Avaya one-X® Attendant 4.02 connected to Avaya Integral Enterprise

Installation and Administration Manual

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Service and Installation Manual one-X Attendant connected to Avaya Integral Enterprise

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Documentation

About this document

Who is this manual for?

This manual is for technical staff who install and configure **Avaya one-X ® Attendant** applications.
Use this manual as you wish for reference purposes regarding individual topics or to learn how to install and configure the applications.

What information is available in the manual?

This manual contains information on how to install and configure the one-X Attendant applications.

What information is not in the manual?

This manual does not contain any information on how to use the one-X Attendant application.

Where can you find additional information?

You will find further information about the one-X Attendant and on
installation of the different components, as well as on the OS33 operator set (needed for a 1st party connection to the PBX system), in the documents listed in the References section (→ p. 84).

Avaya one-X® Attendant Overview

Please familiarize yourself with these components

List of components

Whether you serve as a switchboard for many users or connect calls on a smaller scale, the **Avaya one-X® Attendant** operator position provides just the tools and functions you need to expertly forward calls to the correct party.

Before you can use a one-X Attendant operator position, various components must be installed and operational.

Below is a list of all components. The following descriptions explain the functions of each of the components.

- one-X Attendant application
- One-X Attendant server Database/JOnAS/Tomcat
- OS_TAPI
- SVA Manager (network–wide busy display, PUM)
- License server (Macrovision FlexLM)
- WebAccess
- Absence Info Server

Component: one-X Attendant application

The **one-X Attendant** application is a client application you can use to access different servers and databases.

Component: Database/JOnAS

In order to run the **one-X Attendant** application you need a database. The database contains the configuration and phone book data. A database management system, **Sybase SQL Anywhere 11.0.1**, (ASA) and an application server, **JOnAS**, are used for the database.

JOnAS and **ASA** cannot be separated. Both servers must be installed on the same PC.

Component: QTAPI Framework

QTAPI Framework is the interface between Integral Enterprise and the SVA Manager. It is installed with SVA Manager.

Component: QTAPI Server

The QTAPI server is required for the 3rd party connection of Integral Enterprise. It is the connecting link between Integral Enterprise and OS_TAPI (one-X Attendant application). The server uses QTAPI Framework and is connected with the one-X Attendant using a TCP/IP interface. During a one-X Attendant server installation the QTAPI server is installed automatically.

Component: SVA Manager

SVA Manager is an independent server. It acts

- as a basis for the **network–wide busy display**.
- for logging in and logging out agents using Personal User Mobility (**PUM**).
- to generate the Redial and Call lists.

It uses QTAPI Framework and is connected with the one-X Attendant using a TCP/IP interface.

SVA Manager runs as a service on the PC and has no windows. It is started every time the PC is booted up, independently of one-X Attendant.

SVA Manager only needs to be installed once in the network. Program outputs can be viewed using the TTrace Monitor.

Component: Web server

A web server is needed for the out–of–office notice. One-X Attendant uses the Tomcat web server which is integrated in the JOnAS. You cannot use another web server (such as Apache Web Server) for one-X Attendant.

Component: WebAccess

WebAccess contains the HTML and Java Server pages for the Web server to configure the out–of–office notice using AIS (see below) or a browser. Installing the one-X Attendant Server(JOnAS) installs the following components.

- HTML pages
- Java Server Pages
- Web server activation

Component: WebAccess admin tool

This tool is used for resetting the user password for WebAccess.

Component: Absence Info Server (AIS)

AIS lets the **one-X Attendant** application detect and use an out–of–office notice set in Microsoft Exchange Server. AIS is installed on a central PC in the network and uses MAPI to access the Exchange Server.

Component: License server (Macrovision)

The Macrovision license server must be available on the network. It manages the licenses for one-X Attendant and its components.

Component: OS_TSPV

The OS-Telephony Service Provider (TSPV) is used for the communication between the OS33 operator set and the OS-TAPI.

Component: OS_TAPI

The one-X Attendant can use telephony features via OS_TAPI.

There are two variants for Integral Enterprise:

- 1st party connection via OS33
- 3rd party connection via SVAManager

Component: Absence Info Pusher

A Windows service which informs all one-X Attendant clients about changes to the absence status in the one-X Attendant database.

Component: Update service

The update service connects the external data sources (Exchange, Domino, other databases) with the phone book server (JOnAS). It performs a regular update of the phone book data located there with the entries in the connected data sources.

The update cycle can be configured.

Component: Calendar information

You can use MS Outlook or Lotus Notes to query calendar information. However, you can only use one alternative at a time. You need an appropriate active client on the one-X Attendant client PC (and the calendar license).

The file responsible for the MS Outlook connection is **SaveTol.dll**, for Lotus Notes it is **NotesCalendar.ocx**.

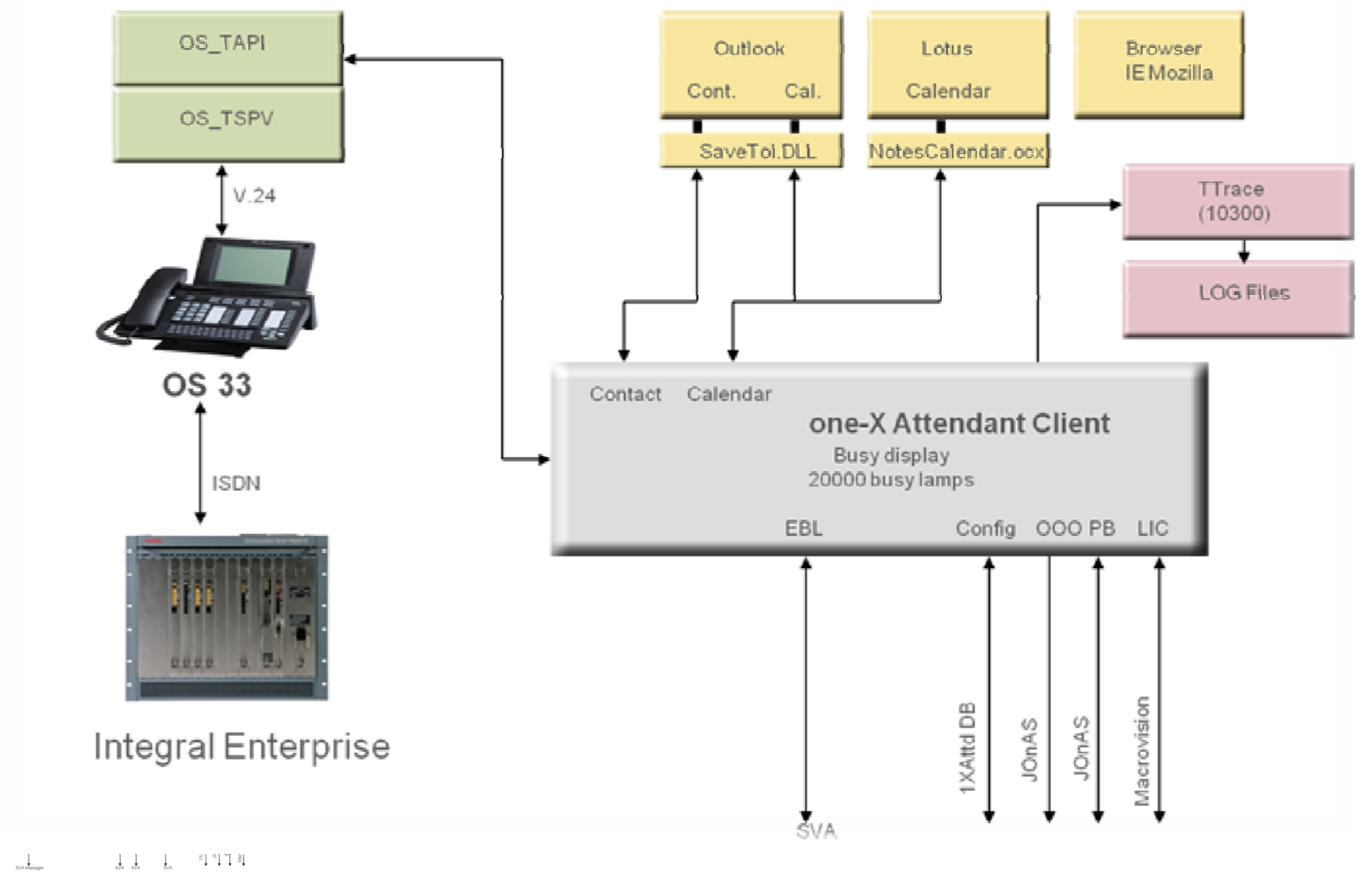
Valid versions of the components

For one-X Attendant to work with all the other components, you must have the correct version of the components. Installing the components from the installation CD will of course install the correct versions. Always consult your system specialist before installing any other versions, even newer versions!

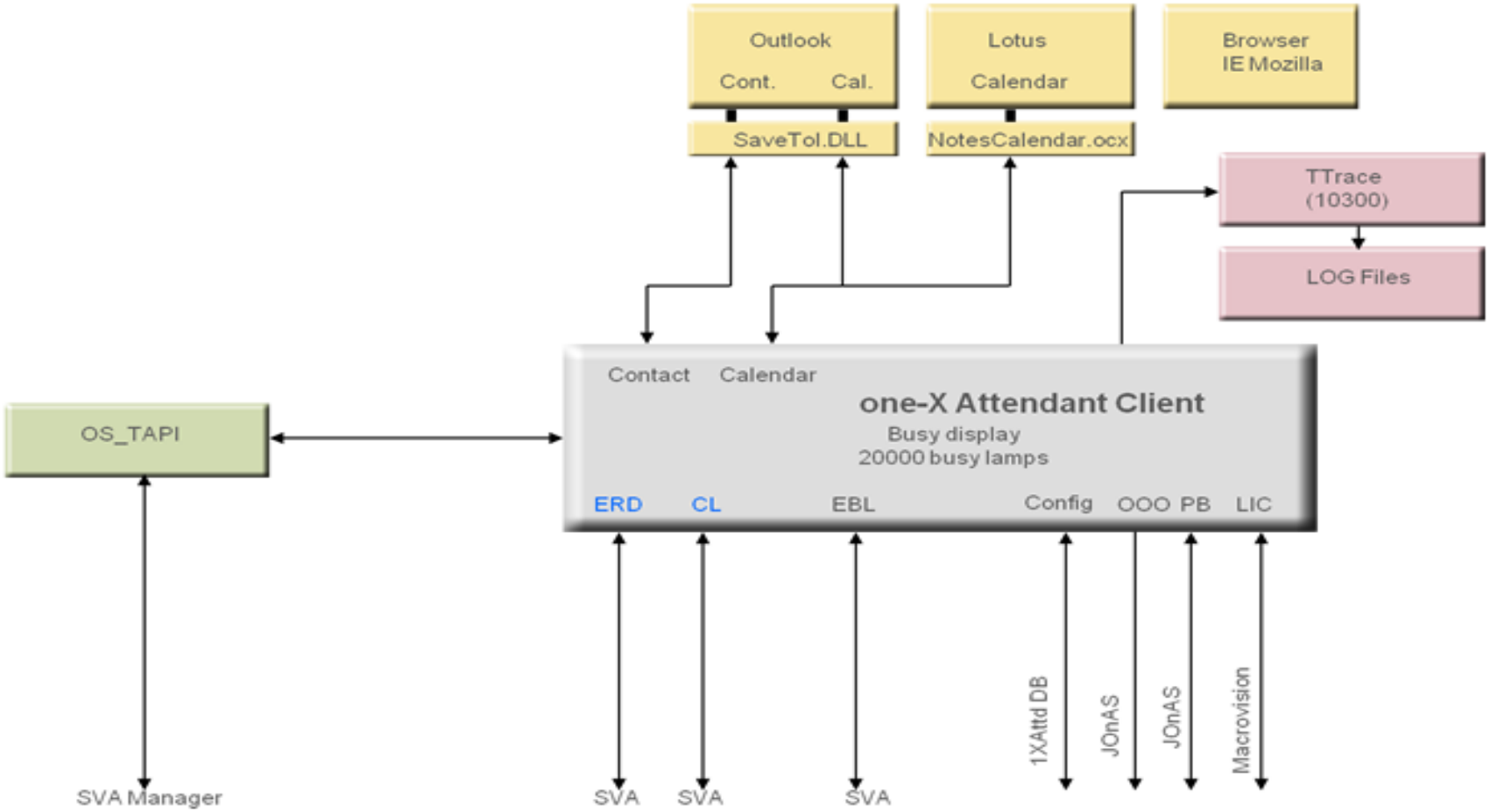
Block diagram of one-X Attendant in conjunction with all additional components

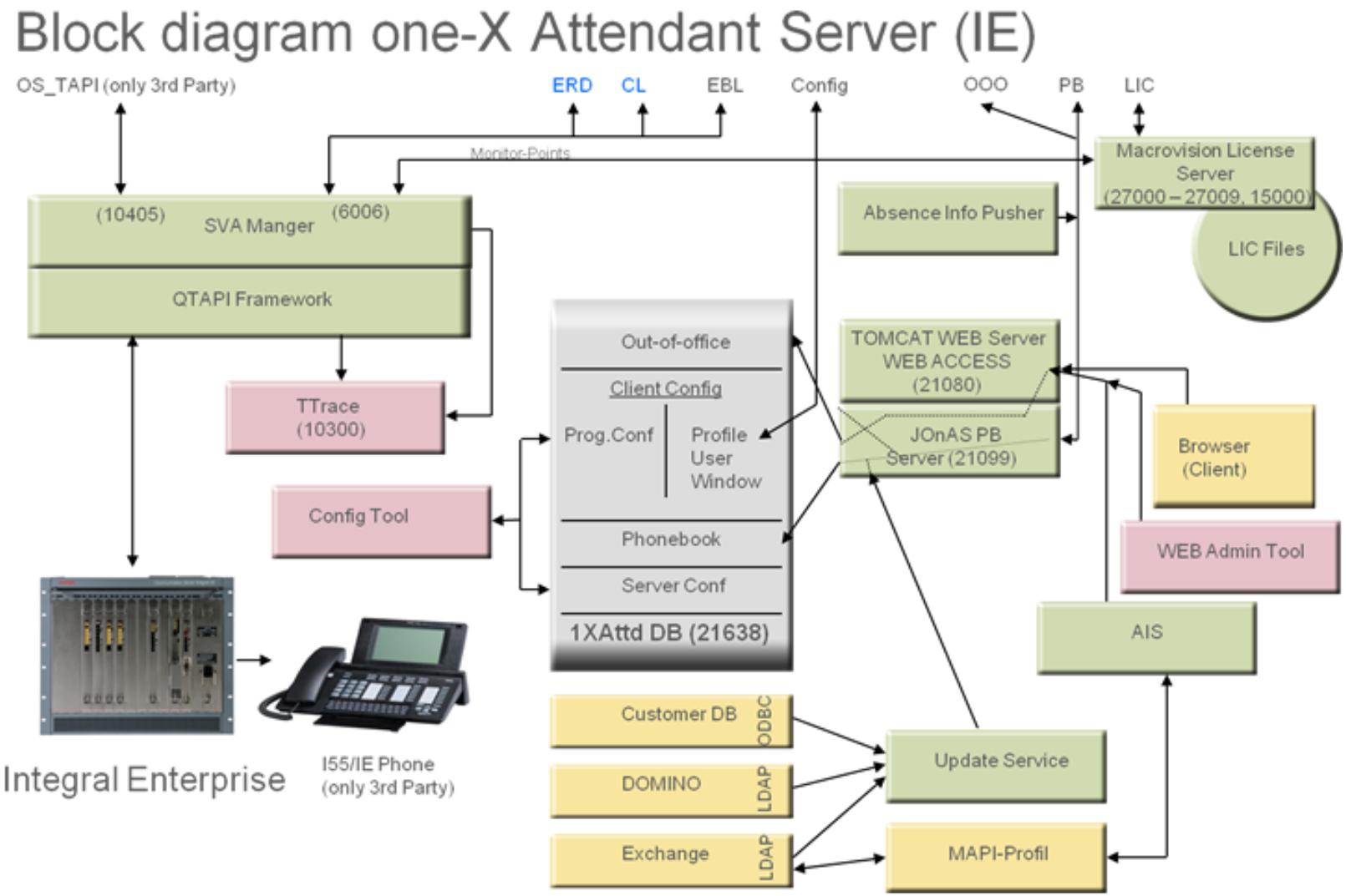
The following block diagrams of one-X Attendant Client and one-X Attendant Server show how all the application components work together.

Block diagram one-X Attendant Client (IE 1st Party)



Block diagram one-X Attendant Client (IE 3rd Party)




Block diagram one-X Attendant Server (IE)
OS_TAPI (only 3rd Party)
ERD
CL
EBL
Config
OOO
PB
LIC
Monitor-Points
Macrovision License Server (27000 – 27009, 15000)
LIC Files
(10405)
SVA Manger
(6006)
QTAPI Framework
Absence Info Pusher
TTrace (10300)
Out-of-office
Client Config
Prog.Conf
Profile User Window
Phonebook
Server Conf
1XAttd DB (21638)
TOMCAT WEB Server WEB ACCESS (21080)
JOnAS PB Server (21099)
Browser (Client)
Config Tool
WEB Admin Tool
AIS
Customer DB
ODBC
DOMINO
LDAP
Exchange
LDAP
Update Service
MAPI-Profil
Integral Enterprise
I55/IE Phone (only 3rd Party)

Connecting to Avaya Integral Enterprise

Operator set

IE/I55 1st party connection: OS33 operator set

Detailed information about maintenance tasks and first use of the OS33 can be found in /4/.

IE/I55 3rd party connection: *ISDN telephones:* T3 Compact, T3 Classic, T3 Comfort

IP Telephones: Avaya one-X®deskphone edition, T3 Compact (not with CIE connection), T3 Classic, T3 Comfort

Information about maintenance tasks and first use can be found in the various service manuals, which you can obtain from Avaya Support /2/.

Installing the software

Avaya one-X® Attendant system requirements

System requirements: Server

The PC running the server components must meet the following minimum requirements:

Only the one-X Attendant server:

- Quad Core CPU with 3 GHz (Server-Hardware or comparable powerful Virtual Machine)
- 3 GBytes RAM (recommended 6 GBytes for 64 Bit)
- 1 GB available disk space (depending on user data)
- 100 Mbit/s Ethernet IP connection
- Operating systems 32 Bit: Windows Server 2008 SP2 Standard/Enterprise (recommended), Windows 7 Professional/Ultimate
- Operating system 64 Bit: Windows Server 2003 (Enterprise/Standard), Windows Server 2008 (Enterprise/Standard), Windows Server 208 R2 (Enterprise/Standard), Windows 7 (Professional7Ultimate)
- If ComMan 4.500.10 for connection of SVA Manager(Extended Busy Lamp) to the Integral 55 with E07 is used and installed on the server, a ISDN S0 adapter is necessary.

The latest service pack must allways be installed..

One-X Attendant Server with other server components:

- Quad Core CPU with 3 GHz (Server-Hardware or comparable powerful Virtual Machine)
- 4 GByte RAM (recommended 6 GByte RAM)
- 2 GB available disk space (depending on user data)
- 100 Mbit/s Ethernet IP connection
- Operating systems 32 Bit: Windows Server 2008 SP2 Standard/Enterprise (recommended)
- Operating systems 64 Bit: Windows Server 2008 R2 Standard/Enterprise (recommended)
- The latest service pack has to be installed in all cases.

One-X Attendant Server on a virtual Machine:

- VMWare ESXi, 4.0.0,208167
- Per VM 1vCPU, 1GB RAM
- Operating system: Windows 7 Professional 64 Bit, Windows 7 Ultimate 32 Bit, Windows 7 Ultimate 64 Bit, Windows Server 2008 SP2 32 Bit, Windows Server 2008 SP2 64 Bit..
- One-X Attendant Client on a separat PC, system requirements see. below

Or

- HyperV Manager
- Per VM 1vCPU, 1GB RAM
- Operating system: Windows 7 Professional 64 Bit, Windows 7 Ultimate 32 Bit, Windows 7 Ultimate 64 Bit, Windows Server 2008 SP2 32 Bit, Windows Server 2008 SP2 64 Bit.
- One-X Attendant Client on a separat PC, system requirements see below

System requirements: Client

The PC running the **one-X Attendant** application must meet the following minimum requirements:

- PC with 2 GHz
- 1 GBytes RAM, (2 GB for 64 Bit OS and in case of 3rd party products e.g. MS Office, …)
- 700 MBytes available disk space (depending on data)
- 100 Mbit/s Ethernet IP connection

- 19”-monitor with 1280x1024 pixels. (or a 21” monitor for visually impaired users)
- 1 free COM interface if a OS33 or a Braille module is connected
- Printer with graphics capability for printing charges and statistical data.
- Operating system 32 Bit: Windows 7 Professional/Ultimate (recommended), Windows XP Professional, Windows Server 2008 SP2 Enterprise/Standard
- Operating system 64 Bit: Windows 7 Professional/Ultimate (recommended), Windows Server 2008 R2 Enterprise/Standard
- The latest service pack has to be installed in every case.

System requirements: Single–user

A PC with a single–user solution must meet the following hardware and software requirements.

- PC with 2 GHz
- 3 GBytes RAM (recommended 5 GBytes), depending on the configuration and installation of other components (for example MS-Outlook, MS-Word)
- Operating system 32 Bit: Windows 7 Professional/Ultimate (recommended), Windows XP Professional, Windows Server 2008 SP2 Enterprise/Standard
- Operating system 64 Bit: Windows 7 Professional/Ultimate (recommended), Windows Server 2008 R2 Enterprise/Standard
- The latest service pack has to be installed in every case!
- 800 MBytes available disk space (depending on data)
- 100 Mbit/s Ethernet IP connection
- 19”-monitor with 1280x1024 pixels
  (or a 21” monitor for visually impaired users)
- 1 free COM interface if a OS33 or a Braille module is connected
- You will need a printer with graphics capability to output charges data and statistical data.
- In Road Warrior Mode: USB Headset with DSP or USB–Phone
  In Telecommuter Mode: Any Ttelephone connected to your PBX

Client–server LAN connection

Client and server must be connected via a LAN offering sufficient bandwidth.

Integral Enterprise system requirements

Version	The following software versions of Integral Enterprise/Integral 55 are supported: E04.1, E05, E06, E07 (latest version), IEE2, IEE3, IEE4, IEE5, IEE6 and later

Installations (setups)

Possible installations

To use all the **one-X Attendant** functions, you must perform the following installations (setups). There is one installation file for each installation.

1. Macrovision FlexLM License Manager (license server)
   When you install License Manager you must install the Avaya license management program for one-X Attendant to Integral Enterprise. The license server is an absolute requirement and must be installed before one-X Attendant .
2. one-X Attendant
   There are four different types of setup. For a detailed description, see below.
3. Absence Info Server (AIS)
   The AIS evaluates the out–of–office information from Exchange. You need special licenses for the AIS.
   The AIS can be installed after the one-X Attendant

Migrations from previous OSPC versions

Migrations from OSPC versions 2.1x, 2.2x, 2.5x are possible. Direct upgrades are not supported .

General setup information

You must have administrator rights to install all one-X Attendant components.

- The setup user interface language is the language of your operating system. If a language other than German or English is set there, the display is in English.
- All settings are preconfigured with default values.
- Following installation, all “services” are started automatically.

Installing the license server (Macrovision FlexLM)

The license server (Macrovision FlexLM) is used to license **one-X Attendant**. All you need is access to a license server already running on the network.

Installing

During the installation, the hostname and port of the license server are queried.

If you do not have access to a license server, you can install one from the one-X Attendant CD.

1. Insert the Avaya one-X Attendant CD into your CD drive. The Overview start page opens in your standard browser.
2. Click on **Avaya license manager**. An InstallShield Wizard starts up. The InstallShield Wizard dialogs are in the same language as your operating system.
3. Start the **Setup.exe file**.
   An install-wizard guides you through the installation.

More information on installation of the license server can be found in Reference /6/.

Requesting and importing licenses

The licenses for the one-X Attendant are linked to the PC hardware of the license server. If the license server is installed on a new PC, a new license must be requested.

Please refer to the online Help facility for the license manager (Macrovision FlexLM) for comprehensive information on how you can request and then import licenses. The Start page is located on the installation CD in the directory
software/licenseserver/documentation/english/start.htm

Overview of Macrovision FlexLM licenses

The table below shows which one-X Attendant Macrovision FlexLM licenses you need for using the different features.

Material Code	***SW-Kit***
4.999.137.300	One-X ATTD R4 IE license and DVD SWBS
4.999.137.301	One-X ATTD R4 IE upgrade license and DVD SWBS
4.999.137.299	One-X ATTD R4 IE.x DVD
	Licenses
4.999.137.309	One-X ATTD R4 IE license
4.999.137.310	One-X ATTD R4 IE upgrade license
4.999.137.304	One-X ATTD R4 IE every client more
4.999.137.305	One-X ATTD R4 IE upgrade for every client more
4.999.137.306	One-X ATTD R4 IE external databases
4.999.137.307	One-X ATTD R4 IE absence information
4.999.137.308	One-X ATTD R4 IE extended busy display 20000

Setup types

The following setup types are available for installation of one-X Attendant.
You must install the appropriate setup type depending on the application.

– **Customized**
  This setup-type is only for advanced users. You can select the desired components.

  You must select this type if you want to install **SVA Manager** (Network–wide busy display, PUM) but do not have a single–user solution.

– **Client**
  Installs one-X Attendant without database. Use this setup type for a client–server solution. Before you can install the one-X Attendant client, you must install the one-X Attendant server (database) on a suitable PC. For the one-X Attendant client you need the host name or TCP/IP address of the one-X Attendant server as well as the name of the one-X Attendant database.

  The following components will be installed:

  – All Client components
  – JRE (Java Runtime Environment)

– **Server**
  Use this setup type for a client–server solution. The one-X Attendant Server must be installed before the clients.

  The following components will be installed:

  – one-X Attendant application (server)
  – Database (ASA 11)
  – Phone book server (JOnAS)
  – JDK (Java Development Kit)
  – WebAccess (JOnAS)
  – Absence Info Pusher

– **Full (single–user)**
  Installs one-X Attendant with a local database. Use this setup type for a single–user solution.

Prepare for installation

Close any other Windows programs (such as MS Word). **Make sure that no Adaptive Server Anywhere (ASA) database is running.** If an ASA (service) is running, close it. If you use a screen saver in Windows, deactivate it before installing **one-X Attendant**. Once the installation is complete, you can use the screen saver as you normally would.

Starting the installation

To start the installation, follow these steps.

1. Insert the one-X Attendant installation CD in your CD drive. The Overview start page opens in your standard browser.
2. Click **one-X Attendant**. An InstallShield Wizard starts up. The InstallShield Wizard dialogs are in the same language as your operating system.
   The **Welcome** dialog opens.
3. Click **Next**. The **License Agreement** dialog opens. Read and comply with the copyrights.
4. You must agree to the license terms to install the program. Select the correct option and click **Next**. The **Setup type** dialog opens.
5. Select the required setup-type and click **Next**. Follow the instructions on screen to continue.

Installing Custom setup

You have begun the installation and selected Custom as the setup type.

