAS application must log on with the OIP server. To do so, enter the user data of the ATAS administrator you created.

6 OIP Applications

OIP applications are specific user applications such as Softphone applications which run on the OIP server. The OIP Toolbox is a collection of integrated OIP applications (Toolbox applications).

Contents:

- OIP-Toolbox – [page 218](#)
- OfficeSuite – [page 285](#)
- Office 1560/1560IP – [page 288](#)
- Office eDial – [page 297](#)
- OIP TAPI service provider – [page 299](#)

6.1 OIP-Toolbox

The OIP Toolbox is a collection of integrated OIP applications made available to the user subject to his user rights and the licensed properties.

The OIP toolbox is the main configuration tool for OIP and contains all applications necessary for configuring OIP. It also contains a number of telephony applications.

Toolbox applications for configuring the OIP server:

- Opening and operating Toolbox applications – [page 219](#)
- OIP Configuration – [page 220](#)
- PBX Setup Manager – [page 223](#)
- User Profiles – [page 224](#)
- Routing Manager – [page 233](#)
- Call Centre Manager – [page 234](#)
- I/O Manager – [page 244](#)
- Alarm Manager – [page 246](#)

Toolbox applications for telephony and CTI, workstation organization and groupware:

- User Preferences – [page 247](#)
- Terminal Manager – [page 248](#)
- Call Manager – [page 249](#)

- Calendar – [page 254](#)
- Presence Indicator – [page 255](#)
- Presence Profiles – [page 263](#)
- Function keys – [page 279](#)
- Messages – [page 280](#)
- Directory Manager – [page 281](#)

Toolbox application for logging call data:

- Call Logging Manager – [page 282](#)

Toolbox application for Call Center agents:

- Agent Manager – [page 284](#)

Toolbox application for displaying alarm messages:

- External display – [page 285](#)

6.1.1 Opening and operating Toolbox applications

Toolbox applications are Java applications which are started from the Toolbox. The Toolbox is started from the homepage of your OIP server. Java Runtime Environment (JRE) must be installed on the PC on which you want to start the Toolbox. If it isn't, the installation process for JRE is started automatically.

You need to log on before the Toolbox is opened:

- To specify settings on the OIP server, log on as Administrator. In the default setting the user name and password are both *oipadmin*.
- To use Toolbox applications for telephony and CTI, workstation organization or groupware, log on under the call number of the internal users you want and enter the PIN of the allocated terminal (default setting *0000*).
- You can also log on as an OIP user previously defined on the OIP server (required licences: *Third Party CTI Basic* or *Third Party CTI Standard*).

The applications available in the Toolbox depend on the rights of the user under whose name you log on and the on the licensed applications.



Fig. 76 The OIP Toolbox

Depending on the context, operating buttons are displayed on the status bar of the Toolbox and Toolbox applications (see [Tab. 108, page 220](#)).

Tab. 108 Status bar icons

Icon	Function	Description
	<i>Exit</i>	This button opens the Help for the Toolbox application.
	<i>Help</i>	This button opens the Help for the Toolbox application.
	<i>OIP-Toolbox</i>	This button opens the OIP Toolbox.
	<i>Configuration</i>	This button opens the setup menu for the Toolbox application.
	<i>Print</i>	This button prints the current contents of the window.
	<i>Save</i>	This button saves the changes made to the configuration.

6. 1. 2 OIP Configuration



The *OIP Configuration Manager* Toolbox application is used to configure and manage the OIP server network and the OIP services. A connection is also made to an Aastra 400 and Aastra IntelliGate® network.

General Settings

Under the General Settings menu item you can carry out the settings at a later stage that are made during the installation of the OIP server to connect the directories. The following settings can be made:

- Directory synchronization

- Microsoft Exchange Server
- Active Directory
- LDAP directories
- External phone book

The settings for the SMTP server can also be made here.

If the OIP server is equipped with several network cards, you need to specify under the *OIP server IP address* tab the network card via which the OIP server communicates with the OIP clients.

The debug recordings made by the OIP services can be activated centrally on the *Debug recordings* tab.

OIP Server Network

The OIP servers in a cluster are managed under the menu item OIP Server Network. Highlight the OIP server for which you want to specify the settings.

The *<OIP Server Name>* tab allows you to save the OIP database and the OIP configuration file manually, and to shut down the OIP server. In the bottom section of the OIP Server Network are specified the settings. The structure of an OIP server network is still in preparation and is not yet available with this release.

The *Log Info* tab contains the log entries of all OIP services running on the highlighted OIP server for which Database is set as the output destination in the Log Service.

The *About* tab contains the software version of the Open Interfaces Platform (OIP).

- OIP Version
The OIP version is the version of the complete package consisting of OIP server and OIP Clients.
- Specification version:
The specification version is the version of the interfaces to the OIP components.
- Implementation version:
The implementation version is the version for the OIP server.

When you open the menu of the highlighted OIP server, the OIP services entities currently running are displayed.

OIP Services

The OIP services are managed under menu item OIP Services.

Highlighting the corresponding OIP service displays the general settings on the right-hand side. The other general properties are set automatically by OIP up to the log level and therefore not be modified.

Tab. 109 OIP Services – General properties

General properties	Description	Settings
<i>Execution mode</i>	Execution of the OIP services entities in the network.	<i>single-in-network</i> <i>multi-per-server</i> <i>single-per-server</i>
<i>Startup mode</i>	Start mode indicating how the OIP service is started.	<i>initial</i> <i>dynamic</i> <i>disabled</i>
<i>Version</i>	Version of the OIP service	
<i>Thread model</i>	Setting of whether the OIP service is executed in the main thread of the OIP server or in its own thread.	<i>threaded</i> <i>non-threaded</i>
<i>Load distribution</i>	Setting of the priority of how the OIP service is executed on the OIP server.	
<i>Log level</i>	Log level setting for writing log information.	See Tab. 110, page 222

The log level setting is required in case the OIP service malfunctions. The log level determines the number of entries in the log file(s). The debug categories are as follows: debug, warnings, security, infos, errors and exceptions. [Tab. 110, page 222](#) illustrates how the log level depends on the debug category.

Tab. 110 OIP Log level

Log level	debug	warnings	security	infos	errors	exceptions
<i>debug</i>	X	X	X	X	X	X
<i>maximum</i>		X	X	X	X	X
<i>medium</i>				X	X	X
<i>minimum</i>						X
<i>none</i>						

In the event of a malfunction the log level can be set either for all the OIP services or for each individual OIP service.

To set the log level for all the OIP services, highlight the OIP Service menu item, open the context menu and click *Set Log Level for All OIP Services*. Select the log level and click *OK*.

To set the log level of an individual OIP service, highlight the corresponding OIP service and select the log level from the right-hand side.

Please note that the more debug information is written into the log files the more the performance of the OIP server is restricted. Further information is available in "[Backup Log files](#)", page 323.

Under the specific properties the standard OIP service settings can be modified if necessary. Details about the settings can be found in "[OIP Services](#)", page 40.

The *Log info* tab displays the log entries for which Database is set as the output destination in the Log Service.

PBX Network

The communication servers connected to the OIP server are managed under the menu item PBX Network. The communication servers configured during the installation of the OIP server are listed here.

To add other communication servers, select the menu item *PBX Network*, open the context menu and click *Add PBX*. Enter the IP address of the communication server and the authentication data (user name and password).

To delete a communication server, select the communication server, open the context menu and click *Delete PBX*.

When a communication server is deleted from the configuration the user profiles are not deleted from the OIP database.

The *PBX Alarms* tab contains the list of communication server alarm messages.

6.1.3 PBX Setup Manager



The Toolbar application *PBX Setup Manager* is used to specify the settings for the communication servers connected to the OIP server. Select the communication server for which you want to make changes and open the submenu.

Data / Time settings

The settings for the date and time of the connected communication servers are set under the menu item Date/Time Settings. You can also define which connected communication server is the time master for the clock frequency synchronization.

Tab. 111 Data and time settings

Parameter	Description
<i>Date</i>	Date of the communication server

Parameter	Description
<i>Time</i>	Time of the communication server
<i>Time zone to CET</i>	Time zone of the central European time (CET) in which the communication server is located.
<i>PBX Time Master</i>	Sets which communication server is the time master for clock frequency synchronization.

The *Synchronize* button is displayed only to the time master. Click the button to carry out the time synchronization manually.

Activation or deactivation of the time synchronization and the settings of the synchronization interval can be done in the OIP configuration, OIP service Time Service.

6.1.4 User Profiles



The *User Profiles* Toolbox application is used to specify the settings for the OIP user groups, user profiles, CTI licences and PUM users (Personal User Mobility).

User groups

User groups are containers of OIP services. When you assign a user to a user group, you define the OIP services to which the user has access. You can modify existing user groups and add new user groups.

The following user groups are available in the default setting:

Tab. 112 OIPStandard user groups

Group	Description
<i>ACD_ADMINISTRATORS</i>	User group for the TAPI administrators that require access to the ACD queue, see " External TAPI Client-Server applications ", page 307.
<i>ACD_SUPERVISORS</i>	User group for the ACD supervisors who are responsible in the Office 1600/1600IP for the management of their own workgroups.
<i>OIP_ADMINISTRATORS</i>	Administrator group for OIP server configuration.
<i>OIP_USERS</i>	User group for access to the Toolbox applications.
<i>OPERATORS</i>	User group for users configured as operator workstation.
<i>TAPI_ADMINISTRATORS</i>	User group for the TAPI administrators that require access to telephony functions, see " External TAPI Client-Server applications ", page 307.

Proceed as follows to add a new user group:

1. Open the context menu of the *User groups* menu item and click *Create new group*.

2. On the right-hand side enter the name of the new user group and a description.
3. Add the desired OIP services as follows: open the context menu in the list of OIP services, click *Add OIP services*, select the desired OIP services and confirm the selection with *OK*.
4. Control the access rights by selecting the desired access right for each of the added OIP services under *Access right*. Please refer to [Tab. 14, page 41](#) for more about access rights.
5. Save the settings.

OIP services required

The assignment of OIP services that OIP applications require to be able to run can be found in the [Tab. 113, page 225](#) and [Tab. 114, page 227](#). The access rights that can be assigned for access to the OIP service have to be taken into consideration here. Details of the OIP services can be found in "OIP Services", page 40.

If a user is assigned to several user groups, he always has the highest rights defined in the user groups for access to the OIP services.

Tab. 113 Allocation of OIP services to OIP Toolbox applications (Part 1)

OIP Services	Agent Manager	Alarm Manager	Routing Manager	Call Manager	User Preferences	User Profiles	Presence Indicator	Terminal Manager	External display	Function keys	I/O Manager	Calendar Manager	Presence Profiles	Line keys	Messages
<i>Account Service</i>															
<i>ACD Log Service</i>															
<i>ACD Service</i>															
<i>Agent Service</i>	X														
<i>Alarm Service</i>		X													
<i>Buddy Service</i>							X								
<i>Calendar Service</i>				X			X					X			
Calendar Synchronization Service															
<i>Call Logging Service</i>															
<i>Call Service</i>				X											
<i>Client Utility Service</i>	X	X	X	X	X	X	X	X	X		X	X			X
<i>Configuration Profile Service</i>													X		
<i>Configuration Service</i>						X									
<i>Directory Service</i>				X											
<i>Display Service</i>															

OIP Services	Agent Manager	Alarm Manager	Routing Manager	Call Manager	User Preferences	User Profiles	Presence Indicator	Terminal Manager	External display	Function keys	I/O Manager	Calendar Manager	Presence Profiles	Line keys	Messages
<i>Fax Service</i>															
<i>Feature Service</i>															
<i>Flow Service</i>															
<i>Function Key Service</i>										X				X	
<i>I/O Service</i>											X				
<i>Journal Service</i>				X											
<i>Key Configuration Service</i>								X							
<i>License Service</i>						X									
<i>Line Service</i>				X											
<i>Location Service</i>															
<i>Login Service</i>	X	X	X	X	X	X	X	X	X		X	X			X
<i>Log Service</i>	X	X	X	X	X	X	X	X	X		X	X			X
<i>Message Service</i>															X
<i>Notepad Service</i>															
<i>Notification Service</i>															
<i>Operator Service</i>				X											
<i>PBX Information Service</i>						X		X							
<i>PBX Setup Service</i>															
<i>PUM Service</i>						X									
<i>Registration Service</i>															
<i>Routing Service</i>			X												
<i>Subscriber Configuration Service</i>								X							
<i>Test Service</i>															
<i>Ticket Service</i>															
<i>User Preferences Service</i>	X	X	X	X	X	X	X	X	X		X	X			X
<i>User Profile Service</i>		X				X									
<i>User Service</i>	X	X	X	X	X	X	X	X	X		X	X			X
<i>Voice Mail Service</i>					X										

Tab. 114 Allocation of OIP services to OIP Toolbox applications (Part 2)

OIP Services	OIPCall Centre Manager	OIP Configuration	OIP Test Manager	PBX Setup Manager	Call logging	Directory Manager	OfficeSuite	Office 1560/1560IP	OIP TAPI service provider
<i>Account Service</i>								X	
<i>ACD Log Service</i>	X							X	X
<i>ACD Service</i>	X								X
<i>Agent Service</i>	X						X	X	X
<i>Alarm Service</i>		X							
<i>Buddy Service</i>							X	X	X
<i>Calendar Service</i>							X	X	
<i>Calendar Synchronization Service</i>							X		
<i>Call Logging Service</i>					X				
<i>Call Service</i>							X	X	X
<i>Client Utility Service</i>	X	X	X	X	X	X	X	X	X
<i>Configuration Profile Service</i>							X		
<i>Configuration Service</i>		X							
<i>Directory Service</i>						X	X	X	
<i>Display Service</i>									
<i>Fax Service</i>									
<i>Feature Service</i>							X		
<i>Flow Service</i>									
<i>Function Key Service</i>							X		
<i>I/O Service</i>									
<i>Journal Service</i>							X	X	
<i>Key Configuration Service</i>							X		
<i>License Service</i>								X	X
<i>Line Service</i>									X
<i>Location Service</i>									
<i>Login Service</i>	X	X	X	X	X	X	X	X	X
<i>Log Service</i>	X	X	X	X	X	X		X	X
<i>Message Service</i>							X	X	
<i>Notepad Service</i>							X	X	
<i>Notification Service</i>							X		
<i>Operator Service</i>								X	X

OIP Services	OIP Call Centre Manager	OIP Configuration	OIP Test Manager	PBX Setup Manager	Call logging	Directory Manager	OfficeSuite	Office 1560/1560IP	OIP TAPI service provider
PBX Information Service	X				X		X		X
PBX Setup Service				X					
PUM Service									
Registration Service								X	
Routing Service	X								X
Subscriber Configuration Service							X		
Test Service									
Ticket Service								X	
User Preferences Service	X	X	X	X	X	X	X	X	X
User Profile Service							X		
User Service	X	X	X	X	X	X	X	X	X
Voice Mail Service							X	X	

To delete one or more assigned OIP services, highlight the service(s), open the context menu and click *Delete OIP Services*.

To delete a group, select the group, open the context menu and click *Delete Group*.

User Profiles

Under the menu item *User profiles* the users are listed on the right side. The main user parameters can be set here (see "[Overview of user profiles](#)", page 228).

There are two categories of OIP users: OIP users who represent a user of the communication server (PBX users) and OIP users with configuration and administration tasks (administrators).

Tab. 115 Overview of user profiles

Parameter	Description
<i>Number</i>	Call numbers of PBX users (imported from the communication server and cannot be changed).
<i>Name</i>	Name of the user. For PBX users the name is imported from the communication server. If you change the name here, it will also be changed in the communication server.
<i>Licence</i>	CTI licence assigned to the PBX user.
<i>Journal</i>	Journal mode activated for the PBX user.

Parameter	Description
<i>Application</i>	Application assigned to the PBX user.

To carry out the detailed settings for the user profiles, open the submenu.

The following OIP users are preconfigured with configuration and administrative tasks in the default setting:

Tab. 116 OIP users in the basic configuration

User	Description	User name	Password
<i>oipadmin</i>	OIP Administrator:	oipadmin	oipadmin
<i>tapiadmin</i>	TAPI Administrator	tapiadmin	tapiadmin

The TAPI administrator is needed for linking external TAPI applications, see "[External TAPI Client-Server applications](#)", page 307.

To create a new user profile, select the *User profiles* menu item, open the context menu and click *Create new user profile*. On the right-hand side you can specify the settings for the new user.

The *General* tab is used for specifying the general settings for the OIP users.

Tab. 117 Settings for user profiles – General tab

Parameter	Setting
<i>Call number</i>	Call number of the PBX user (write protected, read out from the communication server).
<i>PIN</i>	The PIN can be modified here.
<i>User name</i>	The user name on the communication server can be modified here.
<i>Password</i>	An additional password for logging in to the OIP server can be entered here.
<i>PBX Name</i>	EID No. (Aastra 400 and Aastra IntelliGate®) or serial number (OpenCom 1000) under which the user is configured (not alterable; read out from the communication server).
<i>PBX</i>	Identification and name of the communication server (write protected, is read out from the communication server)
<i>Domain user name</i>	Windows user name for logging in to the OIP server.
<i>Mailbox alias</i>	Primary SMTP e-mail address without the domain configured for the user in the Active Directory.
<i>Featured in directories</i>	The OIP user is listed in the various directories.
<i>Login to OIP allowed</i>	User is authorized to log in to the OIP server.
<i>User groups</i>	List of user groups to which the OIP user is assigned.

To add the user to a user group, open the context menu in the list of user groups and click *Add Group*. Select the user groups to be added and confirm your selection with *OK*.

To delete the user from a user group, select the user, open the context menu and click *Delete group*.

The *Lines* tab is used for specifying the settings for the telephony lines.

Tab. 118 Settings for user profiles – Lines tab

Parameter	Setting
<i>CTI licence</i>	Configuration of the user's CTI licence (see "The OIP licences", page 354).
<i>Twincomfort Partner</i>	Configuration of the Twincomfort mode for the user (only Aastra 400 and Aastra IntelliGate®).
<i>Journal mode</i>	Setting whether the journal entries are always written (Client is started or not), dynamically (Client is started) or no journal of entries.
<i>Application</i>	Configures which OIP application (Office 1600 or Office 1560) is assigned to the user.
<i>GSM User terminal</i>	Configuration of the mobile phone mobile assigned to this user.
<i>Automatic terminal selection</i>	Allocated terminals
	The terminal is assigned automatically (for example: Twinpartner for Aastra 400 and Aastra IntelliGate®).

The CTI license change becomes effective after the line is reopened.

The Access Rights area lists the telephony lines with the corresponding access rights. Your own line is entered as standard. Whenever the Twin Comfort mode (Aastra 400 and Aastra IntelliGate®) or parallel connection (OpenCom 1000) is activated, the DECT line is also entered. To assign other telephony lines to the user, open the context menu in the list of access rights and click *Add Lines*. Select the users to be added and confirm your selection with *OK*. To configure the access rights to the lines, highlight the relevant line and change the access rights.

Tab. 119 Access rights to telephony lines

Access right	Description
<i>Controlling</i>	Full access rights to the line (controlling and monitoring).
<i>Monitoring</i>	Monitoring rights to the line only. In addition to the status, the call number of the user with whom the OIP user is connected is displayed.

With the *Controlling* access right to an outside line the user has the possibility for example of fetching a call to that user in the presence indicator. The ACD Supervisor also has the possibility of modifying the status of agents in the Busy Indicator.

[Tab. 120, page 231](#) lists which access rights can be assigned to the various user interfaces.

Tab. 120 Access rights

Terminal interface	Controlling	Monitoring
AD2 /Upn	X	X
DECT	X	X
IP system phones	X	X
Aastra SIP	X	X
ISDN	(X) ¹⁾	X
Analogue	(X) ¹⁾	X
SIP	(X) ¹⁾	X
GAP	(X) ¹⁾	X
DCT		X
GSM		X

¹⁾ Aastra 400 and Aastra IntelliGate®: no control.
OpenCom 1000: Limited control (caller information display)

If no other telephony lines are added, the user sees only the user status, e.g. on the busy indicator.

The *Startup Windows* tab is used to select the Toolbox applications to be started automatically during login.

The *Profile details* tab displays the dynamic user data written into the OIP database by the OIP applications. To reset the Client settings such as window size or position, etc., select the corresponding entries and click *Delete*.

The Personal User Mobility settings are specified on the *PUM* tab. PUM helps separate users from their workstation. Users are able to log on at any PUM workstation and take their internal call number and their stored user profile with them.

All PBX users connected to a system phone can be set up as a PUM workstation. The IP address or the DNS name of the workstation PC has to be entered if it is connected with the PUM workstation. It is important to make sure that the IP address of the workstation PC is assigned to a single PUM workstation (1-to-1 relation). The internal call numbers of the PUM workstations must differ from the call numbers assigned to PUM users.

The PUM users are set up as OIP users. When activating PUM for the OIP user, first enter the call number of the user. This number is set as the internal call number on the communication server when the user logs on to a workstation. [Tab. 121, page 232](#) lists the PUM functions that can be set for the user.

Tab. 121 Settings for user profiles – PUM functions

PUM function	Description
<i>Agent auto login/logout</i>	PUM users who are configured as agents (PUM agents) are also automatically logged on to or out off the call centre when they log on to or out of a workstation. Important: PUM agents cannot be manually logged on and out on the Call Centre. Therefore, make sure that this function is enabled for all PUM agents.
<i>DDI destination when logged out</i>	Call number to which the DDI is routed when the PUM user is logged out.
<i>Assign DDI</i>	DDI number on which the PUM user can be reached from the outside.
<i>Execute login macro</i>	*/# procedures executed when a subscriber logs in to a workstation.
<i>Execute logout macro</i>	*/# procedures executed when a subscriber logs out of a workstation.
<i>Name</i>	Name of the PUM user.
<i>Number</i>	Internal call number configured in the communication server when a subscriber logs in to the workstation.
<i>Check PIN when logging in via the terminal</i>	The PIN has to be entered when logging in to the PUM workstation (<call number>*<PIN>).
<i>Copy private phonebook</i>	The private phone book is copied to the system phone when the user logs in to a workstation.

The profiles of OIP users who are also PBX users cannot be deleted. If the corresponding PBX user is deleted on the communication server, the user profile is automatically deleted after the second synchronization (see synchronization interval in the OIP service PBX Manager) of the OIP server with the PBX.

To delete a pure OIP user (e.g. PUM user), select the corresponding user profile, open the context menu and click *Delete Profile*.

A user's profile can be transferred to another user. Select the corresponding user, open the context menu and click *Copy Profile*. Select the user to whom the user profile is to be transferred and confirm the selection with *OK*. When the user profile is copied, the membership of user groups and the line rights are not transferred.

CTI Licences

The menu item CTI Licences lists users according to the type of CTI licence.

To add users to the CTI licences, select the corresponding CTI licence, open the context menu and click *Add User*. Select the users to be added and confirm your selection with *OK*.

The OIP server has to be restarted if the CTI licence is changed.

PUM

The PUM menu item lists the PUM workstations and the PUM users.

6. 1. 5 Routing Manager



The *Routing Manager* Toolbox application gives you an insight into the call distribution used for the connected communication servers and their routing elements. You can specify individual settings directly from here. However the routing architecture as such must be configured in the communication server.

Call distribution elements (CDE)

The *Call distribution elements* menu item lists the CDE of the connected communication servers. If you open the submenus of a CDE, the assigned user group and the available switch positions are displayed along with the CDE destinations.

To modify the switch position, select the switch group and modify the switch position under *Status* in the main window.

To delete a CDE, select the relevant CDE, open the context menu and click *Delete CDE*.

Direct dialling number (DDI)

The *Direct dialling number* menu item lists the DDI numbers of the connected communication servers. If you open a direct dialling number submenus the assigned CDE as well as the switch group and the available switch positions are displayed.

To route the direct dialling number to a different CDE, select the DDI and modify the CDE under *CDE* in the main window.

To delete a direct dialling number, select the relevant DDI, open the context menu and click *Delete DDI*.

PBX

The *PBX* menu item lists the connected systems. In the submenu you will find a list of the communication server routing elements and PBX users.

User groups (UG)

The *User Groups* menu item lists the user groups of the connected communication servers. In the submenu you will find the members of the user group.

To modify the internal call number and the name of the User group, select the User group and modify the data in the main window.

To add a new subscriber to the User group, select the User group, open the context menu and click *Add user*. To delete an user from User group, select the corresponding user, open the context menu and click *Delete*.

User

The *User* menu item lists the users of the connected communication servers.

6. 1. 6 Call Centre Manager



The *Call Centre Manager* lets you configure the OIP call centre and the operator groups of the Office 1560/1560IP.

Agents

The Agents menu item lists the users who have been added as agents. To use a PBX user as an agent, you need to assign him the Standard CTI Licence in the user profile, see "User Profiles", page 224.

To add users as agents, select the Agents menu item, open the context menu and click *Add agent*. Select the agents to be added and confirm your selection with *OK*.

The agent settings for the Skills are listed on the right-hand side. The Skills displayed are those to which the user is assigned.

Tab. 122 Agents settings

Setting	Description
<i>Name</i>	Skill name to which the agent is assigned.
<i>Active</i>	The agent can be activated or deactivated in a Skill. In the standard settings the agent is activated in all the assigned Skills.
<i>Alternative number</i>	An alternative number can be assigned to the agent. The Call Centre call will be routed to the alternative number instead of the personal internal call number.
<i>Outgoing calls</i>	Standard setting specifying the Skill via which external calls to the Call Centre are to be made.

To assign more Skills to a user, click *Add* and select the Skill you want to add from the list displayed. To remove a Skill, select the Skill from the list and click *Delete*.

To delete an agent, select the corresponding agent, open the context menu and click *Remove agent*.

Call Centre Statistics

The menu item OIP Call Centre Statistics displays the statistics over the period of time configured in the ACD Log Manager. The OIP Call Centre statistics can be displayed for the agents or the Skills.

In the *Agents* view the changes in agent state and the agent calls are listed in the *State* tab and the *Call Type* tab respectively. The statistics can be displayed for all

the agents or for each agent individually. The list can be sorted using the column headings. The filter function can be used to restrict the period of time during which the statistics are displayed.

The [Tab. 123, page 235](#) lists the column headings of the agent states data.

Tab. 123 Agent status data

Agent status	Description
<i>Agent</i>	OIP user ID of the agent.
<i>Name</i>	Agent name.
<i>Call ID</i>	ID of the relevant call to the Call Centre.
<i>Status</i>	Agent status after status change.
<i>Date / time</i>	Date/time of the agent status change.
<i>Wrap up code</i>	Wrap-up code - 0 if no wrap-up code is defined.
<i>Agents ready</i>	Number of available agents logged on at the time of the agent status change.
<i>Skill</i>	Skill assigned to the Call Centre call.
<i>Login state</i>	Status of the agent during the status change.

The [Tab. 124, page 235](#) lists the column headings of the agent calls data.

Tab. 124 Agent calls data

Agent calls	Description
<i>Agent</i>	OIP user ID of the agent.
<i>Name</i>	Agent name.
<i>ACD call ID</i>	ID of the call to the Call Centre.
<i>Date / time</i>	Date/time of the call to the Call Centre.
<i>Ringling time</i>	Ringling time of the call to the Call Centre.
<i>Response time</i>	Time at which the call to the Call Centre was answered.
<i>Stop time</i>	Time at which the call to the Call Centre was completed.
<i>Wrap-up time</i>	Time at which the wrap-up time waas completed.
<i>Wrap up code</i>	Wrap-up code - 0 if no wrap-up code is defined.
<i>Call state before idle</i>	Status of the call to the Call Centre with the agent before he switches to the <i>available</i> status.
<i>Skill</i>	Skill of the call to the Call Centre.
<i>DDI</i>	DDI dialled by the caller.
<i>CLIP</i>	Caller CLIP.
<i>Ringling duration</i>	Ringling time with the agent.
<i>Conversation duration</i>	Call duration of the call to the Call Centre.
<i>Wrap up duration</i>	Duration of the wrap-up for the call to the Call Centre.

The bottom part of the window displays the average values for the waiting time, call duration and wrap-up time.

In the *Skills* view the snapshots of the Call Center states and the Call Center calls are displayed on the *State* tab and the *Calls* tab respectively. The snapshot interval of the Call Centre status data can be configured in the OIP Service ACD Log Manager. The statistics can be displayed for all the Skills or for each Skill individually. The list can be sorted using the column headings. The filter function can be used to restrict the period of time during which the statistics are displayed.