1. The **Select Features** dialog opens. Select the desired components.
   Note: The following procedure describes how to install all components.
2. Click **Next**. The **Choose destination path** dialog opens. You can select the folder into which the corresponding client data will be copied. Use the default setting.
3. Click **Next**. The second **Choose destination path** dialog opens. You can select the folder into which the data of the different server components will be copied. Use the default setting. (The path must **not** contain any spaces.)
4. .Click **Next**. The **Edit data** dialog opens. You must specify the following information for the phone book server.
   Host (Only if Server isn't selected)
   Shows the host name of the phone book server, or TCP/IP number if no DNS server is installed on the network. The default setting is the name of this computer.
   If the TCP/IP number is used be sure that the number is also used for the host in the following file of the server: <ServerDirectory>\JONAS\conf\joramAdmin.xml (3 entries).
   Port
   Indicates the port for database access to the phone book server (JOnAS). Accept the default.
5. Click **Next**. A new **Edit data** dialog opens**.** This dialog lets you set up the database connection.
   Server name
   Shows the name of the database (engine name in the ODBC settings). Accept the default **<hostname>_one-X Attendant**. The name of the database must be unique within the network.
   Port
   Shows the port for the database-server. Accept the default.
6. Click **Next**. The **Password** dialog opens**.** The password is used to access the database. If you change the password, you must enter it twice for security.
7. Click **Next**. A **Setup type** dialog opens**.** Select which phone you will use. For a 1st party connection of an OS33 operator set directly to the one-X Attendant PC, select **OS33**. If you wish to use a different phone, this is done via a 3rd party connection of the phone directly to the PBX. Select the option field **Other terminal in 3rd party mode**.

If you have selected **OS33**:

a. Click **Next**. The **Setup type** dialog opens. Choose the relevant program version. You will find the device type on the back of the OS console.

If you have selected **Other terminal in 3rd party mode**:

a. Click **Next**. A new **Setup type** dialog opens. Choose whether you wish to operate with your phone as agent on the call distribution of a CIE solution (Avaya Customer Interaction Express).

8. Click **Next**. The **Edit data** dialog opens. You configure the connection of the **SVA-Manager** here.
   Host

Enter the host name of the computer on which the SVA Manager is running.

Port Network–wide busy display
Enter here the port for the access to SVA Manager.

Port Telephony (only if you have chosen “with CIE Integration”) Enter here the port for the access to SVA Manager.

9. Click **Next**. The **Edit data** dialog for the Web server port opens.

   Port
   Enter here the port over which the web server can be accessed.

10. Click **Next**. The **Select additional languages** dialog opens. The default setting is to install all languages currently offered by one-X Attendant. Here you can select the languages which you do not wish to install. You do this by unchecking the relevant checkboxes.
11. Click **Next**. The **Ready to install the program** dialog opens.
12. Click **Install**. The installation starts. This process takes several minutes. The **Setup status** dialog indicates the progress of the installation.
13. If you wish to install an SVA Manager, the setup for the **Avaya AE Services TSAPI Client** now starts.
14. After prompting for the save location, the **TCP/IP Name Server Configuration** dialog opens.

    Host name or IP Address
    If you wish to display the busy states of a CM which is located in your network, enter the name or the IP address of the AES server.

    Port
    Enter the AES server port through which it communicates with the TSAPI client.

15. Click on the button **Add to list**.
    The application checks whether you can access the AES server.
16. Repeat steps a and b if necessary and add further existing AES servers to the list.
17. End the installation of the **TSAPI Client** with **Finish**.
18. After the end of the installation, configuration is carried out for the SVA Manager. First you must log in to the **QConfig** tool. In the log in dialog, enter the password “Recall”.
19. Click **Next**. QConfig opens the configuration user interface for the file **SVA_Manager.xml**.

    All the input and option fields which are needed for configuration of the SVA-Manager are described in the section **SVA Manager Configuration** (→ p. 28).
20. Click **Save**.
21. End the configuration with **File** > **Exit**. The SVA Manager installation is complete.

    Next, the InstallShield Wizard starts the following services: Avaya Phonebook Server, Avaya Phonebook Server – Absence Info Pusher, Avaya Phonebook Server – Update Service, Avaya .
22. The **one-X Attendant Configuration Tool Collection** then starts.

    Log in as the default user “Avaya” with the password “000000”. Save your values for the address parser here and test them.

    All settings are described in the one-X Attendant Configuration Tool Collection section.
23. Close the application. The last installation dialog, **InstallShield Wizard Complete**, opens. To end the installation, click **Finish**.

Installing Client type setup

You have begun the installation and selected “Client” as the setup type.

1. Click **Next**. The **Choose destination path** dialog opens. You can select the folder into which the corresponding client data will be copied. Use the default setting.
2. Click **Next**. The **Edit data** dialog opens. You must specify the following information for the phone book server.
   Host
   Shows the host name of the phone book server. In this case, the host is the name or TCP/IP number if no DNS server is installed on the network. The default setting is the name of this computer.
   If the TCP/IP number is used be sure that the number is also used for the host in the following file of the server: <ServerDirectory>\JONASconf\joramAdmin.xml (3 entries)
   Port
   Indicates the port for database access to the phone book server (JOnAS). Accept the default.
3. Click **Next**. A new **Edit data** dialog opens. The connection to the database is set up here.

   Server name
   Shows the name of the database (engine name in the ODBC settings). The default is **<Computername>_one-X Attendant**. The name of the database must be unique within the network. **Port**
   Shows the port for the database-server. Accept the default.
4. Click **Next**. The **Password** dialog opens. Enter here the password for accessing the one-X Attendant database which you set when you installed the server. The default password is already entered.

5. Click **Next**. A **Setup type** dialog opens**.** Select which phone you will use. For a 1st party connection of an OS33 operator set directly to the one-X Attendant PC, select **OS33**. If you wish to use a different phone, this is done via a 3rd party connection of the phone directly to the PBX. Select the option field **Other terminal in 3rd party mode**.

If you have selected **OS33**:

a. Click **Next**. The **Setup type** dialog opens. Choose the relevant program version. You will find the device type on the back of the OS console.

b. Click **Next**. A new **Setup type** dialog opens. Select whether you wish to connect the one-X Attendant with an SVA-Manager. If you have selected “No”, go to 8 and continue the installation process from there.

If you have selected **Other terminal in 3rd party mode**:

a. Click **Next**. A new **Setup type** dialog opens. Choose whether you wish to operate with your phone as agent on the call distribution of a CIE solution (Avaya Customer Interaction Express).

6. Click **Next**. The **Edit data** dialog opens. You configure the connection of the **SVA-Manager** here.

   Host
   Enter the host name of the computer on which the SVA Manager is running.

   Port Network–wide busy display
   Enter here the port for the access to SVA Manager.

   Port Telephony (only when you have chosen **Other terminal in 3rd party mode**)
   Enter here the port for the IP link connection to SVA Manager.

7. Click **Next**. The **Select additional languages** dialog opens. The default setting is to install all languages currently offered by one-X Attendant. Here you can select the languages which you do not wish to install. You do this by unchecking the relevant checkboxes.
8. Click **Next**. The **Ready to install the program** dialog opens.
9. Click **Install**. The installation starts. This process takes several minutes. The **Setup status** dialog indicates the progress of the installation.

10. The last installation dialog, **InstallShield Wizard Complete**, opens.
    To end the installation, click **Finish**.

Note
If the client installation finds Lotus Notes (various versions) on the PC, the database name is checked on the server where the calendar function is set up. The Lotus Notes COM interface is registered as well.
Note
The client installation has always to be followed by the license server installation. If licenses are already installed, The setup GUI will also allow to enter the path to the license manager.

Installing single–user type setup

You have begun the installation and selected single–user as the setup type. The installation is identical to the Custom installation in which all components were selected.

Installing server setup type

You have begun the installation and selected “Server” as the setup type. This installs all the server components.

1. Click **Next**. The **Choose destination path** dialog opens. You can select the folder into which the data for the different server components will be copied. Use the default setting. (The path must **not** contain any spaces.)
2. Click **Next**. The **Edit data** dialog opens. You must specify the following information for the phone book server..
   Port
   Indicates the port for database access to the phone book server (JOnAS). Accept the default..
3. Click **Next**. A new **Edit data** dialog opens**.** The connection to the database is set up here.

   Server name
   Shows the name of the database (engine name in the ODBC settings). Accept the default. The name of the database must be unique within the network.
   Port
   Shows the port for the database-server. Accept the default.
4. Click **Next**. The **Password** dialog opens**.** The password is used to access the database. If you change the password, you must enter it twice for security.
5. Click **Next**. A new **Setup type** dialog opens. Select whether you wish to install an SVA manager.
6. Click **Next**. The **Ready to install the program** dialog opens.
7. Click **Install**. The installation starts. This process takes several minutes. The **Setup status** dialog indicates the progress of the installation.

If you chose SVA manager installation:

a. Click **Next**. If you wish to install an SVA Manager, the setup for the **Avaya AE Services TSAPI Client** now starts.

b. After prompting for the save location, the **TCP/IP Name Server Configuration** dialog opens.

   Host name or IP Address
   If you wish to display the busy states of a CM which is located in your network, enter the name or the IP address of the AES server.

   Port
   Enter the AES server port through which it communicates with the TSAPI client.

c. Click on the button **Add to list**.
   The application checks whether you can access the AES server.

d. Repeat steps a and b if necessary and add further existing AES servers to the list.

e. End the installation of the **TSAPI Client** with **Finish**.

f. A log in dialog opens. You must log in to the **QConfig** tool. Enter the password “Recall”.

g. Click **Next**. QConfig opens the configuration user interface for the file **SVA_Manager.xml**.

All the input needed for configuration of the SVA Manager is described in the section **SVA Manager Configuration**.

h. Click **Save**.

i. End the configuration with **File** > **Exit**. The SVA Manager installation is complete.

   Next, the InstallShield Wizard starts the following services: Avaya Phonebook Server,
   Avaya Phonebook Server – Absence Info Pusher,
   Avaya Phonebook Server – Update Service.

8. The **one-X Attendant Configuration Tool Collection** then starts.
   Log on as the default user “Avaya” with the password “000000”. Save your values for the address parser here and test them.
   All settings are described in the one-X Attendant Configuration Tool Collection section .
9. Close the application. The last installation dialog, **InstallShield Wizard Complete**, opens. To end the installation, click **Finish**.

Installing components later

If you open the setup again, you can change, repair or uninstall the program.

If you select the “Change” option, the “Custom” setup is entered.

Uninstall

You can uninstall the **one-X Attendant** components at any time. To uninstall **all** components, follow these steps.

1. In **Control Panel**, click **Add or Remove Programs**.
2. Click **Avaya one-X Attendant**.
3. Click **Remove**.
4. Select **Remove** and then click **Next**. After another prompt one-X Attendant will be uninstalled from your PC.

Note: It is not possible to remove one-X Attendant components individually.

Additional components

Network–wide busy display (SVA Manager)

About SVA Manager

General information about SVA Manager is provided in the sections about the various one-X Attendant components.

Prerequisites for installation

You must have licenses to use the network–wide busy display/PUM.

Installation

The installation can also be carried out together with the one-X Attendant server installation.

The following describes installation at a later time, which involves using a separate setup which you can open from the Custom setup.

The setup includes the installation of SVA Manager as a service and of the QTAPI Framework.

You have begun the installation and selected Custom as the setup type.

1. The **Select Features** dialog opens. Select the check box “SVA-Manager”. Remove the check mark from all the other check boxes.
2. Click **Next**. The **Choose destination path** dialog opens. You can select the folder into which the data for the different server components will be copied. Use the default setting. (The path must **not** contain any spaces.)
3. Click **Next**. The **Ready to install the program** dialog opens.
4. Click **Install**. The installation starts. The **Setup status** dialog indicates the progress of the installation.
5. After the installation finishes the login dialog for the SVA Manager’s **QConfig** configuration tool opens. The default password is “Recall”. Please take note of the overview table for the settings (→ p. 28).
6. Click **Exit**. The SVA Manager installation is complete.

Configuration using QConfig

When you start SVA Manager, the configuration is imported from the xml file **SVA_Manager.xml**.

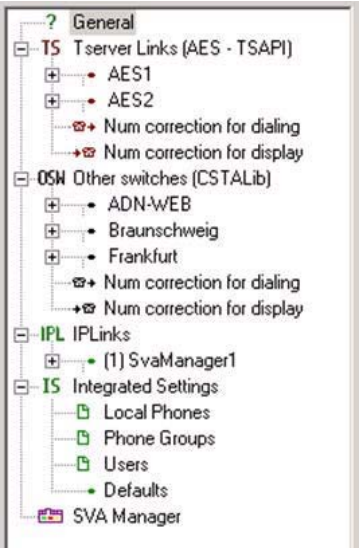
The file is in the SVA Manager directory.

To make it easier to edit the configuration parameters in the xml file, a configuration tool (**QConfig**) is installed along with SVA Manager.

Start program

Start the program using the Start menu: **Start > Programs > Avaya > SVAManager Config**. Enter "Recall" as the password.

Program window



The program window is split into a tree view on the left and a work area on the right.

The tree view allows you to select settings for various tasks. The possible settings for the topic marked in blue are shown in the work area.

The settings for SVA Manager have to be made under the various topic areas.

The following table lists all the settings necessary for configuration of a SVA Manager to an Integral Enterprise. Further information on all the settings which can be made using **QConfig** is provided in Reference /3/.

Note:

For security reasons, please change the login password immediately after the first start of **QConfig**. The change is made in the subject area **General > Config Protection > Password > Set ...**

Subject area, Data entry	**Setting**	**Meaning**
General		Settings for connection of Customer Interaction Expressh (CIE)
CIE Command line	Command to start a task server in CIE	Enter the command **-nsh <CIE Host Name>**, e.g. "-nsh Comm2007". **<CIE Host Name>** is the name of the computer on which CIE is running.
TS		List with AES servers and your system settings relevant to one-X Attendant. New AES servers can be connected using the **New** button.
If you are running one-X Attendant in an mixed Network (Integral Enterprise and CM) you will need to fill this option for the monitorpoints from CM		
<AES server>	Primary Server ID	"Scan" polls all possible AES inputs. Select the ones you require.
	Login: Username, Password	User and password (1024 Bit RSA encryption) for system access
	Link(s): Add ..., Edit ...: Host, Port	Network name or IP address of the system board and the port enabled there.
	Public network location: Country code,Gateway location: - Area code, - Prefix, - Max. length of internal numbers	Settings as under **OSW** (see below).
	Dialing rules	According to the ACM settings / local factors
CTI specials	System monitors: Add ..., Edit ...: Ext./From, To	Settings as under **OSW** (see below).
TSLib.ini	Host, Port	Address and port of the connected AES servers; use **Add** to add new ones
OSW		List of telephone systems and the corresponding one-X Attendant system settings

<Telephone system>	Manufacturer	Manufacturer
	Type	System type
	Login: Username, Password	User and password (1024 Bit RSA encryption) for system access
	Link(s): Add ..., Edit ...: Host, Port	Network name or IP address of the system board and the port enabled there.
	Public network location: Country code, Gateway location: - Area code, - Prefix, - Max. length of internal numbers	Configuration of the trunk lines for the PBX. Use **Add ...** to add more if required. Maximum length of internal numbers. Longer numbers will be regarded as external numbers.
CTI specials	System monitors: Add ..., Edit ...: Ext./From, To	Number or number range to be shown in the network–wide busy display. Operator sets *and* agent numbers must be recorded.
Miscellaneous	CIE support	Select this if the system will be used together with a CIE. Hint: When the system is used together with a CIE, the labelling must be the same as the according task server in CIE.
	Max. number of simultaeous monitor	Throttling of simultaneous monitor starts (Default 10) / see also notes on operation
IPL		
OSPC Link	Port, Gateway	Port of SVAManager for the QTAPI functionality (Default = 10405), to which the operator sets are connected.
CTI specials	Auto-transfer on hangup	Select, if one-X Attendant should directly initiate an outgoing call without the handset at the operator set having to be picked up.
IS		
	Search local phones by the host	Select which entry type you wish to use for the one-X Attendant client PCs during allocation to operator sets.
Local phones	Add ..., Edit ...: Hostname, Extension	Host name of the one-X Attendant PC and number of the associated operator set.
SVA Manager		
	port number	Port of SVAManager for the Extended Busy Lamp functionality (Default = 10405)
	data file	File in which the SVA Manager saves data. Default: SVAManager.dat
	Enable Call list and Redial list	Select this if you want to use the Redial and Call lists. Set the maximum number of entries in the lists.
	TTrace Server	Host IP and Port

Configuration example Integral Entperprise

Please find a Configuration Example for Integral Enterprise under the attached documents see page 121.

Notes:

If the network–wide display does not correctly distinguish between internal and external calls, this may be due to an incorrect setting in “Max. length of internal numbers”.

For changes to take effect, you must restart the service.

Notes on operation

Maximum values of supported SVAManager configurations:

With Cluster Funktionality

Tserver Links (TS):	20
Other switches (OSW):	50
Tserver Links + Other switches (TS+OSW):	50
Monitor Points:	20000
Clients (one-X Attendants)	100

Without Cluster Funktionality

Tserver Links (TS):	20
Other switches (OSW):	100
Tserver Links + Other switches (TS+OSW):	100
Monitor Points:	10000
Clients (one-X Attendants)	100

If you have more than 1500 monitor points in the extended busy lamp field, the environmental variables MAXMESSAGESIZE and MAXBUFERSIZE have tob e inserted7set to a value “50times<number of monitor points>“.

SVA Manager should be fully up and running when one-X Attendant is started. It can also be started afterwards however.

If SVA-Manager is not ready for operation during login, an error button opens. When in the logged in state, this is shown by an icon labeled “SVA”:

- A red icon indicates that there is no connection to SVA Manager
- A yellow icon indicates that SVA Manager is not yet ready for operation

The network–wide busy display only then functions correctly when SVA Manager is not just running but also when it is ready to operate, i.e. all monitor points are licensed and initialized.

For every opened monitor in AES a TSAPI–basis–license will be charged. Internally AES uses WebLM for every booking. Overload can be the consequence that could finally lead to failure of AES and the CTI–server. Integral enterprise can just handle a limited number of simultaneousmonitor starts two, buts its reaction to overload is more resistant. Not handled monitor starts will be rejected with an error code. The SVA Manager checks monitors in continous circles, so the overload breakdown is eliminated.

Because overload in AES can lead to complete failure of cti, the usage of a throttle for simultaneous monitor starts was necessary. This throttle was generalized, so it could be used for integral enterprise. Because of that overload in that case could be eliminated two.

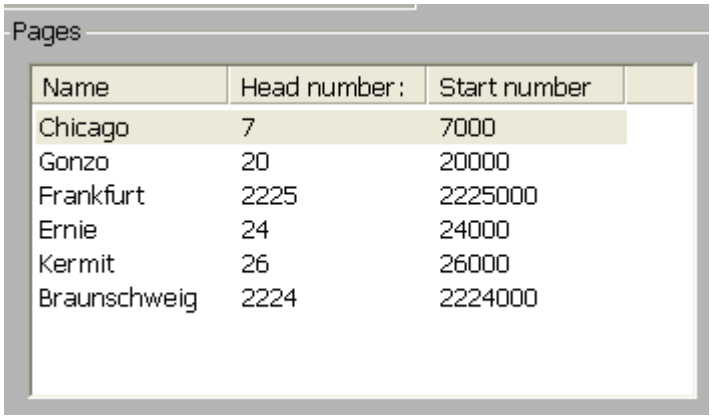
The procedure works as follows: For every system all monitor start and monitor stop reqeuest will be written in a cache. One thread for every system gets a configurable maximum number of actions out of the cache and completes them. The default value of this maximum is 10. The value can be changed with the configuration tool under server Links-> Miscellaneous
CTI–server gets a monitor stop request for one action, that is still in the cache, it will be eliminated from cache.

Additional note for configuration

With „head number“ and „start number“ you can configure a spezial sort when pressing the „Load“ button an putting numbers received by SVAManager in net wide busy view.

Head number is the number all numbers of specified page start with.
Start number is lowest possible number of this page.

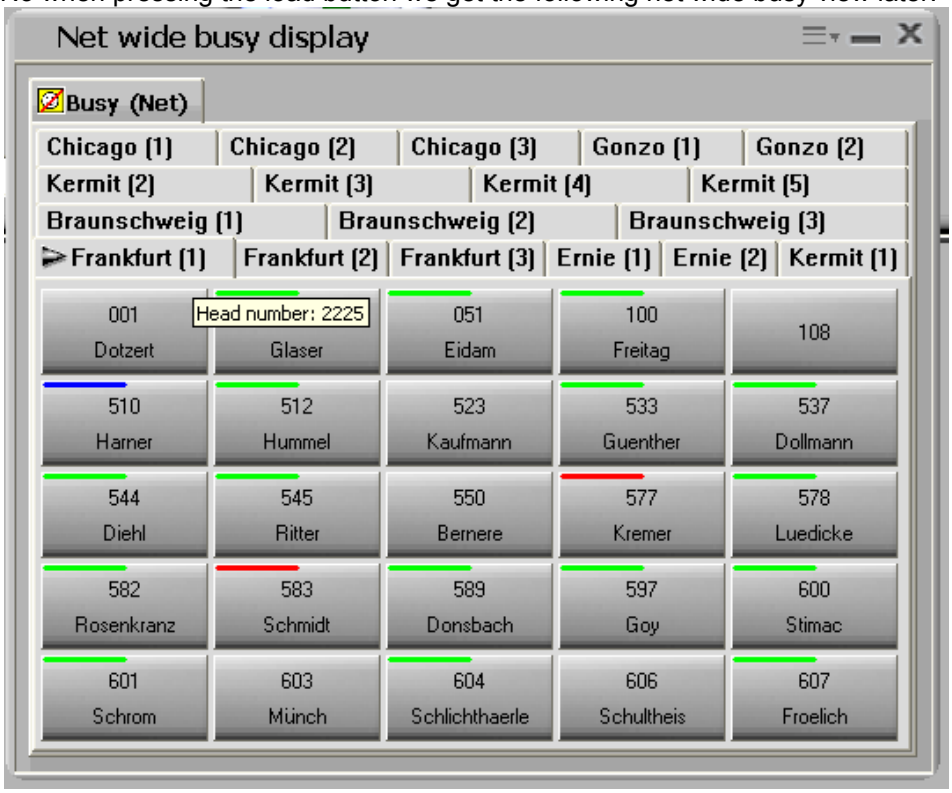
Example:



Pages

Name	Head number:	Start number
Chicago	7	7000
Gonzo	20	20000
Frankfurt	2225	2225000
Ernie	24	24000
Kermit	26	26000
Braunschweig	2224	2224000

No when pressing the load button we get the following net wide busy view later:



Notice: Head number is not displayed in number buttons of net wide busy view. It is only displayed in tooltip of page or page name (if you configure it).

QTAPI Cluster

What is QTAPI Cluster?

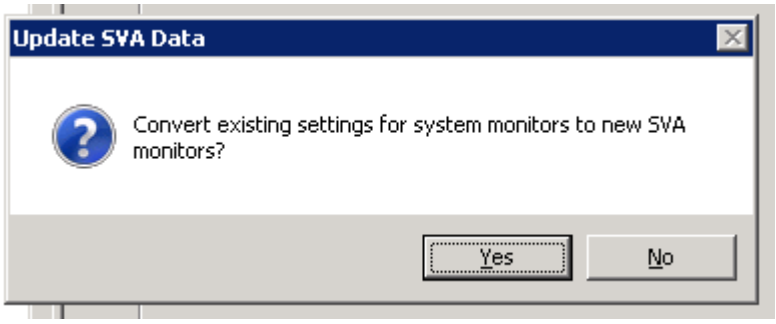
QTAPI Cluster is a functionality of 1XAttd SVAManager to summarize systems with same head number to one Cluster. QTAPI Cluster will be available with 1XAttd R3 SP3

Advantages of QTAPI Cluster:

- QTAPI Cluster is helpfull for configurations with a large number of monitor points and large number of systems.
- SVAManager start is more solid.
- Restart time for failed monitors could be set to a specific time.
- Solved PEM: 187872

Configuration of QTAPI Cluster on upgrade:

When Upgrading 1XAttd R3 SP2 and older versions to 1XAttd R3 SP3 (and higher), SVA Config Tool with ask the question on start, whether you want to convert existing system monitors to new SVA montitors:

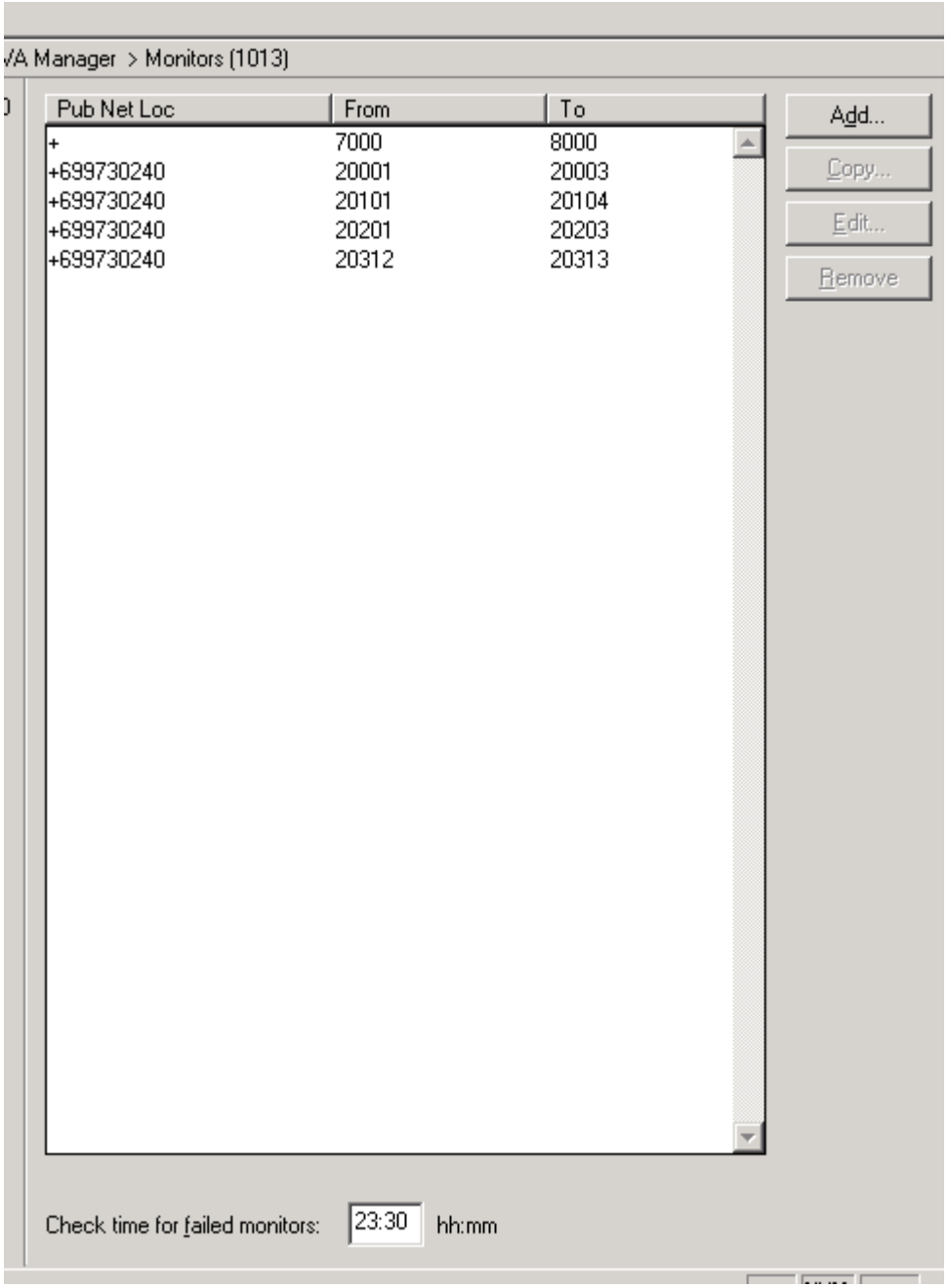


If you klick „no“ everything will stay the same.

If you klick „yes“, system monitors will be summarized to cluster monitors:

All systems monitors will be removed from <system name>->„CTI spezials“ and moved to the new menu point SVAManager->monitors:

There is a new field for „check time for failed monitors“. This is the time when failed monitors are tried to be started again. Default ist 23.30



A new xml-File will be created under <serverpath>\data\sva_mon\sva_mon.xml to store new configuration.

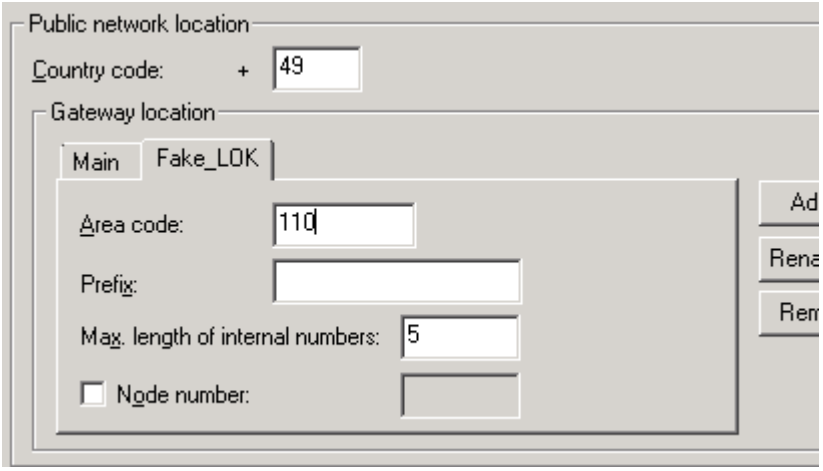
Configuration of QTAPI Cluster on new installation:

Above is described the automatic reconfiguration of system monitors to possible clusters monitors when upgrading 1XAttd to R3 SP3. Of course you have the new menu point SVAManager->monitors on new installations too. System with same head number are automatically summarized to Clusters. If you want to use this clusters, you have to configure the system monitors under the new menu point SVAManager->monitors.

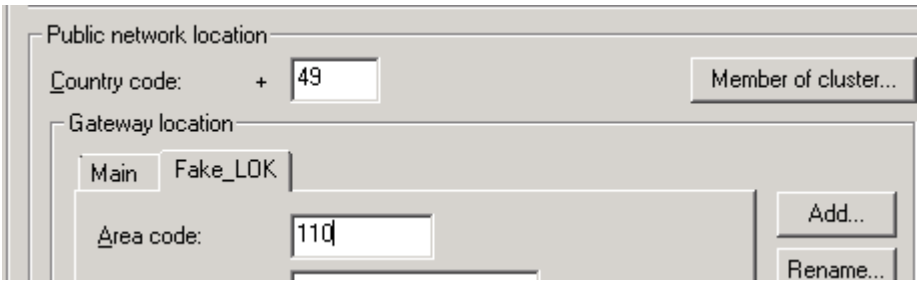
Example of summarizing two new systems with different headnumber in one Cluster:

We have two systems „TS_Ernie“ and „TS_Frankfurt“ which both have different head numbers and same system monitors array under <system name>->“CTI specials“ 1000 to 9000.

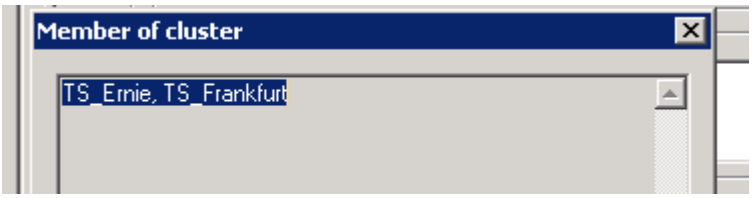
Now we add a new Gateway location (Fake_LOK) for both systems with entering the same head number (for example area code 110):



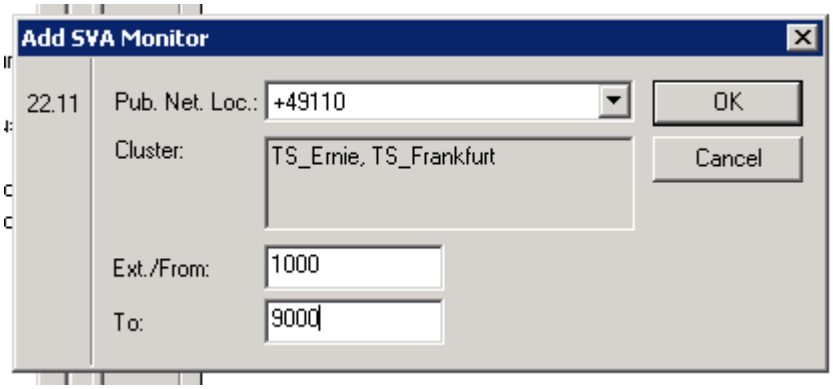
Notice: When you enter area code 110 for the second system you will see a new button „member of cluster“:

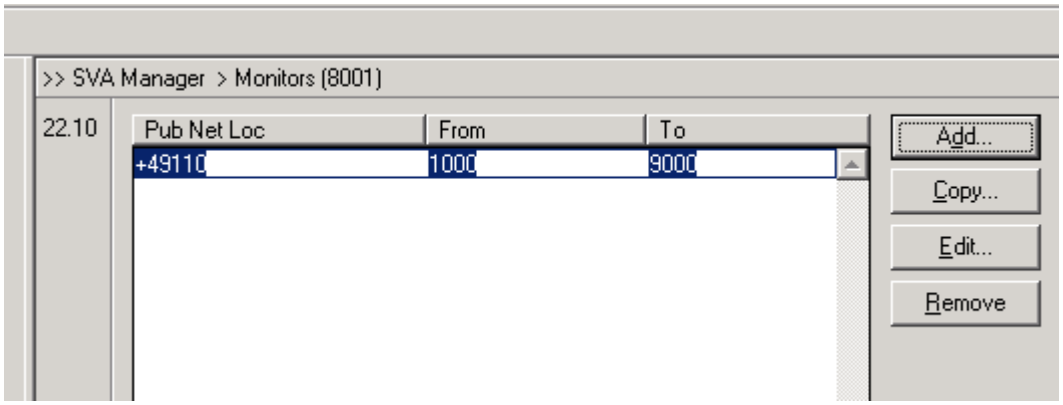


When klicking the button you see that „TS_Ernie“ and „TS_Frankfurt“ have been summarized in one cluster:



We remove system monitors array under <system name>->“CTI sepcials“ for both systems and add number array for new gateway location under new menu point SVAManager->monitors:





Now we have configured a new QTAPI Cluster for two systems with number array 1000 to 9000.

Additional Notes:

Note 1: Do not configure same system monitors under <system name>->“CTI specials“ AND SVAManager->monitors. This is ineffective.
Note 2: Try to find configuration where numbers of existing system monitors differ from number of configured system monitors as few as possible.
Note 3: Make sure that two systems in one cluster does not have one ore more same existing monitor points (otherwise it may happen that monitor is only started in one of the two systems.
Note 4: Configured Restart Time of failed monitors is GMT!

Absence Info Server (AIS)

The one-X Attendant Absence Info Server is a separate program for monitoring the out–of–office (OOF) status of all mailboxes of an exchange server (out–of–office reply in Microsoft Outlook enabled).

The absence display for **one-X Attendant** is updated regularly (using the web server).

Requirements

An outlook client has to be available on the PC.
You must have FEAT_1XATTD_PRESENCE licenses to use the absence notice.

Preparations on Exchange

A user is identified between one-X Attendant and Exchange by the email address. This email address can be made available to one-X Attendant in its own database or in a connected customer database. Each record used must contain both the email address **and** the number.

1. **General preparations for Exchange**

   Absence Info-Server (AIS) generates its own Mapi-profile and establishes a Mapi-connection if one has not been established (for example, on PCs that are not part of a domain). The rights of the local user under which the service is run are effective for the
   Mapi-connection. This user must be set up on Exchange Server. Notes on setting up Exchange can be found in Reference /5/ .

2. **Preparations for Exchange 2010 Server (Exchange 2007 Server)**

   A user (for example “OOFReply”) (with a mailbox and Windows account) must be set up on Exchange Server. Use “Delegate Control...” at the Exchange Server top level (“First Organization (Exchange)”) to assign the user the following function: “Exchange Administrator – View Only” at the organizational level (so the user has read rights for all mailboxes). The rights must then be inherited to the lower levels.

   To view the individual rights, go to “Administrative Groups/First Administrative Group/Servers/<Your Exchange-Server> Properties” and go to the Security tab.

3. **Setting up local users**

   On the PC where you want to install Absence Info Server, you must set up a local user (for example, with the name “OOFReply”). The user must have the mailbox set up on Exchange Server (for example “OOFReply”). In other words, the user must have the same name and password. The user must have the local right to start services (Administrative Tools > Local Security Settings > Local Policies > User Rights Assignment > Log on as a service).

   The user does not need administrator rights for the system. The user only needs to be a member of the users group.

   For AIS to work, an Outlook client must be installed on this PC and configured for this user with a connection to Exchange.

Installation

The installation program installs the AIS as “Service”. You are prompted to enter all necessary parameters. Before the installation is complete, AIS starts in configuration mode. This lets you change the parameters you entered and set other parameters.

You can start the AIS service easily from the **AIS Config UI** (**u**ser **i**nterface). Otherwise you must start the service using Computer Management/Services or by restarting the PC. The installation procedure does not start the service.

Parameters that are required during installation:

1. Installation path

Use the default path or specify a path.

2. Local User

These parameters define the local Windows user (e.g. “OOFReply”) under which you want the service to run. These settings can be changed later under Computer Management/Services/Log in.

3. Connection parameters to Exchange Server

These parameters define which mailbox you wish to use to authenticate to Exchange Server.
You can change these parameters using the AIS Config UI.

Example:
Server: exchange; User: OOFReply; Domain: AVAYA; Password: *****

4. Connection parameters to one-X Attendant Web Server

These parameters define the connection to the one-X Attendant Web server.

Example:
host: one-X Attendant_Server; port: 21080

5. Connection parameters to the TTrace server

These parameters define the connection to the TTrace server. You can change them using the AIS Config UI.

Example:
host: localhost; port 10300

The AIS Config UI is started automatically at the end of the installation.

AIS Config UI

You can use the **AIS Config UI** to set all connection parameters, set additional options, select mailboxes, and start and stop the service.

Start the AIS Config UI using a shortcut in the Start menu or on the desktop.

Main dialog:

Button	Function
Connection	Opens the Connection dialog
Options	Opens the Options dialog
Selection	Opens the Selection dialog
Stop	Stops the service
Start	Starts the service
Refresh (icon)	Determines the current status of the service
Quit	ends the AIS Config UI

Group	Function
Exchange Server	Here you can adjust the connection parameters for Exchange Server

.

		The **Check** button tests the connection to the server. The result is displayed in a dialog box and output via TTrace. You must restart the service and Config UI for the settings to take effect.
	Web server	Here you can adjust the connection parameters to the web server. The **Check** button tests the connection to the web server. The result is displayed in a dialog box and output via TTrace. You must restart the service and Config UI for the settings to take effect.
	TTrace	The level defines the outputs that are generated in addition to the general information. The options are: *Error*: Information messages and errors are output. *Warning*: Information messages, errors and warnings are output. *Debug*: Information messages, errors, warnings and detailed troubleshooting messages are output. The default setting is Warning. These settings take effect as soon as you click OK.

Options:	**Option**	**Effect**
	Poll interval	Specifies the minimum time there must be between the starts of two polling cycles. Default: 5 minutes If a cycle lasts longer than the set polling time, If a cycle lasts longer than the set polling time, there will be a wait time of 30 seconds after the cycle before the next time.
	Delay	Waiting time in milliseconds after an individual mailbox has been processed. Default: 0.

Selection:	**Button**	**Function**
	Select	Selects the designated mailboxes for processing using AIS. The selection is saved in the **AbsenceInfoServer.sel** file. The file is located in the same directory as **AbsenceInfoServer.exe**.
	Deselect	Clears a selection
	Select all	Selects all listed mailboxes for processing using AIS
	Deselect all	Clears the selection for all mailboxes
	Select all (dynamic)	If you set this option, all mailboxes are processed automatically. The list of mailboxes to be processed is recreated in each cycle. If you do not set this option, only the selected mailboxes are processed.

Entries in the Windows Registry

Various entries are written to the Registry during installation. For TTrace they are located under the key
HKEY_LOCAL_MACHINE\Software\avaya\AIS

The remaining entries are located under the key
HKEY_LOCAL_MACHINE\System\CurrentContolSet\Services\ AbsenceINfoServer\Parameter s

Note on absence display

In the one-X Attendant, an absence notice is only displayed for a subscriber when they have once entered themselves as absent in Outlook.

Calendar information

You can use Microsoft Outlook or Lotus Notes to query calendar information (although you can only use one or the other at a time).
One-X Attendants busy display, network–wide busy display or phone book then shows the relevant information for all subscribers.
If neither Outlook nor Notes integration is used, it is strongly recommended to deactivate the “calendar usage” option in the Config Tool (item one-X Attendant).

Requirements

The user of the client computer must have access rights to the calendar data of all subscribers.
You must have FEAT_1XATTD_PRESENCE licenses to use the calendar information.

Exchange Server

One-X Attendant has two possibilities to get busy/free information from the exchange server, they has two different requirements regarding the exchange configuration.

Configuration 1:

- The autodiscover functionality for the outlook client has to be configured. This can be tested in this way: While Outlook 2007 is running, hold down the CTRL key, right-click the Outlook icon in the notification area, and then select **Test E-mail AutoConfiguration**.
  Verify that the correct e-mail address is in the box next to **E-mail Address**.
  Clear the check boxes next to **Use Guessmart** and **Secure Guessmart Authentication**.
  On the **Test E-mail AutoConfiguration page**, verify that the check box next to **Use AutoDiscover** is selected, and then click the **Test** button.
- The SMTP Addresses of the users in the address book has to belong to the same domain as the exchange server. The following request should return an xml file with an “autodiscover” "element within: https://<SMTP address domain>/autodiscover/autodiscover.xml.
- For further information’s please look here: http://technet.microsoft.com/en-us/library/bb124251.aspx

Configuration 2:

- The exchange server has to be configured to use public folders for free/busy (as it works with outlook 2003). In Exchange 2003 this was the default configuration.
- For further information’s please look here:
  http://blogs.technet.com/b/exchange/archive/2010/04/23/3409853.aspx
  http://technet.microsoft.com/en-us/library/bb397221.aspx
  http://technet.microsoft.com/en-us/library/bb124411.aspx

If you have problems you can also use the RedemptionTestTool or the VisualBasic Test SourceCode which you can find on CD in the folder: software\Service-Tools\RedTest

Installation

No installation is required. The calendar information is automatically available with the client installation.

Web interface

One–X Attendant provides a web interface for subscribers (called WebAccess). This interface allows a subscriber to indicate absence nformation (e.g., out–of–office) from any PC with a browser.

Standard access is via the web address

https://host:port/one-XAttendantwebaccess/Login.jsp

which you can enter directly into your browser. “host” and “port” must be replaced with the machine name and port of the Tomcat web server (JOnAs), e.g.

https://localhost:21080/one-XAttendantwebaccess/Login.jsp

If a web page showing a certification error is displayed, click on the “Continue to this website (not recommended)” link.

This interface can also be accessed using program commands. This requires that the programming language used must offer web programming capability. Current programming languages such as Visual Basic, Visual C++, Java, etc. meet this requirement.

Programmable functions

You can use the following five basic functions:

Login, **Logout**, **Set password**, **Set presence/absence**, **Query presence/absence**

The way you access these functions depends on the programming language being used. In general, however, you use commands which will be sent via the HTTPS protocol. The parameters and associated URLs are listed in the following paragraph.

Command-overview

If you are using the following commands you have to specify in the URL the computer name of the Tomcat web server “host” and the “port” that it listens on (default: 21080).

–Login:

Before you can use any further commands you need to log in for a specific user.

Query type:	HTTPS POST
Parameters:	firstName, lastName, phone, passwd
Target URL:	https://host:portone-XAttendantwebaccess/LoginChecker.jsp

Using this command you log in the user using the last name “lastName” and first name “firstName”. “phone” is the user’s phone number and “passwd” the corresponding password.

Note:
A one-X Attendant subscriber only has a password once it has been set for the first time.

–Simple login (SLogin)

Query type:	HTTPS POST
Parameters:	phone
Target URL:	http://host:port/one-XAttendantwebaccess/SLoginChecker.jsp

This command is used to log in a user. Contrary to the “normal” login procedure (Login – see above) the login occurs *without* password and *without* name information. The phone number (phone) is the only identification used for the user.

Note:
This command is only recommended in systems where the same phone number is not used by several one-X Attendant subscribers.

–Logout:

After you have completed the work for a user you must log out again without fail.

Query type:	HTTPS GET or HTTPS POST
Parameters:	–

Target URL: https://host:port/one-XAttendantwebaccess/Logout.jsp

This command allows you to log off the user which you had logged in before using Login.

–**Set password:**

To make logging in more secure, each user has a password. You can set the password with this command.

Query type:	HTTPS POST
Parameter:	passwdFirst, passwdSecond
Target URL:	https://host:port/one-XAttendantwebaccess/SetPassword.jsp

This command allows you to set the password for the user who is currently logged in. “passwdFirst” and “passwdSecond” *must* be identical.

–**Set presence/absence:**

This command allows you to set the presence/absence of the user who is currently logged in.

Query type:	HTTPS GET
Parameter:	FROM, TILL, CAUSE
Target URL:	https://host:port/one-XAttendantwebaccess/SaveData.jsp

FROM and TILL contain time and date information using the format dd.mm.yyyy HH.MM.

FROM is the start time and TILL is the end time of the absence. If you wish to set the user as present, leave FROM and TILL empty.

CAUSE can contain any text. This is usually a short message specifying the reason for the absence.

–**Query presence/absence:**

This command queries the current absence status for the logged in user.

Query type:	HTTPS GET or HTTPS POST
Parameters:	–
Target URL:	https://host:port/one-XAttendantwebaccess/one-XAttendantWebAccess.jsp
Result:	HTML page containing the results

To find the start time, the end time and the comment you need to parse the HTML page received as a result. The start time can be
found in the text entry line called FROM. The end time can be found in the text entry line called TILL. The comment is in the text entry line called CAUSE.

WebAccess admin tool

Installing

This tool is used for resetting the user password for WebAccess.

To use the WebAccess admin tool, you must set up a new link. To do so, in Windows Explorer go to the one-X Attendant directory (C:\Program Files\Avaya\Avaya one-X Attendant).

1. Select the **StartAbsenceAdmin.bat** file. Create a short cut to this file.
2. Open the **StartAbsenceAdmin.bat** in the editor. Copy the only line.
3. Open the properties of the short cut. Delete the destination and insert the copied line.

   If necessary match the port number in this line to the server installation.

Connecting to external databases

Tool

External databases are linked to the **one-X Attendant** using the **one-X Attendant configuration tool collection (one-X Attendant ConfigTool)**. The phone book tool is provided especially for this task (p. 55).

Rules

You **must** follow these rules when working with this tool.

– You need good good knowledge of databases. You must be able to create SQL queries and you also need knowledge of ODBC data source configuration.

– Only 32 Bit ODBC Drivers can be used. Therefore on 64 Bit system the ODBC data source configuration has to be done with the 32 Bit ODBC Admin program: %WINDIR%\SysWOW64\odbcad32.exe.

– Only System Data Sources can be used. User Data Sources are recognized by the Config-Tool but not by the Update Service because the Update Service is running under the SYSTEM Account.

– No one-X Attendant client should be running while you configure these settings. Exit all one-X Attendant client applications. The one-X Attendant database must be up and running.

– Use only one data source at a time (**one** worksheet in the tree view of the one-X Attendant configuration tool collection).

Business solutions

Industry–specific databases are linked like any other database using the one-X Attendant configuration tool collection (one-X Attendant ConfigTool).

Configuring the software

Avaya one-X Attendant configuration tools

one-X Attendant configuration tools collection

The **one-X Attendant configuration tools collection (one-X Attendant ConfigTool)** is a set of tools which allows you to configure one-X Attendant. It is automatically installed when you install a one-X Attendant server.

The collection contains the following tools:

- AbsenceInfoPusher
- Address parser
- JOnAS Server (phone book server)
- Central one-X Attendant- configuration data
- Phone book
- Update service
- WebAccess

Starting and logging in

Start the program from
Start > Programs > Avaya > Avaya one-X Attendant
Avaya one-X Attendant configuration tools

All system engineers saved in the one-X Attendant database are authorized to use the tool collection. The user name and password are the same as for one-X Attendant.

Note when editing configuration data for the first time: After installing one-X Attendant the central one-X Attendant configuration data can only be edited once one-X Attendant has been started.

Reason: The database cannot be accessed during setup. For this reason the one-X Attendant configuration data is first placed in the Registry (key “Setup”). The one-X Attendant then transfers this data into the database during the first startup.

User interface

Menu bar

The menu bar contains the **File** menu, which provides the menu entries *Properties, Sign–on/Logout* and *Exit*.

The **Help** menu contains the entry *About...* to open an info box on the tool.

The work area

The work area is divided into the tree view on the left and the opened worksheets on the right.

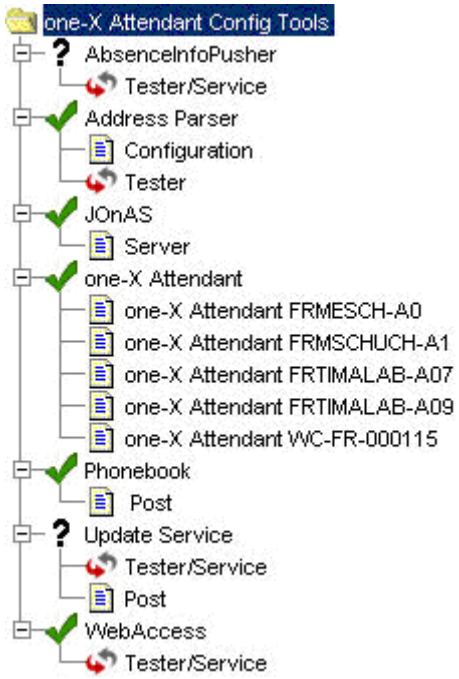
The toolbar


Opens the *Properties* of the **one-X Attendant configuration tools collection**


Starts a test of all components


Opens the Info box

Tree view



The tree view contains all the tools. The tool currently shown in the work area is highlighted in blue.

A **green check mark** indicates that the tool test was successful. A **red exclamation mark** indicates a problem with this tool. A **black question mark** indicates that the tool cannot be tested.

Click on a tool to load it to the work area.

Properties

Properties opens a dialog you can use to edit the program settings (one-X Attendant config tool, properties).

The drivers listed in the table below are available for selection when you define a data source. When you make a selection, the corresponding default URL is also entered.

Key	Value	Note
DBPwd	sql	Password for the one-X Attendant database
DNS	OSPC	ODBC link to the one-X Attendant database
Language	DE or EN etc..	Language of the one-X Attendant configuration tools collection
jdbc.driver.class.1	sun.jdbc.odbc.JdbcOdbcDriver	Driver 1 for accessing ODBC data sources
jdbc.driver.class.2	com.sybase.jdbc3.jdbc.SybDriver	Driver 2 for direct access to Sybase databases (ASA and ASE) without ODBC
jdbc.driver.class.3	com.octetstring.jdbcLdap.sql.JdbcLdapDriver	Driver 3 for accessing LDAP data sources
jdbc.driver.class.4	ianywhere.ml.jdbcodbc.jdbc.IDriver	Driver 4 for direct access to Sybase Database (ASA and ASE) Version 9 and higher
jdbc.driver.class.5	jstels.jdbc.csv.CsvDriver	Treiber 5 für Zugriff auf Text bzw. CSV-Files
jdbc.driver.default_url.1	jdbc \:odbc \:<Enter DSN here>	Default provider URL for driver 1
jdbc.driver.default_url.2	jdbc \:sybase \:Tds \:<server>\:<port>	Default provider URL for driver 2
jdbc.driver.default_url.3	jdbc \:ldap \://<server>\:389/[BASE_DN]? SEARCH_SCOPE \:\=subTreeScope [&pageSize \:\=n]	Default provider URL for driver 3
jdbc.driver.default_url.4	jdbc:ianywhere:<Enter DSN here>	Default provider URL for driver 4
jdbc.driver.default_url.5	jdbc:jstels:csv:<Enter directory here>?separator=;&charset=utf-8	Default provider URL for driver 5
phonebookhost	localhost	Host running the phone book server (JOnAS)
phonebookport	21099	Port on which the phone book server listens

Tools: AbsenceInfoPusher

Settings

cycle (sec)	-	AIP query
interval Host	-	AIP host
name Test Port	-	AIP port

Buttons

The **Save** button saves the changes in the database.

The **Check connection** button checks whether AIP can connect to the JOnAS server using the URL. The result is displayed in the gray text box.

The **Start** button starts AbsenceInfo

Pusher. The **Stop** button stops

AbsenceInfo Pusher.

Testing

To check the connection, proceed as follows:

1. Enter a new free **Test Port**.
2. Save the new setting using the **Save** button.
3. Stop AIP using the **Stop** button.
4. Restart AIP using the **Start** button.
5. Check the connection using the **Check connection** button.

Tools: Address parser

Introduction

In case of a phonebook application entries have to be found by the phone number. Therefore each entry bears a phone number in a visible user format and in a invisible normalized format (ShadowNumber). When an entry is written into the database the normalized phone number is generated by the AddressParser.

If the parser configuration is left with empty fields: All imported numbers will be left unchanged and are copied in the shadow number.

The type of number must be 'unknown'. That means the number consists from the digits that would be used in public network (the digits so seize the trunk line are not part of such a number) plus internal numbers (as the one-X Attendant would receive them in an internal call to identify the caller).

This document describes how the AddressParser works and how it has to be configured.

Application

The address parser is used to convert all numbers sent by a PBX, read from a database or entered by a user to a common, consistent format.

These converted numbers are saved by a shadow database. This is not visible to the user.

To perform this conversion, the address parser requires information on its own PBX number. You must enter the information on the Code Number tab.

- The address parser is only used to uniquely identify a record from the phone book entries.
- The address parser must be configured so that a record can be uniquely identified and the corresponding features in the one-X Attendant application (for example, subscriber properties) work correctly.
- Please find more information about the Adress Parser in the attached document "**Adress Parser Description**".

Overview

The *Code numbers* sheet lets you enter different address parser parameters. The sheet layout changes depending on the Mode option selected.

The *Tester* sheet lets you check the settings on the *Configuration* sheet:

1. In the Number combo box, enter the number or select a saved number from the list.
2. In the Source combo box, select whether the number is an internal, external or unknown number.
3. Click on the the Execute button.
Shadow numbers and numbers that can be dialed are displayed.

The **Save** button saves the data in the database.

The **Apply** button applies the new configuration to all numbers in the database. The progress is indicated by a progress bar in place of the button.

Check lets you check the address parser configuration for the selected mode. The result of the check is displayed in the gray text box.

Definitions

Numbering Plan

A numbering plan is a type of numbering scheme used in telecommunications. This is a set of rules used for making numbers. A telephone numbering plan is a plan for allocating telephone number ranges to countries, regions, areas and exchanges and to non-fixed telephone networks such as mobile phone networks.