The [Tab. 125, page 236](#) lists the column headings of the Call Centre status data.

Tab. 125 Call Centre status data

Call Centre Status	Description
<i>Skill</i>	Skill ID
<i>Name</i>	Name of the Skill.
<i>Date / time</i>	Date/time of the snapshot of the Call Centre Status.
<i>Available</i>	Number of agents who are in the <i>Ready</i> state.
<i>Ringling</i>	Number of agents who are in the <i>Ringling</i> state.
<i>Connected</i>	Number of agents who are in the <i>Connected</i> state.
<i>Pause</i>	Number of agents who are in the <i>pause</i> state.
<i>Wrap-up</i>	Number of agents who are in the <i>Wrap up</i> state.
<i>Waiting</i>	Number of calls waiting in the ACD queue.

The bottom part of the window displays the average values for the number of

- available agents,
- agents making calls,
- agents logged on,
- agents on a pause,
- agents in wrap-up, and
- waiting OIP Call Centre calls.

The [Tab. 126, page 236](#) lists the column headings of the Call Centre call data.

Tab. 126 OIPCall Centre calls data

Call Centre Calls	Description
<i>Date</i>	Date of the call to the Call Centre.
<i>Ringling time ACD queue</i>	Time at which the call in the ACD Queue is first signalled.
<i>Response time ACD queue</i>	Time at which the call in the ACD Queue was answered. If Courtesy is activated, the call is considered answered when Courtesy starts up.
<i>Agent ringling time</i>	Time at which the call is signalled to the first agent.

Call Centre Calls	Description
<i>Agent answering time</i>	Time at which the call was answered by the agent.
<i>Stop time</i>	Time at which the call in the ACD Queue was completed.
<i>DDI</i>	DDI dialled by the caller.
<i>CLIP</i>	Caller CLIP.
<i>Skill</i>	Skill ID of the called Skill.
<i>Name</i>	Name of the called Skill.
<i>Call state before idle</i>	Status of the call to the Call Centre before it switches to the <i>available</i> status.
<i>Waiting duration</i>	Caller ringing time before the call to the Call Centre was answered.
<i>Conversation duration</i>	Duration of the call.

The bottom part of the window displays the average values for the

- waiting time,
- conversation duration,
- number of answered calls to the Call Centre, and
- number of unanswered calls to the Call Centre.

Call Centre Status

The menu item Call Centre Status displays the active calls in the ACD Queue. The view can be selected to display according to Calls or Skills.

The *Calls* view displays the connecting and the waiting calls to the Call Centre. Click the relevant call status to display the calls for each call status (<number of calls>). The call details are shown on the right-hand side, see [Tab. 127](#), [page 238](#). The list can be sorted using the column headings.

The *Skills* view displays both the configured Skills and the number of calls in each call status (<Waiting> | <Connected> | <Load value of the Skill in [%]>). Click the relevant Skill to display the calls for each Skill. The call details are shown on the right-hand side, see [Tab. 127](#), [page 238](#). The list can be sorted using the column headings.

The bottom part of the window displays the current status of each Skill:

- Agents logged on,
- Agents ready,
- Agents busy,
- agents on a pause,

- Agents in wrap-up.
- Calls waiting

Tab. 127 Call/Skill status

Call states	Description
<i>Skill</i>	Name of the called Skill.
<i>Called No.</i>	Called Call Centre number assigned to the Skill.
<i>Status</i>	Status of the call to the Call Centre: <ul style="list-style-type: none">• Ringing – The call is in the ACD queue.• Call signalling – The call is being signalled to an agent.• Connected – The caller is connected with an agent.• On-hook – The call is completed.
<i>Call destination</i>	Agent with which the call is connected.
<i>Caller</i>	Caller CLIP.
<i>Start time</i>	Time at which the call in the ACD Queue is first signalled.
<i>Waiting duration</i>	Caller ringing time before the call was answered.
<i>Response time</i>	Time at which the call was answered by the agent.
<i>Conversation duration</i>	Current call duration.

In the OIP service ACD Manager you can configure how long completed Call Centre calls are to be displayed.

Settings

The global settings are carried out under the menu item settings.

A substitute Skill can be assigned for calls to call distribution elements that are not allocated to any Skill. Select the corresponding Skill from the dropdown list.

For agents that are logged on you can configure which agent status they should assume when call forwarding is activated on the system phone. Select the corresponding agent status from the dropdown list. If an agent has activated call forwarding and then logs on to the OIP Call Centre, the call forwarding is deactivated.

If the option *Logout after business hours* is activated, the agents are automatically logged out once the OIP Call Centre is closed.

Wrap-up Codes

The Wrap-up Codes menu item lists the different reasons for the wrap-up times. The different reasons for the wrap-up times are used to obtain a detailed statistic.

To add reasons for wrap-up times, select the Wrap-up Codes menu item, open the context menu and click *Add wrap-up code*. Enter the name for the reason for the

wrap-up time and select the added wrap-up code on the menu to carry out further settings.

Tab. 128 Setting options for wrap-up codes

Parameter	Description
<i>Name</i>	Name of the wrap-up code.
<i>Standard code</i>	The wrap-up code can be set as a standard code so that the agent only has to modify the code in the case of exceptions.
<i>Assign statistic code</i>	Here an ID can be assigned to the wrap-up code.

To delete a wrap-up time reason, select the corresponding wrap-up time reason, open the context menu and click *Remove wrap-up code*.

Pause Codes

The Pause Codes menu item lists the different reasons for pauses. The different reasons for pauses are used to obtain a detailed statistic.

To add reasons for pauses, select the Pause Codes menu item, open the context menu and click *Add pause code*. Enter the name for the pause reason and select the added pause code on the menu to carry out further settings.

Tab. 129 Setting options for pause codes

Parameter	Description
<i>Name</i>	Name of the pause code.
<i>Standard code</i>	The pause code can be set as a standard code so that the agent only has to modify the code in the case of exceptions.
<i>Assign statistic code</i>	Here an ID can be assigned to the pause code.

To delete a reason for a pause, select the corresponding pause reason, open the context menu and click *Remove pause code*.

Skills

The Skills menu item is used to carry out the settings for the various Skills.

To add Skills, select the Skills menu item, open the context menu and click *Add skill*. Enter the name for the Skill and select the added Skill on the menu to carry out further settings.

The *Settings* tab is used for specifying the general settings for the Skill.

Tab. 130 Setting options for Skills – Settings tab

Parameter	Description
<i>Name</i>	Name of the Skill.

Parameter	Description
<i>Ringling duration</i>	Maximum amount of time in [s] a call is signalled to an agent.
<i>After maximum ring time</i>	Agent status once the maximum ringing time has been reached.
<i>Wrap-up time</i>	Wrap-up time in [s] assigned to an agent after a Call Centre call.
<i>After wrap-up time</i>	Agent status once the wrap-up time has expired.
<i>Auto-save call log</i>	Issues a ticket for each call. This setting is relevant for: <ul style="list-style-type: none"> • The ticket function for Office 1600/1600IP • The function and setting <i>Connect caller with the same agent</i>
<i>Deflect after Courtesy</i>	Incoming calls are deflected to the agents only once Courtesy has been played back.
<i>Controlled by external application</i>	The call distribution for this Skill is handled by an external application.

The *Agents* tab lists the agents assigned to the Skill.

To add more agents to the Skill, open the context menu in the list of agents and click *Add Agent*. Select the agents to be added and confirm your selection with *OK*.

To delete one or more agents from a Skill, select the agents, open the context menu and click *Remove agent*.

The arrow keys on the right next to the list of agents can be used to specify the sequence of the agents.

The *Routing Elements* tab is used to assign the call distribution elements to the Skill.

Tab. 131 Setting options for Skills – Routing Elements tab

Parameter	Description
<i>Call distribution elements</i>	List of the call distribution elements assigned to the Skill.
<i>Call distribution</i>	Call distribution for Call Centre calls, see Tab. 132, page 241 .
<i>Connect caller with the same agent</i>	Caller is connected to the same agent, like during the previous call. Conditions: <ul style="list-style-type: none"> • CLIP detection must be enabled (Setting <i>Activate CLIP detection</i>). • The function <i>Auto-save call log</i> must be enabled.
<i>Emergency routing use</i>	Sets which user group is to be used as the emergency routing destination if the connection to the communication server is interrupted.

To add more call distribution elements to the Skill, open the context menu in the list of call distribution elements and click *Add routing element*. Select the routing element to be added and confirm your selection with *OK*.

To delete a routing element from a Skill, select the element, open the context menu and click *Remove routing element*.

The call distribution of the Call Centre calls can be distributed in the way shown in [Tab. 132, page 241](#).

Tab. 132 Call Distribution of Center Calls

Parameter	Description
<i>Linear</i>	The calls are distributed in the sequence of agents, starting with the first free agent.
<i>Cyclic</i>	Each new call is distributed to the next free agent in the sequence of agents.
<i>PBX cyclic</i>	The calls are first distributed cyclically on the incoming communication server before they are routed to agents of other communication servers.
<i>Free for longest</i>	The calls are distributed to the agent who has not received a Call Centre call the longest. For this call distribution the option <i>Force call log</i> must be activated in the <i>Settings</i> tab.

The following settings are made on the communication server whenever a Skill is created and call distribution elements are added:

- The CDE name is replaced by the Skill name if the CDE name is blank.
- If changes are made to the Skill name the corresponding CDE name is updated only if the CDE name was previously the same as the Skill name.

An emergency routing destination can be set up for each Skill if the connection from the OIP server to the communication server is interrupted. Select a free user group from the drop-down list.

The following settings are made on the communication server whenever emergency routing is activated:

- A new emergency routing CDE designated as *ER - < Skill name>* " is created with User Group as its destination. The user group selected above is used as the destination.
- In the Skill CDE the setting *CDE if no answer* is set to the emergency routing CDE.
- The call distribution in the UG is configured in accordance with the call distribution in the Skill.
- The agents assigned to the Skill are added to the user group.

When the emergency routing is activated, each agent is also automatically logged in to the user group whenever he logs in to the OIP server. During log-off the agent is logged off accordingly from the user group. However the last agent to log off from the Skill cannot log off from the user group, see also Aastra 400 and Aastra IntelliGate® System Manuals.

The configured emergency routing CDE is activated whenever the ACD Queue is closed as a result of an interruption on the communication server. This ensures that incoming calls reach their destination if the OIP server should fail.

The routing of Call Centre calls can be set on the *Actions* tab for the following Skill status:

- All agents busy
- No agent logged in
- Maximum waiting time reached

The parameters listed in [Tab. 133, page 242](#) can be set for the status.

Tab. 133 Setting Options for Actions

Parameter	Description
<i>Deflect</i>	The calls can be deflected to the following call numbers. <ul style="list-style-type: none"> • Internal users • PISN users • User groups • Operator console
<i>Reject</i>	The calls are rejected. If Courtesy is activated, the announcement text is played back before the caller is rejected.
<i>Waiting</i>	The calls remain in the ACD queue and are deflected to the next free agent.
<i>Busy</i>	The callers obtain busy. If Courtesy is activated, the call is rejected immediately.
<i>Change skill</i>	The calls are deflected to the configured Skill.

For the Skill status *All Agents Busy*, thresholds can also be activated at which the Skill is to be set to busy or available.

Tab. 134 Threshold Skill

Parameter	Description
<i>Maximum load threshold</i>	The Skill is set to busy if the number of agents logged in is greater than the set value in per cent.
<i>Normal load threshold</i>	The Skill is set to free if the number of agents logged in is less than the set value in per cent.

For the Skill status *Maximum waiting time reached* the maximum ringing time for the call to the Call Centre must be set to this Skill. It is important to make sure that the *CDE call forwarding delay* in the ACD CDE is not activated.

The *Business Hours* tab is used to enter the times in which the Call Centre is open for this Skill. If the Call Centre is closed, it is possible to set the way in which the call

to the Call Centre is to be handled. If the actin is set to Deflect, the destination for the Call Centre call can also be set.

Call distribution can be activated according to CLIP numbers on the *CLIP routing* tab.

In addition to call distribution according to DDI, for each Skill you can configure a list of CLIP numbers that are to be taken into account during call distribution.

[Tab. 135, page 243](#) lists the special characters used which can be entered as placeholders.

Tab. 135 Placeholder

Placeholder	Description	Example
*	The asterisk (*) is entered as a placeholder for one more digits.	0041* - all calls to the Skill that send a CLIP that begins with 0041 will be transferred.
?	The question mark (?) is entered as a placeholder for any single digit.	?123 – all calls to the Skill that send a four-digit CLIP and whose last three digits end in 123 are transferred.

The placeholders can be combined freely when entering the CLIP numbers. If several CLIP numbers entered correspond to the calling number, the call number is analysed in the priority sequence specified in [Tab. 136, page 243](#).

Tab. 136 CLIP routing priorities

CLIP number	Description
0041326553333	Entering a call number without placeholders.
004132*	Entering part of the sequence of a call number's digits. The placeholder is added to the partial call number.
*3333	Entering part of the sequence of a call number's digits. The placeholder precedes the partial call number.
655	Entering part of the sequence of a call number's digits. Placeholders both precedes and is added to the partial call number.
0041*3333	Entering part of the sequence of a call number's digits. One or more placeholders are placed within the partial call number.

The *Outgoing Calls* tab can be used to configure the settings for outgoing Call Centre calls for this Skill. When the setting is activated, the agent can select in the Agent Manager for outgoing calls whether the call should be made with the CLIP settings of the private line or of the Skill. It is not possible to select the CLIP on the system phone. In the Agents settings it is also possible to activate as a standard setting the Skill from which the CLIP settings for outgoing calls are to be taken. The CLIP settings are activated when the agent logs on to the OIP Call Centre and deactivated when he logs off again.

Tab. 137 CLIP settings for outgoing Call Centre calls

Setting	Description
<i>CLIP parameter</i>	CLIP parameters for outgoing Call Centre calls. The DDIs routed to ACD in the communication server are offered as the CLIP number.
<i>CLIR</i>	Setting whether the CLIP should be suppressed at the called party.
<i>Outgoing route</i>	Route of the outgoing Call Centre call.

To delete a Skill, select the corresponding Skill, open the context menu and click *Remove skill*.

The following settings are made on the communication server when the Skill is deleted:

- On the communication server the corresponding CDE name is deleted only if the CDE name was previously the same as the Skill name.
- If emergency routing is activated for the Skill, the setting *CDE if no answer* is deleted in the Skill CDE.
- The emergency routing CDE and the user group are not deleted. If necessary they need to be deleted manually.

6. 1. 7 I/O Manager



The *I/O Manager* is used to create, modify and delete I/O actions of the OIP I/O system.

The configured actions are displayed in a tree structure on the left-hand side. To add a new action to the tree, select a higher-order action, open the context menu and click *Add Action*. Select the *new action* and carry out the settings on the right-hand side.

The *Details* tab is used for specifying the settings of the respective action. Details about the actions types can be found in "[Automation and Alarm Systems](#)", page 123.

Tab. 138 Actions details

Actions details	Description
<i>Action ID</i>	Unique ID assigned by the system
<i>Action name</i>	Action designation.
<i>Action type</i>	Defined action type.
<i>Monitoring</i>	The actions carried out are logged and stored in the database.
<i>Remark</i>	Remarks relating to the action can be added here.

Actions details	Description
<i>Data type</i>	Each I/O action corresponds to one or more data types.
<i>Data subtype</i>	Data types may contain subtypes.
<i>Data</i>	Current internal status of the I/O action. The current internal status of the I/O action can be changed using the <i>Set value</i> button.

The *Parameter* tab is used for specifying the parameter of the configured actions, see "[Automation and Alarm Systems](#)", page 123.

The *View* tab is used to display the actions graphically.

To move the sequence of actions, select the action you want, open the context menu and click *Move Down* or *Move Up* .

To delete an Action, select the relevant action, open the context menu and click *Remove action*.

For a better overview and layout of the tree structure, you should start every I/O application with the action *IOSystem* under the output action. This ensures that there is a logical interruption at this point in the tree structure and therefore any unwanted interactions between the various I/O applications are prevented.

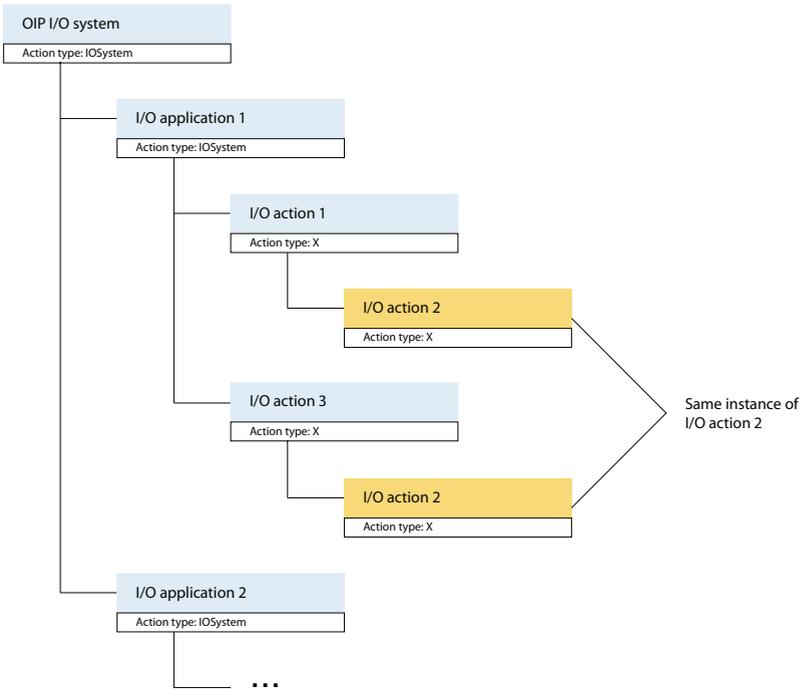


Fig. 77 Layout of the I/O applications

There may be several instances of one and the same action in the tree. Changes to the action need only be made once. To make another instance of the action available in the tree, select the action you want, press the <ctrl> key and drag the action to the destination action you want, keeping the <ctrl> key pressed down. When you delete, only the selected instance of the action is deleted.

6. 1. 8 Alarm Manager



The **Alarm Manager** Toolbox application is used to view the system alarm messages generated by the communication server connected with the OIP server.

The PBX menu item is used to select a communication server to display its current alarm messages.

To delete one or more alarm messages, select the message(s), open the context menu and click *Delete alarm message*.

To print out the list of alarm messages, open the context menu and click *Print*.

To export the list of alarm messages, open the context menu and click *Export*.

Alarm Manager Configuration

The setup window is used to specify whether new alarms should be signalled acoustically.

6.1.9 User Preferences



The *User Preferences* Toolbox application is used to configure the personal settings of OIP users.

General tab

Personal settings are made on the *General* tab.

Tab. 139 Setting Options for General

Parameter	Description
<i>Password</i>	Additional password for logging in to the OIP server.
<i>Terminal PIN</i>	PIN of the user.
<i>Mailbox PIN</i>	PIN input to scan the voice mailbox.
<i>Business phone</i>	Indication of the business phone number. This setting can be used for forwarding calls, etc.
<i>Private phone</i>	Indication of the private phone number. This setting can be used for forwarding calls, etc.
<i>Mobile phone</i>	Indication of the mobile phone number. This setting can be used for forwarding calls, etc.
<i>Business e-mail</i>	E-mail address of the user.
<i>Mobile e-mail (SMS)</i>	E-mail address to which incoming e-mails are to be forwarded as SMSs.
<i>Automatic login</i>	Automatic login to the OIP server.
terminal	Allocated terminals

View tab

The *View* tab is used to select the Toolbox applications to be started automatically after login. The skin and the language in which the Toolbox applications are started can also be selected here.

Voice Mail tab

The *Voice mail* tab can be used to configure a setting for voice mail messages to be deleted on the communication server once the configured time has elapsed.

Notifications tab

In the *Notifications* tab you can define whether calendar events on the user's terminal should be displayed as text messages.

Line rights tab

The user's telephone line access rights are defined in the *Line rights* tab. You can also find these settings in the user profiles. For information about the parameters, see [Tab. 119, page 230](#).

6. 1. 10 Terminal Manager



With the help of the *Terminal settings* toolbox application you can configure the terminal-specific properties of hardphone system phones.

Phone book

The *Phone Book* menu item can be used to edit the private phone book. To add a new entry, click *Create* and enter the new entry. To delete an entry highlight it and click *Delete*.

The *Search ...* button can be used to search for entries in the private phone book.

System phone

The menu item for one's own system phone (displays terminal type) can be used to customise your settings. Whenever the Twin Comfort mode (Aastra 400 and Aastra IntelliGate®), or parallel connection (OpenCom 1000) is activated, the handset is also displayed in addition to the corded system phone.

Tab. 140 Setting options for terminals - General settings

Parameter	Description
<i>Idle text</i>	Idle text on the terminal display.
<i>Telephone barring</i>	Sets the terminal barring.
<i>Hands-free mode</i>	Sets the hands-free operation mode.
<i>Background lighting</i>	Sets the background lighting.
<i>Idle display</i>	Setting for the idle display on the terminal display.

Parameter	Description
<i>Display contrast</i>	Sets the display contrast for the terminal display.
<i>Language</i>	Terminal language.
<i>DTMF enabled</i>	Activates DTMF automatic
<i>Headset</i>	Activates headset functionality.
<i>Bar call waiting</i>	Bars call waiting signalling.
<i>Bar announcement</i>	Bars announcements.

Tab. 141 Setting options for terminals – CFUs

Parameter	Description
<i>Predefined CFUs</i>	Configuration of the <ul style="list-style-type: none"> • predefined CFU • predefined CFNR
<i>CFU options</i>	Configuration <ul style="list-style-type: none"> • CFNR if busy • First CFU
<i>Unreachable destinations</i>	Configuration of unreachable destinations for internal and external calls.

Tab. 142 Setting options for terminals – Ring settings

Parameter	Description
<i>Volume</i>	System phone ring volume
<i>Melody</i>	System phone ringing melody
<i>Speed</i>	System phone ringing speed
<i>Volume for the attention tone</i>	Attention tone volume for the system phone
<i>Melody</i>	Attention tone melody for the system phone
<i>Handset volume</i>	Handset volume for the system phone
<i>Loudspeaker volume</i>	Loudspeaker volume for the system phone

The system phone keys are configured using the [Keys](#) menu item. Depending on the type of system phone, the keys to be configured are displayed in each case. To configure, click the corresponding key and carry out the settings required.

For details of the setting options please refer to your system phone's User's Guide.

6. 1. 11 Call Manager



The **Call Manager** Toolbox application is used to control and operate a system phone. You can set up and answer calls. You can also carry out the telephony functions Brokering, Conference, etc.

Call Manager tab

The *Call Manager* tab contains the functions for controlling the system phone.

The Number field is used to enter the phone number to be called. It is also used to display the caller's number in the case of incoming calls.

The Name field is used to display the name corresponding to the phone number, provided it has been stored in the system.

The Search field is used to search for users among the directories in the OIP (see "[Busy Indicator Setup](#)", page 252). When searching external phone-books you should restrict the search query due to the number of results, e.g. <Last name> <First name> <Town> (standard setting). The *Delete* button deletes the entries in the Number, Name and Search fields.

The telephone button is used to make a call, answer a call or transfer a call, depending on the Call Manager status. The buttons next to and below the list of active calls provide further state-dependent call functions.

Tab. 143 Status-related call function buttons

Button	Description
<i>Enquiry call</i>	Sets up an enquiry call during the call.
<i>Fetch</i>	Fetches a call by entering a number.
<i>Announcement</i>	Makes an announcement by entering a number.
<i>Deflect</i>	Deflects an incoming call without answering first.
<i>DTMF</i>	Activates the DTMF mode.
<i>Answer</i>	Answers an incoming call.
<i>Call waiting</i>	Call waiting on a busy user.
<i>Callback</i>	Sets up a callback during the ringing phase.
<i>End</i>	Ends the current call.
<i>Reject</i>	Rejects an incoming call.
<i>Hold</i>	An existing call is put on hold.
<i>Park</i>	An existing call is parked.
<i>Brokering</i>	Allows the agent to broker between two active calls.
<i>Conference</i>	Sets up a conference.

Some of the call functions can also be controlled via the keyboard, see [Tab. 144](#), page 250.

Tab. 144 Key combinations

Key combination	Description
Page Up	Transfer call without notification.
Page Down	Transfer call with notification.

Key combination	Description
End	Transfer call if user busy.
Insert	Call waiting
Home	Brokering
Delete	Park call
Esc	End call

If a voice mailbox is set up you can use the Voice Mail button to call up received messages. When you retrieve messages the DTMF keyboard opens automatically so you can control the voice mailbox.

If the system phone to be controlled is configured as an operator console, button *A* is displayed; if two-company operation has been configured, buttons *A,B* and *I* are displayed. To make external calls from the Operator line, enter the external call number or search for the external call number in the directories and click the corresponding *A* or *B* button. To make a call from the personal call number, enter the external call number or search for the external call number in the directories and click the *I* button.

If the Busy Indicator option is activated in the Call Manager Setup, the one-line Dynamic Busy Indicator is displayed beneath the number input. The number of user fields is limited by the size of the window. Unlike the Busy Indicator, the Dynamic Busy Indicator is used only for displaying the subscriber status and creating the absence message and sending a message to the relevant user.

To add an user to the Dynamic Busy Indicator, use the search function to find the user and click the corresponding entry in the result list or highlight the user during the call from the list of active calls. The selected user is automatically displayed in the left user field. Each subsequent user is always added to the left user field so that the older entries are shifted to the right.

To send a message to the user or create the absence message, open the context menu on the user and select the corresponding function.

The bottom section of the Call Manager displays the call lists and directories.

Tab. 145 Call lists and directories

List	Description
<i>Active calls</i>	Shows the list of active calls.
<i>Call list</i>	Displays the list of unanswered calls.
<i>Redial list</i>	Shows the list of outgoing calls.
<i>Internal phone book</i>	Displays the entries of internal communication server and PISN users.
<i>Private phone book</i>	Displays the entries of the private phone book.

List	Description
<i>Public phone book</i>	Displays the entries of the communication server abbreviated dialling list.
<i>Search result</i>	Displays the results of a search query.

Call Settings tab

The *Call Settings* tab contains information about activated or waiting callback calls and settings of the call forwarding.

The *Call Expecting* field contains the activated callback calls, which can be deactivated again using the *Reset* button.

The *Callback* field contains waiting callbacks, which can be answered using the *Answer* button or deactivated using the *Reset* button.

In the *Call forwarding* field, one's own line can be forwarded, see section "[Forwarding an User](#)", page 258.

In the *Common Settings* field you can activate the substitution. This function is available only if the system phone to be controlled is configured as operator console.

Busy Indicator Setup

The Setup window is used to carry out the settings for Call Manager.

The *Internal* and *External* tabs are used to define the settings for the way in which incoming internal and external calls are to be signalled.

Tab. 146 Call Manager Setup – Internal tab

Parameter	Description
<i>Sound</i>	Sets the sound used to signal an internal call.
<i>Delay sound</i>	Sets the sound delay in [s].
<i>Playback time</i>	Sets the sound playback time in [s] or unlimited duration.
<i>Popup</i>	Sets the amount of time in [s] after which Call Manager pops up with an incoming call.

Tab. 147 Call Manager Setup – External tab

Parameter	Description
<i>Sound</i>	Sets the sound used to signal an external call.
<i>Delay sound</i>	Sets the sound delay in [s].
<i>Playback time</i>	Sets the sound playback time in [s] or unlimited duration.
<i>Popup</i>	Sets the amount of time in [s] after which Call Manager pops up with an incoming call.

The *Operator* tab is displayed only if the system phone to be controlled is configured as operator console. The settings for the way in which incoming operator calls are to be signalled are made here.

Tab. 148 Call Manager Setup – Operator tab

Parameter	Description
<i>Sound</i>	Sets the sound used to signal an operator call.
<i>Delay sound</i>	Sets the sound delay in [s].
<i>Playback time</i>	Sets the sound playback time in [s] or unlimited duration.
<i>Popup</i>	Sets the amount of time in [s] after which Call Manager pops up with an incoming call.

The *Voice message* tab is displayed only if the system phone to be controlled is configured as a voice mailbox. The settings for the various greetings are made here.