Open Numbering Plan

Open numbering plans have phone numbers that vary in length like in Germany.

Closed Numbering plan

Phone numbers in a closed numbering plan have a fixed length like in the USA.

Dial Plan

A dial plan specifies the actual digits dialed within the constraints of a defined numbering plan. A typical dialed telephone number comprises digits that need not always be dialed (codes) and digits that must always be dialed (local number). If a dial plan consists of slices (blocks) of DIDs where station numbers are ambiguous it is called heterogeneous. Example:

Dial plan consists of two blocks of numbers. Slice 1 from 908-969-5000 to -7000
Slice 2 from 908-484-5000 to –5500
Stations 5000 to 5500 are in both slices.

If a dial plan consists of slices (blocks) of DIDs where station numbers are unique it is called homogeneous. Example:

Dial plan consists of two blocks of numbers. Slice 1 from 908-969-5000 to -7000
Slice 2 from 908-484-1000 to –1500
No station is in both slices.

ShadowNumber

The ShadowNumber is the invisible unique version of an arbitrary phone number. It is used as a key to searches in the phone book database.

Dialable number

The dial able number is that number that can be dialed after AddressParser processed a ShadowNumber.

PBXs in a networked system

If multiple PBXs are connected in a network, you also need the **Call Number Replacement** tab. The **one-X Attendant** application uses this information to identify a subscriber of a networked system even if the subscriber places an external call.

Call number replacement converts a call's number. You must specify the digits used in the search and what replaces them.

Open the number scheme and on the Call Number Replacement tab assign the PBX numbers to the node numbers. This replaces the PBX number of the external location with the PBX number of its own location and the node number of the external location.

If the numbering scheme is closed, you only need to specify the PBX numbers of the locations. This replaces the PBX number of the external location with the PBX number of its own location.

Settings: Code numbers

When you enter an internal subscriber in the phone book, the address parser adds the number and corresponding code numbers.

The user cannot see the converted number. The number is saved in a shadow database. The user always sees the number in the phone book in the form he or she entered it. Universal, Standard, France, Spain, Russia, Norwegian and USA modes are possible.

Name	Explanation	Example
Country code	Indicates the international country code.	49 for Germany
International	Indicates the international prefix.	00
National	Indicates the national prefix.	0
Area code	Indicates the area code.	711 for Stuttgart
Local PBX	Indicates the PBX number.	13586

Slices (defining ranges of DIDs given from the network provider)

In Universal mode:

PBX-Number Start	Holds the beginning of the first number.
PBX-Number End	Holds the beginning of the last number.
Number of local digits	Defines the number of digits included in PBX-Number Start and PBX-Number End that remains to internal numbers

In France, Spain, Norwegian and USA mode:

Head Number	Defines the PBX-number of the slice
First Sub	Holds the first number.
Last Sub	Holds the last number.

Example

If you enter into the phone book an internal subscriber with the number 1234, the converted shadow number looks like this:

+49	711	13586	1234
Country code	Area code	Local PBX	Extension

Settings: Call Number Replacement

one-X Attendant uses the settings on the Call Number Replacement tab to identify a subscriber of a networked system even if the subscriber places an external call.

The PBX handles subscribers in a networked system like internal subscribers. The address parser always creates a shadow number with its own code numbers for this purpose. Therefore, when there is a call, the PBX-numbers of external locations must be re-evaluated using the own code numbers and if necessary the node numbers.

Note the following regarding call number replacement

You must always enter numbers with the country code and area code, for example +49711135.

Settings: Area codes

Within a PBX or in a networked PBX environment, lines can have different external and internal numbers. For instance the internal numbers of the Paris office might have to be dialed with the prefix 123 when called from outside: External call +33017505**123**4712, Internal call 4712.

In the **Area codes** tab under **Prefix**, enter the access number for the PBX (7505) including all prefixes, e.g. +33017505 and under **subst. head**, enter the associated additional digits of the internal number when dialed externally, e.g. 123.

Example for call number replacement with a closed numbering scheme

PBX 1 in Stuttgart

Number: +4971113586

PBX 2 in Frankfurt

Number: +49697505

We are at PBX 1 in Stuttgart.

If you want to enter a subscriber from Frankfurt with internal number 1234 in the phone book, the address parser generates the following shadow number:

+49	711	13586	1234
Country code	Area code	Local PBX	Extension

Settings in call number replacement

You must enter the following information for the example.

From	To
+49697505	+4971113586
PBX own location	PBX number of the external location

Example for call number replacement with an open numbering scheme

PBX 1 in Stuttgart

Number: +4971113586

Node number: 88

PBX 2 in Frankfurt

Number: +49697505

Node number: 99

We are at PBX 1 in Stuttgart.

If you now enter in the phone book a subscriber from Frankfurt with the internal number 991234 (99 is the node number for Frankfurt), the address parser generates the following shadow number:

+49	711	13586	991234
Country code	Area code	Local PBX	Extension

Settings in call number replacement

You must enter the following information for the example.

From	To
+49697505	+497111358699
	PBX number of the external location
PBX number of own location and node number of the external location	

Country settings

If you select France, Spain, Russia or USA from the mode option fields, you can modify other country–specific configuration fields.

Settings: Code numbers for France

Name	Explanation	Example
Country code	Indicates the international country code. (max. 2 Digits)	33 for France
International	Indicates the international prefix. (max. 2 Digits)	00
Provider	Provider code. (Max. 1 Digit)	0 for France Telecom
Area code	Shows the regional/area code. (Max. 1 Digit)	1 for the Paris region
Range:		
First Subs.	First subscriber number in the number block. (3-6 Digits)	000
Last Subs.	Last subscriber number in the number block. (3-6 Digits)	500
Head number	Shows the fixed digits of a PBX number block. (2-5 Digits)	12345

Example

When a station with the number 222 is in the phonebook the shadownumber will be:

+33	0 1	12345	222
Countracode	Provider+Area code	Headnumber	Station

Settings: Code numbers for Spain

The explanation of code numbers for France also applies for Spain. Only the Country Code, International and Range fields are available.

Settings: Code numbers for Norway

The explanation of the code numbers again applies in a corresponding manner. Only the Country Code, International and Range fields are available. It is furthermore taken into account that all national numbers in Norway consist of 8 digits.

Settings: Code numbers for the USA

Name	Explanation	Example
Country code	Indicates the international country code.	1 for the USA
International	Indicates the international prefix for international dialing from the USA.	011 Example: 01149 for USA –> Germany
Area code	Indicates the regional/area code.	585 for part of New York
Local PBX	Indicates the PBX number.	13586

Example

If you enter into the phone book an internal subscriber with the number 1234, the converted shadow number looks like this:

+1	585	13586	1234
Country code	Area code	Local PBX	Extension

Settings: Code numbers for Russia

Name	Explanation	Example
Country code	Indicates the international country code.	7 for Russia
International	Indicates the international prefix for dialing from Russia to another country.	810 Example: 81049 for Russia –> Germany
Area code	Indicates the regional/area code.	495 for Moscow
Local PBX	Indicates the PBX number.	13586

Example

If you enter into the phone book an internal subscriber with the number 1234, the converted shadow number looks like this:

+7	495	13586	1234
Country code	Area code	Local PBX	Extension

Mode of operation

The AddressParser has two basic functionalities.

Normalization*:*

This is parsing and converting an arbitrary phone number into a world wide unique phone number (ShadowNumber).

Reduction:

This is parsing and converting a normalized phone number into a dialable phone number.

For both functionalities the AddressParser needs Information about different elements of a phone number. These are country code, international code, national long distance code, area code, the number of the local PBX or DIDs.

Note:
The AddressParser itself does not deal with trunk codes. Once the AddressParser has identified a dialable number as an external number, the trunk code is added afterwards. The AddressParser tester indicates an external dialable number by adding a leading “+”.

How the phone numbers are parsed and converted depends on the used public numbering plan and the dial plan.

Next chapter describes, which algorithms are implemented and in which countries they can be applied.

How to select the appropriate Address Parser?

Please select the appropriate one-X Attendant address parser in the following steps:
Determine the country, which your one-X Attendant server has to support.
Check whether your country is supported in one-X Attendant *Configuration Tool Collection* (in *Address Parser / Configuration* tree view node, *Code Numbers* tab, parser *Mode* radio):

Standard parser supports Open Numbering Plans for

- Austria
- Australia
- Bolivia
- Brazil
- China
- Germany
- Hungary
- Italy
- Japan
- Mexico
- Netherlands
- Republic of Korea (South Korea)
- Sweden
- United Kingdom

France parser supports 10-digit Closed Numbering Plans with Provider Codes for

- France
- Switzerland

Spain parser supports 9 digit *Closed Numbering Plan* without *Area Codes* for

- Spain

USA parser supports NANP (10 digit Closed Numbering Plan) for

- United States of America
- Canada
- Anguilla
- Antigua & Barbuda
- Bahamas
- Barbados
- Bermuda
- British Virgin Islands
- Cayman Islands
- Dominica
- Dominican Republic
- Grenada
- Jamaica
- Montserrat
- St. Kitts and Nevis
- St. Lucia
- St. Vincent and the Grenadines
- Trinidad and Tobago
- Turks & Caicos

Russia parser supports 10 digit Closed Numbering Plan without National Code for

- Russian Federation
- Republic of Kazakhstan

Norway parser supports 8 digit Closed Numbering Plans with Area Codes for

- Norway

In case your country is not listed in *Configuration Tool Collection* use the Universal Parser.
The Universal Parser supports homogenous and heterogeneous *Open Numbering Plan* and *Closed Numbering Plan* with and without *Area/City codes.*

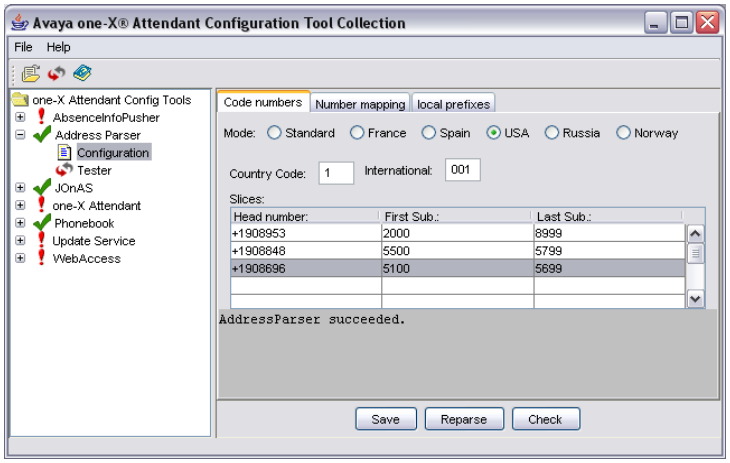
How to configure and test the AddressParser?

The Configuration Tool Collection allows configuring and testing the AddressParser.

Depending on the selected parsing algorithm (= Mode), the code numbers tab differs because each algorithm needs a different configuration. **Fehler! Verweisquelle konnte nicht gefunden werden.** shows an example configuration for USA. **Fehler! Verweisquelle konnte nicht gefunden werden.** shows a possible Tester scenario for this configuration.

Configuring the Address Parser

The configuration also depends on the dial plan.



Configurator

Code numbers

This page takes the AddressParser mode and depending on the selected mode the basic configuration.

Number mapping

Number mapping is a feature that can be used to map an arbitrary number of digits from left of the number. This is for use with two or more PBX interconnected via QSIG and run a 1XA on each PBX with one central phonebook server.

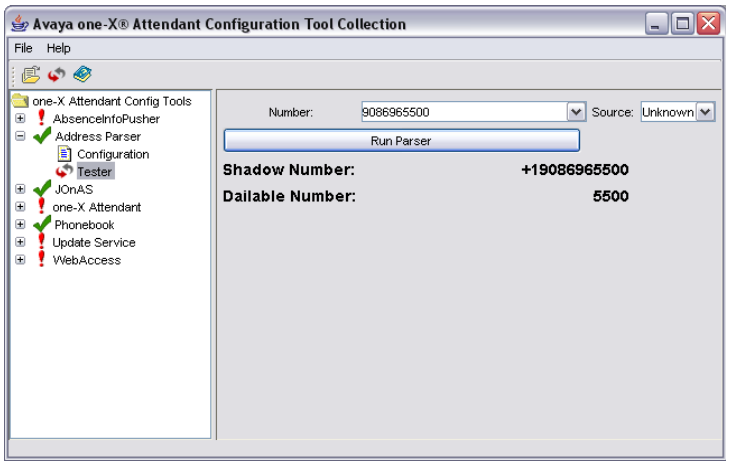
Local prefixes

Locale prefixes is a feature to map DIDs to a prefix that is configured in CM to extend the station number but is not included in the DIDs.

Testing the Address Parser

For testing the AddressParser the Configuration Tool contains a Tester node. It generates the ShadowNumber and the dial able number of the entered number.

ATTENTION: if the dialable number starts with + the number is marked for dialing external. one-X Attendant will replace it by configured trunk code.



Tester

When is AddressParser invoked?

AddressParser **Normalization** is invoked when ever a phone number has to be searched in the phone book.

On start up for each number in
BA
NBA
VIP View
Redial List
Calling List

On Runtime when ever
a phone number is transferred from the connected PBX to the UI. For outgoing calls identification of a phone number is done when call state indicates dial complete.
a phone number is transferred form SVAManager (Redial List, Calling List)
a entry is written into the phone book (from UI, Import, Update Service)

AddressParser **Reduction** is invoked when ever a phone number has to be dialed from
the phonebook (Phonebook window, ITB List window, Operator window)
the NBA
a speed dial button

AddressParser Modes

The diagrams shown in this chapter are using the following abbreviations:

CC	Country Code
IC	International Code
NC	National Code
AC	Area Code (also called City Code)
NPA	Numbering Plan Area (= NANP Area Code)
NSN	National Significant Number
LDN	Long Distance Call
NANP	North American Numbering Plan

USA

This algorithm is built for NANP only. The NANP format can be summed as:

NPA Nxx Station

where

NPA = [2-9][0-8][0-9]
Nxx = [2-9][0-9][0-9]
Station = [0-9][0-9][0-9][0-9]

NPA is the 3 digit Area Code, Nxx and Station together form the local 7 digit telephone number.

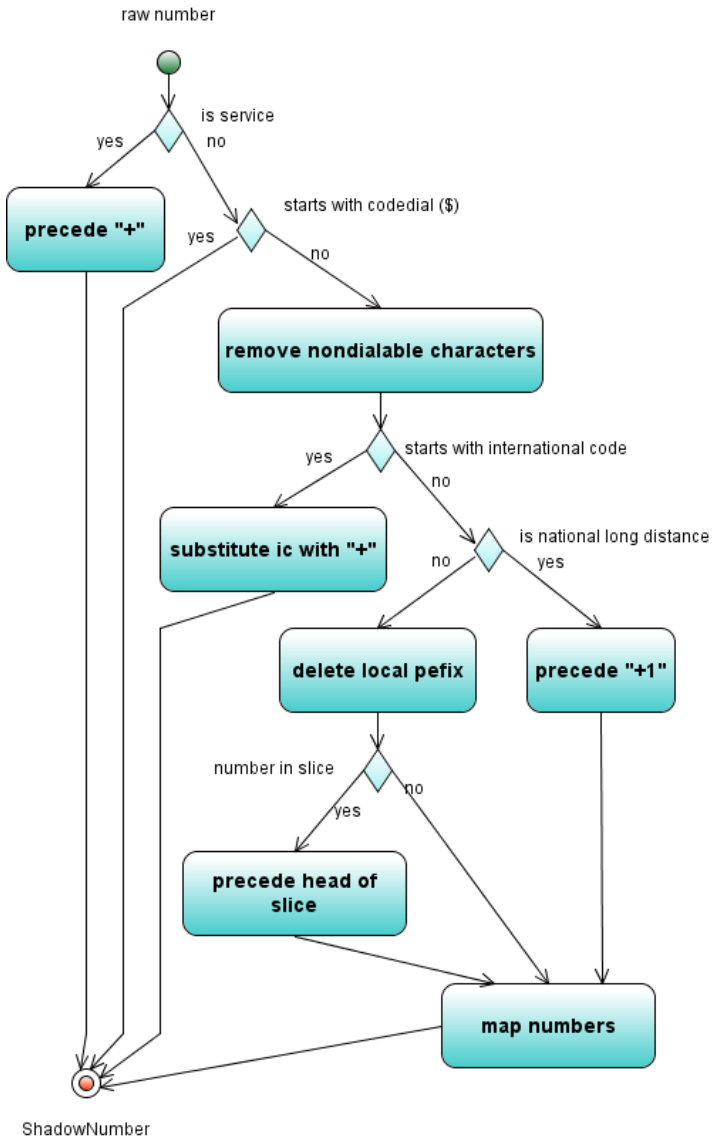
Digit 1 is used to pre-indicate 10-digit number, this is called a national long distance call.

Service code format = X11 (e.g. Emergency Call Number 911)

International access = 011

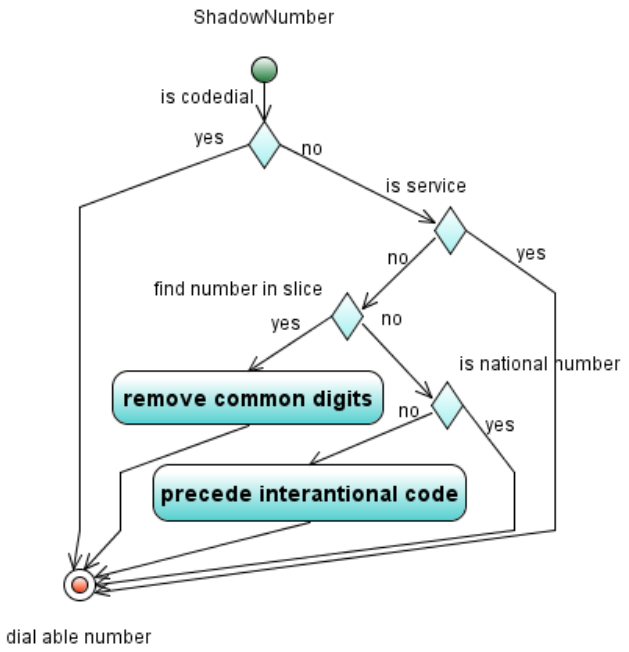
Normalization

Normalization takes a raw number and builds the ShadowNumber. The following steps are done.



Reduction

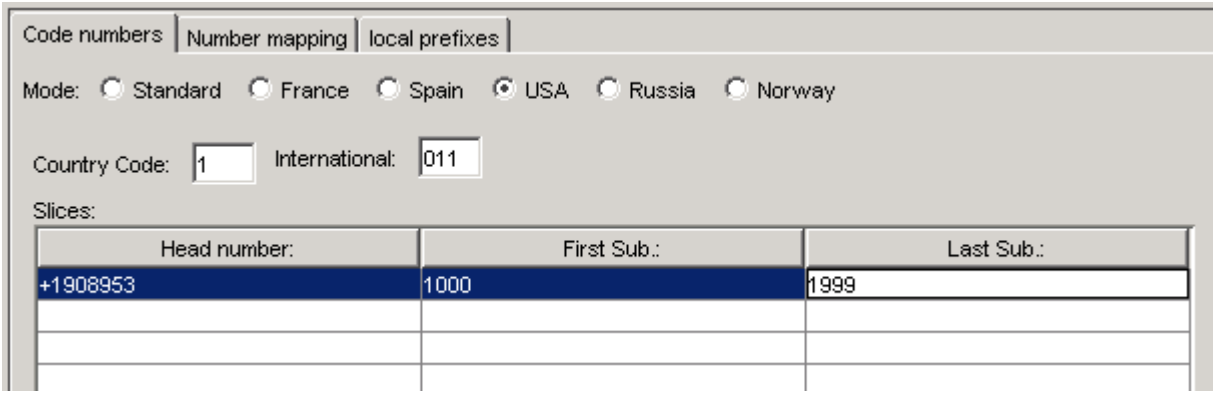
Reduction takes a ShadowNumber and transform it into a dial able number. The following steps are done.



Examples

One block of DIDs

908-953-1000 to 1999, number mapping and local prefixes are not required.

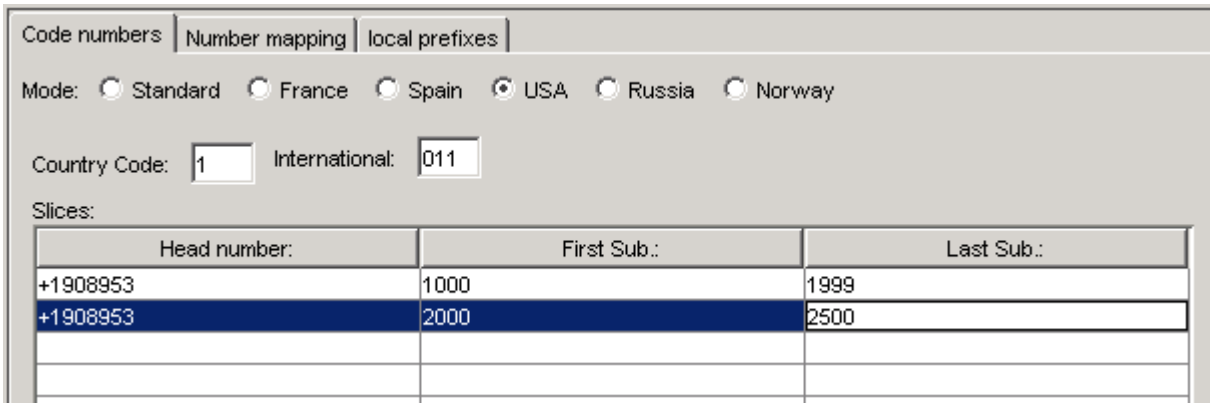


Displayed number	ShadowNumber	Dialable number	Dial external	Comment
908-953-1000	+19089531000	1000		DID 1000 is in a slice
9089532000	+19089532000	9089532000	x	DID 2000 is not in a slice
1500	+19089531500	1500		DID 1500 is in a slice
911	+911	911	x	Emergency Call number
+49-69-7505-5000	+496975055000	011496975055000	x	International Callnumber
953-1000	9531000	9531000		This is an illegal number, but will be dialed internal
1-555-666-7894	+15556667894	+15556667894	x	National long distance call

ATTENTION: the AddressParser Tester will show a leading “+” in case the dialable number is external, thus one-X Attendant software will replace the leading “+” by configured trunk code afterwards. In column “Dialable number” above, the leading “+” is not listed, therefor external calls are marked in column Dial external.

Two blocks of DIDs homogeneous

908-953-1000 to 1999 and 908-953-2000 to 2500, no overlapping in station numbers, number mapping and local prefixes are not required.

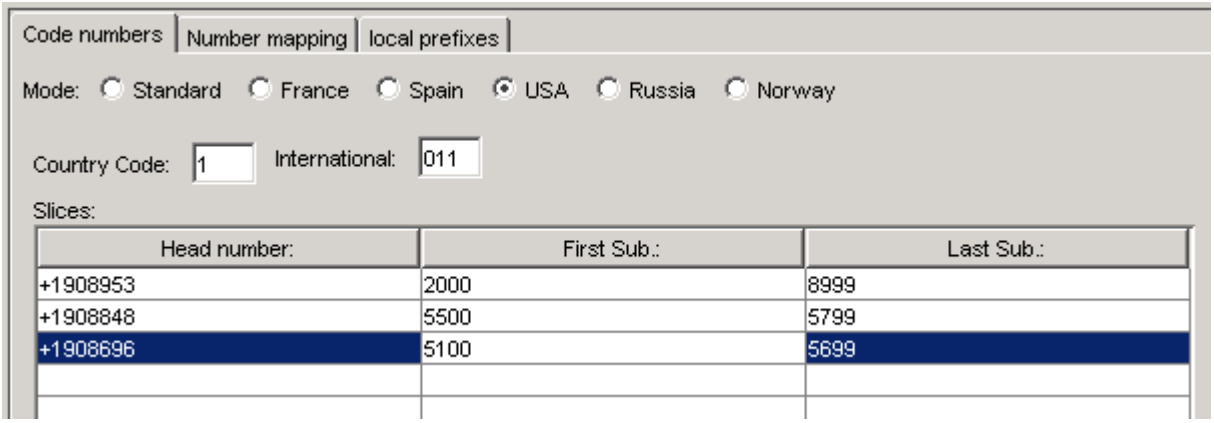


Displayed number	ShadowNumber	Dialable number	Dial external	Comment
908-953-1000	+19089531000	1000		DID 1000 is in a slice
9089532000	+19089532000	2000		DID 2000 is in a slice
1500	+19089531500	1500		DID 1500 is in a slice
911	+911	911	x	Emergency Call number
+49-69-7505-5000	+496975055000	011496975055000	x	International Call
953-1000	9531000	9531000		This is an illegal number, but will be dialed internal
1-555-666-7894	+15556667894	+15556667894	x	National long distance call

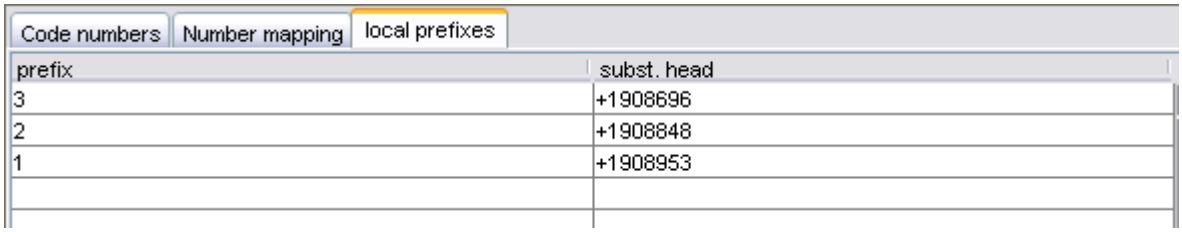
ATTENTION: the AddressParser Tester will show a leading “+” in case the dialable number is external, thus one-X Attendant software will replace the leading “+” by configured trunk code afterwards. In column “Dialable number” above, the leading “+” is not listed, therefor external calls are marked in column Dial external.

Three blocks of DIDs heterogeneous

908-953-2000 to 8999, 908-848-5500 to 5799 and 908-696-5100 to 908-696-5699, overlapping in station numbers, number mapping is not required.



Since station numbers 5100 to 5799 are included in more than one slice, for each slice a local prefix has to be defined. The prefix must be the same as configured in the PBX. A call to station 908-848-5500 can be reached by one-X Attendant when dialing **2**5500. A call from 908-848-5500 to the attendant has to be signaled as **2**5500 or as 908-848-5500.



Displayed number	ShadowNumber	Dial able number	Dial external	comment
908-953-2000	+19089532000	**1**2000		Prefix 1, DID 2000
25500	+19088485500	**2**5500		Prefix 2, DID 5500
+19086965500	+19086965500	**3**5500		Prefix 3, DID 5500
911	+911	911	x	Emergency Call
+49-69-7505-5000	+496975055000	011496975055000	x	International Call
953-1000	9531000	9531000		This is an illegal number, but will be dialed internal
1-555-666-7894	+15556667894	+15556667894	x	National long distance call

ATTENTION: the AddressParser Tester will show a leading “+” in case the dial able number is external, thus one-X Attendant software will replace the leading “+” by configured trunk code afterwards. In column “Dialable number” above, the leading “+” is not listed, there for external calls are marked in column Dial external.

Standard

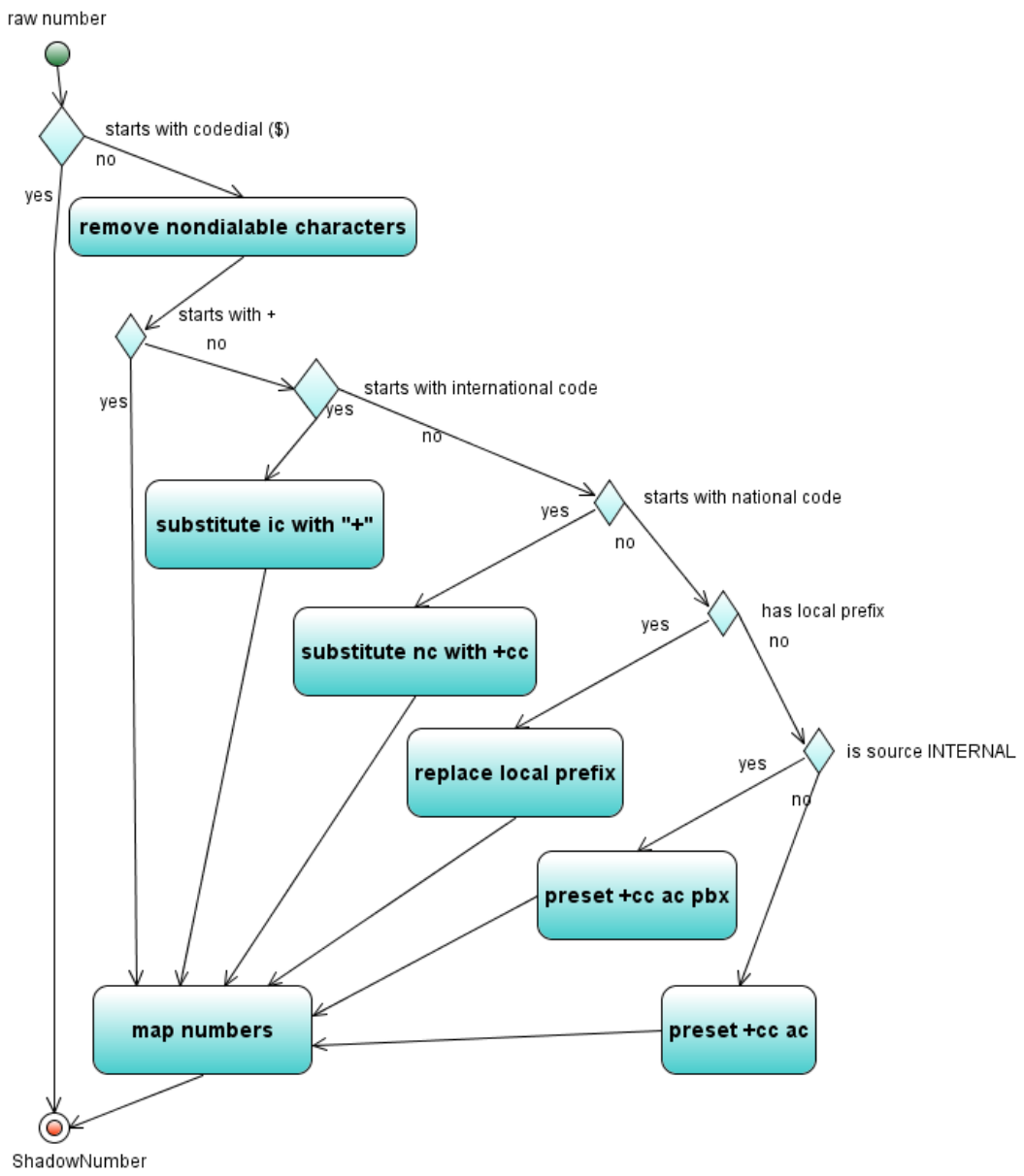
This algorithm is built for open dial plans like in Germany. It may also be used for Closed Numbering Plans as described in chapter 4.

Phone numbers in Germany consists of:

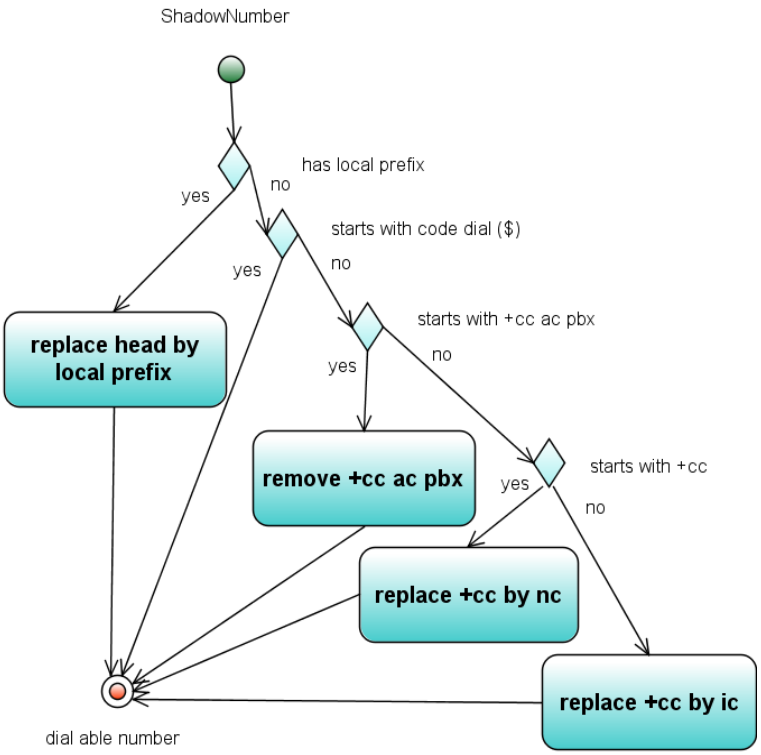
country code	49
area code	2-5 digits
local PBX	4-9 digits
station	private network, depends on PBX

National long distance call are indicated by 0
International access is indicated by 00
Total number length for DID max. 15 digits.

Normalization



Reduction


ShadowNumber
has local prefix
yes
no
starts with code dial ($)
yes
no
starts with +cc ac pbx
yes
no
replace head by local prefix
remove +cc ac pbx
starts with +cc
yes
no
replace +cc by nc
replace +cc by ic
dial able number

France

French telephone numbers (10 digits) are usually stored within an exchange database in the following format:

+33 (P)Z ABPQ-MCDU

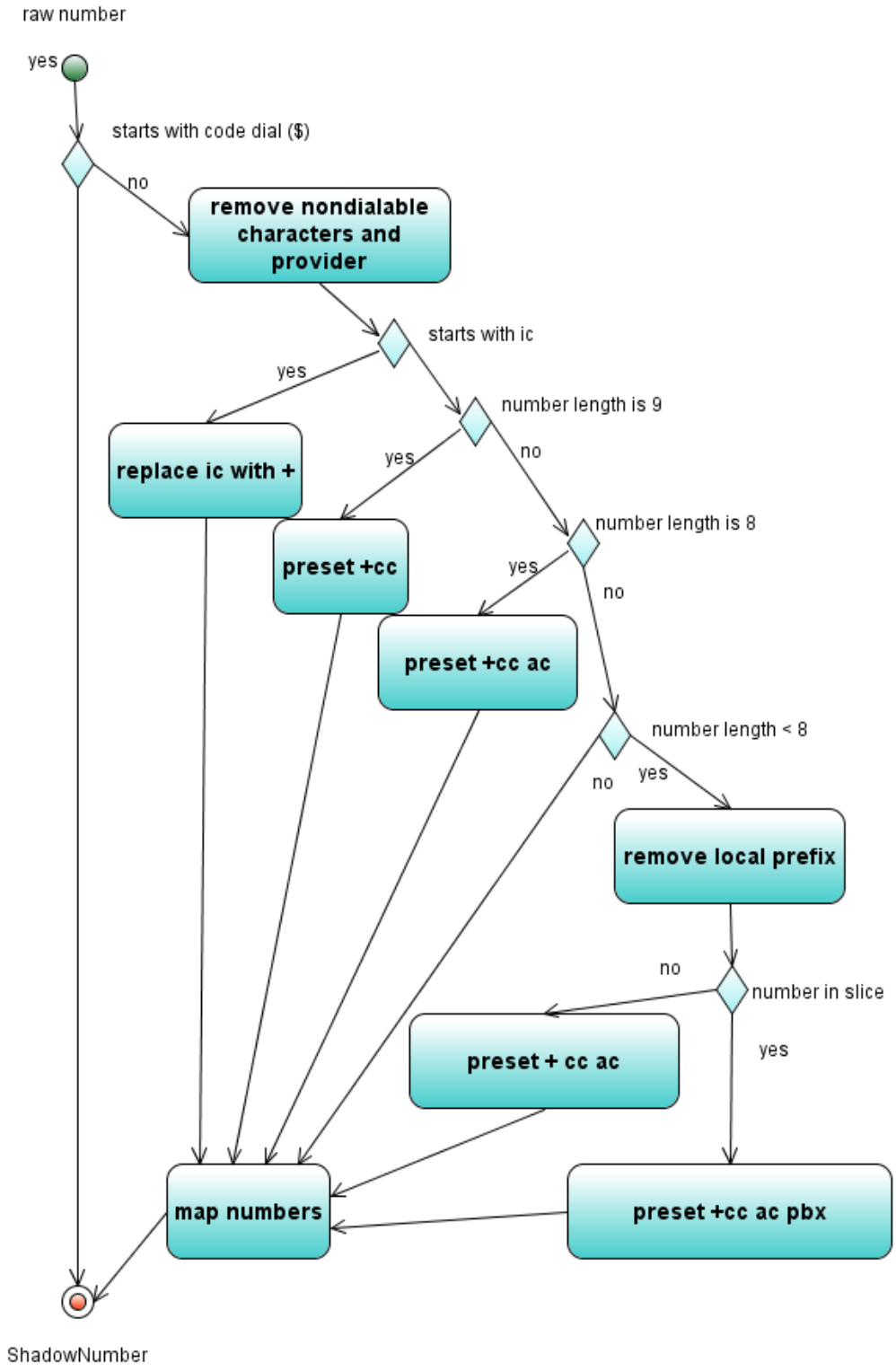
where

+33 French country code
(P) 1 digit code (put into brackets) for a provider (e.g. “0” = France Telecom)
Z 1 digit code for a region/zone within France

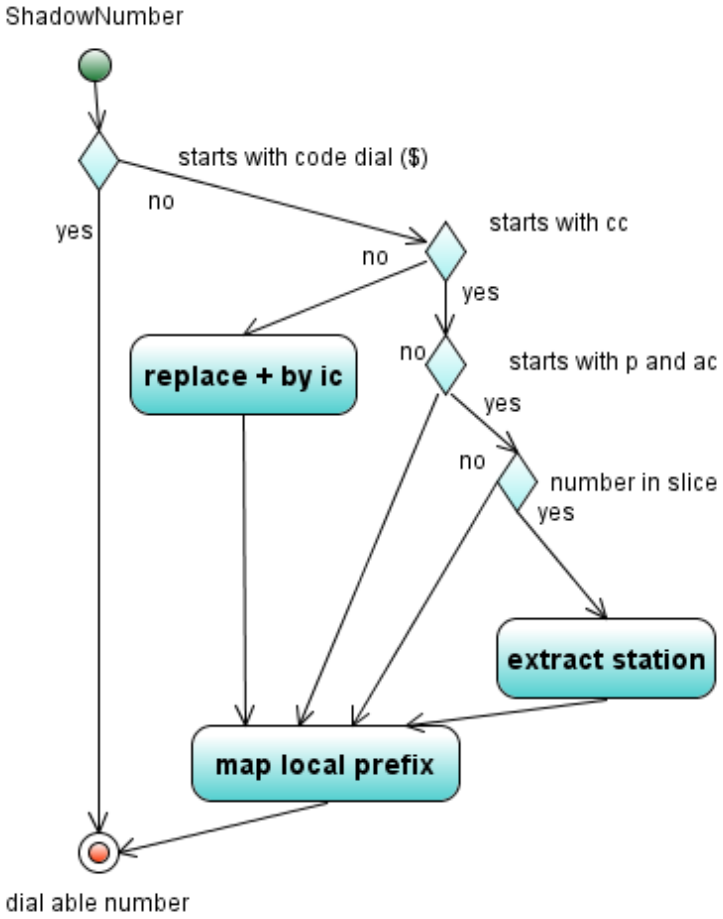
The hyphen separates the remaining 8 digits into
common digits
(“ABPQ”, sometimes called "local PBX number" which may have 3, 4, 5 or 6 digits)
subscriber number
(digits unique to one customer, DID digits, “MCDU” may have have 5, 4, 3 or 2 digits)

In France subscriber numbers are allocated to customers in slices.

Normalization



Reduction


ShadowNumber
starts with code dial ($)
no
yes
starts with cc
no
yes
replace + by ic
no
starts with p and ac
yes
no
number in slice
yes
extract station
map local prefix
dial able number

Examples

		French APPS1
	<u>French Address parser parameter settings:</u> Country Code: International Code: Provider Code: Area Code: Range 1 Common Digits: Range 1 First Subscriber No Range 1 Last Subscriber No Range2 Common Digits: Range2 First Subscriber No: Range2 Last Subscriber No: Access code: ⓪	 33 00 0 1 1234 5000 5999 1234 9000 9999
	<u>Number Reduction:</u>	
R1	+49 69 7505 3609	⓪ 00 49 69 7505 3609
R2	+33 01 1222 5678	⓪ 01 1222 5678
R3	+33 51 1222 5678	⓪ 05 1222 5678
R4	+33 11 1222 5678	⓪ 01 1222 5678
R5	+33 01 1234 4444	⓪ 01 1234 4444
R6	+33 01 1234 5555	5555
	<u>Number Normalisation:</u>	
N1	+33 (0)1 1234 5678	+33 1 1234 5678
N2	+33 (5)1 1234 5678	+33 1 1234 5678
N3	+33 (0)1 1234 9999	+33 1 1234 9999
N4	+49 69 7505 3609	+49 69 7505 3609
N5	00 49 69 7505 3609	+49 69 7505 3609
N6	00 33 0 1 1234 5678	+33 1 1234 5678
N7	0 1 1234 5678	+33 1 1234 5678
N8	5 1 1234 5678	+33 1 1234 5678
N9	5678	+33 1 1234 5678
N10	9999	+33 1 1234 9999
N11	2 1234 5678	+33 2 1234 5678
N12	1347 6713	+33 1 1347 6713
N13	6713	+33 1 6713

Spain

Spanish telephone numbers have 9 digits, starting either with “9”, “8” or “6”. The next two or three digits are used to identify a Spanish region (e.g. “91” = Madrid).

In Spain subscriber numbers of one PBX are allocated to customers into so-called “slices” (similar as in France).

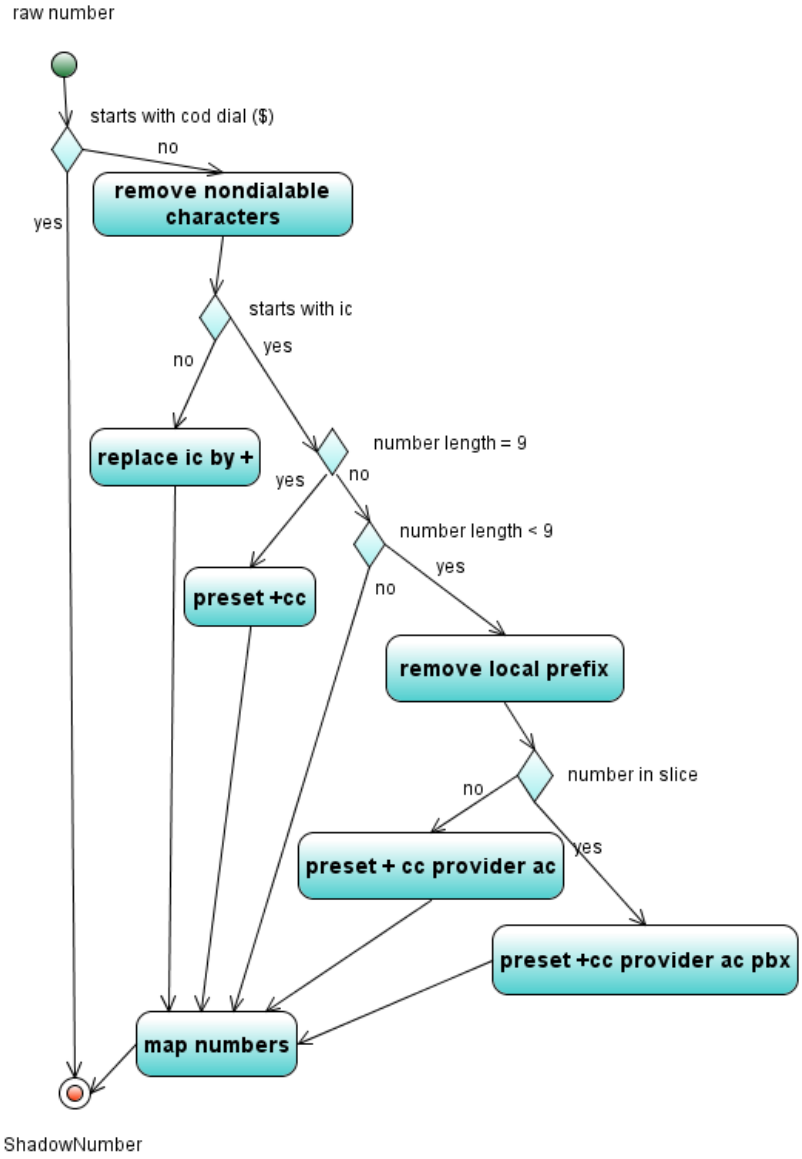
Examples

A customer may have slices:

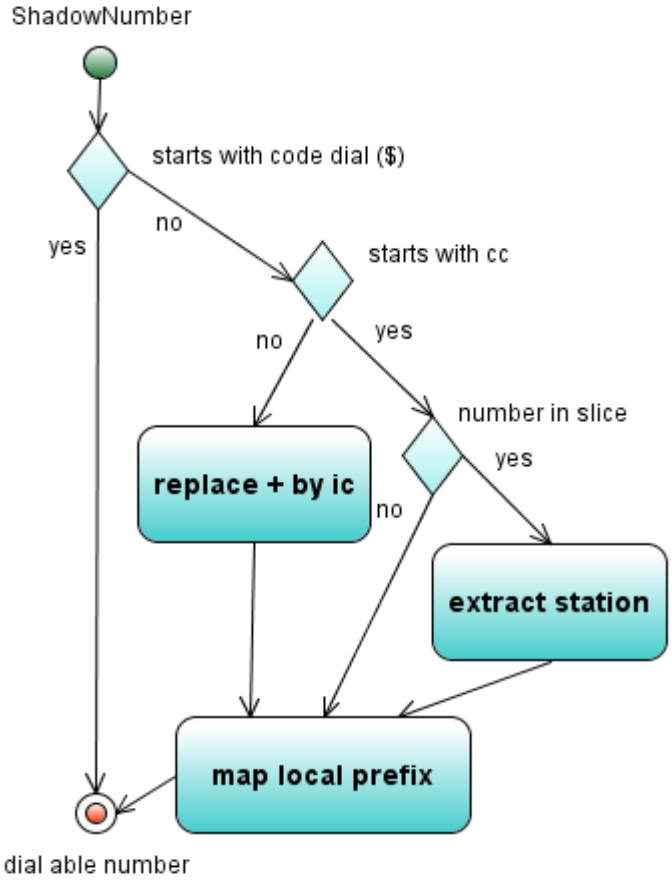
Slice A1:	912051500 to 912051599	head number 912051 stations 500 to 599
Slice A2:	913279200 to 913279899	head number 913279 stations 200 to 899
Slice A3:	914104000 to 914104199	head number 914104 stations 000 to 199
Slice 4:	914061045 to 914061046	head number 9140610 stations 45 to 46

In Spain doesn’t exist any national code or area code.

Normalization



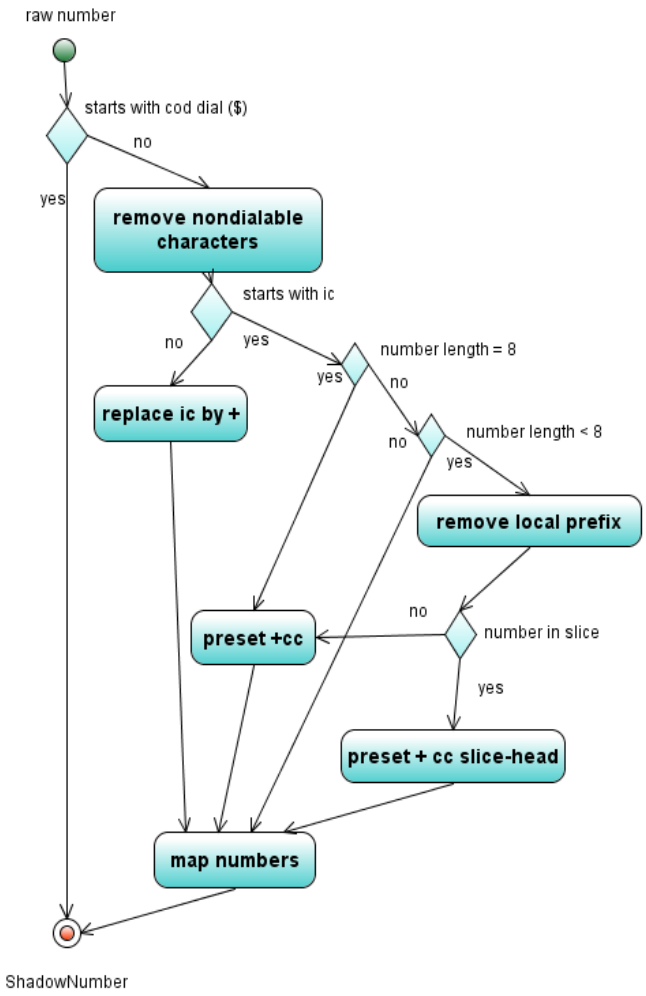
Reduction


ShadowNumber
starts with code dial ($)
yes
no
starts with cc
no
yes
number in slice
yes
replace + by ic
no
extract station
map local prefix
dial able number

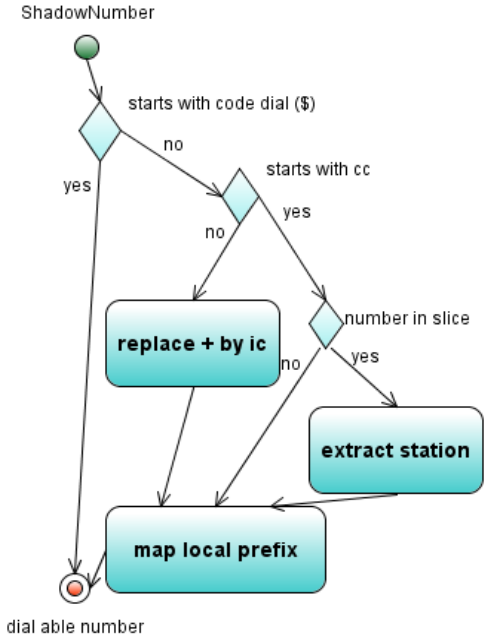
Norway

Phone numbers in Norway have 8 digits. 4 digits area code and 4 subscriber number. Area code can not be omitted.

Normalization



Reduction


ShadowNumber
starts with code dial ($)
no
yes
starts with cc
yes
no
replace + by ic
number in slice
no
yes
extract station
map local prefix
dial able number

Universal Parser

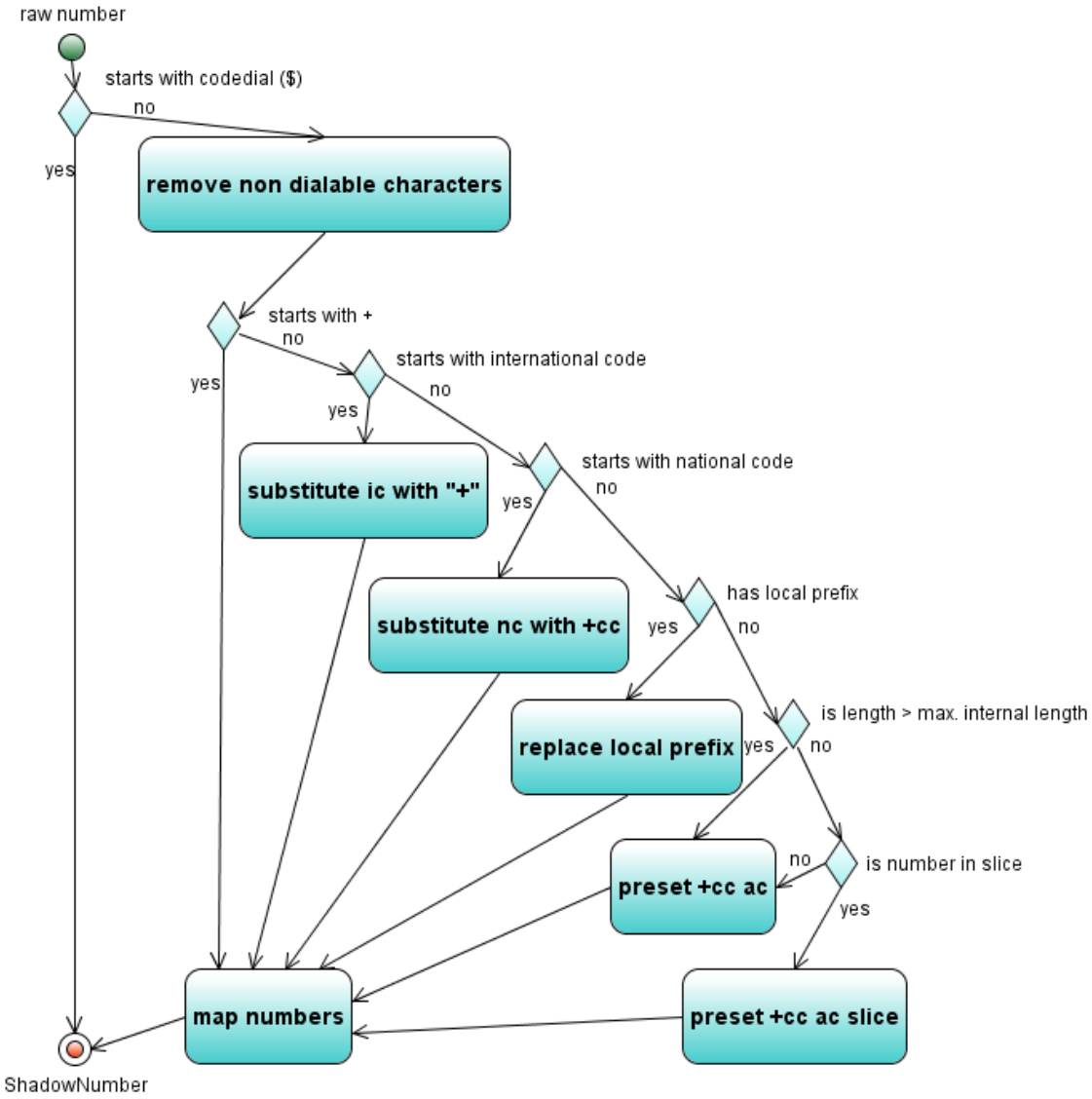
The new Universal Parser can be used for open dial plans with slices. This is e.g. in Germany in areas where free numbers are running low. It can also be used in countries like Nicaragua, Luxembourg or Iceland. The fields National and Area Code are optional and can be left empty.

The field “max. length internal” defines how long internal numbers are in maximum. This is used to detect internals if the field National is empty. If “max. length internal” is 0 the length is ignored.