The *Directory* tab is used to make the settings that determine the directories in which call numbers are to be searched for. The directories displayed are those configured during the installation of the OIP server. You can also configure how the search results are to be displayed.

Tab. 149 Call Manager Setup – Directory tab

Parameter	Description
<i>Append to results list</i>	Search results are appended to the existing search list.
<i>Show duplicate entries</i>	If an user is found in several directories, all the entries are displayed.

The *Dialling by Name* tab is used to make the settings that determine the directories in which call numbers are to be searched for when dialling by name. The directories displayed are those configured during the installation of the OIP server. The dialling by name settings can also be made here.

Tab. 150 Call Manager Setup – Dialling by name tab

Parameter	Description
<i>Dialling by name</i>	Dialling by name is activated for this user.
<i>Count limit</i>	The setting limits the number of search entries to be displayed when searching through the directories.

Further settings can be made on the *Settings* tab.

Tab. 151 Call Manager Setup – Settings tab

Parameter	Description
<i>Select grid font size</i>	Font size for the entries in the list of active calls.
<i>Switching the presence indicator window on and off</i>	Switches on the Busy Indicator in the Call Manager.

Parameter	Description
<i>Playback voice mail when starting the Call Manager terminal</i>	The voice mailbox is automatically retrieved whenever you start the Call Manager.
<i>terminal</i>	For a fixed terminal assignment, choose any of the available terminals. To assign a terminal according to the settings in user profile, choose <i>According to user profile</i> .
Min. external call number length	Automatic recognition of a call number as external call number due to the number of digits set here. <i>Default</i> assumes the system setting, <i>Deactivated</i> disables recognition.

The *Operator Twin Comfort* tab is displayed only if the system phone to be controlled is configured as operator console and a DECT handset is operated in Twin Comfort mode. You can also set whether the queue with the operator calls is also be signalled on the DECT handset (Aastra 400 and Aastra IntelliGate® only).

Tab. 152 Call Manager Setup – Operator Twincomfort tab

Parameter	Description
<i>Ringling time</i>	Duration in [sec] how long operator calls are signalled on the DECT handset.
<i>Repeat time</i>	Time in [sec] after which the operator call is signalled again.
<i>Ringling speed</i>	Ringling rate of the DECT handset.
<i>Ringling volume</i>	Volume of the DECT handset.
<i>Ringling melody</i>	Ringling melody of the DECT handset.

The *Operator Groups* tab is displayed only if the system phone to be controlled is configured as operator console. You can use this tab to set whether only your own calls or all the calls of the configured operator groups are to be displayed.

6. 1. 12 Calendar



The *Calendar Manager* allows a user to manage the entries in his personal calendar. The connection determines whether the entries are stored in the OIP database or on the Microsoft Exchange server.

To create a new calendar entry, mark the tag, open the context-sensitive menu on the right-hand side and click *Create new calendar entry*. Enter the appointment details and save the calendar entry by clicking *OK*.

The subject of the appointment and the configured status are automatically displayed in the Busy Indicator for any active calendar entry. *Busy* is displayed instead of the subject for calendar entries that are marked as private.

If a user activates the reminder function, a reminder message is displayed on his system phone.

For Aastra 400 and Aastra IntelliGate®: If the Twin Comfort mode is activated, the reminder is displayed on the handset, see "User Preferences", page 247.

To edit a calendar entry, double-click the calendar entry and edit the entry accordingly.

To delete a calendar event, select the corresponding entry, open the context menu and click *Delete calendar event*.

6. 1. 13 Presence Indicator



The *Presence Indicator* Toolbox application allows a user to view both telephony state of the PBX user in question (in a call, available, forwarded to, etc.) and the presence status of users (ready, busy, in a meeting, etc.). He can also carry out instant messaging functions (e.g. presence status or send messages) and telephony functions (e.g. make calls, broker calls or set up conferences) directly from the Presence Indicator. If the OIP internal Calendar Manager is used or if a Microsoft Exchange server is connected, the Outlook calendar entries are displayed in the user fields.

The presence status of the monitored users is indicated on the one hand by different colours for the user fields and on the other by the symbols of status (Tab. 153, page 255) in the bottom left. If a Microsoft Exchange Server is connected, the OIP status are displayed on Microsoft Outlook calendar status listed in the table. More detailed information on the Presence Indicator can also be found under "Presence status in the OIP:", page 260).

Tab. 153 Presence status display

Icon	Colour	Description	Microsoft Outlook calender
	light grey	Presence state is <i>Unknown</i> .	<i>Absent</i>
	dark grey	Presence state is <i>Ready</i> .	<i>Free</i>
	Orange	Presence state is <i>Meeting</i> .	<i>Absent</i>
	Blue	Presence state is <i>Ready</i> .	<i>Booked</i>
	Magenta	Presence state is <i>Not available</i> .	<i>With reservations</i>
	Yellow	Presence state is <i>Absent</i> .	<i>Absent</i>
	Green	User is making an internal call.	

Icon	Colour	Description	Microsoft Outlook calender
	Red	User is making an external call.	

If an user is set up as an OIP Call Centre agent, the symbols for the status listed in the table [Tab. 153, page 255](#) in the idle state are replaced by the symbols for the agent status [Tab. 154, page 256](#)).

Tab. 154 Agent status symbols

Icon	Description
	Agent status is <i>logged on</i> .
	Agent status is <i>Pause</i> .
	Agent status is <i>Wrap-up time</i> .

The symbols ([Tab. 155, page 256](#)) in the top left of the user field show the destination on which the user can be reached.

Tab. 155 Symbols for obtainability destination

Icon	Description
	User can be reached on one of his/her system phones.
	User can be reached on the system handset (for Aastra 400 and Aastra IntelliGate®: Twin Comfort is activated).
	User is forwarded.
	User is forwarded to Voice Mail.
	User is forwarded to PC operator console.
	User is forwarded to message.
	User is forwarded to pager.
	User is forwarded to the private phone number if defined in the user settings .
	User is forwarded to the mobile phone number if defined in the user settings.
	User has activated Do not disturb.
	User has activated Follow me.

So that the associated call number is displayed to the user in addition to the presence status and obtainability destination, additional lines have to be added to the user in the user profile with access right *Monitoring*.

When it is started up for the first time the Presence Indicator consists of a window with a tab with empty user fields; alternatively it may contain the configured team keys of the system phone.

The Presence Indicator functions are context-sensitive and displayed using the right mouse button.

Setting up and Editing Users

Open the context menu in a subscriber field and click *User settings*. Specify the user settings and save the changes.

Tab. 156 User Preferences

Parameter	Description
<i>User</i>	User to be monitored.
<i>Sound</i>	Sets the sound used to signal an internal call on this line.
<i>Delay sound</i>	Sets the sound delay in seconds.
<i>Playback time</i>	Sets the sound playback time in second or unlimited duration.
<i>Popup</i>	Sets the amount of time in seconds after which Call Manager pops up with an incoming call.

Aastra 400 and Aastra IntelliGate®: If an user has a corded or cordless system phone on which Twin Comfort is activated, only the settings for the corded user are required.

Setting up / Editing Subscribers

Open the context menu on a tab and click *Create new presence indicator group*. Enter the group name, the tab sequence position and the number of users on the tab, and save the changes.

The relevant tab can be edited using the *settings of the presence indicator group*.

Users configured as agents and assigned Skills are displayed on the personal presence indicator groups and the presence indicator groups of the Skills to which the user is assigned as agent. The presence indicator configuration is used to specify whether the presence indicator groups of the Skills are to be shown.

Forwarding an User

Setting up the call forwardings for an user depends on the access rights an user has to the lines of other users. You need *Controlling* rights to make the settings. Open the context menu in the user field and click *Enter destination*.

Tab. 157 User forward settings

Parameter	Description
<i>Destination</i>	Forwarding destination for an incoming call.
<i>Forwarding mode</i>	Type of call forwarding (CFU, CFNR).
<i>Destination number</i>	Call number to which the call is to be forwarded.
<i>Presence status</i>	User status, which is set automatically depending on the destination. It can also be modified manually.
<i>Absence message</i>	Absence message displayed in the user field of the Presence Indicator.
<i>Location</i>	Location displayed in the user field of the presence indicator.

The parameters in [Tab. 162, page 260](#) can be set when setting the destination. Not all of the destinations are displayed, depending on the configuration of the user profile.

The following settings can be made for the status.

Tab. 158 Forwarding settings for the presence state

Status	Description
<i>Unknown</i>	Availability undefined, unknown.
<i>Available</i>	User can be reached on his own terminal.
<i>Meeting</i>	User is in a meeting
<i>Busy</i>	User is busy.
<i>Not available</i>	User cannot be reached on his own terminal (forwarded).
<i>Absent</i>	User cannot be reached.

Telephony functions

The telephony functions are obtained by right-clicking an user field. The functions displayed depend on the user's current status. The possible functions are listed in [Tab. 159, page 258](#).

Tab. 159 Telephony functions

Telephony function	Description
<i>Call<User></i>	Call user
<i>Announcement<User></i>	Makes an announcement to an user.
<i>Callback from<User></i>	Sets a callback to an user.
<i>Send message to < user></i>	Sends a message to an user.

Telephony function	Description
<i>End active call</i>	Ends a call.
<i>Transfer</i>	Connects users.
<i>Brokering</i>	Brokers between two users.
<i>Conference</i>	Sets up a conference.

To call the user directly, double-click a defined user field.

If the user has monitoring rights on a different line in the Presence Indicator, a call on that line can be answered.

OIP Call centre functions

If a user is configured as an agent, the OIP Call Centre functions (log on/off, pause, wrap-up) are displayed on his or her own user field with a right click. It depends on the access rights which an user has to the lines of other users whether the OIP Call Centre functions can also be displayed for other users. You need *Controlling* rights to be able to carry out OIP Call Centre functions on other users.

Configuration of the presence indicator

The Setup window is used to specify the timeout settings and the basic setup for the Presence Indicator.

The *General* tab is used for specifying the general settings for the OIP users.

Tab. 160 Configuration of the presence indicator – General tab

Parameter	Description
<i>Display ACD Skills</i>	If the user is set up as an ACD agent, the group members are displayed in a separate tab.
<i>Display team members</i>	Displays the team keys programmed on the system phone. If this option is activated, manual settings are cleared again the next time the Presence Indicator is started.
<i>Show Idle display</i>	Displays the current status of the Presence Indicator as idle text on the system phone's display.
<i>Play sound</i>	Sound playback is activated.

The *Actions* is used to configure the status the user should adopt on expiry of the set time, if no activity was carried out on the phone, and when logging on and off the OIP server, see [Tab. 158, page 258](#).

The *Reaction* tab is used for configuring a destination for each presence state. From the dropdown list select the corresponding presence status and activate it.

Tab. 161 Configuration of the presence indicator – Reaction tab

Parameter	Description
<i>Destination</i>	Forwarding destination for an incoming call.
<i>Forwarding mode</i>	Type of call forwarding.
<i>Destination number</i>	Call number to which the call is to be forwarded.
<i>Message</i>	Message displayed in the user field of the presence indicator.

The parameters listed in [Tab. 162, page 260](#) can be set when setting the destination. Not all of the destinations are displayed, depending on the configuration of the user profile.

Tab. 162 Configuration of the presence indicator – Reaction tab – Destination

Destination	Description
<i>Corded</i>	Separate corded system phone
<i>Forward to number</i>	Forwards call to the call number entered in the Number field.
<i>Unknown/Macro</i>	Destination via macro
<i>Cordless</i>	Forwards call to own DECT if Twin Comfort (Aastra 400 and Aastra IntelliGate®) or parallel connection (OpenCom 1000) is activated.
<i>Voice Mail</i>	Forwards calls to the voice mailbox
<i>Do not disturb</i>	Do not disturb
<i>Follow me</i>	Activates Follow me.
<i>Message</i>	Forwards call to message.
<i>Private phone</i>	Forwards call to the call number entered under Private Phone in the user settings.
<i>Mobile phone</i>	Forwards call to the call number entered under Mobile Phone in the user settings.
<i>Operator</i>	Forwards calls to the PC operator console

Tab. 163 Configuration of the presence indicator – Reaction tab – Forwarding mode

Forwarding mode	Description
<i>All calls</i>	Forwards all calls.
<i>If busy</i>	Forwards calls if busy.
<i>If no reply</i>	Forwards call if no reply.

6. 1. 13. 1 Presence status in the OIP:

Presence states are specified states which provide information on the current presence and availability of an OIP user. The presence state can be specified for each OIP user and therefore for each PBX user, too. It is shown using the Presence Indicator. Several instances are capable of specifying the presence state. The presence indicator always shows the presence state last specified.

Example:

In the OIP Calendar the presence state of a PBX user is set on *Busy*; the presence indicator shows *Busy*. The user now activates the profile *Absent* via his OfficeSuite. The Presence Indicator switches to *Absent*. However the presence state of the OIP Calendar remains on *Busy*.

If OIP is connected to a Microsoft Exchange server, the OIP Calendar is synchronized to the presence states of Microsoft Outlook. Exchange statuses are assigned to OIP statuses according to [Tab. 153, page 255](#). If there are nested calendar inputs in Microsoft Exchange, OIP takes over the presence status according to the following order of priority: *Absent*, *Tentative*, *Busy*.

Example:

In his Microsoft Outlook a user has marked his status as absent the whole day, but has entered at the same time a meeting from 10:00 to 11:00 with the presence status *Busy*. OIP also takes over the presence status *Absent*, for this time period as this status has a higher priority.

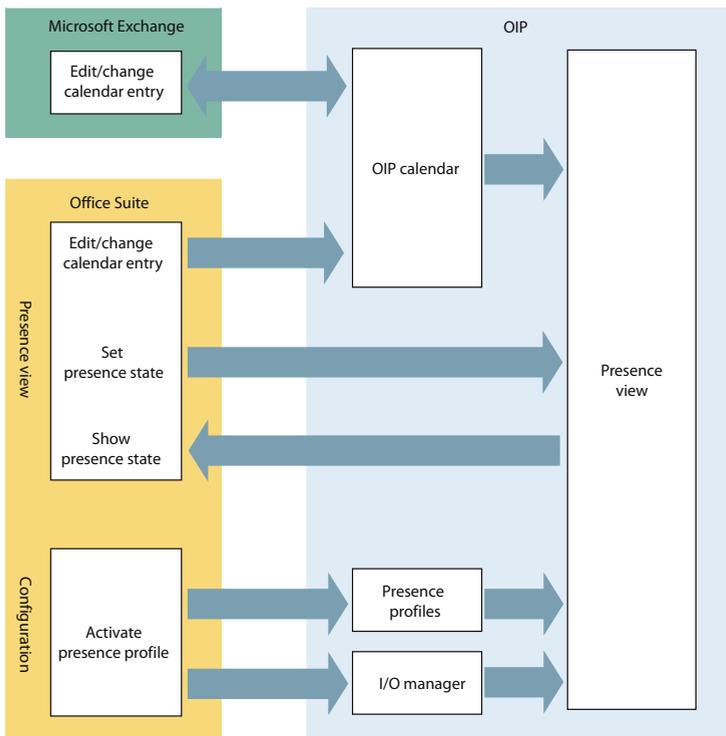


Fig. 78 OIP instances specify presence states and indicates them on the Presence Indicator.

Profile switch

With the profile switch the presence states of the OIP Calendar can also switch presence profiles (see "[Activating presence profiles automatically \(profile switch\)](#)", page 276). In this case the presence states of the OIP Calendar are not displayed directly on the Presence Indicator.

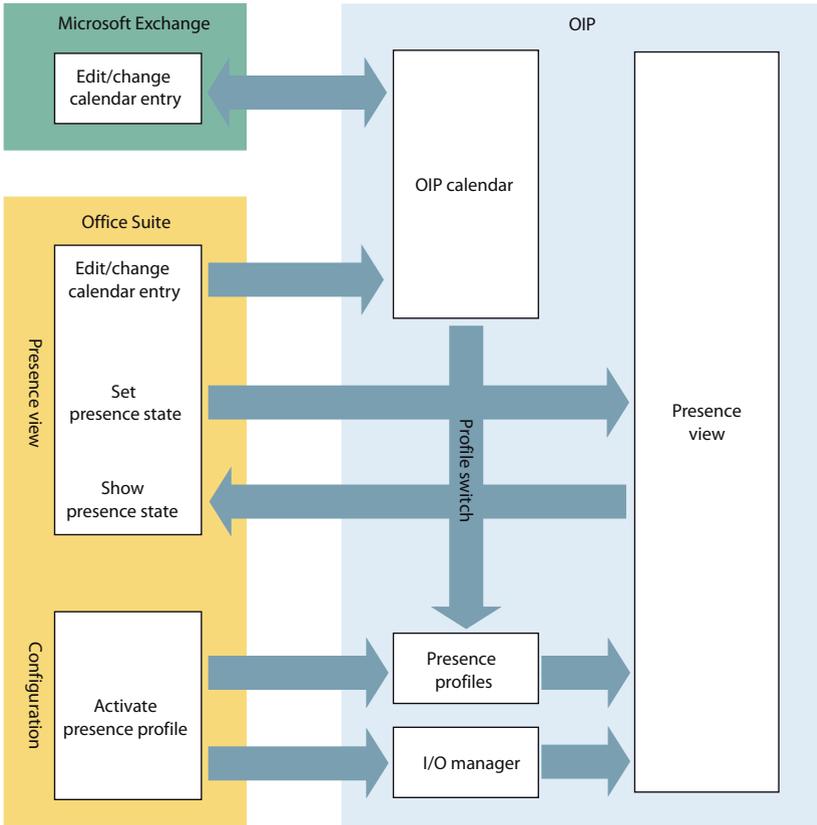


Fig. 79 Presence status of the OIP Calendar controls profiles via the profile switch

6. 1. 14 Presence Profiles



The *Presence Profiles* Toolbox application allows a user to manage his incoming calls individually, taking his presence status into account. When he leaves his workstation for example, he can activate the presence profile provided for absences. During his absence it will control the call routing and the call notification and control the voice mail actions. When the user returns to his workstation, he re-activates the presence profile provided for this presence.

It is also possible to activate and deactivate presence profiles automatically based on the current presence state.

Presence profiles can be assigned to all OIP users. However they work first and foremost with OIP users with an assigned user as calls are never routed to an OIP user, but always to an user.

6. 1. 14. 1 Setting up presence profiles

There are no presence profiles available in the OIP's basic configuration. To be able to use them, you need to acquire the *Presence Profile* licence and set up the profiles for each user. The main rules for setting up profiles:

- You can set up any number of presence profiles. To create, delete or copy a presence profile, either right-click a user in the navigation tree and select the required action or use the buttons along the bottom edge of the profile window.
- While you can set up presence profiles for each OIP user, only PBX users can use the profiles.
- You can create profiles which are available to every OIP user (public profiles) or profiles which are available to only an individual OIP user (private profiles). You can also create profile templates to simplify the process for generating a large number of private profiles.

Tab. 164 Overview of the presence profiles

	Profile templates	Public templates	Private templates
Location in the navigation tree	<i>Templates and public profiles</i>		<i>Private profiles</i>
Profile availability setting	<i>Template</i>	<i>Public</i>	<i>Home</i>
Function and use	Profile templates are used as templates for creating public and private profiles.	Public profiles are available to all OIP users, but can be individually activated/deactivated.	Private profiles are available only to an individual OIP user.
Access rights (OIP basic configuration):			

	Profile templates	Public templates	Private templates
• Create/Edit/Delete	OIP_ADMINISTRATORS		OIP_ADMINISTRATORS ¹⁾
• Read/Apply	OIP_USERS	OIP_USERS	OIP_USERS

¹⁾ To expand the rights to *OIP_USERS* also, you need to assign them access rights of the *super user* level for the OIP service *Configuration Configuration Profile Services* (see "Configuration Service", page 59)

Creating profile templates

1. Right-click the navigation tree to open the context menu of *Templates and public profiles* and select *Insert default templates*. Default templates are inserted for all presence states.
2. Copy the default templates and save them under new names.
3. Edit your newly created profile templates and make the settings which you want to be the same later on in the profiles generated using these templates.

Creating public profiles

1. Right-click the navigation tree to open the context menu of *Templates and public profiles* and select *New profile*.
2. Give the new profile a name and select the template to be used (besides a profile template you can also use a public profile as a template). The profile is created.
3. From the *General* profile view select the setting *Profile availability = Public* and save the change. The profile is now available to all OIP users.

Creating private profiles for each PBX user

1. Right-click the navigation tree to open the context menu of the PBX user in question and select *New profile*.
2. Give the new profile a name and select the template to be used (besides a profile template you can also use a public profile as a template). The private is created.
3. To create private profiles for an OIP user from all the available profile templates, select the function *Create profiles from templates* from the context menu of the OIP user.

Tab. 165 Functions for setting up and managing presence profiles

Parameter	Description
Context menu of an OIP user:	Right-clicking an OIP user in the navigation tree provides a range of profile management options:

Parameter	Description
<ul style="list-style-type: none"> • <i>New Profile</i> • <i>Create profiles from templates</i> 	<p>Creates a new profile.</p> <p>Creates private profiles from all the available templates.</p>
<p>Context menu for <i>Template and public profiles</i>:</p> <ul style="list-style-type: none"> • <i>Insert default templates</i> 	<p>Right-clicking <i>Templates and public profiles</i> in the navigation tree provides additional profile management options:</p> <p>Inserts as templates the profiles predefined in the system.</p>
<p>Context menu of a profile:</p> <ul style="list-style-type: none"> • <i>Delete profile</i> • <i>Save profile</i> • <i>Copy profile</i> • <i>Go to profile owner</i> 	<p>Right-clicking a profile in the navigation tree provides additional options:</p> <p>The availability of these options depends on the user rights</p> <p>For public profiles only.</p>

6. 1. 14. 2 Activating a presence profile

Exactly one presence profile is always active for each user. If a profile is already active when a presence profile is activated, the active profile is deactivated.

There are several possibilities for activating a presence profile:

- The user manually activates the presence profile he wants using the OfficeSuite or another OIP application that supports presence profiles.
- The user manually activates the presence profile he wants using a preconfigured key (Redkey function) on his system phone.
- A presence profile is activated by the profile switch depending on the presence state (see under "[Activating presence profiles automatically \(profile switch\)](#)", page 276).

Activating a presence profile carries out all the settings stored under that profile.

6. 1. 14. 3 Profile views

A presence profile comprises the following views:

- *General*: General settings for the profile and allocation of function profiles which are activated when the profile is activated/deactivated
- *Call forwarding* Forwarding settings
- *Notification*: Allocation of a notification profile
- *Audio*: Allocation of an audio profile
- *Display*: Allocation of a display profile

You can display the views either as a tree view or a card view. To do so, right-click the topmost node in the navigation tree (*User*) and select between *Tree view* and *Card view*.

Profile templates only have the views *General*, *Call forwarding* and *Notification* as the other views depend on the terminal.

Subprofiles

Function, notification, voice mail and display profiles are all subprofiles allocated to a presence profile.

A given subprofile can be made available to all OIP users or to one individual user only (*Profile availability public / private*).

The following OIP users are authorized in the basic setup to create and modify subprofiles:

- Subprofiles with the profile availability *public* and private: Members of the *OIP_ADMINISTRATORS* user group. To expand the rights to *OIP_USERS* also, you need to assign them access rights of the *super user* level for the OIP service *Configuration Profile Services* (see "*Configuration Service*", page 59).
- Subprofiles with the *System* profile availability are created by an OIP service and cannot as a rule be modified by the user.



Note:

Public profiles cannot comprise any private subprofiles. Subprofiles with *private* profile availability can therefore only be assigned to presence profiles whose profile availability is also *private*.

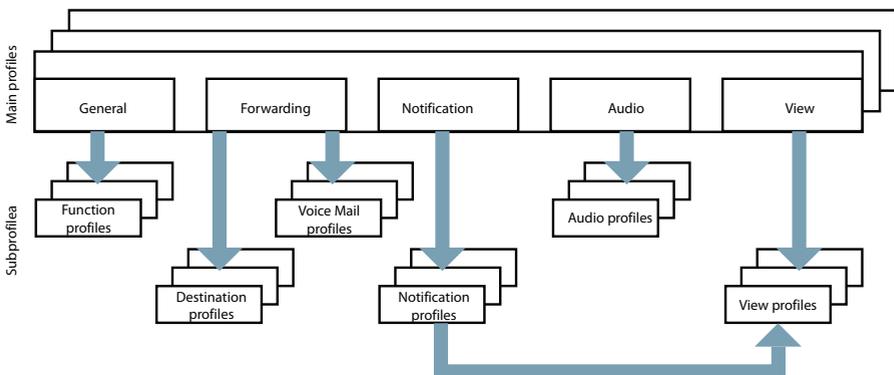


Fig. 80 Presence profiles and allocated subprofiles

The settings and subprofiles of the individual views are explained below.

General Settings

The *General* view comprises information on the profile, regulates the profile availability, the presence state and the allocation of the function profiles which are activated when the profile is activated/deactivated.

Tab. 166 Presence profile settings: ViewGeneral:

Parameter	Parameter value	Description
<i>Name</i>	<Name>	Profile title
<i>Owner</i>	<OIP-User>	Indicates the name of the OIP user who created the profile.
<i>Profile availability</i>	<i>Private / Public / Template</i>	<ul style="list-style-type: none"> • A private profile is available only to its owner. • A public profile is available to all OIP users. • The template of a profile acts as a copy template when creating a profile. The template itself cannot be used directly as a profile and therefore cannot be activated.
<i>Deactivation locked for profile switch</i>	Check box	The profile can only be deactivated manually, not using the profile switch (see " Activating presence profiles automatically (profile switch) ", page 276).
<i>Presence status</i>	<i>---/Available / Meeting / Busy / Not available / Absent</i>	Sets the required presence state when the profile is activated.
<i>Absence reason</i>	<i>--- / Illness / Vacation / Doctor / Business / Army / Training / Weekend / Private / Lunch / Pause</i>	Displayed in a presence indicator (e.g. in the Office-Suite or on the Office 1560/1560IP PC operator console).
<i>Message</i>	<Text message>	Displayed in a presence indicator (e.g. in the Office-Suite or on the Office 1560/1560IP PC operator console).
<i>Location</i>		Displayed in a presence indicator (e.g. in the Office-Suite or on the Office 1560/1560IP PC operator console).
<i>Function profiles</i>		see " Function profiles ", page 267
• <i>On profile activation</i>	<Function profile>	The selected function profile is activated when the presence profile is activated.
• <i>On profile deactivation</i>	<Function profile>	The selected function profile is activated when the presence profile is deactivated.

Function profiles

A function profile contains one or more predefined communication server functions. When the function profile is activated, the functions are either activated or deactivated in the sorting order. Some functions require a number of additional arguments for their execution.

Creating and editing a function profile

To create a new function profile or edit an existing one, click one of the buttons *New* or *Edit* behind the list of function profiles in the *General view*.

The profile configuration window appears and the *Function Profiles* tab is displayed. All the available function profiles are listed on the left-hand side. The right-hand side shows which communication server functions are assigned to the function profile and in what order. The functions' sorting order determines the order in which they are executed.

To create a new function profile, proceed as follows.

1. Click the *Create* button.
The *Create profile* window appears.
2. Enter the name of the new function profile and select one of the available templates.
The function profile is created using the settings of the selected template and is now ready for configuration.
3. Specify the profile availability.
4. Add a function by click the *Insert* button and following the user prompting.
The function is inserted together with the relevant parameters.
5. Save the function profile.
6. Use the available buttons to add other functions, modify the function sequence, edit functions already added or delete functions.

Call forwarding configuration

Connection to Aastra 400 and Aastra IntelliGate®

The *Call forwarding configuration* view comprises a tab with the call forwarding configuration for each type of call forwarding. You can specify your own call forwarding configuration for each type of call forwarding.

Tab. 167 Presence profile settings: *ViewNotification*

Parameter	Parameter value	Description
<i>Use call forwarding settings</i>	Check box	This call forwarding is also activated/deactivated whenever the presence profile is activated/deactivated. If there is not check mark, the settings are ignored and the call forwarding is not activated/deactivated.