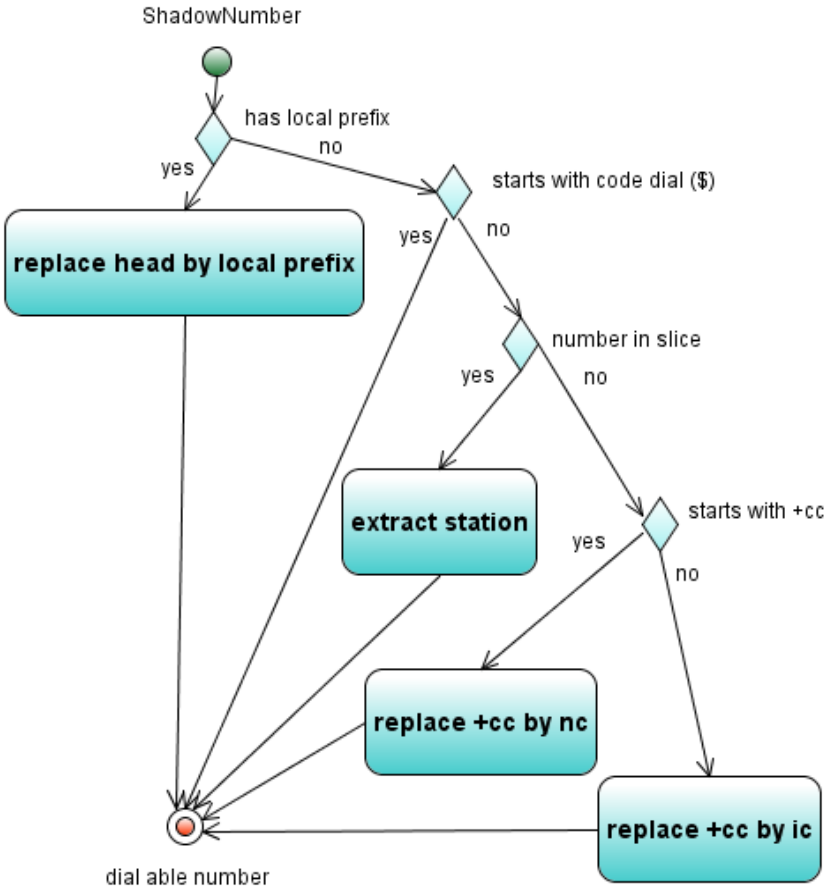
Slices defining ranges of DIDs given from the network provider. PBX-Number Start holds the beginning of the first number, PBX-Number End holds the beginning of the last number. Number of local digits defines the number of digits included in PBX-Number Start and PBX-Number End that remains to internal numbers. See examples.

Number mapping and local prefixes are also supported.

Normalization

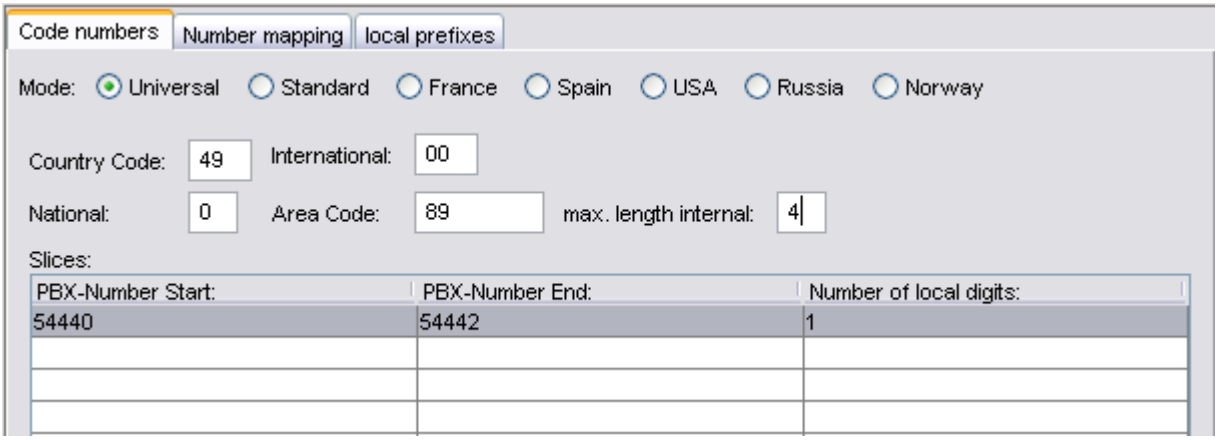


Reduction



Examples

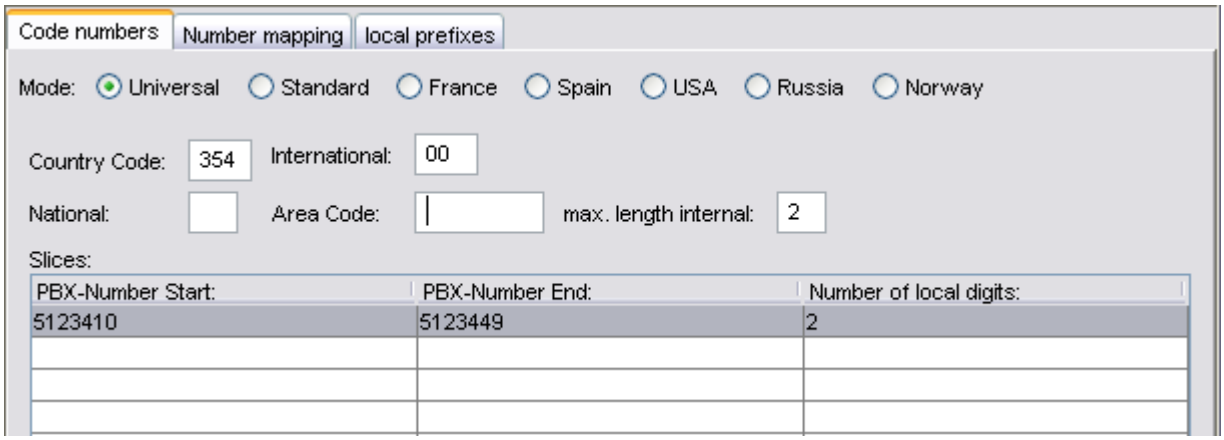
Open numbering plan with slices



This example defines numbers from +49 89 5444 0 to +49 89 5444 2999. The last one digit of PBX-Number Start defines the lowest digit an internal number can start with. The last one digit of PBX-Number End defines the highest digit an internal number can start with. The length of internal numbers can vary from 1 up to 4 digits.

Displayed number	ShadowNumber	Dialable number	Dial external	Comment
10	10	10		
2500	2500	2500		
089 5444-5000	+498954445000	08954445000	X	5000 is not in slice, so it is external
25000	+498925000	08925000	X	25000 is longer than max. internal length, so it is external
+49-69-7505-5000	+496975055000	06975055000	X	National long distance call

Iceland, Luxembourg, Nicaragua and others



This example shows the usage in countries with no national code and no area code and. The range of numbers contains 40 DIDs from +3545123410 to +3545123449.

Displayed number	ShadowNumber	Dialable number	Dial external	Comment
10	10	10		
5123410	+3545123410	10		
+3545123450	+3545123450	5123450	X	50 is not in slice, so it is external
+49-69-7505-5000	+496975055000	00496975055000	X	National long distance call

Tools: one-X Attendant

A separate sheet is displayed in the tree view for each one-X Attendant client that has connected to the database at least once.

The selected sheet consists of two table columns. The Property Name and
Property Value columns let you edit the properties.

Buttons/Check

The **Save** button saves the changes in the database.

The **Check** button checks only the *EJBSrvHostName* and *EJBSrvPortNo* param
eters.

If a check fails, the entry responsible is highlighted in red. Once this entry is corrected, it is displayed in black again.

The following table indicates the meaning of the parameters and the value range:

3rdPartymodeWithCIE	3rd party connection to BCC/CIE (0 = OFF (default), 1 = ON)
AnswerOnVKADD	+ key for querying in the standard phone window (0 = OFF (default), 1 = ON)
AssignOnDial	Assign a caller to a line which is currently in Dial status (0 = OFF, 1 = external calls only, 2 = external and internal calls (default)
AutoStartFeature	(0 = OFF (default), 1 = one-X Attendant will *not* send an “Attendant Start” signal to the CM before dialing)
CalendarInterval	Interval for refreshing data from the Lotus Notes/Outlook calendar (min, default = 10)
CalendarUsage	Calendar function (No, Yes, Without password request) “Without password request” means that one-X Attendant isn’t asking for the Lotus Notes password after login to the client. If this option is chosen and Lotus Notes started with the setting “File/Security/User Security/Don’t prompt for a password from other Notes-based programs”, no password is necessary to get the calendar information. Without the Lotus Notes setting, Notes will prompt for the password.
CallTransfDelayTime	Delay time for Dial & Assign operations (msec, default = 1000)
CFABActive	CallFromAnsweredBy-Criteria for detection of external call numbers (0 = OFF (Default), 1 = ON) (see document ExternalCallDetection.pdf)
ClearSearchOnNewCall	Clears the search screen in the phone book when a new call comes in 0 = OFF (default), 1 = ON
CutOnBusyTransfer	In case of a busy line the focus is on Clear in the calling card to be assigned (0 = OFF (default), 1 = ON)
DelayTimeCMUnpark	Delay inmilliseconds between the dial of the unpark FAC and the unpark extension (only CM variant, Default=0)
EJBSrvHostName	EJB server PC name (phone book server) (Default = “localhost”)

EJBSrvPortNo	EJB server port number (phone book server) (Default = 21099)
ExtNumberDigits	Call number length-Criteria for detection of external call numbers (Default 0 = OFF) (see document ExternalCallDetection.pdf)
ForceBlockdialCM	After a block dial, e.g. using a destination key, the CM sends the number immediately without waiting for further inputs (0 = OFF (default), 1 = ON)
GlbSearchFilterField	Prefilter for topic calls (all phone book fields listed; default = none
ImExportTransferMode	Codepage format of the ex/imported phone book data (0=Default Codepage, 1=ISO 8859_1, 2=UTF 8, 3=UTF 16 BE, 4=UTF 16 LE, 5=UTF 16)
Keep AliveTimerDB	Keep alive timer in milliseconds between 1XAttd client and database for deactivation of database searches during calls if database is not reachable (DEFAULT 20000 / 0 = turned off)
KeepAliveTimerSVA	Keep alive timer in milliseconds between 1XAttd and SVA Manager for NBV (CM+IE) and call/redial list (IE) (DEFAULT 0 = turned off)
NbaPumDefault	Default size configuration for Personal User Mobility (PUM) and network–wide busy display (Default= 2000)
NBV Server	Operates with SVA Manager or not (Presence Server is not supported).
NoCallIdentification	Controls number identification (0 = number identifcation on incoming and outgoing calls (default), 1 = no number identification, 2 = number identification only for incoming calls, 3 = number identification only for outgoing calls)
OSType	OS hardware ("OS33" for 1st Party, "I55" for 3rd Party)
OSSoftwareVersion	OS software version "02.01" (Default), "02.00", "01.51", "01.61")
PUMLOgginTimeout	Wait time for the PBX answer for PUM user logon (sec, default: 5)
SearchDelayTimeCC	Search delay time for calling card (msec, default = 400)
SearchDelayTimeST	Search delay time for the lookup table in the phone book (msec, default = 150)
SearchNumberHead	Head number search (0 = OFF(default), 1 = ON) If turned on (in configtool): if the headnumber(s) of the trunk line(s) of an external caller is entered in the phonebook to identify the company and a user of that company calls in, the name of the company will be displayed if that user number is not in the phonebook. If present in the phonebook the exact name of the user is displayed. If turned off: the exact name of the user is displayed if present in the phonebook
ShowEmoticons	Show Icons/Symbols for Call Types in operator window (0 = OFF, 1 = ON (Default))
ShowSubstituteRemark	Display substitute text as the topic (0 = OFF (default), 1 = ON)
SVAMHostName	SVA Manager PC name for NBA (Default = "localhost")
SVAHostNameIPL	SVA Manager PC name for call control (Default = "localhost"
SVAMPortNo	Port number of the SVA Manager for NBA (Default = 6006)
SVAMPortNoIPL	Port number of the SVA Manager for call control (Default = 10405)
SVAMPort	Port number for the QTAPI SVA Manager port (Default = 10405)
SystemLanguage	System language (Default = "system_language", e.g. en)

Top100Support	Collect call information for the Top100 display (1 = ON (default), 0 = OFF)
TransferOnBusy	Can be assigned to busy subscriber; no effect if one-X Attendant is connected to ACM (1 = ON (default), 0 = OFF)
TTracePortNo	TTrace server port number (Default = 10300)
TTraceHostName	TTrace server PC name (Default = “localhost”)

Buttons

The **Save** button saves the changes and reconfigures all available clients accordingly.

The **Restart JOnAS** button stops the service and restarts it with the modified settings. The following table explains the text boxes and check boxes.

Note

When you have restarted JOnAS, you also need to restart all dependent services, such as AIS, WebAccess and Update Service.

	Server
Registry Port	Port on which the phone book server listens. Default = 21099
Remote Object Port	Port which should be used to transfer the search results to the one-X Attendant. Define a port here if a firewall is installed between one-X Attendant and the phone book server. (Default = 0, i.e. dynamic)
Transaction timeout	Timeout in seconds, the maximum time that the processing of a search query may last. Default = 120
	Cache
Cache active	Select if you want to cache the search results. This can speed up a new search.
Limit	Select if you want to restrict the memory for the cache.
max. size	The size entered here will not be exceeded. The oldest entries in the cache are deleted when more recent entries are written to the cache. The recommended max. size is 10,000 records.
	Search result
Search result size	Number of records transferred from the server to one-X Attendant when a search returns more results. Default = 50
Search result timeout	Timeout in seconds a search result remains valid on the server. Records that are not queried are discarded after the timeout. Default = 240

Settings for large databases

If you run one-X Attendant with a large database (> 5000 records) or if it is linked to large databases, you must assign JOnAS more memory. You can do this when you configure the JOnAS-service (Avaya Phonebook Server) in the **Wrapper_ext.conf** file.

1. Open the **Wrapper_ext.conf** file in an editor. It is located in:

   c:\avaya\servers\serviceconf
2. Find the line “wrapper.java.maxmemory” in the wrapper properties.
3. Change the default value from 64 (which means 64 MB) as required.
   136 MB are sufficient for 15,000 records.
4. You may also need to change the default transaction timeout time.
   You can do so using the one-X Attendant config tool on the JOnAS tab. We recommend increasing the time to 300 seconds.

A separate sheet is created for each data source. You can define data sources and configure the field assignment using an index definition on the sheet.

For examples of connecting to different data sources, see LDAP-connection
(→ p.
70).

Connection tab

The **Reload** button discards the last changes, reloads the settings from the one-X Attendant database and runs the SQL statement. However, *no* data is loaded into the one-X Attendant database!

The **New** button creates a new data source and populates the fields with default values.

The **Save** button checks the settings and saves the configuration data in the one-X Attendant database.

The **Delete** button deletes the active data source. If you delete a data source, all records of this source are also automatically deleted.

The **Delete** button deletes all records of the selected data source from the database.

Name and Description	The *Name* and *Description* fields describe the data source. The name is needed to uniquely identify a data stream. The name appears in the combo box of the one-X Attendant phone book.
Drivers	The *Drivers* field contains a list of available JDBC drivers. The driver displayed is loaded. The list can be added to in the one-X AttendantConfigTool.properties file. If you select a driver from the list, the *Provider URL* box is populated with the corresponding URL schema by default. The name of the JDBC database driver can be found in the database documentation or the driver documentation (e.g. for a JDBC-ODBC bridge it is sun.jdbc.odbc.JdbcOdbcDriver).
Provider URL	The *Provider URL* field contains the connection parameters. The URL points to the database to be connected, and has the following format: **jdbc:<subprotocol>:<subname>** **subprotocol** belongs to the JDBC class with which you are working (e.g. for a JDBC-ODBC bridge, this is odbc). **subname** is information that is needed to locate the database (e.g. for a JDBC-ODBC bridge, this is a DSN from the ODBC sources). The syntax of subname is dependent on the driver and can be found in the documentation for the database or the driver. For SYBASE, this information is in the SYBASE manual.

User database.	Shows the *user* for the corresponding
Password	Shows the *password* for the corresponding database.
SQL statement	The *SQL statement* field contains the SQL query used to retrieve the data from the data source.
Transaction timeout	The *Transaction timeout* contains the time in seconds after which a hanging transaction is ended if necessary. This information is also important for updates. The maximum value is 3600 seconds.
Commit Transaction	If a transaction takes longer than 1 hour it will automatically be canceled. With the option ”Commit Transaction” you can configure the number of records, according to which the transaction is automatically confirmed (committed). Then begins a new transaction and the timer cannot strike if the number is selected small enough. This configured automatic ”commit” has the disadvantage that the final data will be stored into the database and if an error does occur the original state can’t be restored. A value of "0" disables the automatic "Commit Transaction

Assignment tab

Result (gray display window)

The *Result* field contains all messages that provide information on a possible error.

Index	The *Index* column selects the database fields that make a record unique (primary key). one-X Attendant needs a primary key to work with customer data. This primary key can be the primary key of the customer database. You can also use several fields as a primary key. This is referred to as a composite primary key. one-X Attendant uses this primary key for the shadow database. **Attention**: None of the elements of the primary key can be blank for any of the records!
Source field	The *Source field* column contains all fields output from the database.
Target field	The *Target field* column contains the assigned one-X Attendant phone book destination fields. All fields defined in the one-X Attendant phone book are possible! The fields are displayed in the language of the one-X Attendant configuration tool collection. For the “Gender” field the source value has

to be “m” or “M” for male, and “f” or “F” for female. All other values will be interpreted as undefined.

CM Name (last name, first name)” isn’t a real phone book field. If you choose this as target field and the content of the source field has the format (last name, first name), then it will be split into the phonebook fields (last name) and (first name). This will be usually used for importing data from text files which are created via Avaya Site Administration (ASA) export.

Tools: Update service

The update service connects the external data sources (Exchange, Domino) with the phone book server (JOnAS). A separate sheet is created for each data source that was created in the phone book. Click the sheet to open the settings for that sheet in the work area.

Data sources that do not have an enabled update service are not listed in one-X Attendant as data sources. Records from these data sources are nevertheless found when you search for all data sources!

Buttons

The **Save** button saves configuration data in the one-X Attendant database.
This data only becomes active after the update service has been stopped and then restarted.

The **Check connection** button checks whether the data sources were reached by the update service.

The **Start** button starts the update service. The **Stop** button stops the update service.

Check connection

To check the connection, proceed as follows:

1. Enter a new free **Test Port**.
2. Save the new setting using the **Save** button.
3. Stop the update service using the **Stop** button.
4. Restart the update service using the **Start** button.
5. Check the connection using the **Check connection** button. If necessary, you can also refer to the results of the test in the **updateservice.log** logfile in the server directory **Avaya\Server**.

Tester/Services

Host	Name of the host on which the update service is installed.
Test Port	TCP server port of the update service.

Information for each database

Earliest run (date, time)	The *Earliest run (date, time)* fields define the earliest time at which you wish the update service to start.
Interval	The *Interval* fields define the how often you want the update service to run (value and unit).
Activated	The *Activated* checkbox must be selected for every update database if it is to be included in the update service.

Buttons/Test connection

The **Check connection** button checks whether the Web server component connects correctly to the phone book server component.

Save saves configuration data in the one-X Attendant database. This data is only active when the JOnAS is stopped and then restarted.

The **Restart JOnAS** button stops the service and restarts it with the modified settings.

Host
Name of the host on which WebAccess is installed.

Web server port
Port on which the WebAccess is listening

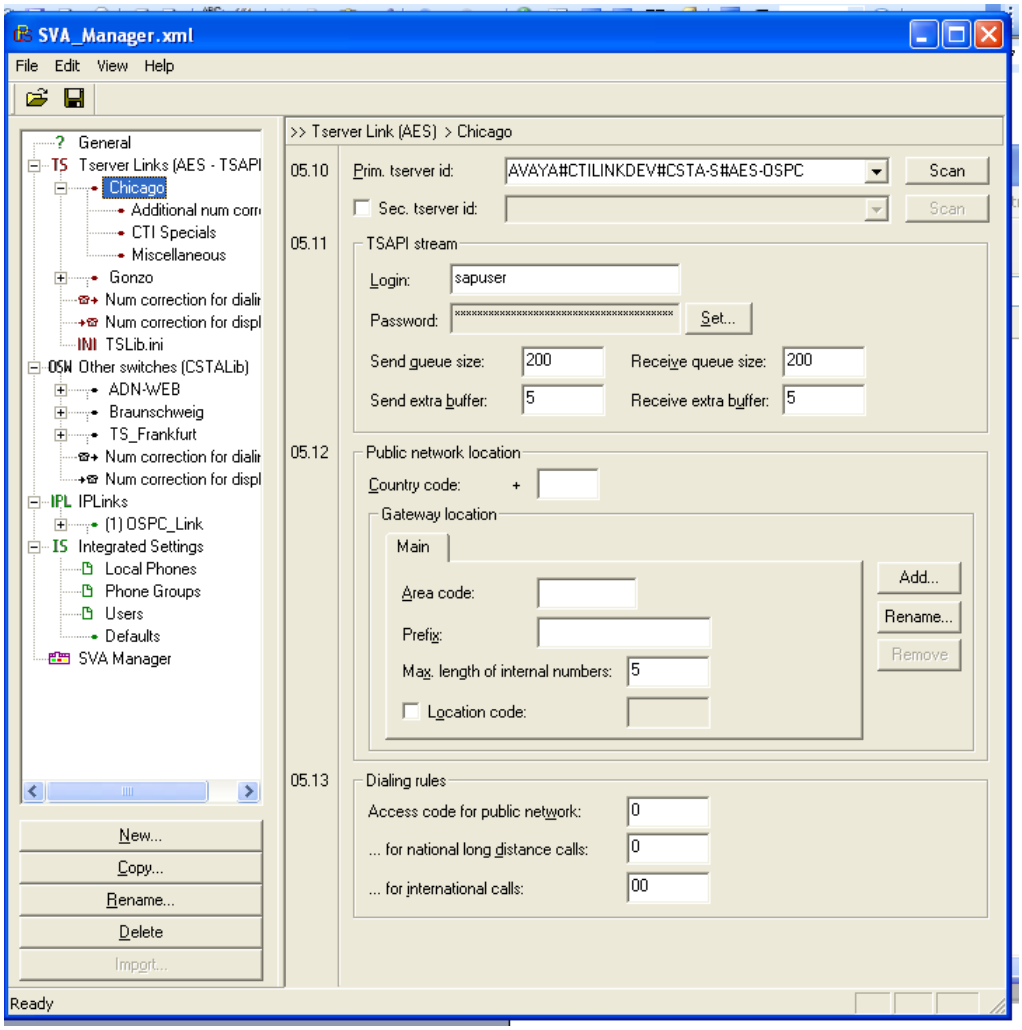
Note

– You need to specify the Web Server Port entered here if you are using AIS or operating the absence display via a browser.

Tools: External Call Detection

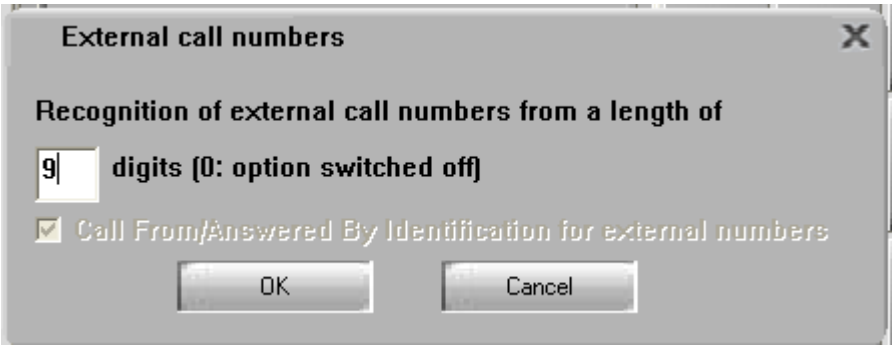
Incoming and Outgoing calls on one-X Attendant I55 3rd party

External Call Number detection is also a point for one-X Attendant at I55 via 3rd party. In this scenario we have SVA Manager (QTAPI) instead of Scapi
The only criteria for incoming and outgoing calls is the length of the call number of the remote calling party. The difference to the CM version is, that call list and extended redial list are filled by the SVA Manager. That means a call number in call list or extended redial list is marked “external”, if the call number is longer than the with the SVA Manager Config-Tool configured value for “Max. length internal numbers”:



SVA Manager Configuration Tool

In one-X Attendant operator window, a call is marked “external”, if the call number of the remote calling party is longer than the configured value in the one-X Attendant “external call number” dialog (see Figure 19)



Enternal call number dialog

Problems could be the same as described in 1.2.4. a) but normally I55 dial plan does not provide internal numbers longer than external numbers.

Configuring the Avaya Attendant application

one-X Attendant application

Once you have configured the software, the following configurations are either required or recommended for the one-X Attendant **application** the first time you start the program:

– Set up a new user with a password. Instructions for setting up agents follow in the next section.

– Define the work profiles by assigning functions to hotkeys and the keypad.

– Set up integrated phone book.

– Configure phone book search (phonetic search).

– Configure the network–wide busy display.

These configurations do not form part of this manual. A detailed description can be found in the Help facility or in the User Guide for the one-X Attendant /10/ (→ p. 84).

Configure Agents Login

With a third party connection, if the operator is also working as an agent in a connected CIE, the user name and the password for the one-X Attendant and CIE must be identical. Only then can the one-X Attendant user authenticate against both the one-X Attendant and the CIE.

1. Construct a new user with a suitable password (one-X Attendant menu **Edit > User > Edit > Insert**).
2. Enter the **Agent number** assigned in CIE.
3. When the topic of a call should be shown in the calling card of a caller instead of the call type, select the control box **Show topic**.
4. Select which phone book field should be searched for the topic (one-X Attendant configuration tools, → p. 52). Select **“None”**, if the topic should not be evaluated during the phone book search.

   Note: During a call to a topic, the search for the caller in the phone book is only performed in this field. If the topic is not recorded there for the caller, they will not be found.

Maintenance, problem solving

one-X Attendant information

In case of problems with one-X Attendant you can use

Start > Programs > Avaya > Avaya one-X Attendant Info

where you can record all your computer statuses and pass them over to the service department, who can then use this information to check your settings and applications.

The program creates, in the root directory, a file **one-X AttendantInflog.txt**, and this contains the relevant information. You can send this file to your service technician.

TTrace

If a login to one-X Attendant is not successful because a wrong password or an invalid user name has been entered then in the TTRACE category “TC_Warning” a message “Failed login with user name <name>” appears where <name> is replaced by the name the user had entered

More detailed information on installation and operation can be found in /7/ and /8/

TTrace installation

To install TTrace, follow these steps:

1. Insert the one-X Attendant installation CD in your CD drive.
2. In the root directory of the installation CD, double–click on the file TTrace.html. The “TTrace” page opens in your standard browser.
3. Click on TTrace (logging tool). The TTrace window opens.
4. Click on TTrace Update. This runs a batch file which replaces some program files.

one-X Attendant/ SVA-Manager connection

To also record one-X Attendant, SVA-Manager, AIS and other messages, you need to set the correct host name and port number of the TTrace server in the configuration tools **QConfig**, **one-X Attendant configuration tools collection** and **AISConfig**.

TTrace password Access to TTrace is password protected. The default password is “Recall”.