Parameter	Parameter value	Description
<i>Internal calls</i>	Check box	Activates the call forwarding configuration for internal calls.
<i>External calls</i>	Check box	Activates the call forwarding configuration for external calls.
<i>Force settings of the profile</i>	Check box	Prevents other instances from altering the call forwarding settings specified here as long as this presence profile is activated. Other instances include: User interaction via the system phone or a softphone, call forwarding destinations of the Presence Indicator, the OfficeSuite or a softphone, default call forwarding destinations defined in the communication server.
Call forwarding type	<i>Unconditional (CFU)/No response (CFNR)/Busy (CFB)</i>	Selecting the call forwarding type
<i>Call number</i>	<Call number>	Destination number for the call forwarding. You can only enter the destination number if a destination profile has not yet been assigned. The call number specified creates a destination profile which is assigned automatically.
<i>Destination profile</i>	<Destination>	Call forwarding to the destination stored in the destination profile (see "Managing destinations", page 272).

Connection to OpenCom 1000

The *Call forwarding configuration* view comprises a tab with the call forwarding configuration for each type of call forwarding. You can specify your own call forwarding configuration for each type of call forwarding.

Tab. 168 Presence profile settings: *Call forwarding view for OIP connection to OpenCom 1000*

Parameter	Parameter value	Description
<i>Force profile settings</i>	Check box	Prevents other instances from altering the call forwarding settings specified here as long as this presence profile is activated. Other instances include: User interaction via the system phone or a softphone, call forwarding destinations of the Presence Indicator, the OfficeSuite or a softphone, default call forwarding destinations defined in the communication server.
<i>Internal calls</i>	Check box	Activates the call forwarding configuration for internal calls.
<i>External calls</i>	Check box	Activates the call forwarding configuration for external calls.
<i>Use call forwarding settings</i>	Check box	This call forwarding is also activated/deactivated whenever the presence profile is activated/deactivated.

Parameter	Parameter value	Description
<i>Call number</i>	<Call number>	Destination number for the call forwarding. You can only enter the destination number if a destination profile has not yet been assigned. The call number specified creates a destination profile which is assigned automatically.
<i>Destination profile</i>	<Destination>	Call forwarding to the destination stored in the destination profile (see "Managing destinations", page 272).

Notification and notification profiles

The *Notification* view lets you assign a notification profile to the presence profile.

A notification profile records whether a certain event is to be notified, and if so, how. To this end, the various events are assigned information destinations. For example you can specify that an e-mail message is to be generated if a call goes unanswered.

Tab. 169 Presence profile settings: *ViewNotification*

Parameter	Parameter value	Description
<i>Notification profile</i>	<Notification profile>	Assigning a notification profile.
<i>Force profile settings</i>	Check box	Prevents other instances from altering the settings specified by the selected notification profile as long as this presence profile is activated. Other instances include: I/O events, settings in the Presence Indicator.
<i>External calls</i>	Check box	Activates the call forwarding configuration for external calls.

Creating and editing a notification profile

To create a new notification profile or edit an existing one, click one of the buttons *New* or *Edit* behind the list of function profiles in the *Notification* view.

The profile configuration window appears and the *Notification Profiles* tab is displayed. All the available notification profiles are listed on the left-hand side. The right-hand side shows the allocation of event sources to information destinations.

To create a new notification profile, proceed as follows.

1. Click the *Create* button.
The *Create profile* window appears.

2. Enter the name of the new notification profile and select one of the available templates.
The notification profile is created using the settings of the selected template and is now ready for configuration.
3. Specify the profile availability.
4. Select an event from the *Events* column. Next, from the *Targets* column, select all the targets that are to be informed by the selected event; to do so, click the relevant check boxes in the *Link* column.
5. Repeat this step for all the events. If none of the targets is to be informed of an event, make sure none of the check boxes is marked.
6. Save the notification profile.
7. Use the available buttons to add or edit other notification profiles and to delete notification profiles.

Managing events

You can create new notification event profiles or edit existing ones, providing the profile availability allows you to do so.

Tab. 170 Settings for the notification event profiles

Parameter	Parameter value	Description
<i>Name</i>	<Name>	Event name
<i>Availability</i>	<i>Private / Public / System</i>	Availability of the notification event profiles: <ul style="list-style-type: none"> • <i>Home</i>: Available only to its owner. • <i>Public</i>: Available to all OIP users. • <i>System</i>: Is created by an OIP service and cannot as a rule be modified.
<i>Event</i>	<i>Voice mail, Text messages, Calendar, I/O event</i>	Selecting the event type
<i>Unanswered Calls:</i> <ul style="list-style-type: none"> • <i>from all call numbers</i> • <i>Call number</i> 	Check box <Call number>	The event is an unanswered call The event is true for all unanswered calls The event is true for an unanswered call with the specified call number
<i>Answered Calls:</i> <ul style="list-style-type: none"> • <i>from all call numbers</i> • <i>Call number</i> 	Check box <Call number>	The event is an answered call The event is true for all answered calls The event is true for an answered call with the call number specified
<i>Text messages:</i> <ul style="list-style-type: none"> • <i>All text messages</i> • <i>to the current user</i> 	Check box	The event is a text message The event is true for all text messages. The event is true for the current user.
<i>Calendar:</i>		The event is a calendar entry

Parameter	Parameter value	Description
<ul style="list-style-type: none"> All calendar entries Entry type Presence status 	Check box <i>Business and Private/Business/Private</i> <i>All/Available/Meeting/Busy/Not available/Absent</i>	The event is true for all calendar entries. The event is true for the selected type of calendar entry. The event is true for the selected presence state
I/O Event: <ul style="list-style-type: none"> All I/O events Parameter 	Check box	The event is an I/O event The event is true for any I/O event.

Managing destinations

You can create new notification destination profiles or edit existing ones, providing the profile availability allows you to do so.

Tab. 171 Settings for the notification destination profiles

Parameter	Parameter value	Description
Name Availability Visibility	<Name> <i>Private / Public / System</i> All information, <i>Only with address, Without information</i>	Destination name Availability of the notification destination profiles: <ul style="list-style-type: none"> Home: Available only to its owner. Public: Available to all OIP users. System: Is created by an OIP service and cannot as a rule be modified. The notification is made with the chosen information content.
Call: <ul style="list-style-type: none"> to the current user Call number 	Check box <Call number>	The event is notified with a call: <ul style="list-style-type: none"> The destination for the call is the current user. The call destination is the user whose call number is specified.
Fax: <ul style="list-style-type: none"> to the current user Call number 	Check box <Call number>	The event is notified with a fax: <ul style="list-style-type: none"> The destination for the fax is the current user. The destination for the fax is the user whose call number is specified.
Display: <ul style="list-style-type: none"> to the current user User Priority 	Check box <Call number> <i>Message, Function, Indication, Unimportant, Warning, Important, Urgent, Critical, Alarm</i>	The event is notified by means of an indication on the terminal: <ul style="list-style-type: none"> Indication on the terminal of the current user. Indication on the terminal of the specified user. The indication on the terminal is made in accordance with the chosen priority. The priority settings are part of the display profile, see "Presence Profiles", page 263.
Text message:		The notification is made by means of a text message on the terminal:

Parameter	Parameter value	Description
<ul style="list-style-type: none"> • <i>to the current user</i> • <i>Call number</i> 	Check box <Call number>	<ul style="list-style-type: none"> • The destination for the text message is the current user. • The destination for the text message is the user whose call number is specified.
<i>Message Waiting:</i> <ul style="list-style-type: none"> • <i>to the current user</i> • <i>Call number</i> 	Check box <Call number>	Notification on the terminal using the Message Waiting function: <ul style="list-style-type: none"> • Message Waiting is activated on the terminal of the current user. • Message Waiting is activated on the terminal of the current user.
<i>Printer:</i> <ul style="list-style-type: none"> • <i>Printer name</i> 	<Printer name>	Notification by means of a hard-copy printout on a printer: <ul style="list-style-type: none"> • The printout is made on the selected printer.

Audio and audio profiles

The *Audio* view lets you assign an audio profile to the presence profile.

An audio profile specifies the ring type on the terminal and the volume of the open-listening speaker and handset speaker.

Tab. 172 Presence profile settings: *View Audio*:

Parameter	Parameter value	Description
<i>Audio profile</i>	<Audio profile>	Assigning an audio profile.

Creating and editing an audio profile

To create a new audio profile or edit an existing one, click one of the buttons *New* or *Edit* behind the list of profiles in the *Audio* view.

The profile configuration window appears and the *Audio Profiles* tab is displayed. All the available audio profiles are listed on the left-hand side. The right-hand side shows the settings of the signalling parameters.

To create a new audio profile, proceed as follows.

1. Click the *Create* button.
The *Create profile* window appears.
2. Enter the name of the new audio profile and select one of the available templates.
The audio profile is created using the settings of the selected template and is now ready for configuration.
3. Configure the signalling parameters.
4. Save the audio profile.
5. Use the available buttons to add or edit other audio profiles and to delete audio profiles.

Tab. 173 Audio profile settings

Parameter	Parameter value	Description
<i>Name</i>	<Name>	Name of the audio profile
<i>Volume</i>	<1..8>	Setting the ring volume
<i>Melody</i>	<1..8>	Setting the ring melody
<i>Speed</i>	<1..8>	Setting the ring speed
<i>Loudspeaker volume</i>	<1..8>	Setting the loudspeaker volume
<i>Handset volume</i>	<1..8>	Setting the handset volume

Display and display profiles

The *Display* view lets you assign a display profile to the presence profile.

A display profile specifies how an event should be displayed on a terminal depending on its priority.

Tab. 174 Presence profile settings: ViewDisplay:

Parameter	Parameter value	Description
<i>Display profile</i>	<Display profile>	Assigning a display profile.
<i>Force profile settings</i>	Check box	Prevents other instances from altering the settings specified by the selected display profile as long as this presence profile is activated. Other instances include: I/O events, settings in the Presence Indicator.

Creating and editing a display profile

To create a new display profile or edit an existing one, click one of the buttons *New* or *Edit* behind the list of profiles in the *Display* view.

The profile configuration window appears and the *Display Profiles* tab is displayed. All the available display profiles are listed on the left-hand side. The right-hand side shows the settings of the display elements depending on their priorities.

To create a new display profile, proceed as follows.

1. Click the *Create* button.
The *Create profile* window appears.
2. Enter the name of the new display profile and select one of the available templates.
The display profile is created using the settings of the selected template and is now ready for configuration.
3. Specify the profile availability.
4. Configure the display elements for each priority.
5. Save the display profile.
6. Use the available buttons to add or edit other display profiles and to delete display profiles.

Tab. 175 Settings on the presence profile

Parameter	Parameter value	Description
<i>Name</i>	<Name>	Name of the display profile

Parameter	Parameter value	Description
Availability	Private / Public / System	Availability of display profiles: <ul style="list-style-type: none"> • <i>Home</i>: Available only to its owner. • <i>Public</i>: Available to all OIP users. • <i>System</i>: Is created by an OIP service and cannot as a rule be modified.
Priority: • Signalling settings (Volume, Speed, Melody, Vibra, Ring time, Repeat time, LED, Beep)	Message, Function, Indication, Unimportant, Warning, Important, Urgent, Critical, Alarm <Settings>	Specify here the priority with which the display is to be made on the terminal. You can specify your own signalling settings for each priority.

6. 1. 14. 4 Activating presence profiles automatically (profile switch)

The profile switch is used to activate and deactivate presence profiles depending on the presence state of the OIP calendar. If the OIP calendar is connected to Microsoft Outlook, the presence profiles are switched depending on the Outlook presence state.

Example:

Microsoft Outlook sets the presence state to *Busy based on the calendar entry*. The profile switch deactivates the current profile and activates the presence profile assigned to the *Busy* presence state.

Each OIP user has one profile switch at his disposal.

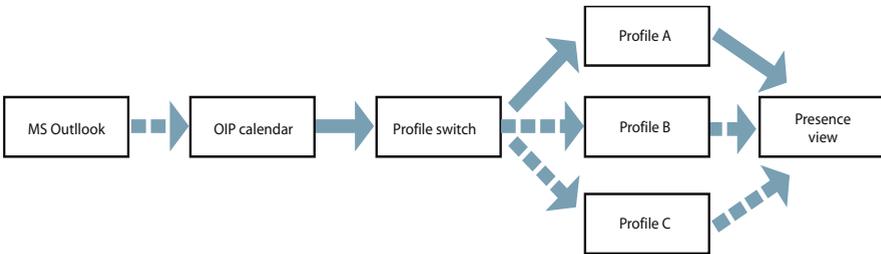


Fig. 81 Activating a profile based on the OIP calendar presence state

Setting up the profile switch

To set up the profile switch, proceed as follows.

1. Set up a presence profile for each presence state used, as indicated under "[Setting up presence profiles](#)", page 263.
2. In the navigation tree right-click the OIP user and select *Profile switch*.
The *Profile switch* window appears.
3. Assign one of the newly created profiles to each of the presence states.
4. Save the settings and close the *Profile switch* window.

Tab. 176 Settings for automatic profile activation

Parameter	Parameter value	Description
<i>Presence status:</i> <ul style="list-style-type: none"> • <i>Available/Meeting/Busy/Not available/Absent</i> 	<Profile>	Presence state of the OIP calendar. The current presence state activates the assigned presence profile.
<i>Application event:</i> <ul style="list-style-type: none"> • <i>On login</i> • <i>On logout</i> 	<..>	<..>

Tab. 177 Linking of the presence states of different instances using the profile switch

Microsoft Exchange		OIP Calendar		Presence Profiles		Presence Indicator
Linking rules for the presence states of different instances:						
Exchange status	↔	Calendar Status	<input checked="" type="checkbox"/>	Profile Status	⇒	Profile Status
Exchange status	↔	Calendar Status	<input checked="" type="checkbox"/>	<blank>	⇒	Calendar Status
Linking rules for specific presence states:						
<i>Free</i>	↔	<i>Available</i>	<input checked="" type="checkbox"/>	<i>Available</i>	⇒	<i>Available</i>
<i>(Absent)</i>	⇐	<i>Unknown</i>		<No profile can be switched with this state >		<State profile of the currently active profile>
<i>(Absent)</i>	⇐	<i>Meeting</i>	<input checked="" type="checkbox"/>	<i>Meeting</i>	⇒	<i>Meeting</i>
<i>Booked</i>	↔	<i>Busy</i>	<input checked="" type="checkbox"/>	<i>Busy</i>	⇒	<i>Busy</i>
<i>With reservations</i>	↔	<i>Not available</i>	<input checked="" type="checkbox"/>	<i>Not available</i>	⇒	<i>Not available</i>
<i>Absent</i>	↔	<i>Absent</i>	<input checked="" type="checkbox"/>	<i>Absent</i>	⇒	<i>Absent</i>
Linking rules for specific message texts:						
Exchange subject	↔	Calendar subject	<input checked="" type="checkbox"/>	Profile subject	⇒	Profile subject
Exchange subject	↔	Calendar subject	<input checked="" type="checkbox"/>	<blank>		Calendar subject
Linking rules for specific location texts:						
Exchange location	↔	Calendar location	<input checked="" type="checkbox"/>	Profile location	⇒	Profile location
Exchange location	↔	Calendar location	<input checked="" type="checkbox"/>	<blank>		Calendar location

Legend:

- ↔ The presence state of the OIP calendar is firmly coupled with the presence state of Microsoft Outlook, providing that Microsoft Outlook is synchronized with the OIP calendar of the Toolbox.
- ⇐ There is no equivalent in Exchange for the OIP calendar's presence status. The presence status *Absent* is assigned in Microsoft Exchange during synchronisation.
- The presence state of the OIP calendar determines the presence profile using the profile switch. A presence state is configured in the presence profile.
- ⇒ When a presence profile is activated, its presence state is forwarded to the presence indicator. It can however also be overwritten by a different instance (see also "Presence status in the OIP:", page 260).

6. 1. 15 Function keys



The *Function Keys* Toolbox application allows a user to operate function keys which he has previously set up and arranged into groups.

Using function keys

By operating a function key you can activate or deactivate the function stored under it. To do so, proceed as follows:

1. Open the Toolbox and log in under your internal call number.
2. Open the OIP Toolbox application *Function keys*.
The function key window appears. The function keys are laid out in a matrix. They can also be grouped on several cards.
The display tells you whether a function is stored under a function key and whether it is activated or deactivated (see "[Layout of the function keys](#)", page 279).
3. Double-click a function key to activate or deactivate the stored function. Alternatively you can operate the function key via the context menu using a right-click.

Tab. 178 Layout of the function keys

Icon	Colour	Labelling	Status
–	light grey	None	Function key is not occupied
	light grey	Name of the function key	Function key is occupied Function is deactivated
	dark grey	Name of the function key	Function key is occupied Function is activated

Setting up function keys

The *Function Keys* Toolbox application is an application for end users and the functions themselves are tied to an internal user. That is why the access right of the *OIP_USERS* user group is sufficient for setting up.

You can assign a function to a function key. If you set up a large number of function keys, you can group them by topic and place them in separate cards. Proceed as follows:

1. Open the Toolbox and log in under your internal call number.
2. Open the OIP Toolbox application *Function keys*.
The function key window appears.

- To set up only a few function keys without grouping them together by topic, go to step 6. To group the function keys in cards, continue with the next step.
- To create a new card for grouping function keys, open the card context menu by right-clicking a card tab, then select *Create New Group*.
The window with the settings for the function key groups appears.
- Enter the name of the group, the position of the group's card tab and the maximum number of possible function keys for the group. Complete your inputs with *Save*.
The card for the new function key group is created.
- To assign a function to a function key, open the context menu by right-clicking a function key, then select *Edit Function Key*.
The window with the function key settings appears.
- Give the function key a name and select the required function from the *List* dropdown menu.
The list of available functions depends on the communication server to which the internal user is connected.
- Fill out the entries required for the function and complete your input with *Save*.
The function key is now set up and ready to use.

6.1.16 Messages



The **Messages** Toolbox application allows a user to send messages to users.

The top window displays the messages sent and received. If an user is selected under destination, only the messages of that user are displayed. These messages are deleted by the system after a set period of time. If a message is not to be deleted, select it using the check box on the right-hand side.

To send a message, select the message recipient under destination in the top part and type the message in the bottom part. Under message type you can select different destinations provided the corresponding addresses have been entered. Click *Send* to send the message.

Tab. 179 Message Types

Message type	Description
<i>Auto destination</i>	OIP automatically determines the address.
<i>Text message via PBX</i>	The communication server's message system is used.

Message type	Description
<i>Text message via OIP</i>	The message is sent via OIP (to OIP user).
<i>SMS</i>	The message is sent as an SMS.
<i>E-mail</i>	The message is sent as an e-mail.
<i>Text in display</i>	The message is written as text on the display of the system phone.

Messages configuration

The Setup window is used to carry out the basic settings for the Messages.

Tab. 180 Messages configuration

Parameter	Description
<i>Sound</i>	Sets the sound used to signal a new incoming message.
<i>Delay sound</i>	Sets the sound delay in [s].
<i>Playback time</i>	Sets the sound playback time in [s] or unlimited duration.
<i>Mobile e-mail</i>	E-mail address to which incoming e-mails are to be forwarded as SMSs.
<i>E-mail</i>	Own e-mail address.

Once these addresses have been defined and SMTP Service is started, the message types SMS and E-mail can be used.

6. 1. 17 Directory Manager



The *Directory Manager* allows a user to view the entries in the various directories and to edit them depending on his access rights.

The phone books are listed under the *Directories* menu item. The directories actually displayed depend on the installation concepts.

Tab. 181 Directories

Directory	Description
<i>ActiveDirectoryService</i>	Active Directory
<i>DasTelefonbuchDirectoryService</i>	DasTelefonbuch Germany (D)
<i>LDAPDirectoryService</i>	LDAP directory
<i>PISNSubscriberDirectoryService</i>	PISN user directory
<i>PhoneCardDirectoryService</i>	Private phone book on the communication server.
<i>PrivateDirectoryService</i>	Private OIP directory
<i>PublicDirectoryService</i>	Public OIP directory
<i>ShortDialDirectoryService</i>	PBX abbreviated dialling list
<i>SubscriberDirectoryService</i>	PBX user directory
<i>SystemUserDirectoryService</i>	OIP user directory
<i>TwixTelDirectoryService</i>	TwixTel (CH)

To add contacts to the directories, select the corresponding directory in the menu, open the context menu and click *Add contact*. Enter the contact data and save your changes.

Public contacts can be entered either in the communication server abbreviated dialling list or in the public OIP directory. If the OIP server is connected with only one communication server, the new contacts can be added to either of the two directories. In a communication server network, however, a distinction has to be made between common abbreviated dialling numbers and abbreviated dialling numbers outside this range. The range of common abbreviated dialling numbers is configured during installation; it can also be configured afterwards in the OIP configuration in the Shortdial Directory Service.

Contacts can only be added to common abbreviated dialling numbers in the public OIP directory. If a contact is to be added to the abbreviated dialling list on one communication server only, it has to be added outside the range of the common abbreviated dialling numbers. Contacts added to the range of common abbreviated dialling numbers on one communication server will be deleted again during the next synchronization.

To delete contacts in the directories, select the contact in the corresponding directory, open the context menu and click *Delete contact*.

To find contacts in the directories, highlight the corresponding directory, open the context menu and click *Find*. The list with the results of the search is shown under the menu item *Search Results*. If you activated the option *Add to result list* in the Find Contacts window, the search result is added to the existing search results.

Access rights

OIP users who are members of the OIP user group *OIP_USERS* have read rights to all public directories and write rights to the private directories.

Changes to the access rights to various directories for certain OIP users can be done creating a new OIP user group. Create a new OIP user group and add it to the OIP service Directory Service. You have to assign access rights in accordance with which access rights are to be granted to the directories, see [Tab. 42, page 62](#). After that you have to assign the newly created OIP user group to the appropriate OIP users.

6. 1. 18 Call Logging Manager



The *Call Logging Manager* Toolbox application is used to display the call data of the communication server connected to the OIP server.

Clicking the *Call Data* menu item displays the call data counters of all the communication servers connected to the OIP server.

Tab. 182 Call data counters of all the communication servers connected to the OIP server

Call data counter	Description
<i>User counter</i>	Lists the counters of all the PBX users connected to the OIP server.
<i>Exchange connection counter</i>	Lists the counters of all the network interfaces of the communication servers connected to the OIP server.
<i>Cost centre counter</i>	Lists the counters of all the cost centres of the communication servers connected to the OIP server.
<i>ICL tickets</i>	Lists the ICL tickets of all the PBX users connected to the OIP server.
<i>OCL tickets</i>	Lists the OCL tickets of all the PBX users connected to the OIP server.

To delete the entries of the call data counters or tickets, go to the corresponding tab and highlight the entries you want to delete, open the context menu and click ... *delete*.

Details about the setting options can be found in the Aastra 400 and Aastra IntelliGate® System Manuals.

PBX

The *PBX* menu item lists the connected communication servers and the users configured on them. To display the call data counters for the individual communication servers, select the corresponding communication server.

In addition to the call data counters listed in [Tab. 182, page 283](#) you can also use *Call data details* to configure the Call Logging Manager for each communication server individually.

Details about the setting options can be found in the Aastra 400 and Aastra IntelliGate® System Manuals.

User

The *User* menu item lists all the users of the communication servers connected to the OIP server. To display a user's call data, select a user.

Tab. 183 User call data

Call data	Description
<i>User counter</i>	Lists the counters for business and private voice connections and the business data connections.
<i>ICL tickets</i>	Lists the user's ICL tickets.
<i>OCL tickets</i>	Lists the user's OCL tickets.

Call data	Description
<i>Call data configuration</i>	The user settings are made here.

Print

The Print function is used to print out the different lists.

6. 1. 19 Agent Manager



The *Agent Manager* Toolbox application allows a Call Center agent to log in and out and to activate the break and wrap-up status.

If several pause and wrap-up time reasons are configured in the OIP Call Centre Manager, they can be selected using the drop-down list. The different pause and wrap-up time reasons can only be activated with the Agent Manager.

When activating a specific pause reason you must first select the pause reason before activating the pause.

To activate a specific wrap-up reason, you must ensure that the wrap-up time set in the OIP Call Centre Manager has not yet expired. First select the wrap-up reason and then end the wrap-up time. Once the wrap-up time has expired, the standard code configured in the OIP Call Centre Manager is used.

If the pause status is activated on the system phone, the standard code configured in the OIP Call Centre Manager is used for the pause. The standard code configured in the OIP Call Centre Manager is used for the wrap-up time even if the wrap-up time is ended on the system phone.

In the *Outgoing Calls* field the agent logged on can select whether the outgoing call should be made with the CLIP settings of the private line or of the assigned Skills. When the agent logs on to the OIP Call Centre the setting configured in the OIP Call Centre Manager is used as the standard setting. When he logs off from the OIP Call Centre the setting is reset.

The Agent Manager also displays the current status of the Skill to which the agent is assigned.

Tab. 184 Skill status

OIP Call Centre Status	Description
<i>Logged on</i>	Number of agents logged on.
<i>Available</i>	Number of agents who are in the <i>Ready</i> state.
<i>Busy</i>	Number of agents who are in the <i>Busy</i> state.
<i>Pause</i>	Number of agents who are in the <i>pause</i> state.
<i>Wrap-up</i>	Number of agents who are in the <i>Wrap up</i> state.

OIP Call Centre Status	Description
<i>Waiting</i>	Number of calls waiting in the ACD queue.

To display the individual status data for each assigned Skill, open the detailed view by double-clicking the double-arrow on the right-hand side.

In the detailed view the agent has the possibility of switching himself actively or deactively into the Skills to which he is assigned. To do so, create a new OIP user group to which the OIP service Agent Service with *super user* access rights are assigned, and add it to the agent. The checkbox is used to activate and deactivate the agent status in the relevant Skill.

The agent status is indicated on the left side of the Agent Manager status line.

Tab. 185 Agent status

Agent status	Description
<i>Ready</i>	The agent is logged on and can answer Call Centre calls.
<i>Busy (private)</i>	The agent is busy with a private call.
<i>Busy (< Skill>)</i>	The agent is busy with an Call Centre call on Skill xxx.
<i>On pause</i>	The agent is in pause status.
<i>In wrap-up time</i>	The agent is in wrap-up status.
<i>Logged out</i>	The agent is logged out.

6. 1. 20 External display



The *External Display* Toolbox application allows a user to have any alarm messages that are displayed on his hardphone displayed on his PC screen, too.

External display configuration

The configuration window is used to configure the priority and sound output with which alarm messages are to be displayed.

6. 2 OfficeSuite

The OfficeSuite has a broad functional scope and covers a wide range of applications. As a personal cockpit it can be used not just as an added-features phone with direct access to external directories and groupware such as Microsoft Outlook. The user also has the possibility of using presence profiles to configure his personal and presence-related call routing and to obtain individual notifications of events he wishes to be kept informed of.

OfficeSuite is currently only available for Aastra 400 and Aastra IntelliGate®.

Contents:

- Installation – [page 286](#)
- OfficeSuite configure – [page 288](#)

6.2.1 Installation

Contents:

- Installation Requirements – [page 286](#)
- Installing an OfficeSuite – [page 286](#)
- OfficeSuite Refresh – [page 287](#)
- OfficeSuite Repairing – [page 287](#)
- Uninstalling OfficeSuite – [page 288](#)

6.2.1.1 Installation Requirements

Microsoft .Net Framework 2.0 must already be installed on the PC before the OfficeSuite can be installed. If required, the installation can be made from the OIP Installations web page.

To install the OfficeSuite, you have to have local administrator rights.

6.2.1.2 Installing an OfficeSuite

Start the installation via the OIP Installations web page.

1. Start the web browser and enter the URL for the OIP server home page, e.g. <http://oip-server.aastra.com<:Port>>.
2. Click *OIP Installations* on the menu bar.
3. Start the installation by clicking *OfficeSuite*. A new web page appears with the OIP server data that needs to be entered during the installation of the OfficeSuite.
4. Take note of the safety warnings before proceeding with *Yes*.
5. Select the Installation language and click *OK*.
6. In the next dialog box click *Next*.

7. Read through the licence agreement carefully before accepting the terms, then click *Next*.
8. Enter the installation directory or accept the default directory (recommended) and click *Next*.
9. Enter the OIP server data and click *Next*.
10. If you also want to install the OIP Update Service, select this option and click *Next*.
11. In the next dialog box start the installation by clicking *Install*.
12. Exit the installation by clicking *Finish*.
13. Close all the web browser windows.

6.2.1.3 OfficeSuite Refresh

To update the version of the OfficeSuite already installed to a more recent version, proceed as follows:

1. Start the web browser and enter the URL for the OIP server home page, e.g. `http://oip-server.aastra.com<:Port>`.
2. Click the *OIP installations* link and start the installation by clicking *OfficeSuite*.
3. Take note of the safety warnings before proceeding with *Execute*.
4. Select the language and click *OK*.
5. In the next dialog box confirm that you want to update the OfficeSuite and click *Yes*.
6. In the next dialog box click *Next*.
7. Exit the installation by clicking *Finish*.

6.2.1.4 OfficeSuite Repairing

To repair the version of the OfficeSuite already installed, proceed as follows:

1. Start the web browser and enter the URL for the OIP server home page, e.g. `http://oip-server.aastra.com<:Port>`.
2. Click the *OIP installations* link and start the installation by clicking *OfficeSuite*.
3. Take note of the safety warnings before proceeding with *Execute*.
4. Select the language and click *OK*.

5. In the next dialog box start the repair process by clicking *Next*.
6. The maintenance dialog box appears. Select the *Repair* and click *Next*.
7. In the next window click *Install*.
8. Exit the installation by clicking *Finish*.

6.2.1.5 Uninstalling OfficeSuite

The OfficeSuite is uninstalled using *Control Panel \Software* in the Windows operating system.

6.2.2 OfficeSuite configure

Once you have started the OfficeSuite you can carry out the configuration using the OfficeSuite icon in the info area of the taskbar. Open the context menu and click *Setup....*

Local Outlook connection

To synchronize the OfficeSuite with the Outlook, please observe the following instructions:

Without OIP name server OfficeSuite is capable of synchronizing a maximum of 350 private contacts. To synchronise a greater number of private contacts, you need to activate the OIP name server by purchasing a *Phonebook Connector* or a *Microsoft Exchange Connector* licence.

6.3 Office 1560/1560IP

The Office 1560/1560IP softphone is a PC-based operator workstation. It can be operated together with a corded system phone (Office 1560) or as a stand-alone IP softphone (Office 1560IP).

In an Aastra 400 and Aastra IntelliGate® network the Office 1560/1560IP can be used as a network-wide operator workstation. The only requirement is that all the communication servers of the Aastra 400 and Aastra IntelliGate® network are connected to an OIP server.

It is possible to configure operator groups in addition to the global call to all connected operator consoles, see "[Setting up operator groups](#)", page 293. This enables the users to log themselves on and off at the operator workstations.

Office 1560/1560IP is only available for Aastra 400 and Aastra IntelliGate® systems.

Contents:

- Installation – [page 290](#)
- Setting up the Office 1560/1560IP – [page 292](#)
- Setting up operator groups – [page 293](#)
- Setting up multiple users – [page 295](#)

6.3.1 Installation

Contents:

- Installation Requirements – [page 290](#)
- Configuring the communication server – [page 290](#)
- Installing an Office 1560/1560IP – [page 291](#)
- Office 1560/1560IP upgrading – [page 291](#)
- Uninstalling Office 1560/1560IP – [page 292](#)

6.3.1.1 Installation Requirements

To install the Office 1560/1560IP, you have to have local administrator rights.

Before you begin with the installation of the Office 1560/1560IP, carry out the following steps and make sure you have the following information:

The PCs on which the Office 1560IP is to be operated must be equipped with one or more media devices (e.g. a headset).

For each Office 1560/1560IP a separate licence *Office 1560/1560IP* has to be obtained.

6.3.1.2 Configuring the communication server

Depending on the application type the following settings have to be made on the communication server to operate Office 1560/1560IP.

Office 1560

1. In AMS (CM_4.1) or AIMS (CM_3_2_2) assign the application *Office 1560* to the terminals you want.
2. In the communication server, configure the properties of the related users as indicated in your communication server's System Manual.

Office 1560IP

1. Set up the VoIP channels as indicated in your Aastra Intelligent Net System Manual.
2. Assign an *IP softphone* IP terminal type to the desired users and select *Office 1560IP* as application.

3. Configure the properties of the users as indicated in the Aastra 400 and Aastra IntelliGate® System Manuals *System Functions and Features*.
4. For each Office 1560IP define an unobtainability destination in AMS (CM_4.1_ *Unobtainable*) or AIMS (CM_3_2_1). Calls will then be routed to that destination whenever the Office 1560IP is not in operation.

6.3.1.3 Installing an Office 1560/1560IP

Start the installation via the OIP Installations web page.

1. Start the web browser and enter the URL for the OIP server home page, e.g. `http://oip-server.aastra.com<:Port>`.
2. Click *OIP Installations* on the menu bar.
3. Start the installation by clicking *Office 1560/1560IP*. A new web page appears with the OIP server data that needs to be entered during the installation of the Office 1560/1560IP.
4. Take note of the safety warnings before proceeding with *Yes*.
5. Select the language and click *Next*.
6. In the next dialog box click *Next*.
7. Read through the licence agreement carefully before accepting the terms, then click *Next*.
8. Enter the installation directory or accept the default directory (recommended) and click *Next*.
9. Enter the OIP server data and click *Next*.
10. If you also want to install the OIP Update Service, select this option and click *Next*.
11. In the next dialog box start the installation by clicking *Install*.
12. Exit the installation by clicking *Finish*.
13. Close all the web browser windows.

6.3.1.4 Office 1560/1560IPupgrading

When you start the Office 1560/1560IP a check is carried out to see whether the OIP server has a more recent version of the Office 1560/1560IP. After the logon a message appears to indicate that a new version of the Office 1560/1560IP is availa-

ble. You can start the installation either immediately, see "Installing an Office 1560/1560IP", page 291, or later on.

6.3.1.5 Uninstalling Office 1560/1560IP

The Office 1560/1560IP is uninstalled using *Control Panel \ Software* in the Windows operating system.

6.3.2 Setting up the Office 1560/1560IP

The following describes how to set up Office 1560/1560IP for operation.

1. Check the user settings in the communication server using AMS (CM_4.1/2) or AIMS (CM_3_2_1/2) and make the necessary adjustments.
2. Start the Office 1560/1560IP and select *Settings*.
3. Specify the installed output devices and select the audio files used for signalling calls or system messages.
4. The Office 1560/1560IP is now ready for operation. The online user's guide (in the Help menu) contain all the information you need to operate the Office 1560/1560IP correctly.



Notes:

Please note the following restrictions:

- The system phone of the Office 1560 coupled as media device must be part of a One Number user configuration.
- Make sure no lines (key telephones) are configured on the media device of an Office 1560.
- Joint use of the Office 1560/1560IP alongside the OfficeSuite and the Aastra 2380ip is not permitted.

6.3.3 Setting up a handset as an operator console

The user wants to be able to operate the PC operator console via his cordless phone too.

You can integrate DECT system phones into the PC operator console of an Office 1560 in such a way that the queue with the transfer calls is offered.

Conditions:

- Office 1560 PC operator console (Office 1560IP is not supported)
- Desk phone as media device (digital system phone or IP system phone)
- DECT system phone in Twin Comfort mode with the desk phone
- *ATASpro Interface* licence
- The display server must be installed
- The user must be a member of the OIP *OPERATORS* user group.

To set up the DECT system phone as a PC operator console, proceed as follows:

1. Open the Toolbox with the user name and PIN/password of the user on the PC operator console.
2. Open the *Call Manager* Toolbox application and open the configuration by clicking the configuration icon on the toolbar at the bottom.
3. Open the *Operator Twin Comfort* tab and check the *Activated* checkbox.
4. Set the *Ringing time*, *Repeat time* and the audio properties for the ringing signal. Calls in the queue are not signalled individually. The ring settings refer to the queue as a whole. If for example you set a 10 second ringing time and a repeat time of 60 seconds, the user is signalled every minute that there are still calls in the queue.
5. Save the setting.
The DECT system phone is now configured as an operator console.

6.3.4 Setting up operator groups

Contents:

- Setting up the communication server – [page 294](#)
- Setting up the OIP server – [page 294](#)
- Setting up the Office 1560/1560IP – [page 295](#)
- Setting up a redundant operator group in the communication server – [page 295](#)

New operator groups are created by the Administrator in the OIP server using the Toolbox application OIP Call Centre Manager, see "[Call Centre Manager](#)", [page 234](#).

6.3.4.1 Setting up the communication server

To set up the operator group on the communication server proceed as follows:

1. In the communication server use AMS (CM_3.1.4) or AIMS (CM_2_1_2) to create a call distribution element with the direct dialling number and the internal call number under which the new operator group is to be reached.
2. Select *ACD* as the CDE destination for all switch positions.

6.3.4.2 Setting up the OIP server

To set up the operator group on the OIP server proceed as follows:

1. Start the Toolbox application *User Profiles* and assign the operators the CTI licence Standard.
2. Start the OIP Call Centre Manager to open a new operator group (Skill) and to configure the users as operators (agents).
3. Select the Skills menu item, open the context menu, click *Add Skill* and enter the name of the new operator group.
4. Select the newly added operator group in the menu and carry out the settings for
 - the operator group,
 - the routing elements, and
 - the outgoing calls.See "*Call Centre Manager*", page 234, Section *Skills*.
5. Select the Agents menu item, open the context menu and click *Add Agent*. From the list select the users to be assigned to the operator group, and click *OK*. Select the corresponding operator group and click *OK*.
If PC operator console do not appear on the list, they still need to be assigned the CTI licence Standard in the user profiles.
6. In the Agent settings you need to assign the operator the number of the operator console as the alternative number.

6.3.4.3 Setting up the Office 1560/1560IP

To set up the Office 1560/1560IP to be used with operator groups, proceed as follows:

1. Click the *Operator Groups* icon and configure the operator calls (own or all) that are to be signalled.
2. Open the menu *Settings/Configure Signalling ...* and configure the colours to be used to display the operator calls.

The online Help contains all the information you need to operate the Office 1560/1560IP correctly.

6.3.4.4 Setting up a redundant operator group in the communication server

To ensure that operator calls can still be distributed in the operator group even if the OIP server fails, the operator group also has to be mapped in the communication server. The OIP server automatically sets up one user group per operator group in the communication server and adds the operators as members. When an operator logs in or out, he is also logged into or out of the user group.

The following instructions allow you to set up the operator group in such a way that if the OIP server fails the operator calls are routed to the user groups that are automatically created.

1. Start the *Call Center Manager* Toolbox application, highlight the operator group and open the *Routing elements* tab.
2. From the drop-down menu select under *Use Emergency Routing* a user group (UG) to be used for the emergency routing of incoming operator calls.

6.3.5 Setting up multiple users

It is possible to configure several users on one operator workstation with their own internal call number and their own user profile (e.g. busy indicator or private phone book).

This functionality is provided via PUM (Personal User Mobility). To set up the multiple users proceed as follows:

1. Configure the operator workstation (PUM workstation) as indicated in the "*PUM (Personal User Mobility)*"; page 309.

2. Assign the operator workstation the application *Office 1560* on the *Lines* tab.
3. Configure the operators (PUM users) as indicated in the "*PUM (Personal User Mobility)*", page 309.
4. In addition assign the operators the *OPERATORS* user group in the *General* tab.

6.4 Office eDial

Office eDial is a CTI application that can be connected either via the OIP or the AIF TAPI service provider. It is also possible to integrate the Microsoft Outlook personal phone book. This enables Office eDial to look up the caller's phone number among the contacts of the personal Microsoft Outlook address book and, if it matches, to take and display the contact data.

Contents:

- Installation – [page 297](#)
- Configuration – [page 298](#)

6.4.1 Installation

Contents:

- Installing an Office eDial – [page 297](#)
- Office eDial Repairing/Upgrading – [page 298](#)
- Uninstalling Office eDial – [page 298](#)

6.4.1.1 Installation Requirements

To install the Office eDial, you have to have local administrator rights.

The OIP TAPI Service Provider must be installed on the workstation before you start the installation of the Office eDial.

6.4.1.2 Installing an Office eDial

Start the installation via the OIP Installations web page.

1. Start the web browser and enter the URL for the OIP server home page, e.g. <http://oip-server.aastra.com<:Port>>.
2. Click *OIP Installations* on the menu bar.
3. Start the installation by clicking *Office eDial*.
4. Take note of the safety warnings before proceeding with *Execute*.
5. In the next dialog box click *Next*.

6. Read through the licence agreement carefully before accepting the terms, then click *Next*.
7. Enter the installation directory or accept the default directory (recommended) and click *Next*.
8. In the next dialog box start the installation by clicking *Install*.
9. Exit the installation by clicking *Finish*.
10. Close all the web browser windows.

6.4.1.3 Office eDial Repairing/Upgrading

In the case of a re-installation of the same version or in the case of upgrading the Office eDial, perform the following steps:

1. Start the web browser and enter the URL for the OIP server home page, e.g. `http://oip-server.aastra.com<:Port>`.
2. Click the *OIP installations* link and start the installation by clicking *Office eDial*.
3. Take note of the safety warnings before proceeding with *Yes*.
4. The maintenance dialog box appears. Select the *Repair* or *Upgrade* option and click *Continue*.
5. In the next window click *Install*.
6. Exit the installation by clicking *Finish*.

6.4.1.4 Uninstalling Office eDial

The Office eDial is uninstalled using *Control Panel \ Software* in the Windows operating system.

6.4.2 Configuration

You need to carry out the configuration the first time you start Office eDial. Thereafter you can open the configuration at any time by right-clicking the Office eDial icon in the info area of the taskbar and the menu item *Settings*

The settings for the TAPI line and the location are made under the *Telephony* menu item. From the dropdown list select the line read out by the TAPI service provider which you want to use. You can configure Office eDial so that it opens during incoming and outgoing calls.

The location settings are taken from Windows. The *Use PBX* option allows Office eDial to know on the one hand up to which call number length intern it should dial. On the other Office eDial should dial internally for instance numbers from the personal Microsoft Outlook address book that are normally stored as external dialling call numbers. Enter first the maximum length of the internal call numbers and the master number of the PSTN connection.

You can use the *Operation* menu item to make your personal settings for Office eDial.

The *Microsoft Outlook* menu item allows you to configure the integration of Microsoft Outlook. You can configure whether, with incoming or outgoing calls, the contact found in the personal Outlook address book should be displayed. The contact found can also be opened automatically.

You can also configure the contact folders in which you want Office eDial to search for entries.

You can use the *Key combinations* menu item to configure the function keys, e.g. <ctrl>-F8, for dialling, answering and disconnecting a call.

Under the *Logging* menu item you can activate the debug mode for Office eDial.

6.5 OIP TAPI service provider

Contents:

- Connection to the OIP Server – [page 299](#)
- Installation – [page 299](#)
- Configuration – [page 301](#)

6.5.1 Connection to the OIP Server

The OIP TAPI service provider is connected to the OIP server via Ethernet. The OIP TAPI service provider can be installed on both application servers and on workstation PCs, see "[Application Examples](#)", [page 306](#).

6.5.2 Installation

Contents:

- Installing the OIP TAPI Service provider – [page 300](#)
- OIP TAPI Service Provider – [page 301](#)

- Uninstalling the OIP TAPI service provider – [page 301](#)

Installation Requirements

To install the OIP TAPI Service provider, you have to have local administrator rights.

Installing the OIP TAPI Service provider

Several OIP TAPI service providers must not be installed in an Aastra 400 and Aastra IntelliGate® network as the OIP server handles the administration of the network communication servers and, depending on the configuration of the access rights on the OIP server (see also "[User Profiles](#)", [page 224](#)) provides all the lines to OIP TAPI service provider.

The OIP TAPI service provider is started with the Windows *Telephony* system service. The AgentProxySvc Windows system service for the agent functionality is also installed along with the installation of the OIP TAPI service provider.

Start the installation via the OIP Installations web page.

1. Start the web browser and enter the URL for the OIP server home page, e.g. <http://oip-server.aastra.com<:Port>>.
2. Click *OIP Installations* on the menu bar.
3. Start the installation by clicking *OIP TAPI service provider*.
4. Take note of the safety warnings before proceeding with *Yes*.
5. Select the language and click *Next*.
6. In the next dialog box click *Next*.
7. Read through the licence agreement carefully before accepting the terms, then click *Next*.
8. Enter the OIP server data and click *Next*.
9. If you also want to install the OIP Update Service, select this option and click *Next*.
10. In the next dialog box start the installation by clicking *Install*.
11. Carry out the configuration of the OIP TAPI service provider (see next section "[Configuration](#)", [page 301](#)) and confirm with *OK*.
12. Exit the installation by clicking *Finish*.
13. Close all the web browser windows.

OIP TAPI Service Provider

To update the version of the OIP TAPI Service Provider already installed to a more recent version, proceed as follows:

1. Start the web browser and enter the URL for the OIP server home page, e.g. `http://oip-server.aastra.com<:Port>`.
2. Click the *OIP installations* link and start the installation by clicking *OIP TAPI service provider*.
3. Take note of the safety warnings before proceeding with *Execute*.
4. Select the language and click *Next*.
5. The maintenance dialog box appears. Select the *Repair* or *Upgrade* option and click *Continue*.
6. Carry out the configuration of the OIP TAPI service provider and confirm with *OK*.
7. Exit the installation by clicking *Finish*.

Uninstalling the OIP TAPI service provider

The OIP TAPI service provider is uninstalled using *Control Panel \Software* in the Windows operating system.

6.5.3 Configuration

Contents:

- Customized Settings – [page 302](#)
- General Settings – [page 303](#)

The OIP TAPI service provider is configured to connect to an OIP server.

1. Enter the OIP server address if it is not already automatically entered during installation. Make sure you specify the DNS name or the IP address of the OIP server as the OIP server address.
2. Click *Connect with Server* to establish the connection to the OIP server.

Only after the connection to the OIP server is established can the user-specific and general settings be performed.

Logging on to the OIP server is done via the Windows user name, via a user name configured in the OIP server, or using the internal phone number with the terminal PIN, see "[Logging in to the OIP server](#)", [page 38](#).

Logging on with the Windows user name is dynamic. This means that for different Windows user names one's own TSP user profile can be saved. Depending on which Windows user name the PC is logged on, the corresponding TSP user profile is loaded.

Logging on via a user name configured in the OIP server or using the internal phone number with the terminal PIN is a fixed setting. This means that the configured TSP user profile is always loaded independently of the Windows user name.

6.5.3.1 Customized Settings

Available Lines

Personal settings are made on the *General* tab.

1. Select the type of logon and enter the corresponding user data.
2. Click *Read out lines* to display the available lines.
3. If required, carry out any user-defined settings.
4. Save the configuration for the specified user in the TSP user profile by clicking *Save*.

If you want to save additional TSP user profiles for Windows users, repeat the steps above. This is necessary if you as the Administrator want, for example, the OIP TAPI Service provider to be available to Windows users who do not have local administrator rights.

The lines configured in the for the specified users are displayed in the logon data. Listed next to the name and number of the lines are the terminal type and the access right to the line. The access rights can be changed in the Toolbox Application *User Profiles*, see "*User Profiles*", page 224.

Tab. 186 Terminal types

Terminal type	Description
<i>Office xx / Open Phone xx / Aastra 5x</i>	The line is assigned to a system phone
<System phone>+	Set as agent
<i>ISDN</i>	The line is assigned an ISDN terminal
<i>Analogue</i>	The line is assigned an analogue terminal
<i>Voice Mail</i>	The line is assigned an internal voice mail line
<i>DECT GAP</i>	The line is assigned a GAP-compatible DECT terminal

Tab. 187 Access rights to telephony lines

Access right	Description
<i>Controlling</i>	Full access rights to the line (controlling and monitoring)
<i>Monitoring</i>	Monitoring rights to the line only

Properties

At least one line has to be selected before you can modify the line settings. The *Select All* can be used to select all the lines.

It is possible to configure the call number format to be displayed for incoming calls (CLIP) and connected calls (COLP).

The supported call number formats are listed in [Tab. 188, page 303](#).

Tab. 188 Call number formats

Setting	Description	Example
<i>Keep exchange access prefix</i>	Exchange access prefix-phone number	0-004132655xxxx
<i>Remove exchange access prefix</i>	Call number	004132655xxxx
<i>Replace exchange access prefix</i>	Exchange access prefix-phone number	9-004132655xxxx
<i>Use canonical format</i>	+Country code (area code) phone number	+41 (32) 655xxxx

There are two interaction options for calls to busy internal users. You can send a call waiting tone to a busy subscriber or you can intrude on a busy user. For both functions the user rights settings have to be configured in the communication server in each case. Microsoft TAPI does not support parallel use of these two functions. So to call a busy internal user you can configure whether the call waiting function or the intrusion function is used.

If the user is an ACD agent of an external TAPI ACD application, you can use the option *Control of agent status changes on the terminal* to hand over the agent monitoring to the application, i.e. each status change carried out on the system phone has to be confirmed by the external application.

6.5.3.2 General Settings

The global settings apply to all saved TSP profiles.

Advanced Settings

The OIP TAPI service provider supports the use of key telephones. Whether and how the functionality is implemented depends on the CTI application. When the system phone is used, calls on the private line are disconnected when calls on the key telephone line are answered. You can configure that calls on the private line are automatically parked when a call is answered via the CTI application. As before, active calls on the key telephone line can be displayed as Connected (*LINECALLSTATE_CONNECTED*) or Idle (*LINECALLSTATE_IDLE*). Ask your application manufacturer which setting is correct for your CTI application.

The OIP TAPI service provider supports the use of Operator Consoles. Whether and how the functionality is implemented depends on the CTI application. When the system phone is used, active calls on the private line are disconnected when calls on the operator line are answered. You can configure that calls on the private line are automatically parked when a call is answered via the CTI application.

Parked calls can be signalled to the CTI application as idle or parked. This setting is dependent on the used CTI application. Ask your application manufacturer which setting is correct for your CTI application.

The signalling on the ACD queue can be set whenever the ACD functionalities of the OIP TAPI service provider are used. Ask your application manufacturer which setting is correct for your CTI application.

Debug Settings

The settings for the log files can be made here for maintenance purposes. In normal operation the debug mode should be deactivated as otherwise it affects the system's performance.

For debug output the options *Standard Debug Output* and *Log File* must be activated. In the Log Directory field specify the path to the log files (default setting c:\debug\). Warning: The entry itself does not automatically create the folder. The folder itself has to be created separately, for example using the Windows Explorer. You can also specify the maximum log file size and the number of days after which the log files are to be deleted automatically.

Two log files are created when the debug mode is activated:

- intf<mmddhhmm>.log
- tspa<mmddhhmm>.log

<mmddhhmm> stands for the month, day, hour and minute on which the log file was created.

Debug Level is used to specify the information to be logged. Normally all the options should be activated.

7 Application Examples

OIP can be used in many different ways. The examples below illustrate just a few possible applications.

Other application examples can be found on the OIP server homepage under [OIP Documentation/OIP I/O Application Examples](#).

Contents:

- Use OIP Server as Telephony Server – [page 306](#)
- OIP Call Centre – [page 307](#)
- External TAPI Client-Server applications – [page 307](#)
- Citrix and terminal server environment – [page 309](#)
- PUM (Personal User Mobility) – [page 309](#)
- Setting up a PUM workstation – [page 310](#)
- Standard and AVS voice mail – [page 312](#)
- Time Synchronization in PBX Network – [page 313](#)
- DECT locating – [page 314](#)
- RSS News on system phones – [page 316](#)

7.1 Use OIP Server as Telephony Server

To use the OIP server as a telephony server you do not need to specify any other settings on the OIP server as all the users are assigned their own telephony line with *Controlling* rights in the OIP standard settings. Whenever the Twin Comfort mode (Aastra 400 and Aastra IntelliGate®), or parallel connection (OpenCom 1000) is activated, the DECT line is also assigned *Control* rights.

In each case the OIP users must be assigned the corresponding CTI licence in the user profiles.

The OIP TAPI service provider has to be installed on the Client PC. Carry out the installation as indicated in "[OIP TAPI service provider](#)", [page 299](#). As login information enter the Windows user name if it is configured on the OIP server in the user profiles. If not, log in using the internal call number and the PIN.

Access to other telephony lines has to be carried out in the user profile of the corresponding user, see "[User Profiles](#)", [page 224](#).

7.2 OIP Call Centre

To set up the OIP call centre to an Aastra 400 and Aastra IntelliGate® you need to carry out the following procedural steps:

1. In the PBX use AMS (CM_3.1.4) or AIMS (CM_2_1_2) to create a call distribution element with the direct dialling number and the internal call number under which the ACD Skill is to be reached.
2. Select *ACD* as the CDE destination for all switch positions.
3. Start the Toolbox application *User Profiles* and assign the agents the CTI licence Professional.
4. Start the OIP Toolbox application *Call Centre Manager* to open a new Skill and to configure the agents.
5. Select the Skills menu item, open the context menu, click *Add Skill* and enter the name of the new Skill.
6. Select the newly added Skill in the menu and carry out the settings for
 - the Skill and
 - for the routing elements.See "*Call Centre Manager*", page 234, Section *Skills*.
7. Select the Agents menu item, open the context menu and click *Add Agent*. From the list select the users to be assigned to the Skill, and click *OK*. Select the corresponding Skill and click *OK*.
If agents do not appear on the list, they still need to be assigned the CTI licence Professional in the user profiles.

Once the configuration is completed, all the agents will obtain the Agent Manager in the OIP Toolbox the next time they log in to the OIP server, see "*Agent Manager*", page 284.

7.3 External TAPI Client-Server applications

For external TAPI Client-Server applications the application server has to be provided with the necessary lines by the OIP server.

To set up the Aastra 400 and Aastra IntelliGate® you need to carry out the following procedural steps:

1. Enter in AMS (CM_1.2) or AIMS (CM_1_2_2) the corresponding CTI licence.

2. On the *Lines* tab add all the necessary lines to the TAPI Administrator (tapiadmin) in the user profile and assign the access right *Controlling* on all the lines.
3. Assign the corresponding CTI Licence to the lines you have added to the TAPI Administrator. A CTI Licence does not have to be assigned to the TAPI Administrator.

Next you need to install the OIP TAPI service provider on the application server. Carry out the installation as indicated in "[OIP TAPI service provider](#)", page 299. To log on to the OIP server enter the user data of the TAPI administrator.

If the external TAPI Client-Server application supports ACD functionalities, you need to make the following settings:

1. In the PBX use AMS (CM_3.1.4) or AIMS (CM_2_1_2) to create a call distribution element with the direct dialling number and the internal call number under which the ACD Skill is to be reached.
2. Select *ACD* as the CDE destination for all switch positions.
3. Start the Toolbox application *User Profiles* and highlight the user profile of the TAPI administrator.
4. Add the user group *ACD_ADMINISTRATORS* to the TAPI administrator and save the settings.
5. Assign the CTI licence Professional to the lines that are to be configured as agents.
6. Start the Toolbox application OIP Call Centre Manager to open a new Skill and to configure the agents.
7. Select the Skills menu item, open the context menu, click *Add Skill* and enter the name of the new Skill.
8. Select the newly added Skill in the menu and carry out the settings for
 - the Skill (controlled by external application) and
 - for the routing elements.See "[Call Centre Manager](#)", page 234, Section *Skills*.
9. Select the Agents menu item, open the context menu and click *Add Agent*. From the users list select the agents to be configured, and click *OK*. The agents do not have to be assigned to the Skills as this is controlled via the ACD application. Click *OK*.

If agents do not appear on the list, they still need to be assigned the CTI licence Professional in the user profiles.

If the external ACD application is to take charge of agent status changes such as login and logout, the option *Control of agent status changes on the terminal* has to be activated in the line settings in the OIP TAPI service provider.

7.4 Citrix and terminal server environment

The OIP server can be integrated into a Citrix or terminal server environment. If so, the OIP server should not be installed on the terminal server for performance reasons.

OIP-Toolbox

Each terminal server user can start the Toolbox from the OIP home page with his settings, which are stored on the OIP server.

A maximum of 100 OIP Toolbox entities may be started simultaneously.

To be able to start the Toolbox, you need to carry out a number of other settings to operate Java applications, depending on the configuration of the terminal server environment (e.g. user profiles). You should therefore contact the responsible network administrator on site.

Office Softphone

Office Softphones Office 1560/1560IP and Office 1600/1600IP cannot be used in a terminal server environment.

OIP TAPI service provider

To make telephone lines available via TAPI to terminal server users and applications, the OIP TAPI service provider has to be installed on the terminal server. To do so, carry out the steps described in the "[External TAPI Client-Server applications](#)", page 307.