SVA-Manager trouble

First please check that a red “**SVA system”** status in NOT shown on one-X Attd start screen.

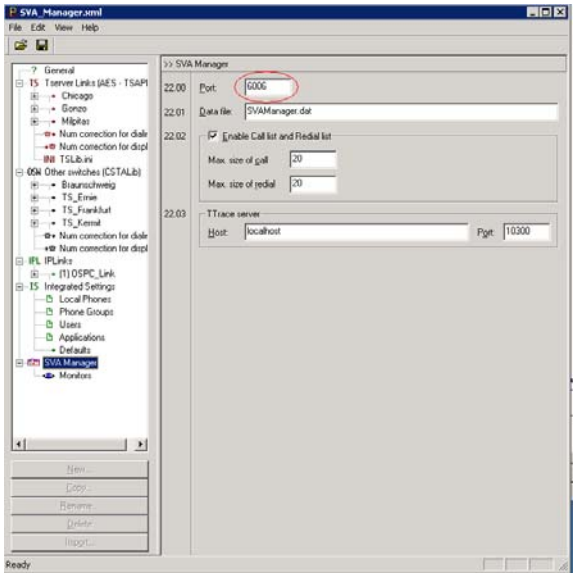
Then check that all configured gateways and monitors are having status **active**:

1. SVA-Manager system service is started
2. Open TTrace Console on server: SVA-Manager is listed
3. Enter "printCtiGw" in TTrace Console command prompt
   => all configured gateways (CM, IE) are having status **active**
4. Enter "printDevice" in TTrace Console command prompt
   => all configured monitors are having status **active**

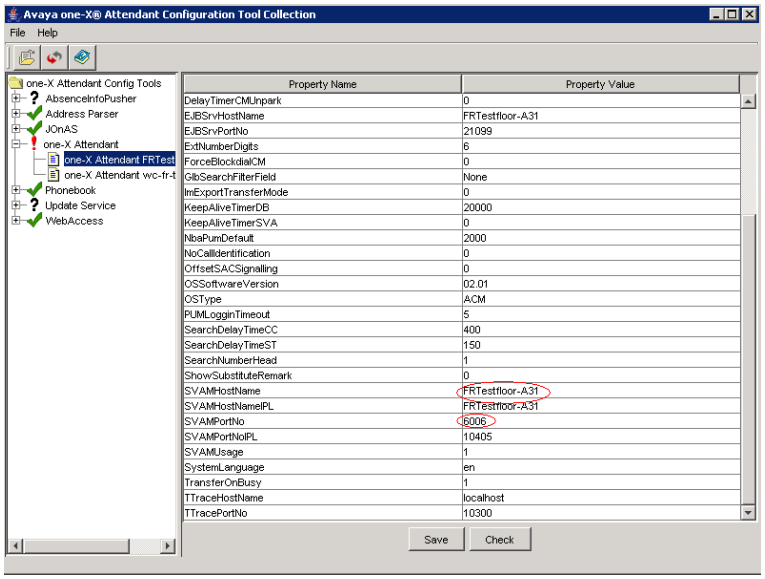
SVA-Manager NBL-Link

Red SVA system status

First of all, please check that SVA-Manager service is running (see chapter “*one-X Attd is up and running*” above). Then ensure that configured SVA Manager IP address & port are correct, which means that the same IP port (default: 6006) is configured in *SVA* & *one-X Attd Config Tool*:



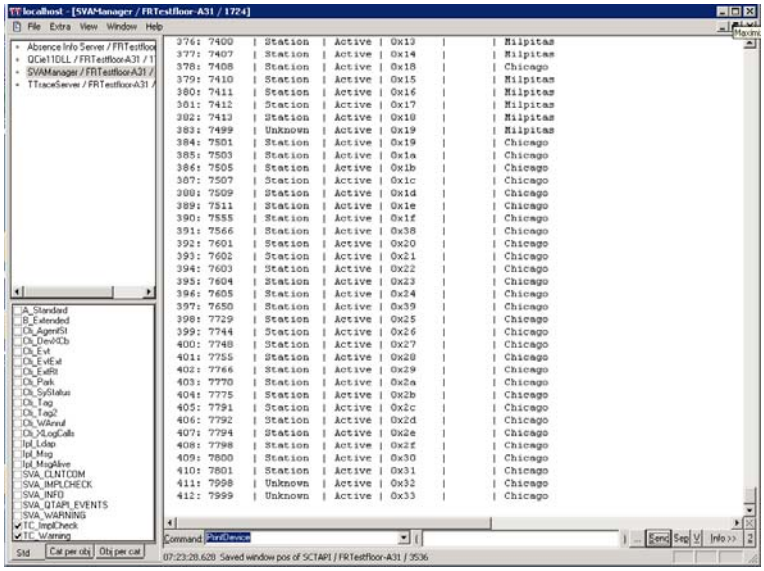
NBL-Link port administration in SVA-Manager config tool



NBL-Link port administration in one-X Attd config tool

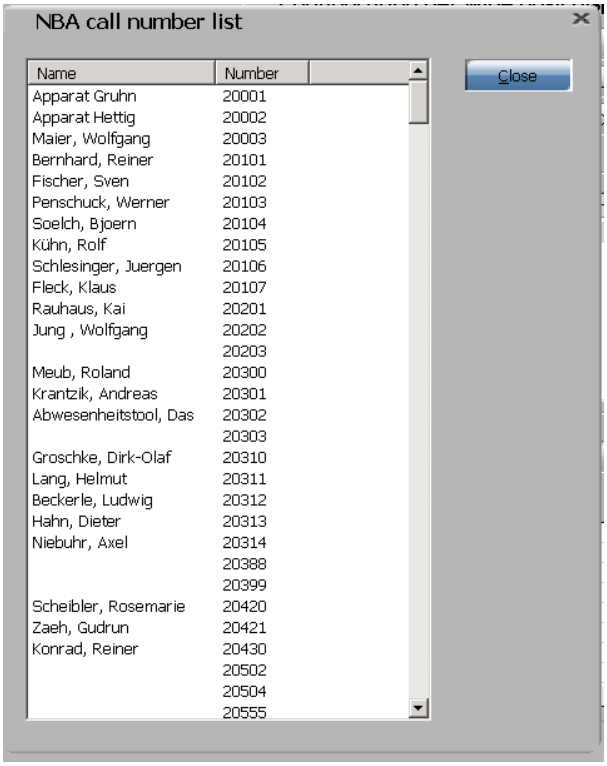
NBL does NOT show call states (e.g. busy/ agent/ call diversion)

First please check w/ the help of *TTrace* console and **PrintDevice** command, if configured monitors have been started and are logged as **Active**:



TTrace “Print Device” command displays start of monitors

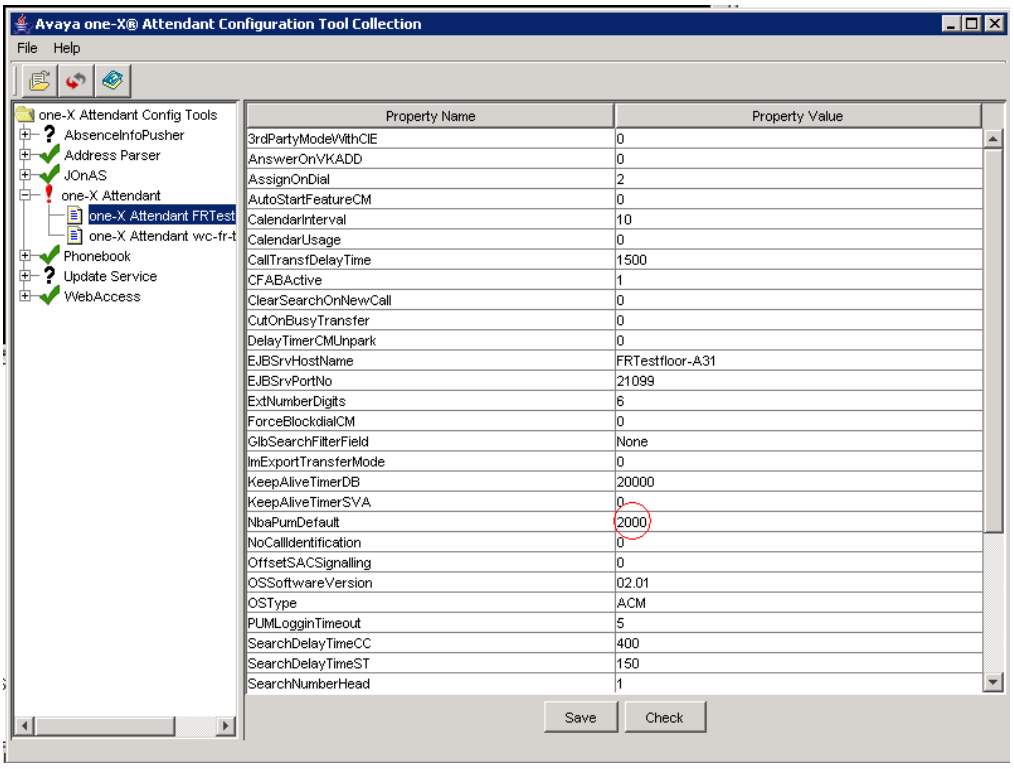
Look in 1XAttd work profile edit net wide busy display if there are numbers in number list (if not and above point is ok: try to disconnect all clients and restart SVA Manager):



Name	Number
Apparat Gruhn	20001
Apparat Hettig	20002
Maier, Wolfgang	20003
Bernhard, Reiner	20101
Fischer, Sven	20102
Penschuck, Werner	20103
Soelch, Bjoern	20104
Kühn, Rolf	20105
Schlesinger, Juergen	20106
Fleck, Klaus	20107
Rauhaus, Kai	20201
Jung , Wolfgang	20202
	20203
Meub, Roland	20300
Krantzik, Andreas	20301
Abwesenheitstool, Das	20302
	20303
Groschke, Dirk-Olaf	20310
Lang, Helmut	20311
Beckerle, Ludwig	20312
Hahn, Dieter	20313
Niebuhr, Axel	20314
	20388
	20399
Scheibler, Rosemarie	20420
Zaeh, Gudrun	20421
Konrad, Reiner	20430
	20502
	20504
	20555

NBA call number list

Check in 1XAttd config tool if value for **NbaPumDefault** is not below number of monitored extensions:



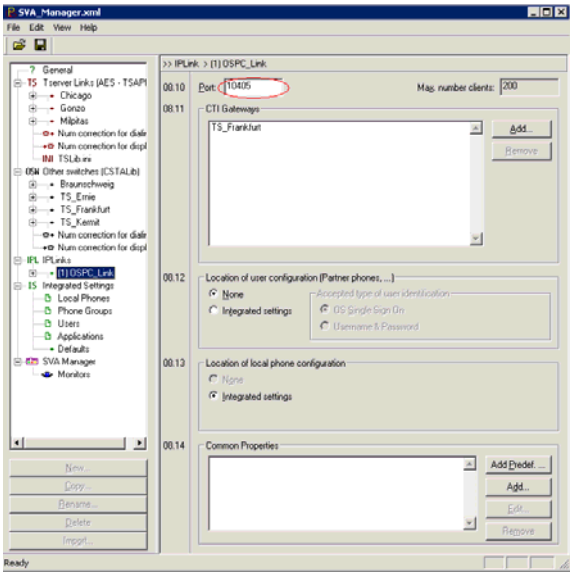
Property Name	Property Value
3rdPartyModeWithCIE	0
AnswerOnVKADD	0
AssignOnDial	2
AutoStartFeatureCM	0
CalendarInterval	10
CalendarUsage	0
CallTransfDelayTime	1500
CFABActive	1
ClearSearchOnNewCall	0
CutOnBusyTransfer	0
DelayTimerCMUnpark	0
EJBSrvHostName	FRTestfloor-A31
EJBSrvPortNo	21099
ExtNumberDigits	6
ForceBlockdialCM	0
GlbSearchFilterField	None
ImExportTransferMode	0
KeepAliveTimerDB	20000
KeepAliveTimerSVA	0
NbaPumDefault	2000
NoCallIdentification	0
OffsetSACSignalling	0
OSSoftwareVersion	02.01
OSType	ACM
PUMLogginTimeout	5
SearchDelayTimeCC	400
SearchDelayTimeST	150
SearchNumberHead	1

Administration of *Nba PUMDefault* value in one-X Attd confi tool.

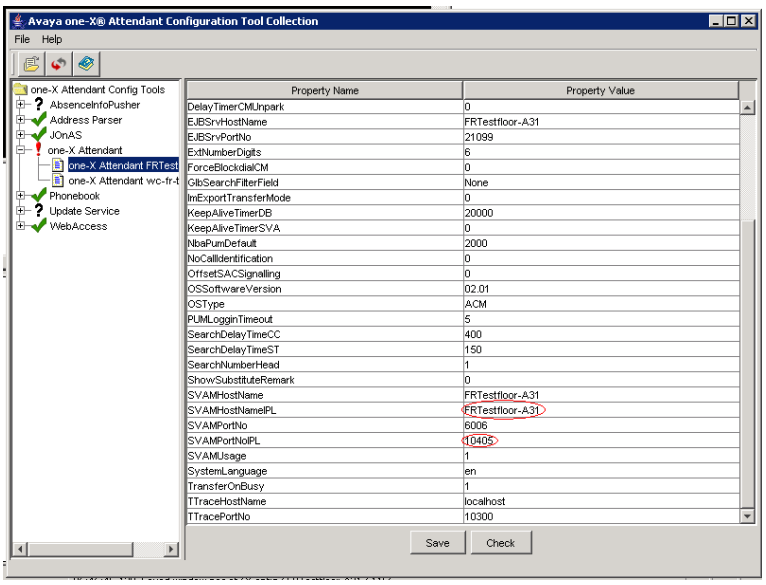
SVA-Manager: IP-Link

Red TEL system status

First of all, please check that SVA-Manager service is running.
Next ensure that configured SVA Manager IP address & port are correct, which means that the same IP port (default: 10405) is configured in *SVA Config Tool* and *one-X Attd Config Tool*:



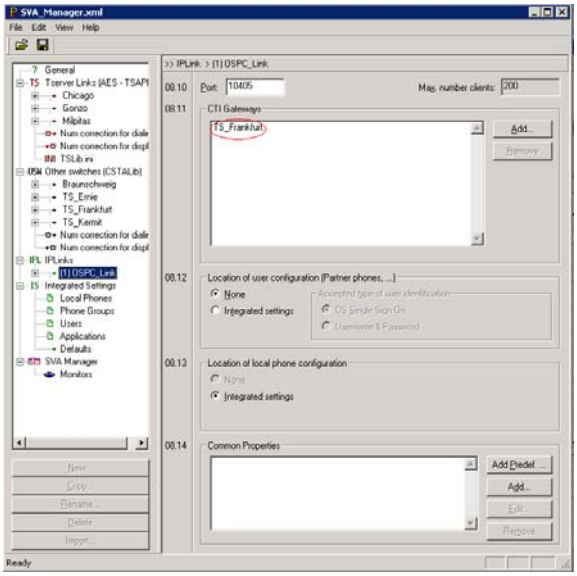
IP-Link port administration in SVA config tool



Property Name	Property Value
DelayTimerCMUnpark	0
EJBSrvHostName	FRTestfloor-A31
EJBSrvPortNo	21099
ExtNumberDigits	6
ForceBlockdialCM	0
GlbSearchFilterField	None
ImExportTransferMode	0
KeepAliveTimerDB	20000
KeepAliveTimerSVA	0
NbaPumDefault	2000
NoCallIdentification	0
OffsetSACSignalling	0
OSSoftwareVersion	02.01
OSType	ACM
PUMLogginTimeout	5
SearchDelayTimeCC	400
SearchDelayTimeST	150
SearchNumberHead	1
ShowSubstituteRemark	0
SVAMHostName	FRTestfloor-A31
SVAMHostNameIPL	FRTestfloor-A31
SVAMPortNo	6006
SVAMPortNoIPL	10405
SVAMUsage	1
SystemLanguage	en
TransferOnBusy	1
TTraceHostName	localhost
TTracePortNo	10300

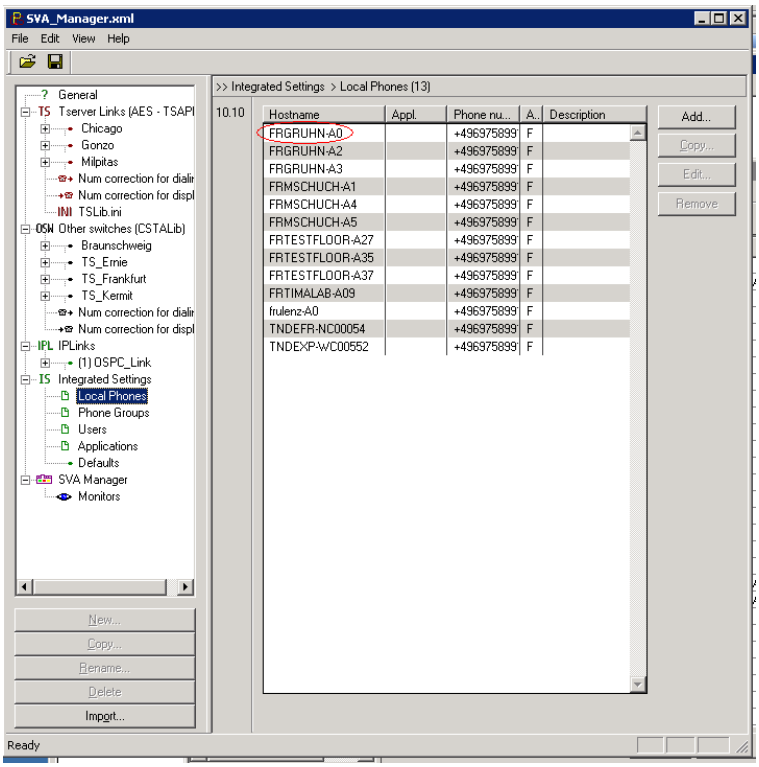
IP-Link port administration in one-X Attd config tool

Then ensure, that the appropriate *Integral Enterprise* pbx has been configured in *SVA Config tool* as **CTI Gateway**:



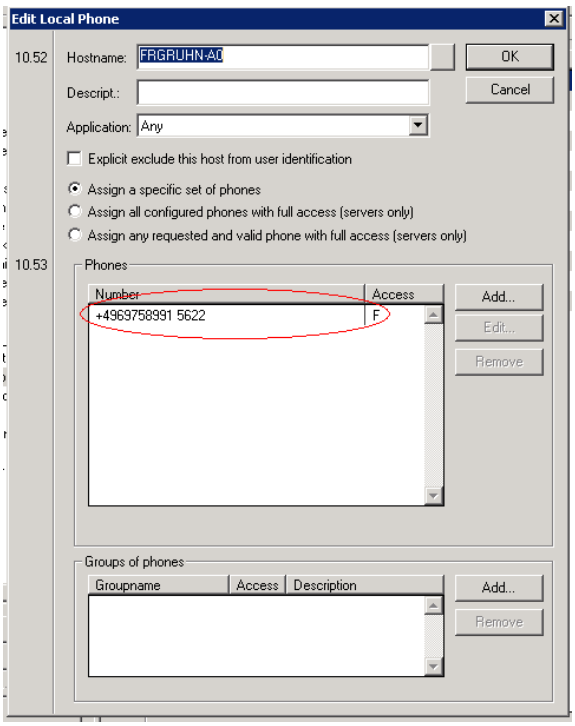
CTI Gateway configuration in SVA config tool

Please check that one-X Attd client PC's host name is configured in *SVA config tool* under **Integrated Settings/Local Phones**:



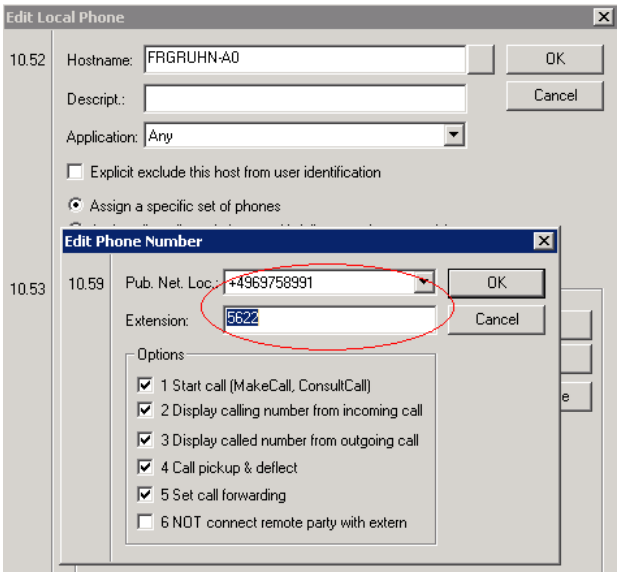
One-X Attd client PC host name configuration in SVA config tool

Now please check that one-X Attd phone number is configured correctly:



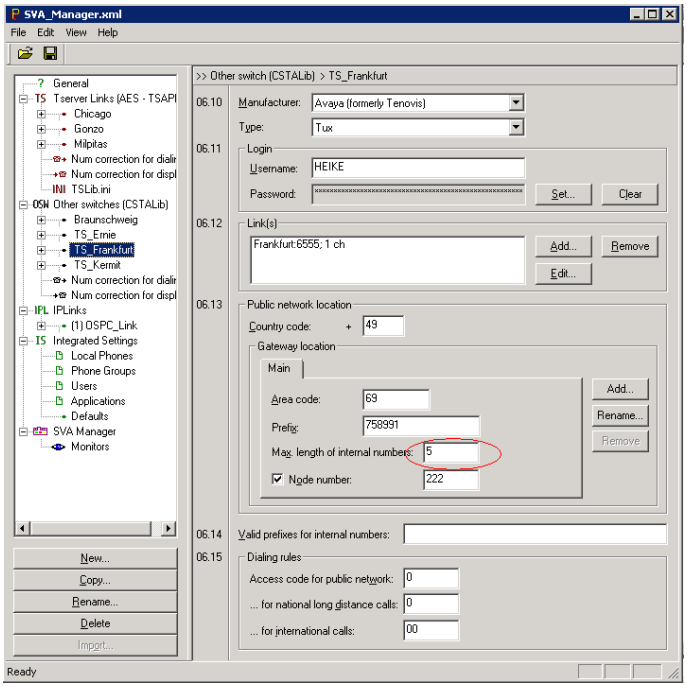
Assign phone number to one-X Attd client

Verify that the apptopriate options are configured for one-X Attd phone number



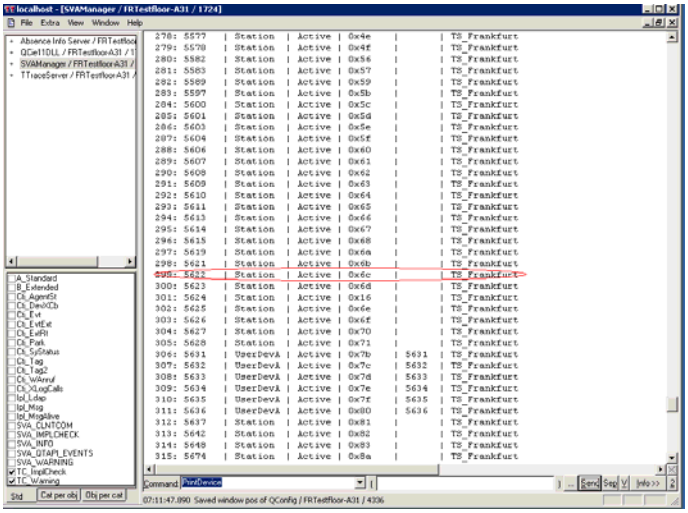
Configure options for one-X Attd client / phone number

Note:
The following bug is reported: when no changes are made and Edit Phone Number dialog is first closed w/ **Cancel** button, then reopened again, that the configured phone number options are not displayed.
Please verify that **Max length of internal number** of Integral Enterprise (one-X Attd is connected to) is not shorter than length of one-X Attd phone number (here: phone nr. 5622 has length 4 and therefore is longer/bigger than 5):



Configuration of maximum length of internal numbers

Finally please have a look at SVA-Manager TTrace console applying PrintDevice command, if monitor point for one-X Attd has been started (if it is not started/logged, please check if one-X Attd phone number is configured correctly as described above):



TTrace showing that monitor point for one-X Attd phone nr has been started

Backing up and restoring the database

Application

Once you have created all users and work profiles, you can back up the database and all entries. You can revert to this data at any time and restore the data. These functions help you to quickly and easily set up an operator position with the usual work profiles and users, for example if you reinstall the operating system.

The file **OSPCdb.db** contains the entire one-X Attendant database. You can use tools to back up the database while it is running and restore it while it is not running. The appropriate tools are set up during the installation process.

Backup

You can back up the database during operation. Proceed as follows:

1. Click on Start.
2. Click on Programs.
3. Click on Avaya.
4. Click on Backup one-X Attendant.
5. If no **backup** folder exists, the following prompt appears: **Directory does not exist. Create it.** Acknowledge this prompt with **Y** (yes). The **backup** folder is created, and the **OSPCdb.db** database and the JOnAS and Serviceconf directories are copied to the folder. If the **OSPCdb.db** file already exists, a prompt is displayed asking whether you want to replace the file.
6. You can back up the **OSPCdb.db** file and both directories on a single drive (for example, a tape drive).
   We recommend changing the file names afterwards and adding the one-X Attendant version and date, for example OSPCdb_3v00_090910.db or moving all files to a suitably named folder.

Restore

Before you restore the database, you must make sure that the backed up database file **OSPCdb.db** is located in the **backup** folder. You **cannot** restore a database when it is running. Proceed as follows:

1. Shut down all one-X Attendant clients.
2. Click on Start.
3. Click on Programs.
4. Click on Avaya.
5. Click on **Restore one-X Attendant**. This copies the database and theJOnAS and Serviceconf folders.
6. Press any key.

Note:
If necessary a database update will be done during the restore. This will be logged in the directory “<Serverdirectory>\Update\log”.

one-X Attendant migration from OSPC v2.5x

Performing migration

If you wish to migrate from an OSPC version 2.5x to one-X Attendant v3.00, proceed as follows:

First of all:
<Serverdirectory new> is by default: C:\Avaya\Servers
<Serverdirectory old> is by default: C:\Avaya\Servers

The following steps are only for a database update necessary, this will occur if for the according version a update_xxx_xxx.sql file is available. For example at the update from 3.00.006 to 3.00.008 the file update_v300_v300007.sql.

Configuration(Database/SVAManager/JONAS) backup
'Start –> Programs –> Avaya –> Avaya OSPC – > Backup Avaya OSPC' respectively
'Start –> Programs –> Avaya –> Avaya one–X Attendant –> Backup Avaya one–X Attendant'

1. Recommendation:
   For safety reasons export the Profiles, Users, Phone Book and make screenshots of the Connection\Mapping data for the external

   Phone Directory in the one–X Attendant Configuration Tool. If something goes wrong, you can reimport/enter them after a normal installation of the next version.
2. Deinstall old version.(→ p. 63).
   Important: Please note database user and database password, because during the installation of the new version these should be used again,

   otherwise after the update the database access works no more.
3. Install the new one-X Attendant version (→ p. 18).
4. Copy files:
   Copy the files 'updatedb.bat' and all 'update_vxxx–vxxx.sql', which are necessary for this step of the update, from the Update–Directory of the CD '\software\one–X Attendant\DBUpdate' into <Serverdirectory new>.
   For an update from 2.50 towards 3.00.007 these files are 'update_v250_v251.sql', 'update_v251_v300.sql' und 'update_v300_v300007.sql'.