For safety reasons you should also activate the Microsoft telephony server on the terminal server so that terminal server users do not have access to the lines provided by the OIP TAPI service provider. For the configuration of the Microsoft telephony server please refer to the documentation of the corresponding Windows server operating system.

7.5 PUM (Personal User Mobility)

Contents:

- Configuring the PBX – [page 310](#)
- Setting up a PUM workstation – [page 310](#)
- Setting up a PUM user – [page 311](#)
- Logging on to the PUM workstation – [page 311](#)

PUM (Personal User Mobility) separates the workstation from the user, which means that several PUM users can log on to one PUM workstation or that PUM users can log on to different PUM workstations.

The PUM workstation comprises a system phone and, as an option, a workstation PC.

Each PUM user has his own user profile with his own internal call number. The user profile is automatically set when the subscriber logs on to the PUM workstation.

7.5.1 Configuring the PBX

Since each system phone on the PBX has to be assigned an internal call number, you should assign the PUM workstations a free unused call number range on the PBX.

1. In AMS (CM_3.1.1) or AIMS (CM_1_2_8) assign a number from the call number range to the internal users you want to set up as PUM workstations.
2. Configure a function key AMS (CM_4.2) or AIMS (CM_3_2_2) of the type *ACD for logging on and off as a PUM user. Log on/off*.

7.6 Setting up a PUM workstation

To set up a PUM workstation, proceed as follows.

1. Start the OIP Toolbox application *User Profiles* and highlight the PUM workstation under *User Profiles*.
2. From the *PUM* tab select the option *PUM workstation*. If the PUM workstation consists of a system phone and a workstation PC, enter under *IP address* the DNS name or, if there is no DNS server, the IP address of the workstation PC. Otherwise leave the field blank.
Make sure the IP address of the workstation PC is assigned to a single PUM workstation (1-to-1 relation).

It is important that the PUM workstation was not previously set up as an agent in the OIP Call Centre Manager. A CTI Licence does not have to be assigned to the PUM workstation.

7.6.1 Setting up a PUM user

To set up a PUM user, proceed as follows.

1. Start the Toolbox application *User profiles*, highlight the *User profiles* menu item, open the context menu and click *Create new user profile*.
2. On the right-hand side enter the settings for the new PUM user, see "*User Profiles*", page 224, Section *User Profiles*.
3. From the *PUM* tab select the option *PUM users* and give the PUM user an internal call number under which he is to be reached.
4. Complete the other settings for the PUM user, see "*User Profiles*", page 224, Section *PUM*.

7.6.2 Logging on to the PUM workstation

The subscriber can use the configured function key on the system phone or the OIP application to log on and off from the PUM workstation.

Logging on the system phone

To log on as a PUM user the user uses the configured internal call number and the function key *ACD: Log on/off*. The log-on procedure is signalled on the display with *PUM Login ...* and the function key's LED is activated. If the function *Check PIN when logging in via the terminal* is activated in the user profile of the PUM user, the PIN also has to be entered during login (<call number>*<PIN>).

Logging on via the OIP application

To log on as a PUM user you must enter the configured internal call number and password. The log-on procedure is signalled on the display with *PUM Login ...* and the LED of the function key *ACD: On/off*, is activated, if configured. To log in via the OIP application the IP address of the workstation PC must be configured in the profile of the PUM workstation.

7.7 Standard and AVS voice mail

Besides standard voice mail the older AVS voice mail (Aastra IntelliGate® only) can also be connected to OIP. The voice mailboxes assigned to system phones are also supported.

To set up the connection of the Standard and AVS Voice Mail carry out the following steps in sequence:

1. In the PBX use AMS (CM_3.1.1) or AIMS (CM_1_2_8) to open the internal voice mail number.
2. In the PBX use AMS (CM_5.1.1) or AIMS (CM_1_6_2) to open a new mailbox for the user.
3. If the *AVS* voice mail service was selected, open a mailbox for the user with the voice mail manager.
4. Use AMS (5.1.1) or AIMS (CM_3_2_1_Voice mailbox) to configure the user-specific voice mail properties in the PBX.
5. Open the *User settings* toolbox and log on with the user and its PIN.
6. In the *Voice mail* tab configure the user-specific voice mail properties in the OIP.

Different actions can be carried out with new voice mails depending on the voice mail connection, see [Tab. 189, page 312](#) .

Tab. 189 Actions for new voice mails

Action	Description	Standard	AVM
<i>No action</i>		X	X
<i>Save voice mail on the OIP server</i>	The new voice mails are downloaded from the PBX and stored in the directory ...\\webapps\asp\voicemails on the OIP server.	X	
<i>Send voice mail link by email</i>	The new voice mails are downloaded from the PBX and stored in the directory ...\\webapps\asp\voicemails on the OIP server. At the same time the link to the voice mail is sent as an e-mail. The voice mail is played back whenever the link is clicked.	X	
<i>Send voice mail by email as an attachment</i>	The new voice mails are sent by e-mail as attachments.	X	
<i>Send e-mail</i>	An e-mail is sent to indicate that there is a new voice mail.	X	X

Each user can make his individual settings using the Toolbox application User Preferences.

Depending on the e-mail connection the following settings are required for carrying out e-mail actions.

E-mail connection via an SMTP mail server

1. Start the Toolbox application OIP Settings and highlight the SMTP Driver under the OIP services. If the OIP service SMTP Driver does not appear on the list, you need to restart the installation of the OIP server and select the option *Connection of a SMTP mail server* from the custom installation, see "Updating the OIP server", page 35.
2. In the specific properties enter the address of your SMTP mail server and any authentication data required.
3. A valid e-mail address has to be already configured for the user in the Toolbox application User Preferences.

E-mail connection via a Microsoft Exchange Server

1. During the installation of the OIP server the option *Connection of a Microsoft Exchange Server* has to have been selected and the installation of the OIP Exchange driver completed, see "Microsoft Exchange Server directories", page 105.
2. Start the Toolbox application *User Profiles* and enter the mailbox alias for each user.

The email sender address for the voice mails can be configured in the OIP configuration in the OIP service Message Manager.

The formats *.wav and *.mp3 are available as voice mail file types. The settings can be made in the Voice Mail Manager OIP service.

7.8 Time Synchronization in PBX Network

Time synchronization in PBX networks is possible only if all PBXs are connected with the public exchange. In PBX networks in which for example only one communication server (Gateway PBX) is connected with the public exchange, the time synchronization is carried out on the Gateway PBX only. The time is not synchronized on the other PBXs.

For network-wide call logging in particular all the PBXs must have the same time.

The OIP server supports the following time synchronization possibilities.

Gateway PBX as time master

The Gateway PBX synchronizes the time on the other PBXs connected to the OIP server. As an option the system time of the OIP server can also be synchronized after the Gateway PBX if there is no connection to a time server.

1. Start the Toolbox application PBX Setup Manager and highlight the menu item *Date/Time Settings* under the Gateway PBX.
2. On the right-hand side activate the option *PBX time master*.
3. Start the Toolbox application OIP Settings and highlight the Time Service under the OIP services.
4. In the specific properties activate *Time synchronization* and edit the *Synchronization interval* if required.
5. To synchronize the system time of the OIP server with the Gateway PBX also, activate *Time synchronization from the OIP server* too.

OIP server is the time master

It is possible to deactivate the time synchronization with the exchange and to control it from the OIP server, providing it has a connection with a time server. In this case it is important to make sure that no communication server is configured as time master.

1. Start the Toolbox application OIP Settings and highlight the Time Service under the OIP services.
2. In the specific properties activate *Time synchronization* and edit the *Synchronization interval* if required.

7.9 DECT locating

DECT locating is used to locate handsets on the DECT system of a PBX connected to OIP. The signal strength of the various radio units can be called up on the device. It is important to note that there has to be at least three radio units. An external application uses the data to calculate the position and to display it. This position is for information purposes only and is not guaranteed to ensure personal safety.

The I/O Manager can be used to implement the example of DECT locating inside a building using visual means.

To do so, proceed as follows:

1. The building's situation plan has to be available as an image file in gif format. The size of the image file should be adapted to the screen size and its resolution. Make sure the file name does not contain any spaces and is identical with the action name in the I/O Manager.
2. Copy the situation plan to the OIP server installation directory ...`\aas-tra\OIP\webapps\exp\images\io`.
3. Start the Toolbox application *I/O Manager*, add an action of the type *IOSystem* and name the I/O application *DECT Locating*.
4. Under the I/O application add an action of the type *Area* and name it *Situation Plan* for example. The action name must be identical to the file name of the situation plan.
5. Add the DECT radio units that are to be integrated in the DECT locating as follows: highlight your newly created action in the navigation tree, open the context window and select *Advanced\Add DECT radio unit*. It is not necessary to perform settings at this point.
6. Under the I/O application add another action of the type *IOSystem* and name it *DECT terminal* for example.
7. Highlight the action, open the context menu and use *Special\Add DEC terminal* to add the DEC terminal be included in the DEC locating.
8. Add the DEC terminals that are to be integrated in the DEC locating as follows: highlight the newly created action in the navigation tree, open the context window and select *Advanced\Add DEC terminal*.
9. Define the monitoring signal interval of the added DEC terminals (setting *Request interval*). The shorter the monitoring interval is set, the greater the load on the DECT system.
To deactivate the DECT locating: while the DECT terminal is in the charging bay, set the *Handle charging bay* setting to *Yes* (default value).
10. Highlight the action *Situation Plan* and right-click the *View* tab. The situation plan should now be displayed. Use the mouse to drag the DECT radio units one by one into the situation plan and position them according to your location.
11. Next drag the DECT terminals one by one to your location in the situation plan. As soon as the system recognises the location of the DECT terminals, the DECT terminals are positioned accordingly. Alternatively you can also position the DECT terminals on the edge of the screen so that the situation plan only displays those DECT terminals that are not in the charging bay.

7.10 RSS News on system phones

RSS News (Really Simple Syndication) is used to retrieve information (news, weather, etc.) from web sites and display it on system phones.

1. Start the OIP Toolbox application *I/O Manager*, add an action of the type *IOSystem* and name the I/O application *RSS News* for example.
2. Under the I/O application add an action of the type *RSSNews* and give it the name of an RSS provider for example.
3. On the *Parameter* tab configure the following parameters:
 - Refresh time
 - RSS location
 - Subscribers
 - Display time
 - Ring time

At the time interval configured under *Refresh time* OIP reads the provider's RSS file and displays the newly added messages.

8 Maintenance and Troubleshooting

Information and procedures for maintenance and troubleshooting.

Contents:

- Maintenance of the OIP Server – [page 317](#)
- Locating a malfunction – [page 320](#)
- Backup Log files – [page 323](#)

8.1 Maintenance of the OIP Server

Contents:

- OIP Configuration Backup – [page 317](#)
- Restore the OIP Configuration – [page 318](#)
- Changing the PBX hardware – [page 320](#)
- Changing the PBX hardware – [page 320](#)

8.1.1 OIP Configuration Backup

During the installation of the OIP server the regular backup of the OIP database and the OIP configuration file are also set. The following backup files are created during this process:

- `axpconfig_YYYY-mm-dd.xml`
- `axpdb_YYYY-mm-dd.sql`

The number of days the backup files saved in each case are stored in the file system depends on the setting in the OIP service *Database Driver*.

The times for the automatic file backup are listed in [Tab. 91, page 91](#), see also "OIP backup", [page 91](#).

You can also save the OIP database and the OIP configuration file manually in the Toolbox application OIP Configuration Manager, see "OIP Configuration", [page 220](#).

The files are backed starting with the OIP server installation directory in the *backup* folder. These settings can be modified in the OIP Service *Database Driver*.

If the backup files are to be stored in the network, the Windows System Service of the *OIP Server* must be started under a user account that has access to the network

resources. In this case you need to specify the network path in the OIP service *Database Driver*.

8.1.2 Restore the OIP Configuration

To restore the OIP database and the OIP configuration file you need the two created backup files, see "[OIP Configuration Backup](#)", page 317.

Safely restoring an OIP configuration requires three steps. Proceed as follows:

1. Install the desired OIP server software without starting the OIP Windows system services:
 - Start the installation of the OIP server with the necessary OIP installation components, see "[OIP Server](#)", page 26.
 - Follow the installation routine up to the *Start OIP Windows system services* dialogue box.
 - Deactivate the check box *Start OIP Windows system services* and continue with the installation.
2. Download the backup files:
 - Install the OIP server software a second time and select the installation type *Restore OIP database and/or configuration file from the backup copy*.
 - Specify the path to the backup files and click *Next*.
 - Carefully read the OIP version notes. It contains some information that is not available in this documentation. Close the web browser window.
3. Install the OIP server software a third time; this time by starting the OIP Windows system services:
 - Start the installation of the OIP server with the necessary OIP installation components, see "[OIP Server](#)", page 26.
 - Follow the installation routine up to the *Start OIP Windows system services* dialogue box.
 - Make sure the check box *Start OIP Windows system services* is activated and then continue with the installation.

The OIP configuration is now restored.

8.1.3 Changing the PBX configuration

Changes to the PBX configuration are automatically adopted by the OIP server during the next synchronization with the communication server. Setting the synchro-

nization interval with the communication server can be set in the OIP service *PBX Manager*.

Changes to the following PBX settings could result in unintended data changes in the OIP database:

- IP address of the PBX
- Name of the PBX
- System ID

As long as the PBX's system ID remains the same, the OIP server handles the communication server as a known PBX. This means that the IP address and name of the PBX can be changed.

If the PBX's IP address and name remain the same and if only the PBX's system ID is changed, the OIP server also handles the communication server as a known PBX.

All other combinations will result in the OIP server handling the communication server as a different PBX and creating the PBX's users as new data records in the OIP database.

Changing the IP Address of the PBX

To change the IP address of the PBX, proceed as follows:

1. Change the IP address of the PBX and restart the PBX.
2. Log on to the OIP server using the OIP Administrator (OIPAdmin).
3. Open the OIP configuration window and in the *PBX network* menu select the communication server whose IP address you wish to change. You can change the IP address only after the PBX has been deactivated. After making the changes, reactivate the communication server and save the changes.
4. Exit and restart the Windows system service *OIP Server*.

First Start of the PBX

If the PBX is being started for the first time, you should proceed as follows to avoid any data loss:

1. Exit the Windows System Services *OIP Server* on the OIP server.
2. Carry out the first-start of the PBX and the upload of the PBX configuration.
3. Start the Windows system service *OIP Server* on the OIP server.

8.1.4 Changing the PBX hardware

The PBX hardware or licence chip can be replaced under the conditions listed in "Changing the PBX configuration", page 318 without having to reconfigure the OIP server.

Proceed as follows when changing the PBX hardware:

1. Exit the Windows System Services *OIP Server* on the OIP server.
2. Make the scheduled changes to the PBX hardware.
3. Carry out an upload of the PBX configuration where necessary.
4. Start the OIP Windows system service *OIP Server* on the OIP server.

8.2 Locating a malfunction

Contents:

- Connection monitoring – page 320
- OIP server performance – page 322

The interplay of the different OIP components within the network, the dimensioning of the OIP server and the pre-installed software on the OIP Client PC can be the cause of an OIP malfunction. That's why the utmost care has to be taken during planning to ensure that the infrastructure complies with the OIP requirements.

Nonetheless a malfunction during the installation, running of the OIP server or OIP components is possible. For this reason you should try and locate the malfunction and provide your support organisation with a precise description of the fault together with the log files.

The following chapters describe the interplay between the OIP components and within the network for the purposes of locating faults.

More information is listed in the Knowledge Base. To access the Knowledge Base use the link on the *OIP support web page*.

8.2.1 Connection monitoring

The OIP server's communications with the communication server, the OIP database, the OIP applications and the OIP Connectors are monitored using Heartbeats (HB), see Figure Fig. 82 .

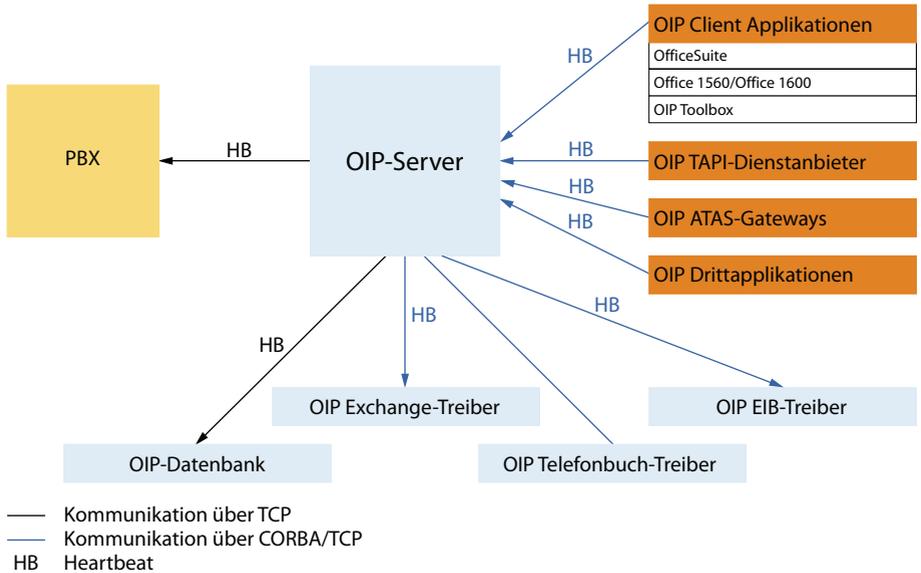


Fig. 82 Heartbeat between Client and Server

The heartbeat is sent by the Client periodically and checked on the server. If the Client cannot send a heartbeat, the Client automatically sets up the new connection¹⁾.

The OIP server can act either as a Client or as a server. With the following connections the OIP server is the Client and therefore sends the heartbeat to the:

- PBX
- OIP database
- OIP Exchange Driver
- OIP KNX driver

By contrast with the following connections the OIP server is the server, which means it receives the heartbeats from the:

- OIP Applications
- OIP TAPI service provider
- OIP ATAS-Gateways
- OIP third-party applications

¹⁾ The OIP Toolbox and the Office 1560/1560IP have to be restarted.

Connection interruptions can occur on the TCP layer or on the CORBA layer. In the event of interruptions on the TCP layer (e.g. network cable disconnected), the connections between Client and server are cleared down immediately. By contrast short-term interruptions of up to 10 s are caught at the CORBA layer whenever possible.

The OIP services started by the Clients on the OIP server are automatically terminated by the OIP server after a connection interruption due to the missing heartbeat.

Connection interruptions in which the OIP server is the Client are entered in the log file <OIPServer-jjjj-mm-dd_hh-mm-ss.log>. Connection interruptions in which the OIP server is the server are entered in the log file of the corresponding Client.

A alarm can be configured on the communication server so that it generates an alarm in the event of a connection interruption between the OIP server and the PBX. The following alarm messages can be configured:

- ACD server out of operation
- ATAS: connection lost/established
- CTI third-party: connection lost/established

For an overview of the log files of the OIP components during the runtime please refer to "[Backup Log files](#)", page 323.

8. 2. 2 OIP server performance

The following factors can cause the OIP server to perform below par:

Slow OIP databases

OIP is a real-time application that relies on fast, high-level availability on the part of the database. The number of entries in the individual tables of the database, in which data matches are carried out even during the runtime, increases the CPU load on the OIP database service and the performance of the OIP server can be diminished as a result.

Use the Windows Task Manager to check the CPU load of the OIP database service. Only a permanent load of more than 30% should be considered as critical.

In this case check the amount of time the following data is stored in the database:

- Call Centre Statistic Data
- Call journals (logs)

- Call data
- Log data

In this case change the amount of time the data is stored in the database. The Call Centre statistics and the call data can be accessed via the stored files. If the data is still required in database form, you should duplicate the OIP database in an offline database. More details can be found on the MySQL web pages (<http://www.mysql.com>).

Insufficient memory

The current storage utilisation of the OIP server is displayed on the OIP homepage under the menu item *OIP Server Status*. If the average storage space used is above 200 MB, the PC should have a main memory of at least 1 GB.

No connection to OIP Connector drivers

If the OIP server cannot set up a connection to the OIP Connector drivers, the performance is reduced by the OIP server's continued attempts to set up a connection. Check the OIP server's main log file <OIPServer-jjjj-mm-dd_hh-mm-ss.log> to see whether there are any entries about this behaviour, see also "[Connection monitoring](#)", [page 320](#). It may well be that OIP components were selected during the OIP server installation that are not required. If so, re-install the OIP server, see "[Updating the OIP server](#)", [page 35](#).

For an overview of the log files of the OIP components during the runtime please refer to "[Backup Log files](#)", [page 323](#).

8.3 Backup Log files

Contents:

- Malfunction during installation – [page 324](#)
- Malfunction during the runtime – [page 324](#)
- Debug mode tables – [page 334](#)

For an analysis of the malfunction you should save the relevant log files and send them to your support organisation along with an exact description of the fault. Create a ZIP archive due to the size.

8.3.1 Malfunction during installation

Any error during installation is recorded in the corresponding log files.

OIP-Server

From the OIP server installation directory "...\[aastra\oip](#)" save the log file with the file extension **.log*.

OIP Applications

From the installation directory of the OIP application "...\[aastra\...](#)" save the log file with file extension **.log*.

Office eDial

Save the log files of the Windows event display.

OIP TAPI service provider

Save the log files of the Windows event display.

If the malfunction occurs during configuration, see "[Malfunction during the runtime](#)", page 324, Section "[OIP TAPI service provider](#)", page 331

OIP Connectors

From the installation directory of the driver of the OIP Connector "...\[aastra\oip...](#)" save the log file with file extension **.log*.

8.3.2 Malfunction during the runtime

Any error during the runtime is recorded in the corresponding log file. Figure [Fig. 83](#) provides an overview of where the various log file are created.

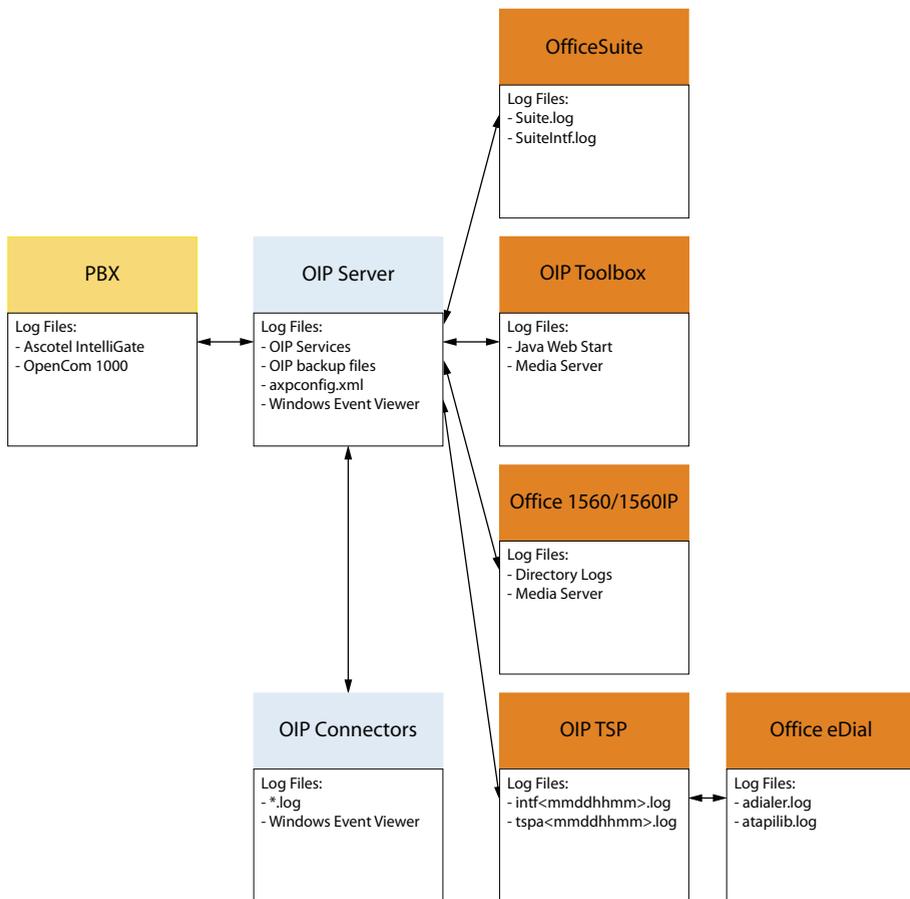


Fig. 83 Overview Log files

Aastra 400, Aastra IntelliGate® and OpenCom 1000

Tab. 190 Log files Aastra IntelliGate®/OpenCom 1000

Log file	Remarks
Log files Aastra 400 and Aastra IntelliGate®: <ul style="list-style-type: none"> • I-bus • ATPC3 	Switch on the Benni Monitor

Log file	Remarks
• <i>Error logs</i>	
Log files OpenCom 1000:	
• <i>CI check</i>	

OIP-Server

On the OIP server there are two levels of log files. The upper level comprises the log files that log the general status of the OIP server. They include the log files listed in [Tab. 191, page 326](#).

Tab. 191 Level 1 Log files

Log file	Description
OIPServer-yyyy-mm-dd_hh-mm-ss.log	Log file of the OIP server
OIPWebServer-yyyy-mm-dd_hh-mm-ss.log	Log file of the OIP web server
AXP-Logfile-yyyy-mm-dd_hh-mm-ss.log	Log file of the OIP server with detailed information
axpusers.log	Log file of the OIP users configured in the OIP server

The second level comprises the log files of the individual OIP services. These log files are created or filled with log entries only if the corresponding OIP service has been set on *debug*. [Tab. 192, page 327](#) lists the OIP services and the relevant log files.

Tab. 192 Level 2 Log files

OIP Service	Log file
<i>Account Service</i>	AccountService_<OIP-user-ID>_yyyy-mm-dd_hh-mm-ss_0.log
<i>ACD Log Manager</i>	ACDLogManager_yyyy-mm-dd_hh-mm-ss_0.log
<i>ACD Log Service</i>	ACDLogService_yyyy-mm-dd_hh-mm-ss_0.log
<i>ACD Manager</i>	ACDManager_yyyy-mm-dd_hh-mm-ss_0.log
<i>ACD Service</i>	ACDService_<OIP-user-ID>_yyyy-mm-dd_hh-mm-ss_0.log
<i>Active Directory Service</i>	ActiveDirectoryService_yyyy-mm-dd_hh-mm-ss_0.log
<i>Agent Manager</i>	AgentManager_yyyy-mm-dd_hh-mm-ss_0.log
<i>Agent Service</i>	AgentService_<OIP-user-ID>_yyyy-mm-dd_hh-mm-ss_0.log
<i>Alarm Driver</i>	AlarmReceiver_yyyy-mm-dd_hh-mm-ss_0.log TCP-IN-<PBX IP-address>-ON-1062.log
<i>Alarm Service</i>	AlarmService_<OIP-user-ID>_yyyy-mm-dd_hh-mm-ss_0.log
<i>Alpha & Quick Dial Service</i>	AlphaService_yyyy-mm-dd_hh-mm-ss_0.log
<i>Buddy Manager</i>	BuddyManager_yyyy-mm-dd_hh-mm-ss_0.log
<i>Buddy Service</i>	BuddyService_<OIP-user-ID>_yyyy-mm-dd_hh-mm-ss_0.log
<i>Calendar Manager</i>	CalendarManager_yyyy-mm-dd_hh-mm-ss_0.log
<i>Calendar Service</i>	CalendarService_<OIP-user-ID>_yyyy-mm-dd_hh-mm-ss_0.log
<i>Calendar Synchronization Service</i>	CalendarService_<OIP-user-ID>_yyyy-mm-dd_hh-mm-ss_0.log
<i>Call Logging Driver</i>	TaxReceiver_yyyy-mm-dd_hh-mm-ss_0.log TCP-IN-<PBX IP-address>-ON-1080.log
<i>Call Logging Manager</i>	TaxManager_yyyy-mm-dd_hh-mm-ss_0.log
<i>Call Logging Service</i>	TaxService_<OIP-user-ID>_yyyy-mm-dd_hh-mm-ss_0.log
<i>Call Service</i>	CallService_<OIP-user-ID>_yyyy-mm-dd_hh-mm-ss_0.log
<i>Client Utility Service</i>	UtilsService_<OIP-user-ID>_yyyy-mm-dd_hh-mm-ss_0.log
<i>CLIP Service</i>	CLIPService_yyyy-mm-dd_hh-mm-ss_0.log
<i>Configuration Profile Manager</i>	ConfigProfileManager_yyyy-mm-dd_hh-mm-ss_0.log
<i>Configuration Profile Service</i>	ConfigProfileService_<OIP-user-ID>_yyyy-mm-dd_hh-mm-ss_0.log
<i>Configuration Service</i>	ConfigurationService_<OIP-user-ID>_yyyy-mm-dd_hh-mm-ss_0.log
<i>DasTelefonbuch Directory Service</i>	ThePhoneDirectoryService_yyyy-mm-dd_hh-mm-ss_0.log
<i>Database Driver</i>	DatabaseDriver_yyyy-mm-dd_hh-mm-ss_0.log
<i>Directory Manager</i>	DirectoryManager_yyyy-mm-dd_hh-mm-ss_0.log
<i>Directory Service</i>	DirectoryService_<OIP-user-ID>_yyyy-mm-dd_hh-mm-ss_0.log
<i>Display Manager</i>	DisplayManager_yyyy-mm-dd_hh-mm-ss_0.log
<i>Display Service</i>	DisplayService_<OIP-user-ID>_yyyy-mm-dd_hh-mm-ss_0.log
<i>Event Service</i>	EventService_yyyy-mm-dd_hh-mm-ss_0.log
<i>Fax Manager</i>	FaxManager_yyyy-mm-dd_hh-mm-ss_0.log
<i>Fax Service</i>	FaxService_<OIP-user-ID>_yyyy-mm-dd_hh-mm-ss_0.log
<i>Feature Service</i>	FeatureService_yyyy-mm-dd_hh-mm-ss_0.log
<i>Flow Manager</i>	FlowManager_yyyy-mm-dd_hh-mm-ss_0.log

OIP Service	Log file
<i>Flow Service</i>	FlowService_<OIP-user-ID>_yyyy-mm-dd_hh-mm-ss_0.log
<i>Function Key Manager</i>	FunctionKeyManager_yyyy-mm-dd_hh-mm-ss_0.log
<i>Function Key Service</i>	FunctionKeyService_<OIP-user-ID>_yyyy-mm-dd_hh-mm-ss_0.log
<i>I/O Manager</i>	IO-Manager_yyyy-mm-dd_hh-mm-ss_0.log
<i>I/O Service</i>	IO-Service-<OIP-user-ID>_yyyy-mm-dd_hh-mm-ss_0.log
<i>Jabber Driver</i>	JabberDriver_yyyy-mm-dd_hh-mm-ss_0.log
<i>Journal Manager</i>	JournalManager_yyyy-mm-dd_hh-mm-ss_0.log
<i>Journal Service</i>	JournalService_<OIP-user-ID>_yyyy-mm-dd_hh-mm-ss_0.log
<i>Key Configuration Service</i>	KeyService_<OIP-user-ID>_yyyy-mm-dd_hh-mm-ss_0.log
<i>LDAP Directory Service</i>	LDAPDirectoryService_yyyy-mm-dd_hh-mm-ss_0.log
<i>License Manager</i>	LicenseManager_yyyy-mm-dd_hh-mm-ss_0.log
<i>License Service</i>	LicenseService_yyyy-mm-dd_hh-mm-ss_0.log
<i>Line Service</i>	LineService_<OIP-user-ID>_yyyy-mm-dd_hh-mm-ss_0.log
<i>Load Balancing Service</i>	LoadBalancingService_<OIP-user-ID>_yyyy-mm-dd_hh-mm-ss_0.log
<i>Location Manager</i>	LocationManager_yyyy-mm-dd_hh-mm-ss_0.log
<i>Location Service</i>	LocationService_<OIP-user-ID>_yyyy-mm-dd_hh-mm-ss_0.log
<i>Log Service</i>	Log_<OIP-user-ID>_yyyy-mm-dd_hh-mm-ss_0.log
<i>Login Service</i>	SystemLogin_<OIP-user-ID>_yyyy-mm-dd_hh-mm-ss_0.log
<i>Media Manager</i>	MediaManager_yyyy-mm-dd_hh-mm-ss_0.log
<i>Message Manager</i>	MessageManager_yyyy-mm-dd_hh-mm-ss_0.log
<i>Message Service</i>	MessageService_<OIP-user-ID>_yyyy-mm-dd_hh-mm-ss_0.log
<i>Naming Service</i>	DistributedNameService_yyyy-mm-dd_hh-mm-ss_0.log
<i>Notepad Service</i>	NotepadService_<OIP-user-ID>_yyyy-mm-dd_hh-mm-ss_0.log
<i>Notification Manager</i>	NotificationManager_yyyy-mm-dd_hh-mm-ss_0.log
<i>Notification Service</i>	NotificationService_<OIP-user-ID>_yyyy-mm-dd_hh-mm-ss_0.log
<i>ODBC/JDBC Directory Service</i>	JDBCDirectoryService_yyyy-mm-dd_hh-mm-ss_0.log
<i>Operator Service</i>	OperatorService_<OIP-user-ID>_yyyy-mm-dd_hh-mm-ss_0.log
<i>PBX Driver Ascotel</i>	ASNMP-<PBX IP-address>_yyyy-mm-dd_hh-mm-ss_0.log ATNS-<PBX IP-address>_yyyy-mm-dd_hh-mm-ss_0.log ATNSDriver-<PBX IP-address>_yyyy-mm-dd_hh-mm-ss_0.log CTIDriverAscotel-<PBX IP-Adresse>_yyyy-mm-dd_hh-mm-ss_0.log DisplayDriver_yyyy-mm-dd_hh-mm-ss_0.log PBXConfigDriver-<PBX IP address>_yyyy-mm-dd_hh-mm-ss_0.log PBXDriverAFP-<PBX IP address >_yyyy-mm-dd_hh-mm-ss_0.log PBXDriverAscotel-<PBX IP address >_yyyy-mm-dd_hh-mm-ss_0.log PBXDriverInfolink-<PBX IP address >_yyyy-mm-dd_hh-mm-ss_0.log TCP-OUT-<PBX IP address >-1061_yyyy-mm-dd_hh-mm-ss_0.log TCP-OUT-<PBX IP-address>-1070_yyyy-mm-dd_hh-mm-ss_0.log TCP-OUT-<PBX IP-address>-1074_yyyy-mm-dd_hh-mm-ss_0.log TCP-OUT-<PBX IP-address>-1088_yyyy-mm-dd_hh-mm-ss_0.log

OIP Service	Log file
<i>PBX Driver OpenCom 1000</i>	ANETProvider-<PBX IP address>_yyyy-mm-dd_hh-mm-ss_0.log ANVZDriver-<PBX IP address>_yyyy-mm-dd_hh-mm-ss_0.log CI-Provider-<PBX IP address>_yyyy-mm-dd_hh-mm-ss_0.log CTIDriver-<PBX IP address>_yyyy-mm-dd_hh-mm-ss_0.log OC1000DisplayDriver-<PBX IP address>_yyyy-mm-dd_hh-mm-ss_0.log PBXConfigDriver-<PBX IP address>_yyyy-mm-dd_hh-mm-ss_0.log TAMI-Provider-<PBX IP address>_yyyy-mm-dd_hh-mm-ss_0.log TCP-OUT-<PBX IP address >-8092_yyyy-mm-dd_hh-mm-ss_0.log TCP-OUT-<PBX IP address >-8095_yyyy-mm-dd_hh-mm-ss_0.log TCP-OUT-<PBX IP address>-880x_yyyy-mm-dd_hh-mm-ss_0.log
<i>PBX Information Service</i>	PBXInfoService_<OIP-user-ID>_yyyy-mm-dd_hh-mm-ss_0.log
<i>PBX Manager</i>	PBXManager_yyyy-mm-dd_hh-mm-ss_0.log
<i>PBX Setup Manager</i>	PBXSetupManager_<OIP-user ID>_yyyy-mm-dd_hh-mm-ss_0.log
<i>PBX Setup Service</i>	PBXSetupService_<OIP-user-ID>_yyyy-mm-dd_hh-mm-ss_0.log
<i>PISN Directory Service</i>	PISNSubscriberDirectoryService_yyyy-mm-dd_hh-mm-ss_0.log
<i>Private Card Directory Service</i>	PhoneCardDirectoryService_yyyy-mm-dd_hh-mm-ss_0.log
<i>Private Directory Service</i>	PrivateDirectory_yyyy-mm-dd_hh-mm-ss_0.log
<i>Public Directory Service</i>	PublicDirectory_yyyy-mm-dd_hh-mm-ss_0.log
<i>PUM Manager</i>	PUMManager_yyyy-mm-dd_hh-mm-ss_0.log
<i>PUM Service</i>	PUMService_<OIP-user-ID>_yyyy-mm-dd_hh-mm-ss_0.log
<i>Registration Manager</i>	RegistrationManager_yyyy-mm-dd_hh-mm-ss_0.log
<i>Registration Service</i>	RegistrationService_<OIP-user-ID>_yyyy-mm-dd_hh-mm-ss_0.log
<i>Routing Manager</i>	RoutingManager_yyyy-mm-dd_hh-mm-ss_0.log
<i>Routing Service</i>	RoutingService_<OIP-user-ID>_yyyy-mm-dd_hh-mm-ss_0.log
<i>RSS Driver</i>	RSSDriver_yyyy-mm-dd_hh-mm-ss_0.log
<i>Security Service</i>	SecurityService_<OIP-user-ID>_yyyy-mm-dd_hh-mm-ss_0.log
<i>Server Utility Service</i>	UtilityService_<OIP-user-ID>_yyyy-mm-dd_hh-mm-ss_0.log
<i>Service Manager</i>	axpservices-yyyy-mm-dd_hh-mm-ss.log
<i>Shortdial Directory Service</i>	ShortDialDirectoryService_yyyy-mm-dd_hh-mm-ss_0.log
<i>SMTP Driver</i>	SMTPDriver_yyyy-mm-dd_hh-mm-ss_0.log
<i>Subscriber Configuration Manager</i>	SubscriberConfigManager_yyyy-mm-dd_hh-mm-ss_0.log
<i>Subscriber Configuration Service</i>	SubscriberConfig_<OIP-user-ID>_yyyy-mm-dd_hh-mm-ss_0.log
<i>Subscriber Directory Service</i>	SubscriberDirectoryService_yyyy-mm-dd_hh-mm-ss_0.log
<i>System User Directory Service</i>	SystemUserDirectoryService_yyyy-mm-dd_hh-mm-ss_0.log
<i>Test Manager</i>	TestManger_<OIP-user-ID>_yyyy-mm-dd_hh-mm-ss_0.log
<i>Test Service</i>	TestService_<OIP-user-ID>_yyyy-mm-dd_hh-mm-ss_0.log
<i>Ticket Service</i>	TicketService_<OIP-user-ID>_yyyy-mm-dd_hh-mm-ss_0.log
<i>Time Service</i>	TimeService_<OIP-user-ID>_yyyy-mm-dd_hh-mm-ss_0.log
<i>TTS Manager</i>	TTSManager_<OIP-user-ID>_yyyy-mm-dd_hh-mm-ss_0.log
<i>TwixTel Directory Service</i>	TwixTelDirectoryService_yyyy-mm-dd_hh-mm-ss_0.log

OIP Service	Log file
User Preferences Service	UserPreferences_<OIP-user-ID>_yyyy-mm-dd_hh-mm-ss_0.log
User Profile Manager	UserProfileManager_yyyy-mm-dd_hh-mm-ss_0.log
User Profile Service	UserProfileService_<OIP-user-ID>_yyyy-mm-dd_hh-mm-ss_0.log
User Service	UserServices-<OIP-user-ID>_yyyy-mm-dd_hh-mm-ss_0.log
Voice Mail Manager	VoiceMailManager_<OIP-user-ID>_yyyy-mm-dd_hh-mm-ss_0.log
Voice Mail Service	VoiceMailService_<OIP-user-ID>_yyyy-mm-dd_hh-mm-ss_0.log
WEB Server Service	Output on console if the OIP server is started in console mode.

1. Activate the debug mode either for all the OIP services or for the corresponding OIP services, see "OIP Services", page 40. The log level should be set to *debug*. Tab. 194, page 335 , Tab. 195, page 338 and Tab. 196, page 341 contain an overview of the OIP services that should be activated for the different OIP applications and OIP Connectors when the debug mode is used in the event of a malfunction.
When you activate the debug mode make sure that the runtime behaviour of the OIP server is restricted.
2. From the installation directory of the OIP Server "...*\astra\oip*" save the entire directory *logs*.
3. From the installation directory of the OIP Server "...*\astra\oip*" save the entire directory *backup*.
4. From the OIP server installation directory "...*\astra\oip*" save the OIP configuration file *axpconfig.xml*.
5. Save the log files of the Windows event display.

OfficeSuite

1. Activate the Debug mode using the *Settings* menu item , *Logging* tab.
2. From the installation directory save the log files:
 - Suite.log
 - SuiteIntf.log

OIP-Toolbox

The information listed here refers to the Java-based OIP applications.

In the OIP applications carry out the following steps also:

1. Delete the temporary internet files in the Java Control Panel (Control Panel\Java). Deleting the Temporary Internet Files deletes all downloaded appli-

cations; the next time you start up the OIP application, the application files will again be downloaded.

2. From the Java Control Panel activate debugging from the *Advanced* tab.
3. Reproduce the malfunction.
4. From the user profile directory ...*Sun\Java\Deployment\log* save the log file *javaws*.log*.

Office 1560/1560IP

1. Activate the Debug mode using menu item *Settings/Logging*.
2. From the user profile directory ...*Documents and Settings\All Users\Application Data\Astra* save the entire *Logs* directory.

Media Server

The Media Server is installed along with the Office 1600/1600IP and Office 1560/1560IP: From the user profile directory save the log file *media.log*.

Office eDial

1. Activate the Debug mode using the *Settings* menu item , *Logging* tab.
2. From the installation directory save the log files:
 - *adialer.log*
 - *atapilib.log*

OIP TAPI service provider

1. Activate the debug mode of the OIP TAPI service provider, see "*Debug Settings*", page 304.
2. Restart the Windows Telephony Service.
3. Save the configured Log directory.
 - *intf<mmddhhmm>.log*
 - *tspa<mmddhhmm>.log*

If an error occurs, the event messages in [Tab. 193, page 332](#) may be displayed when connecting with the OIP server and when reading out the lines.

Tab. 193 Event Messages

Event message	Cause/solution
<i>No lines configured for the user.</i>	Use the OIP server to check whether the user has been assigned lines.
<i>List of available lines cannot be loaded.</i>	<ul style="list-style-type: none"> • Use the OIP server to check whether the user has been assigned the necessary access rights. • Check whether the OIP server is running fault-free. Restart the OIP server if necessary.
<i>OIP server software is not compatible.</i>	Check the OIP version notes to see whether the version of the OIP TAPI service provider is compatible with the OIP server.
<i>Login to OIP server failed. Please check your user name and password.</i>	<ul style="list-style-type: none"> • Use the OIP server to check whether the user name is correct. • Use the internal phone number and terminal PIN for the login; check whether the terminal PIN has been changed.
<i>Login to OIP server failed. Please check the server address.</i>	Check whether the correct address of the OIP server has been entered. If you have no success with the DNS name, re-try the connection setup with the OIP server IP address. If this attempt also fails, contact your OIP Administrator.
<i>Initialisation of the CORBA interface failed. Installation aborted.</i>	The connection to the OIP server cannot be set up. Contact your OIP Administrator.
<i>Connection disconnected by the user.</i>	You have disconnected the connection setup to the OIP server.

OIP Exchange drivers for Microsoft Exchange Server 2007 & 2010

If you did not activate the debug mode after installing the OIP Exchange driver, start the configuration via the Start menu entry.

Reproduce the malfunction and save the log files:

Windows XP: c:\Documents and Settings\All Users\Application Data\Aastra\Oip\MsxDrv\Log\

Windows Server 2008/R2 and Windows 7/Vista: c:\ProgramData\Aastra\Oip\MsxDrv\Log\

1. On the PC on which the OIP Exchange driver is installed, save the log files from the following directories:
 - Windows XP: c:\Documents and Settings\All Users\ApplicationData\Aastra\Oip\MsxDrv\Log\

- Windows Server 2008/2008 R2 and Windows 7/Vista:
c:\ProgramData\Aastra\Oip\MsxDrv\Log\

2. On Microsoft Exchange Server, save the Windows event display log files.

OIP Exchange drivers for Microsoft Exchange Server 2003 & 2007

To activate the debug mode, on Microsoft Exchange Server first end the Windows system service *OIP Exchange Service* then proceed as follows:

1. From the installation directory of the OIP Exchange driver open the configuration file *msexchangedriverconfig.oip* using a text editor.
2. Change the entry *oip.exchangeconnector.debug=0* to *oip.exchangeconnector.debug=1* and save the modification.
3. Start the Windows System service *OIP Exchange Service*.

Reproduce the malfunction and save the following log files:

1. On Microsoft Exchange Server, from the installation directory save the log files:
 - *delprivate.log*
 - *delpublic.log*
 - *regprivate.log*
 - *regpublic.log*
 - *regresult.txt*
2. On Microsoft Exchange Server, save the Windows event display log files.

OIP phone book driver (phone book CDs)

The information listed here refers to the following OIP phone book drivers:

- OIP TwixTel driver (CH)
- OIP Phone Book Drivers (D)

To activate the debug mode first exit the Windows System Service of the corresponding OIP phone book driver and proceed as described here.

1. From the installation directory of the OIP phone book driver open the configuration file *...config.OIP* using a text editor.
2. In the paragraph [Config] change the entry *DebugLevel=0* to *DebugLevel=1* and save the change.
3. Start the Windows System Service of the corresponding OIP phone book driver.

Reproduce the malfunction and save the following log files:

1. On the PC on which the driver of the OIP phone book is installed, save the log file of the installation directory "...*driver.log*".
2. On the PC on which the driver of the OIP phone book is installed, save the log files of the Windows event display.

OIP phone book driver (ODBC/JDBC)

The information listed here refers to the OIP phone book driver OIP ODBC/JDBC driver.

The debug mode is activated while the OIP ODBC/JDBC driver is being installed.

1. On the PC on which the OIP ODBC/JDBC driver is installed, save the entire *logs* directory from the installation directory "...*\aastra\oip...*".
2. On the PC on which the driver of the OIP ODBC/JDBC is installed, save the log files of the Windows event display.

OIP ATAS-Gateways

The debug mode is activated while the OIP ATAS-Gateway is being installed.

1. On the PC on which the OIP ATAS-Gateway is installed, save the entire *logs* directory from the installation directory "...*\aastra\oip...*".
2. On the PC on which the driver of the OIP phone book is installed, save the log files of the Windows event display.

OIP KNX driver

The debug mode is activated while the OIP KNX driver is being installed.

1. On the PC on which the OIP KNX driver is installed, save the entire *logs* directory from the installation directory "...*\aastra\oip...*".
2. On the PC on which the driver of the OIP KNX is installed, save the log files of the Windows event display.

8.3.3 Debug mode tables

Tab. 194, page 335, Tab. 195, page 338 and Tab. 196, page 341 contain an overview of the OIP services that should be activated for the different OIP applications and OIP Connectors when the debug mode is used in the event of a malfunction.

Tab. 194 Debug-Modus OIP Applications (Part 1)

	Agent Manager	Alarm Manager	Routing Manager	Call Manager	User Preferences	User Profiles	Presence Indicator	Terminal Manager	External display	Function keys	I/O Manager	Calendar	Configuration Profiles	Line keys	Messages
Account Service															
ACD Log Manager															
ACD Log Service															
ACD Manager															
ACD Service															
Active Directory Service															
Agent Manager	X														
Agent Service	X														
Alarm Driver		X									X				
Alarm Service		X									X				
Alpha & Quick Dial Service				X			X								
Buddy Manager				X			X								
Buddy Service				X			X								
Calendar Manager				X			X					X			
Calendar Service				X			X					X			
Calendar Synchronization Service															
Call Logging Driver															
Call Logging Manager															
Call Logging Service															
Call Service				X											
Client Utility Service															
CLIP Service				X			X								
Configuration Profile Manager															
Configuration Profile Service															
Configuration Service															
DasTelefonbuch Directory Service				X			X								
Database Driver															
Directory Manager															
Directory Service				X			X								
Display Manager											X	X			
Display Service											X	X			
Event Service															

	Agent Manager	Alarm Manager	Routing Manager	Call Manager	User Preferences	User Profiles	Presence Indicator	Terminal Manager	External display	Function keys	I/O Manager	Calendar	Configuration Profiles	Line keys	Messages
<i>Fax Manager</i>															
<i>Fax Service</i>															
<i>Feature Service</i>															
<i>Flow Manager</i>															
<i>Flow Service</i>															
<i>Function Key Manager</i>															
<i>Function Key Service</i>															
<i>I/O Manager</i>											X				
<i>I/O Service</i>											X				
<i>Jabber Driver</i>															
<i>Journal Manager</i>				X											
<i>Journal Service</i>				X											
<i>Key Configuration Service</i>								X							
<i>LDAP Directory Service</i>				X			X								
<i>License Manager</i>	X			X			X				X				
<i>License Service</i>	X			X			X				X				
<i>Line Service</i>				X											
<i>Load Balancing Service</i>															
<i>Location Manager</i>											X				
<i>Location Service</i>											X				
<i>Log Service</i>															
<i>Login Service</i>															
<i>Media Manager</i>															
<i>Message Manager</i>															X
<i>Message Service</i>															X
<i>Naming Service</i>															
<i>Notepad Service</i>															
<i>Notification Manager</i>															
<i>Notification Service</i>															
<i>ODBC/JDBC Directory Service</i>															
<i>Operator Service</i>				X											
<i>PBX Driver Ascotel</i>	X		X	X			X								
<i>PBX Driver OpenCom 1000</i>	X		X	X			X								

	Agent Manager	Alarm Manager	Routing Manager	Call Manager	User Preferences	User Profiles	Presence Indicator	Terminal Manager	External display	Function keys	I/O Manager	Calendar	Configuration Profiles	Line keys	Messages
<i>PBX Information Service</i>															
PBX Manager															
<i>PBX Setup Manager</i>															
<i>PBX Setup Service</i>															
<i>PISN Directory Service</i>				X			X								
<i>Private Card Directory Service</i>				X			X								
<i>Private Directory Service</i>				X			X								
<i>Public Directory Service</i>				X			X								
<i>PUM Manager</i>						X									
<i>PUM Service</i>						X									
<i>Registration Manager</i>															
<i>Registration Service</i>															
<i>Routing Manager</i>			X												
<i>Routing Service</i>			X												
<i>RSS Driver</i>															
<i>Security Service</i>															
<i>Server Utility Service</i>															
<i>Service Manager</i>															
<i>Shortdial Directory Service</i>				X			X								
<i>SMTTP Driver</i>															
<i>Subscriber Configuration Manager</i>								X							
<i>Subscriber Configuration Service</i>								X							
<i>Subscriber Directory Service</i>				X			X								
<i>System User Directory Service</i>				X			X								
<i>Test Manager</i>															
<i>Test Service</i>															
<i>Ticket Service</i>	X														
<i>Time Service</i>															
TTS Manager															
<i>TwixTel Directory Service</i>				X			X								
<i>User Preferences Service</i>					X										
<i>User Profile Manager</i>					X	X									
<i>User Profile Service</i>					X	X									

	Agent Manager	Alarm Manager	Routing Manager	Call Manager	User Preferences	User Profiles	Presence Indicator	Terminal Manager	External display	Function keys	I/O Manager	Calendar	Configuration Profiles	Line keys	Messages
User Service															
Voice Mail Manager															
Voice Mail Service															
WEB Server Service															

Tab. 195 Debug-Modus OIP Applications (Part 2)

	OIP Call Centre Manager	OIP Configuration	OIP Test Manager	PBX Setup Manager	Call logging	Directory Manager	OfficeSuite	WebSuite	Office 1560/1560IP	Office eDial	OIP TAPI service provider	External ACD applications
Account Service									X			
ACD Log Manager	X					X	X	X	X	X	X	
ACD Log Service	X					X	X	X	X	X	X	
ACD Manager	X					X	X	X	X	X	X	
ACD Service	X					X	X	X	X	X	X	
Active Directory Service					X	X	X	X	X			
Agent Manager						X	X	X	X	X	X	
Agent Service						X	X	X	X	X	X	
Alarm Driver												
Alarm Service												
Alpha & Quick Dial Service							X	X	X			
Buddy Manager							X	X	X	X	X	
Buddy Service							X	X	X	X	X	
Calendar Manager							X	X	X			
Calendar Service							X	X	X			
Calendar Synchronization Service							X					
Call Logging Driver					X							
Call Logging Manager					X							
Call Logging Service					X							
Call Service	X					X	X	X	X	X	X	

	OIP Call Centre Manager	OIP Configuration	OIP Test Manager	PBX Setup Manager	Call logging	Directory Manager	OfficeSuite	WebSuite	Office 1560/1560IP	Office eDial	OIP TAPI service provider	External ACD applications
<i>Client Utility Service</i>												
<i>CLIP Service</i>							X		X			
<i>Configuration Profile Manager</i>							X					
<i>Configuration Profile Service</i>							X					
<i>Configuration Service</i>		X										
<i>DasTelefonbuch Directory Service</i>						X	X		X			
<i>Database Driver</i>	X											
<i>Directory Manager</i>						X	X	X	X			
<i>Directory Service</i>						X	X	X	X			
<i>Display Manager</i>							X					
<i>Display Service</i>							X					
<i>Event Service</i>												
<i>Fax Manager</i>							X					
<i>Fax Service</i>							X					
<i>Feature Service</i>							X					
<i>Flow Manager</i>												
<i>Flow Service</i>												
<i>Function Key Manager</i>							X					
<i>Function Key Service</i>							X					
<i>I/O Manager</i>												
<i>I/O Service</i>												
<i>Jabber Driver</i>												
<i>Journal Manager</i>							X	X	X			
<i>Journal Service</i>							X	X	X			
<i>Key Configuration Service</i>												
<i>LDAP Directory Service</i>						X	X	X	X			
<i>License Manager</i>	X				X		X	X	X	X	X	X
<i>License Service</i>	X				X		X	X	X	X	X	X
<i>Line Service</i>							X		X		X	X
<i>Load Balancing Service</i>												
<i>Location Manager</i>												
<i>Location Service</i>												

	OIP Call Centre Manager	OIP Configuration	OIP Test Manager	PBX Setup Manager	Call logging	Directory Manager	OfficeSuite	WebSuite	Office 1560/1560IP	Office eDial	OIP TAPI service provider	External ACD applications
<i>Log Service</i>												
<i>Login Service</i>	X	X	X	X	X	X	X	X	X	X	X	X
<i>Media Manager</i>												
<i>Message Manager</i>							X		X			
<i>Message Service</i>							X		X			
<i>Naming Service</i>	X	X									X	X
<i>Notepad Service</i>									X			
<i>Notification Manager</i>							X	X				
<i>Notification Service</i>							X	X				
<i>ODBC/JDBC Directory Service</i>						X	X	X				
<i>Operator Service</i>							X		X		X	X
<i>PBX Driver Ascotel</i>	X			X	X	X	X	X	X	X	X	X
<i>PBX Driver OpenCom 1000</i>	X			X	X	X	X	X	X	X	X	X
<i>PBX Information Service</i>							X	X	X	X	X	X
<i>PBX Manager</i>				X			X	X	X	X	X	X
<i>PBX Setup Manager</i>				X								
<i>PBX Setup Service</i>				X								
<i>PISN Directory Service</i>						X	X	X	X			
<i>Private Card Directory Service</i>						X	X	X	X			
<i>Private Directory Service</i>						X	X	X	X			
<i>Public Directory Service</i>						X	X	X	X			
<i>PUM Manager</i>						X			X			
<i>PUM Service</i>						X			X			
<i>Registration Manager</i>							X	X	X		X	X
<i>Registration Service</i>							X	X	X		X	X
<i>Routing Manager</i>	X											
<i>Routing Service</i>	X											
<i>RSS Driver</i>												
<i>Security Service</i>												
<i>Server Utility Service</i>												
<i>Service Manager</i>												
<i>Shortdial Directory Service</i>						X	X	X	X			

	OIP Call Centre Manager	OIP Configuration	OIP Test Manager	PBX Setup Manager	Call logging	Directory Manager	OfficeSuite	WebSuite	Office 1560/1560IP	Office eDial	OIP TAPI service provider	External ACD applications
<i>SMTP Driver</i>							X					
<i>Subscriber Configuration Manager</i>							X	X				
<i>Subscriber Configuration Service</i>							X	X				
<i>Subscriber Directory Service</i>						X	X	X	X			
<i>System User Directory Service</i>						X	X	X	X			
<i>Test Manager</i>			X									
<i>Test Service</i>			X									
<i>Ticket Service</i>	X						X	X	X		X	X
<i>Time Service</i>												
<i>TTS Manager</i>							X	X				
<i>TwixTel Directory Service</i>						X	X	X	X			
<i>User Preferences Service</i>							X	X				
<i>User Profile Manager</i>							X	X	X	X	X	X
<i>User Profile Service</i>							X	X	X	X	X	X
<i>User Service</i>	X								X	X	X	X
<i>Voice Mail Manager</i>							X	X				
<i>Voice Mail Service</i>							X	X				
<i>WEB Server Service</i>												

Tab. 196 Debug mode OIP driver

	OIP Exchange Driver	Active Directory	LDAP directories	External phone book directories	OIP Name Server	OIP KNX driver
<i>Account Service</i>						
<i>ACD Log Manager</i>						
<i>ACD Log Service</i>						

	OIP Exchange Driver	Active Directory	LDAP directories	External phone book directories	OIP Name Server	OIP KNX driver
<i>ACD Manager</i>						
<i>ACD Service</i>						
<i>Active Directory Service</i>		X			X	
<i>Agent Manager</i>						
<i>Agent Service</i>						
<i>Alarm Driver</i>						X
<i>Alarm Service</i>						X
<i>Alpha & Quick Dial Service</i>	X	X	X	X	X	
<i>Buddy Manager</i>						
<i>Buddy Service</i>						
<i>Calendar Manager</i>						
<i>Calendar Service</i>						
<i>Calendar Synchronization Service</i>						
<i>Call Logging Driver</i>						
<i>Call Logging Manager</i>						
<i>Call Logging Service</i>						
<i>Call Service</i>						
<i>Client Utility Service</i>						
<i>CLIP Service</i>	X	X	X	X	X	
<i>Configuration Profile Manager</i>						
<i>Configuration Profile Service</i>						
<i>Configuration Service</i>						X
<i>DasTelefonbuch Directory Service</i>				X	X	
<i>Database Driver</i>						
<i>Directory Manager</i>	X	X	X	X	X	
<i>Directory Service</i>	X	X	X	X	X	
<i>Display Manager</i>						X
<i>Display Service</i>						X
<i>Event Service</i>						
<i>Fax Manager</i>						

	OIP Exchange Driver	Active Directory	LDAP directories	External phone book directories	OIP Name Server	OIP KNX driver
<i>Fax Service</i>						
<i>Feature Service</i>						
<i>Flow Manager</i>						
<i>Flow Service</i>						
<i>Function Key Manager</i>						
<i>Function Key Service</i>						
<i>I/O Manager</i>						X
<i>I/O Service</i>						X
<i>Jabber Driver</i>						
<i>Journal Manager</i>						
<i>Journal Service</i>						
<i>Key Configuration Service</i>						
<i>LDAP Directory Service</i>			X			
<i>License Manager</i>					X	X
<i>License Service</i>					X	X
<i>Line Service</i>						
<i>Load Balancing Service</i>						
<i>Location Manager</i>						
<i>Location Service</i>						
<i>Log Service</i>						
<i>Login Service</i>						
<i>Media Manager</i>						
<i>Message Manager</i>						
<i>Message Service</i>						
<i>Naming Service</i>						
<i>Notepad Service</i>						
<i>Notification Manager</i>						
<i>Notification Service</i>						
<i>ODBC/JDBC Directory Service</i>				X	X	
<i>Operator Service</i>						

	OIP Exchange Driver	Active Directory	LDAP directories	External phone book directories	OIP Name Server	OIP KNX driver
<i>PBX Driver Ascotel</i>						X
<i>PBX Driver OpenCom 1000</i>						X
<i>PBX Information Service</i>						
<i>PBX Manager</i>						
<i>PBX Setup Manager</i>						
<i>PBX Setup Service</i>						
<i>PISN Directory Service</i>	X		X	X	X	
<i>Private Card Directory Service</i>	X		X	X	X	
<i>Private Directory Service</i>	X		X	X	X	
<i>Public Directory Service</i>	X		X	X	X	
<i>PUM Manager</i>						
<i>PUM Service</i>						
<i>Registration Manager</i>						
<i>Registration Service</i>						
<i>Routing Manager</i>						
<i>Routing Service</i>						
<i>RSS Driver</i>						
<i>Security Service</i>						
<i>Server Utility Service</i>						
<i>Service Manager</i>						
<i>Shortdial Directory Service</i>	X		X	X	X	
<i>SMTP Driver</i>						
<i>Subscriber Configuration Manager</i>						
<i>Subscriber Configuration Service</i>						
<i>Subscriber Directory Service</i>	X		X	X	X	
<i>System User Directory Service</i>	X		X	X	X	
<i>Test Manager</i>						
<i>Test Service</i>						
<i>Ticket Service</i>						
<i>Time Service</i>						

	OIP Exchange Driver	Active Directory	LDAP directories	External phone book directories	OIP Name Server	OIP KNX driver
<i>TTS Manager</i>						
<i>TwixTel Directory Service</i>				X	X	
<i>User Preferences Service</i>						
<i>User Profile Manager</i>						
<i>User Profile Service</i>						
<i>User Service</i>						
<i>Voice Mail Manager</i>						
<i>Voice Mail Service</i>						
<i>WEB Server Service</i>						

9 Annex

Requirements for operating OIP, planning remarks, licensing information, compatibility tables

Contents:

- Planning – [page 346](#)
- Licensing and system limits – [page 353](#)
- Compatibility – [page 357](#)

9.1 Planning

Contents:

- Communication between OIP, PBX and applications – [page 346](#)
- IP-network Requirements – [page 347](#)
- Communication server requirements – [page 350](#)
- OIP Server PC requirements – [page 351](#)
- OIP Client PC Requirements – [page 351](#)

9.1.1 Communication between OIP, PBX and applications

The OIP server communicates with the communication server via Ethernet. OIP server and PBX exchange both time-critical signalling and control data as well as information data such as voice files of the PBX voice mail. The OIP server does not process any real-time media data (media stream). The media stream flows directly between the communication server and the terminals, the OIP applications or the CTI applications of third-party manufacturers.

OIP and CTI applications also communicate with the OIP server via Ethernet.

The communication server recognises and handles OIP applications of the IP soft-phone type such as Office 156OIP in the same ways as IP hardphones:

- Voice transmission is effected via the VoIP channels
- The media stream flows directly between IP softphone and PBX
- The user data is stored in the communication server

But unlike the OIP server signals and controls all the IP-Softphones in the network. The OIP server also takes over the IP addressing of the IP softphones in the commu-

nication server, which means that manual configuration is not required and is therefore superfluous.

IP softphones coupled with a hardphone (e.g. Aastra 5370ip) such as Office 1560 do not process any media data themselves and the media stream flows between hardphone and PBX.

When an OIP server is operated in an Aastra Intelligent Net the OIP server communicates with the Master node only.

9.1.2 IP-network Requirements

Please note that a network environment can only be optimised with the know-how of an experienced network technician.

Check the following points before installing the OIP server and integrating it into your IP network:

- The DNS is correctly configured.
- Check the DNS server for any invalid entries.

Integrating OIP in the existing IP network requires additional bandwidth.

Communications between OIP Server and PBX

Communications between OIP server and the communication server take place

- when the OIP server is started,
- when the OIP server synchronizes with the communication server, and
- during the runtime.

The required bandwidth depends on the following factors:

- The size of the PBX configuration during startup and synchronization
 - The number of internal users
 - The number of call distribution elements (CDE)
 - The entries in the abbreviated dialling list/PISN users
 - The entries in the private phone books
- The number of internal and external calls made (calls per hour)

The average network load during runtime can be influenced by the settings used for the various synchronization intervals. The synchronization intervals can be configured in the OIP Services.

Tab. 197 OIP server – PBX synchronization

Synchronization interval	OIP Service	Default setting
<i>OIP server – PBX configuration</i>	PBX Manager	all 15 min
<i>OIP server – PBX abbreviated dialling list</i>	Public Directory Service	all 60 min
<i>OIP server – PBX private phone books</i>	Private Directory Service	all 60 min

Communications between the OIP server and the OIP applications

For the communication between the OIP server and the OIP applications during the runtime, the bandwidth depends on the following factors:

- The number of internal and external calls made (calls per hour)
- The number of monitored users for each application (e.g. Presence Indicator)
- The number of configuration changes via the OIP Toolbox

Communications between OIP server and Microsoft Exchange Server

For communications between OIP server and the Microsoft Exchange Server the bandwidth depends on the following factors:

- The number of entries in the PBX abbreviated dialling list
- The number of entries in the PBX private phone books
- The number of entries in the public contacts folder on the Microsoft Exchange Server
- The number of entries in the private Microsoft Outlook address books

The synchronization intervals between PBX, OIP Server and Microsoft Exchange Server are set in the OIP Services, see "[Communications between OIP Server and PBX](#)", page 347.

Communications between IP-Softphone and PBX

To achieve a high voice quality when using IP Softphones, it is important to dimension and plan the IP network carefully with the same care as when planning IP Hardphones or an AIN system (Aastra 400 and Aastra IntelliGate®).

Network Bandwidth

When dimensioning the network bandwidth in LAN environments it is important to make sure that the LAN environments are implemented or adapted with switches instead of hubs.

WAN links in particular are critical during the dimensioning process.

Connection via WAN Links

WAN connections should be implemented via virtual private networks (VPN) to protect the call data and due to the problems with firewalls (dynamic port allocations).

9. 1. 2. 1 Firewall Management

When firewalls are used between communication sections of PBX, OIP server and OIP clients, some ports must be opened.

Firewall in front of the communication server

If the communication server is behind a firewall, the following ports must be opened incoming:

Tab. 198 IP Ports Aastra 400 and Aastra IntelliGate®:

Interface	TCP Port
Configuration	1061/1062/1080 ¹⁾
OIP Name Server	1070
Telephony	1074
Alarming	1088
Ascotel OIP Information Link	1112

¹⁾ Ports for outputting PBX event messages and call charge data can be configured in the communication server with AMS and AIMS. The values specified here are the default values of the PBX.

Tab. 199 IP Ports OpenCom 1000

Interface	Port
OIP Name Server	8092 (TCP)
TAMI interface	8095 (TCP)
CI interface	8801 -8808 (TCP)
RPC	962 (TCP)
Port mapper	111 (UDP)
OpenCom-Login	3100 (TCP)

Firewall on the OIP server

If the OIP server is protected by a firewall, the following ports must be opened incoming:

Tab. 200 IP Ports OIP Server

OIP server component	TCP Port
OIP-Server	2809
OIP Web server	80 ¹⁾
PBX alarms	1062
Call charge data	1080
OIP database	3308

¹⁾ The port for the OIP web server can be defined when the OIP server is installed. The value specified here is the default value.

Firewall on an OIP client

If an OIP client (PC with an OIP application) is protected by a firewall, the following ports must be opened incoming:

Tab. 201 IP ports OIP applications, OIP TAPI service provider and OIP connectors

OIP application	TCP Ports
<i>OIP Toolbox</i>	Free port ¹⁾
<i>OfficeSuite</i>	Free port
<i>Office 1560/1560IP</i>	Free port
<i>OIP TAPI service provider</i>	Free port
<i>OIP VoIP Media Driver</i>	60201 - 60300
<i>OIP Action Server</i>	60801 - 60900
<i>OIP Exchange Driver</i>	60001 - 60100
<i>OIP ODBC/JDBC Driver</i>	63001 - 63010
<i>OIP TwixTel driver</i>	60101 - 60110
<i>OIP DasTelefonbuch driver</i>	60111 - 60120
<i>OIP ISDN Media Driver</i>	60901 - 60910
<i>OIP ATAS-Gateways</i>	61001 - 61010
<i>OIP KNX driver</i>	60501 - 60600

¹⁾ A free port is searched for and occupied

9.1.3 Communication server requirements

OIP-Server

Requirements for connecting the OIP server to the communication server:

- The communication server must be connected to the network.
- The communication server has to be assigned an IP address.

IP-Softphone

Voice transmission is effected via the VoIP channels. Take the system and expansion limits into account.

- Each IP softphone is registered as a user in the communication server.
- The telephony settings are to be made in the communication server.
- A separate licence has to be obtained for each IP-Softphone.

9.1.4 OIP Server PC requirements

The following requirements and limitations must be taken into consideration to guarantee safe and high-availability of the OIP server.

Tab. 202 OIP server PC requirements and limitations

System specifications:	At least Pentium 4, 3 GHz, 1 GB RAM, 1.5 GB free hard-disk space
Supported operating systems	See Tab. 215, page 359
Use on a server operating system	Recommended for 50 or more users
Use of Aastra Technologies Limited certified applications on the same PC.	Allowed
Use of other applications on the same PC	Not recommended, to ensure OIP server availability and avoid compatibility problems
IIS installation on the same server	Not recommended, so that the OIP web server can be installed on standard IP port 80.
DirectX version	as of 8.1
Real-time search for antivirus software	To be deactivated for the OIP directory

9.1.5 OIP Client PC Requirements

Make sure an OIP client PC meets with the following requirements.

Tab. 203 OIP client PC requirements and limitations

System specifications:	Minimum Pentium III, 1 GHz, 512 MB RAM, 100 MB free hard-disk space
Supported operating systems	See Tab. 215, page 359
Use on a virtual client	Not allowed
DirectX version	as of 8.1

For the installation of an IP-Softphone the PC has to be equipped with a headset or handset. Devices with USB and analogue interfaces are available.

9.1.6 Further specifications on PCs with CTI applications

Installing Microsoft security updates

It is urgently recommended to install Microsoft security updates for all PCs on which Aastra Telecom Schweiz AG applications are installed.

There is only a small risk of problems occurring after a PC is updated. Aastra Telecom Schweiz AG cannot test the security updates in advance, just like it cannot provide the possibility for testing all possible hardware combinations. However, during operations and tests inside the company the applications are always deployed with the latest security updates, so that any problems can be rapidly detected.

Updating Java Runtime Environment (JRE) on server and client PCs

(Automatic) update of Java Runtime Environment (JRE) with CTI applications is not recommended on server PCs. Applications are optimised on specific JRE versions. Although it is possible for several JRE versions to run on the same PC, in reality, a JRE update often results in errors and, thus, to support cases. This is especially the case if new application components are installed or if already installed components are updated.

The CTI server applications provided by Aastra Telecom Schweiz AG are normally always compatible with the latest JRE version available during product release. The used JRE version is clearly defined. However, hitch-free operation with other JRE versions cannot be fully guaranteed. Therefore, it is advisable to use only the recommended JRE version without updating it.

You can update JRE on client PCs without worry.

Using antivirus software on server PCs

Basically, the use of antivirus software on server PCs with CTI server applications is conflict-free and recommended. Nevertheless, the antivirus software must be configured in such a way that all data concerned by real-time processing is not scanned. For example, the operative MYSQL directory of the OIP server database must be excluded from OIP operations. The same thing applies, among others, to the OpdenDesk and OpenMessaging applications. We also recommend excluding from the scanned directory the call data and ACD statistics written by the application.

Normally, using at the same time several antivirus programs from different manufacturers does not pose any problems.

9.2 Licensing and system limits

The finely tuned licensing policy used for the OIP applications, OIP functions and OIP connections means that OIP's powerful functionality can be tailored precisely to requirements, and its costs optimized.

Contents:

- System limits – [page 353](#)
- Handling OIP licences – [page 353](#)
- The OIP licences – [page 354](#)

9.2.1 System limits

Tab. 204 System limits

Maximum number ...	OIP	Remarks
CTI user	1200	This is the maximum value of OIP. The maximum value during operation depends on the connected communication system.
Agents	250	

9.2.2 Handling OIP licences

You can obtain OIP licences directly via the licence server or through your dealer. You obtain a licence file which contains not only the licence code but also a list of all the OIP licences enables. The OIP server reads the licence code from the licence file and manages the licences independently of the PBX licences.

To read the licence information into OIP, proceed as follows:

If you have not yet installed OIP:

1. Copy the OIP licence file on to your PC.
2. Start the OIP installation and follow the instructions given by the Installation Assistant.

At a certain point in the installation procedure you will be prompted to specify the storage location for the OIP licence file.

3. Indicate the storage location of the OIP licence file and continue with the installation.

The OIP licence file is copied to the OIP root directory. When you start OIP the licence number is loaded and the OIP licences it contains are enabled.

If you have already installed OIP:

1. Copy the OIP licence file to the OIP root directory (...*programme\aastra\oip*)
2. Restart OIP.

When you start OIP the licence number is loaded and the OIP licences it contains are enabled.

9.2.3 The OIP licences

Contents:

- Basic operation – [page 354](#)
- OIP Applications – [page 355](#)
- Connection of directories and group software – [page 355](#)
- Call Center – [page 355](#)
- CTI Third-Party applications and Toolbox applications – [page 356](#)
- Presence Profiles – [page 356](#)
- Trial licence – [page 357](#)

Basic operation

The basic operation of the OIP server requires a fully operational, permanently assigned PBX and an OIP licence which enables the connection to the PBX. Each additional PBX on the same OIP server requires a further connection licence.

The CTI connection licence restricts the scope of functions to TSP applications.

Tab. 205 Licences for PBX connection

Licence	Description
<i>PBX Connections for <pbx type></i>	Licence for operating one or more PBXs with OIP. The systems are specified in the licence file with their EID number (Aastra 400) and Aastra IntelliGate®) or their serial number (OpenCom 1000). The licence is valid only for the specified PBX systems.
<i>PBX Connections CTI for <pbx type></i>	Same as the licence <i>PBX Connection for <pbx type></i> but restricted to TSP applications with OIP (CTI Third-Party).
<i>PBX Master</i>	This is not a purchasable licence: The PBX added first is declared as the PBX Master. The PBX Master must be permanently connected with OIP so that the other licensed PBXs remain enabled for operation with OIP. The OIP server checks the connection every 24 hours. If the PBX is not connected with the OIP server during two successive checks, all the connected PBXs are disconnected from the OIP server.

OIP Applications

The OIP applications are available on the OIP server and can be installed from it, providing the relevant licences have been acquired. The OIP application licences contain all the rights required to operate the application in its basic function.

The licence of an OIP application enables all the OIP features required for its operation.

Tab. 206 Licences for OIP applications

Licence	Description
<i>OfficeSuite</i>	Licence to operate an OfficeSuite.
<i>Office 1560</i>	Licence to operate an Office 1560.
<i>Office 1560IP</i>	Licence to operate an Office 1560IP.

Connection of directories and group software

Enabling the following licences allows direct access to directories or to group software such as phone books or Microsoft Exchange.

Tab. 207 Licences for connecting directories and specific third-party applications

Licence	Description
<i>Phonebook Connector</i>	<p>Licence for connecting the following electronic directories:</p> <ul style="list-style-type: none"> • "TwixTel", phone book for Switzerland • "Das Telefonbuch", phone book for Germany • Microsoft Active Directory as directory database. • LDAP databases as directory databases. <p>The licence also enables the use of the name server so that it is possible to access directly from the connected terminals to the connected directories.</p>
<i>Microsoft Exchange Connector</i>	<p>Licence for connecting a Microsoft Exchange server to synchronize contacts, calendar entries, presence states, Voice Mails and e-mails. The licence also enables the use of the name server.</p>

Call Center

Enabling the following licences allows the OIP server to be used as a Call Center.

Tab. 208 Call Centre Licences

Licence	Description
<i>OIP Call Centre</i>	Enables the Call Center functions in the OIP and the ACD queue.
<i>Groups</i>	Each licence allows an agent group to be set up (Skill).
<i>Agent</i>	Each licence allows an agent to be set up.

CTI Third-Party applications and Toolbox applications

Enabling the following licences allows the operation of CTI Third-Party applications together with the OIP server as well as the use of Toolbox applications for telephony operation. Toolbox applications for the configuration of the OIP server do not require a licence.

Tab. 209 Third-party CTI Licences

Licence	Description
<i>CTI Third Party Basic</i>	Enables the connection to the TSP, the basic telephony features and the OIP Toolbox applications. Supports the telephony functions necessary for a simple CTI application (e.g. Office eDial, phone book CD).
<i>CTI Third Party Standard</i>	Enables the connection to the TSP, the standard telephony features and the OIP Toolbox applications. Supports the necessary telephony functions of a standard CTI application.

These licences are also required to operate third-party applications which communicate directly with the OIP server and not via TSP.

Presence Profiles

Enabling the following licences broadens the OIP functionality with presence profiles.

Tab. 210 Licences for OIP features

Licence	Description
<i>Profiles</i>	Allows the setting-up of (any number of) presence profiles.

alarm and location functions

Activating the following licences enhances the OIP function with alarm and location functions.

Tab. 211 Licences for OIP features

Licence	Description
<i>ATAS Interface</i>	Licence for enabling the alarm server functionality. This licence is also required if an external alarm server is connected to the OIP server (enables the ATAS gateway).
<i>ATASpro Interface</i>	Add-on licence for <i>ATAS Interface</i> . Enables the OIP DECT localization feature.



Note (only for Aastra 400 and Aastra IntelliGate®):

You can also acquire these licences in the communication server (recommended). In this case, OIP reads it from the communication server.

Trial licence

The trial licence can only be enabled for limited period of time. It provides an opportunity to get to know the OIP server and its range of features.

Tab. 212 Trial licence

Licence	Description
<i>Trial Licence, Office 1560x, CTI</i>	The trial licence enables all the OIP licences for a period of 30 days (see "The OIP licences", page 354). Its purpose is to provide a possibility for testing the OIP functionality.

Licence retrieval when updating older OIP versions

OIP licences as of OIP 7.6 do not cover the same range as OIP licences of earlier OIP versions. The licence management has also changed; up until OIP 17.5 the OIP licences were managed on the communication server. If you update OIP to version 17.6 or higher, OIP continues to read the licences from the communication server and converts them. If you acquire other licences, you obtain a licence file that contains both the new and the retrieved licences. This means that after the update all the functions previously enabled are still available.

9.3 Compatibility

Information on the compatibility of OIP and its components with PBX systems and operating systems can be found here.

Contents:

- Compatibility of OIP 8.0 – [page 358](#)
- Compatibility with softphones – [page 359](#)
- Compatibility Office eDial – [page 360](#)
- Compatibility with OIP 8.0 TAPI Service Provider – [page 360](#)
- Compatibility with OIP Exchange Driver – [page 360](#)
- Compatibility of external phone book directories – [page 361](#)
- Compatibility OIP Name Server – [page 361](#)
- Compatibility with OIP KNX driver – [page 361](#)

The [Tab. 213, page 358](#) provides a compatibility overview of the OIP components with the different PBX versions.

9.3.1 Compatibility of OIP 8.0

Tab. 213 Compatibility with Aastra 400 and Aastra IntelliGate®:

interface components	R1.0	I7.9
Open Interfaces Platform	X	-
Office Softphones	See "Compatibility with softphones", page 359	
Office eDial	X	X
OIP TAPI service provider	X	X
Microsoft Exchange Server Connection	X	X
Active Directory connection	X	X
Connection to LDAP directory	X	X
External phone book directories	X	X
OIP Name Server	X	X
KNX connection	X	X

Tab. 214 Compatibility with OpenCom 1000

interface components	Release 6.0	Release 5.1 / 5.0
Open Interfaces Platform	X	X
Office Softphones	See "Compatibility with softphones", page 359	
Office eDial	X	X
OIP TAPI service provider	X	X
Microsoft Exchange Server Connection	X	X
Active Directory connection	X	X
Connection to LDAP directory	X	X
External phone book directories	X	X
OIP Name Server	X	X
KNX connection	X	X

Tab. 215 Compatibility with Operating Systems

Operating system	OIP-Server	OIP-Toolbox	OfficeSuite	Office 1560/1560IP	Office eDial	OIP TAPI service provider	OIPExchange Driver	OIP Phone Book CD Driver	OIP KNX driver
Windows Server 2008 R2	X	X				X	X ²⁾	X	X
Windows 7 ¹⁾	X	X	X	X	X	X	X ²⁾	X	X
Windows Server 2008 ¹⁾	X	X				X	X	X	X
Windows Vista Business ¹⁾	X	X	X	X	X	X	X ²⁾	X	X
Windows Vista Home ¹⁾		X	X	X	X	X		X	X
Windows Server 2003 ¹⁾	X	X				X	X	X	X
Windows XP Professional	X	X	X	X	X	X	X ²⁾	X	X
Windows XP Home		X	X	X	X	X		X	X
Citrix / terminal server environment			X			X			

¹⁾ 32- and 64-bit systems

²⁾ Only OIP Exchange drivers for Microsoft Exchange Server 2007 & 2010

**Note:**

Windows Small Business Servers are not supported.

9.3.2 Compatibility with softphones

Tab. 216 Compatibility of OIP softphone - PBX version

PBX version	OfficeSuite ¹⁾	Office 1560 ²⁾	Office 1560IP
Aastra 400 as of R1.0	X	X	X
Aastra IntelliGate® I7.9	X	X	X
OpenCom 1000			

¹⁾ These softphone applications are updated automatically when they are started for the first time after the OIP version has been updated.

- ²⁾ This softphone application displays a message that a new version is available when it is started for the first time after the OIP version has been updated.

Compatibility with OIP can be found in the OIP Release Notes, see OIP support web page.

Office Softphone compatibility

Office Softphones are not compatible with each other and cannot be used at the same time for the same user.

9.3.3 Compatibility Office eDial

Compatibility with the OIP TAPI Service Providers

Office eDial is compatible with all OIP TAPI service providers and with Aastra 400 and Aastra IntelliGate® first-party TAPI service providers.

Office eDial is compatible with Citrix and terminal server environments.

Office eDial is compatible with MS Outlook 2003 and 2007 applications.

9.3.4 Compatibility with OIP 8.0 TAPI Service Provider

Compatibility to PBX version

The OIP 8.0 TAPI service provider is compatible as of Aastra 400 R1.0, Aastra IntelliGate® 17.9 and as of OpenCom 1000 Release 4.

Compatibility with Microsoft TAPI

The OIP 8.0 TAPI service provider is compatible with Microsoft TAPI 2.1.

The OIP 8.0 TAPI service provider is compatible with 64-bit operating systems.

9.3.5 Compatibility with OIP Exchange Driver

Compatibility with Microsoft Exchange Server

The OIP Exchange driver for Microsoft Exchange Server 2003 & 2007 is compatible with the following versions of Microsoft Exchange Server:

- Microsoft Exchange Server 2003 SP1
- Microsoft Exchange Server 2007 SP1

The OIP Exchange driver for Microsoft Exchange Server 2007 & 2010 is compatible with the following versions of Microsoft Exchange Server:

- Microsoft Exchange Server 2007
- Microsoft Exchange Server 2010

9.3.6 Compatibility of external phone book directories

Compatibility with Open Interfaces Platform

The compatibility of the various drivers with OIP can be found in the OIP Release Notes, see OIP Support web page. If required, the drivers for the external phone book directories should also be upgraded as a matter of principle whenever the OIP server is upgraded.

Compatibility with phone book CDs

The [Tab. 217, page 361](#) provides an overview of current drivers for connecting phone book CDs and the relevant program version used for testing the corresponding driver.

Tab. 217 Compatibility with external directories

Country	Phone book CD	Version
CH	TwixTel Network Version	as of 35
D	DasTelefonbuch Germany	as of 270

9.3.7 Compatibility OIP Name Server

Compatibility to PBX version

The OIP Name Server is compatible as of Aastra 400 R1.0, Aastra IntelliGate® I7.9 and OpenCom 1000 4.0.

9.3.8 Compatibility with OIP KNX driver

Compatibility with Open Interfaces Platform

Compatibility with OIP can be found in the OIP Release Notes, see OIP support web page. If required, the OIP server should also be upgraded as a matter of principle whenever the OIP KNX driver is upgraded.

Compatibility with KNX

The OIP KNX driver is compatible with KNX bus coupler as per Standard BCU 1 and BCU 2.1.

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