   If now the Master Directory Application is installed and in the old version not, the entries for an automatic update of the phone book will be deleted during the restore of the configuration(database). If they should be restored,
   then also the file 'One–XAttendantAutoImport.sql' out of the directory
   <Serverdirectory new>\MasterDirectory\Data>
   have to be copied in the <Serverdirectory new>. .

5. Customize updatedb.bat
   Open the file update.bat with a text editor (e.g. Notepad) and change the following texts:
   – 'SERVERNAME_1XA' in the name of the database server as stated during the installation respectively located in the registry under the Key [HKEY_LOCAL_MACHINE\SOFTWARE\Avaya\Avaya OSPC\Setup] in the value 'DBServer'
   – 'SERVERNAME' in the name of the PC as stated under Control Panel –> System –> Computer name

   If during the installation the default values haven't been used, then possibly the following texts has to be changed:
   – The value for 'ServerDrive' (default is 'C:')
   – The value for 'ServerDir' ('default is C:\Avaya\Servers')
   – The value for 'BACKUPPATH' ('default is C:\Avaya\Servers\Backup')
   – The value for 'DBUser' in the user name for the database server as stated during the installation
   – The value for 'DBPwd' in the password for the database server as stated during the installation
   – The value for 'DBPort' in the port for the database server as stated during the installation respectively located in the registry under the Key [HKEY_LOCAL_MACHINE\SOFTWARE\Avaya\Avaya OSPC\Setup] in the value 'DBPort'
6. Update database
   Call updatedb.bat (with Windows VISTA and Windows 7 as administrator).
7. If you have chosen the usage of the SVAManager during the installation and you didn't have use before, the entry 'SVAMUsage' in the one–X Attendant Config Tools after the restore of the configuration(database) is possibly set to '0'. This means that usage of the SVAManager is deactivated and the extended busy lamp doesn't work. If you want to use this feature, you have to set entry 'SVAMUsage' to '1' again.

Note

An upgrade **cannot** be installed over an existing version.

one-X Attendant update

Carry out update

The installation supports updates from Version 3.01.000 and higher, no further actions are necessary.

Use old databases

For databases of the OSPC version 2.5x: See chapter "one-X Attendant migration from OSPC v2.5x" .
For databases of the one-X Attendant 3.01.000 version and higher: Copy the database in the "restore" subdirectory and call the restore function. See chapter "Backing up and restoring the database".

Starting one-X Attendant without OS

For servicing, it is possible to log on to **one-X Attendant** even while it is not connected to Integral Enterprise. This lets you, for example, set up users and create work profiles.

To start the **one-X Attendant** application without a connection to a PBX or without a console, follow these steps:

1. Start one-X Attendant adding the following:
   one-X Attendant.exe -o (space, minus sign, letter o)

Note

If you start one-X Attendant with the "–o" extension while there is a functioning connection to a PBX, it will work as if it had been started without "–o".

Checking the connection to Web server when Outlook out–of–office is switched on

To use an activated out–of–office notice in Microsoft Outlook, the Absence Info Server (AIS) must be installed. There must be a connection to the one-X Attendant web server (Tomcat). The operating system Internet options are used to establish the connection. If there is a registered proxy server it must find the one-X Attendant web server.

To check the connection, follow these steps.

1. Open a browser, such as Microsoft Internet Explorer.
2. Enter the following address.
   https://Name of the Web server PC:21080 (Port as set in the WebAccess tool).
3. The browser must display a page with a certification error.

Registry

Advanced users can modify the settings in the Registry.
All registry entries are located in:
HKEY_LOCAL_MACHINE\SOFTWARE\Avaya
and
HKEY_CURRENT_USER\SOFTWARE\Avaya

Information for service or hotline

Go to **START > PROGRAMS > Avaya > Avaya one-X Attendant Info** This creates the file **OSPCInfoLog.txt** under **C:**. This file contains all necessary data for one-X Attendant and the PC. You must do this on the client and server PCs.

This file contains the following information:

1. one-X Attendant full version
2. Software version of the optional software (WEB, NBA, etc.)
3. Operating system and version, service pack if applicable
4. Version of the program libraries used (DLL, VBX, OCX or others)
5. Associated Registry entries (one-X Attendant, license server, all modules, etc.)
6. Network settings (IP, subnet mask, default gateway, DHCP server, routes)
7. Errors detected and logged at runtime are written to the event log (separate logs)
8. Some settings from the one-X Attendant configuration tools collection
9. Description of the one-X Attendant environment, the names of, for example: Exchange server, one-X Attendant server, one-X Attendant clients
10. ODBC Administration settings (System DSN)

Unknown host name

You must use the host name when you enter the name for a server.
This is how you find out the host name:

1. In order to find out the hostname, open a command prompt (**cmd.exe**) on the relevant PC.
2. Enter **ipconfig /all**.
3. Press **ENTER**. This displays the host name and other IP settings.

Sybase database in the network with the same name

If there is a Sybase database with the same name (one-X Attendant) in the network (LAN), a message to this effect is displayed.

Note: The name for the one-X Attendant database can only be entered during installation. The name of the one-X Attendant database cannot be changed later on.

Distinction between external and internal numbers is not working

Sometimes, the distinction between external and internal numbers in the one-X Attendant phone book does not work.

Make sure that all external numbers are entered with a prefix, even if they are in the same area code as you. This is the only way to save numbers so that they are unique.

one-X Attendant does not start at all

Problem: When starting one-X Attendant, the splash screen (welcome screen) only appears briefly.

There is a problem with the Java installation! In the Control Panel, the Java plugin must be set to Default, and under the PATH system variables, no path to a JRE should be entered.

one-X Attendant shows message “java.lang.OutOfMemoryError: Java heap space”

If the client shows a window with this message then the heap space for the JVM has to increased. This has to be done in the file deployment.properties which you can find the folder

C:\Documents and Settings\<username>\Application Data\Sun\Java\Deployment (Windows XP/2003) or

C:\Users\<username>\AppData\LocalLow\Sun\Java\Deployment (Windows 7/2008/VISTA).

Add the following line: deployment.javaws.jre.0.args=-Xmx256m -Xms64m. The '0' corresponds to the JRE you want to set these parameters for. There could be multiple JREs with different numbers (0,1,2..), do this for the JRE with version “1.6.0_23”.

Connection to the database server does not occur

Problem: After starting one-X Attendant, the red DB icon appears, even though the server name is indicated correctly.

Complete the server name in the input field **Connection parameters** under Database Settings.
Example of a modified entry (Servername “frlab-A07”):
TCPIP{serverport=21638;host=frlab-A07}

Changing the OS hardware

You can also change the hardware setting of the operator sets connected to the one-X Attendant after installation. If the hardware setting does not
match the connected hardware, the one-X Attendant will not start.

To correct this:

1. Start one-X Attendant in Offline mode (→ p. 66).
2. Change the hardware settings.
3. Stop one-X Attendant and restart it with the OS.

Additional tips

For more tips and tricks, visit the Avaya Enterprise Portal
Once there, go to the **Technical Center** and, under Applications, look for “one-X Attendant”.

Appendix

LDAP connection (LDAP browser) examples

LDAP connection

(LDAP browser)

Before configuring an LDAP connection you should first check the connection using the **LDAP browsereditor** tool.

For this, copy the “LDAPBrowser” directory to a local drive (with write access rights).
Start by double–clicking on **lbe.jar** or if the system does not detect Java
Runtime (basic OSPC installation), double–click the OSPC **lbe.bat**.
The **Connect** window opens. The **Session list** tab already contains a few sample connections here.
Use the **Edit** button to view and modify the settings. If the name is changed
(tab: **Name**), then a new connection configuration (session) will be created. The **Connection** tab specifies the connection parameters.
With Exchange, be sure that the PC is specified on which Active Directory is running. This is not necessarily the Exchange Server.
Next click **Fetch DNs** to obtain a list of **Base DN**s (Domino shows an empty list). Select the shortest entry.
First, select an anonymous connection (enable **Anonymous bind**), click
Save and in the Connect window click **Connect**.
You should be able to see at least the BaseDN entry.
Now enter an appropriate user and the user’s password. You may be required to enter the user keying in the complete path (see for example Exchange2k_Lab-Login and Exchange2003_Lab-Login). To do so, you will need the support of your system administrator who will advise you in which substructure the user that you are utilizing is located.
Once you have successfully set up the connection in this way, you can transfer the parameters to the phone book tool.
The Select statement in the phone book tool must contain every field that you wish to retrieve. After you have selected a user the field identifiers will
display in the **LDAP browsereditor** under attributes. Accept these, remembering that they are case-sensitive.

Example 1 for data source using a JDBC-ODBC bridge

The table below shows an example of the parameters on the Connection tab if you connect to a database using a JDBC-ODBC bridge.

Parameter	**Setting**
Name	JDBC-ODBC bridge
Description	
Driver	sun.jdbc.odbc.JdbcOdbcDriver
Provider URL	jdbc:odbc:SampleDSN User admin
Password	
SQL statement	SELECT * FROM SampleTable

Example 2 for data source directly via JDBC

The table below shows an example of the parameters on the Connection tab if you connect to a database directly using a JDBC driver. The database with the name DBN is a Sybase ASA type and is located on the PC with the host name dbserver with port 4321.

Parameter	Setting
Name	AdaptiveServerAnywhere
Driver	com.sybase.jdbc3.jdbc.SybDriver
Provider URL	jdbc:sybase:Tds:dbserver:4321 [?ServiceName=DBN]
User	dba
Password	sql
SQL statement	SELECT * FROM SampleTable

Example 3 for MEDCOM data source using a JDBC-ODBC bridge

The table below shows an example of the parameters on the Connections tab if you connect to a MEDCOM-database. You have to configure a system DSN for the MEDCOM database. The data source name for this example is Medcom_W2k.

In the OSPC Tool Collection, you generally set up two data streams in the phone book tool, which both point to the data source Medcom_W2k (in this example). The data streams could be called Staff and Patients, for example. You must use the appropriate SQL query for each data stream.

Parameter	Setting
Name	JDBC-ODBC bridge
Driver	sun.jdbc.odbc.JdbcOdbcDriver
Provider URL	jdbc:odbc:Medcom_W2k *or* jdbc:odbc:; Driver={Adaptive Server Anywhere 6.0}; SRVR=Medcom_W2k
User	dba password sql
SQL statement	SELECT * FROM mcuser

Example 4 for an LDAP data source using a JDBC-LDAP bridge with general settings

The table below shows an example of the parameters on the Connections tab if you connect to an LDAP-database.

Parameter	Setting
Name	Exchange
Driver	com.octetstring.jdbcLdap.sql.JdbcLdapDriver
Provider URL	jdbc:ldap://<server>:389/[BASE_DN]?SEARCH_ SCOPE:=subTreeScope[&pageSize:=n] Note: The URL must not contain spaces (except for immediately in front of the “?”).
User	<Domain><User ID> or <Distinguished Name of the user (DN)> *Examples*: – DomainUser ID: tnbk1bek2fr – distinguishedName: CN=BEK2FR,OU=Users,OU=Fr, OU=Germany, DC=Avaya,DC=corp,DC=lan

Parameter	Setting
Password	SamplePassword
SQL statement	select DN,givenName,sn,cn,title,mail,telephoneNumber,mobile,homePhone,otherHomePhone,ipPhone,pager,facsimileTelephoneNumber,description,info,physicalDeliveryOfficeName,streetAddress,postOfficeBox,postalCode,l,st,co,company, department,extensionAttribute5,wWWHomePage,url from ou=OrgUnit “select from ou=OrgUnit” also works, but is not recommended.

Example 5 for Exchange2007/2010 data source using a JDBC–LDAP bridge

The table below shows an example of the parameters on the Connections tab if you connect to an Exchange 2007/2003/2000 database.

Parameter	Setting
Name	ADS 2000/2003
Driver	com.octetstring.jdbcLdap.sql.JdbcLdapDriver
Provider URL	jdbc:ldap://FR135120:389/DC=iccdomain,DC=com?SEARCH_SCOPE:=subTreeScope&pageSize:=90
User	cn=Administrator,cn=users,dc= iccdomain,dc=com
Password	SamplePassword
SQL statement	select DN,sn,givenName,cn,mail,telephoneNumber,department from ou=cdm–test where sn=*

Example 6 for Domino6 data source using a JDBC-LDAP bridge

The table below shows an example of the parameters on the Connections tab if you connect to a Domino 6-database.

Parameter	Setting
Name	Domino 6
Driver	com.octetstring.jdbcLdap.sql.JdbcLdapDriver
Provider URL	jdbc:ldap://FR146025:389?SEARCH_SCOPE:= subTreeScope
User	Avaya
Password	SamplePassword
SQL statement	select givenname,sn,cn,mail,telephonenumber from o=OSPc_Org

Example 7 for Domino5 data source using a JDBC-LDAP bridge

The table below shows an example of the parameters on the Connections tab if you connect to a Domino 5-database. The pagesize attribute in the url is not mandatory.

Parameter	Setting
Name	Domino 5
Driver	com.octetstring.jdbcLdap.sql.JdbcLdapDriver
Provider URL	jdbc:ldap://FR146025:389?SEARCH_SCOPE:= subTreeScope&pageSize:=90
User	Avaya
Password	SamplePassword
SQL statement	select givenname,sn,cn,mail,telephonenumber from o=OSPc_Org

Port-overview OSPC and accessories

The table below gives an overview of all the port default-settings used by OSPC and accessory-components.
A more detailed compilation you will find under
http://support.avaya.com

Please search for one-X Attendant

Application/Server	Port	Purpose
one-X Attendant		
Tomcat, WebAccess (JOnAS)	21080	Internal Web-Server / https requests
Phonebook Server (JOnAS)	21099, 16010	RMI Registry, JMS
Phonebook Server (JOnAS) Remote Object Port	1050	RMI Remote Object Port
Database-Server	21638	
SVA-Manager	6006	
IP Link (SVA-Manager)	10405	
TTrace	10300, 10301, 10303, 10304	
AbsenceInfoPusher (LPS)	9072, 9070	
Avaya AURA Presence Server (LPS)	5432	
Avaya AURA Presence Server (IM)	5223	
Licence		
WebLM	8443	Licence requests (for external access, dependent on licence server running local or extern)

Registered services

Some OSPC components are installed on the PC as services. These services are also available when no users are signed on.
During installation the following services are registered:

Service	**Displayed name**	**Description**
OSPC Database	Avaya OSPC Database	Setup during the installation process
OSPC_JOnAS	Avaya phonebook server	Setup during the installation process
AbsenceInfoPusher	Avaya phonebook server – AbsenceInfoPusher	Set up during the installation process
UPDService	Avaya phonebook server – UpdateService	Setup during the installation process
SVAManager	Avaya OSPC SVAManager	Set up during the installation process if SVA Manager was selected

one-XAttendant features overview

The following table compares the Avaya one-X Attendant features on Integral Enterprise using different configurations.

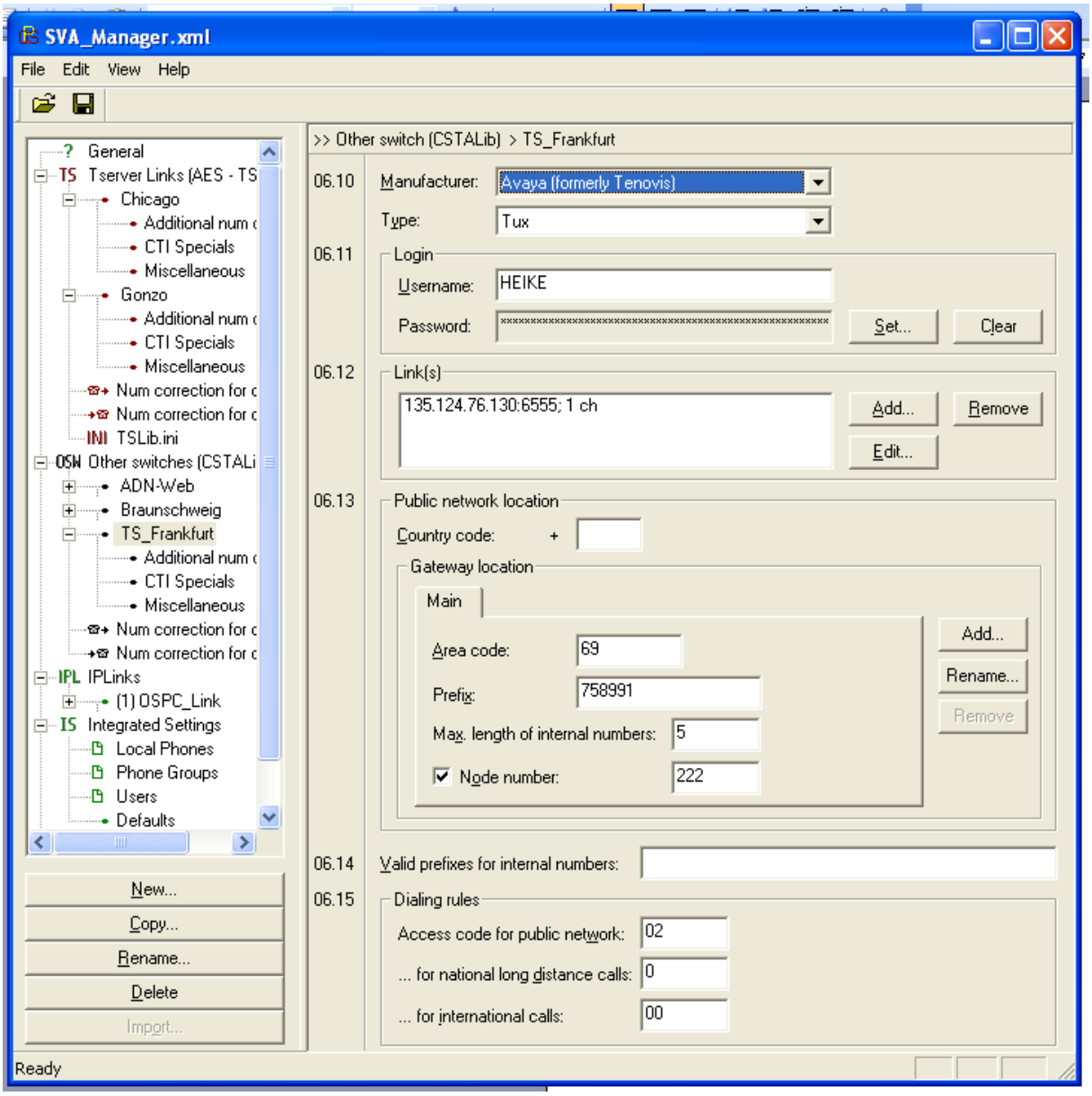
one-X Attendant v3.00				
		1st party with OS33	3rd party	3rd party with CIE
Switchboard features/Switching calls				
	Making calls with a locked operator set	X	X	X
	Switch internal –> external	X	X	X
	Switch external –> internal	X	X	X
	Key block with function keys or destination keys	X	X	X
	Switching a call	X	X	X
	Override do not disturb	X		
	Three–way conference	X		
	Connect an exchange line to an internal	X		
	Find and assign an available trunk line (bundle)	X		
	Serial call	X		
	Keep caller waiting	X	(X)	(X)
	Interposition call and transfer (to another OS)	X		
	SSD	X		
	Cut–in	X		
	Switching on night service	X	X	X
	Switching on charge metering manually	X		
	Holding connections	X		
	Assign line from bundle	X		
	Specific hold 1–3	X	(X)	(X)
Call center (CIE) features				
	Logging in/out as an agent			X
	Logging into CC			X
	Starting the Off function			X
	ACW			X
Call types				
	Operator call	X	X	X
	Internal call	X		
	Trunk line call	X	X	X
	DID call	X		
	DID return	X		
	Recall	X		
	Hold call	X		
		1st party with OS33	3rd party	3rd party with CIE
	Specific hold calls	X		
	Intrude prompt	X		
	Charge call	X		

	Renewed call	X		
	Emergency call	X		
	Interposition call and transfer	X		
	Specific answering of call types	X		
	General answer button for all call types	X	X	X
	Show queue per call type	X		
	Signaling call queue in the PBX	X		X (via CIE)
Applications				
	one-X Attendant internally			
	Display time zones	X	X	X
	Start/Stop audiotape	X	X	X
	Switch class of service	X		
	ITB list	X	X	X
	Calendar functions	X	X	X
	Charge display	X		
	Network–wide busy display	X	X	X
	Information on connections	X		
	Working with containers	X	X	X
	Call list	X	X (SVA)	X (SVA)
	Dial using destination dialing	X	X	X
	Redial	X	X (SVA)	X (SVA)
	Extended redial	X	X (SVA)	X (SVA)
	Caller ID display	X		
	Emergency call	X	X	X
	PUM	X		X
	DTMF dialing	X		
	Suppress internal number	X		
	Monitor operator positions	X		
	Use phone book	X	X	X
	Use favorites	X	X	X
	Use subscriber properties	X	X	X
	Busy display (max 10 tabs)	X	only network–wide busy display	only network–wide busy display
	- Signaling when subscriber busy on internal	X	X	X
	- Signaling when subscriber busy on external	X	X	X
	VIP display (max 10 tabs)	X		
		1st party with OS33	3rd party	3rd party with CIE
	Network–wide busy display using SVA–Manager			
	Internal/external busy status	X	X	X
	Use of 20 tabs	X	X	X
	- Signaling of name and telephone number	X	X	X
	- Signaling via call forwarding	X	X	X
	- Signaling of connection data	X	X	X
	Absences through AIS			

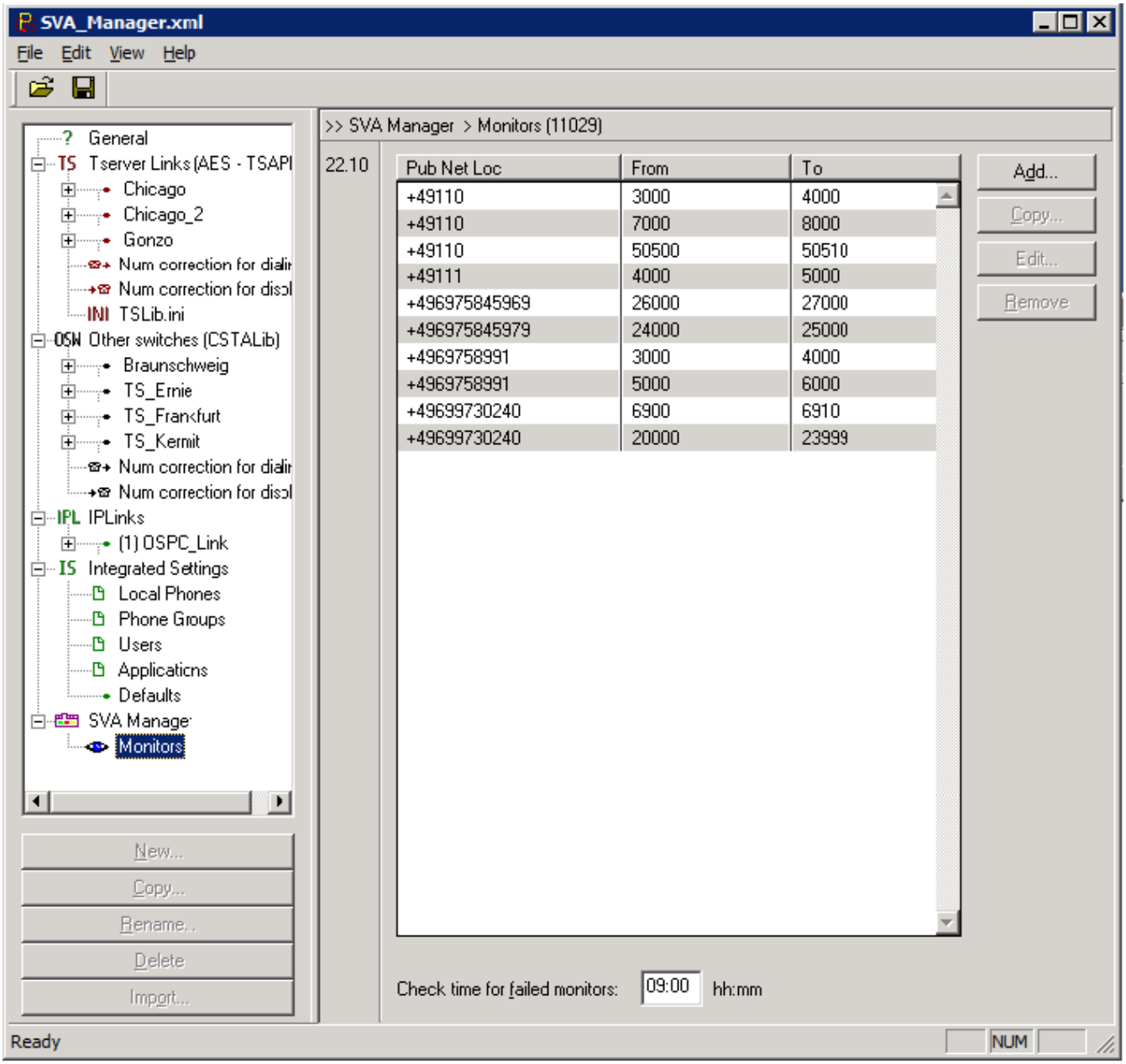
	Absences through Outlook and Exchange	X	X	X
	Absences in the ITB–window	X	X	X
	Absences in the phone book	X	X	X
	Absences in the network–wide busy display	X	X	X
	Calendar function			
	Calendar function through Outlook and	X	X	X
	Calendar function through Lotus Notes	X	X	X
	View subscribers' Outlook contacts	X	X	X
	Transfer presence and absence from calendar (Lotus Notes and Outlook)	X	X	X
	External database connection			
	Connection to external databases through JDBC, ODBC or LDAP	X	X	X
Edit user				
	Start user administration	X	X	X
	User details	X	X	X
	Insert, change, copy or delete	X	X	X
	Assigning work profiles	X	X	X
Work profiles				
	Using different work profiles	X	X	X
	Destinations	X	X	X
	Features	X	X	X
	Macros	X		
	Editing hotkeys	X	X	X
	Configuring the key block	X	X	X
	OS33 key assignments	X		
	Configuring the busy display	X	only network–wide busy display	only network–wide busy display
	Network–wide busy display	X	X	X
	Configure PUM	X		X
	Configure VIP view	X		
	Edit time zones	X	X	X
	Subscriber properties	X	X	X
		1st party with OS33	3rd party	3rd party with CIE
	Editing switching options	X	exch. AC only	exch. AC only
	Edit overload display	X		
	Print labeling strips	X		
	Assign users	X	X	X
Configuration				
	Acoustic settings	X		
	Change password	X	X	X
	Entering an emergency number	X	X	X
	Changing fonts	X	X	X
	V.24 settings	X		
	Phone book	X	X	X

	Absence management	X	X	X
	Select OS	X		
	Configure agents			X
Statistics				
	Create statistical data	X	X	X
	Configure statistics	X	X	X
	Views	X	X	X
	Export statistics	X	X	X
	Delete statistical data	X	X	X
Service and diagnostics				
	one-X Attendant database			
	- Backup	X	X	X
	- Restore	X	X	X
	Address parser	X	X	X
	- Standard, France, Spain, Norway	X	X	X
	- USA, Russia	X	X	X
	Record messages	X	X	X
	Import and export users	X	X	X
	Import and export profiles	X	X	X
	Import and export destinations	X	X	X
	Import and export phone book	X	X	X
	Select operator set	X		
	Select CTI server access	X	X	X
	one-X AttendantInfo	X	X	X
	one-X Attendant configtool	X	X	X
	Wizard (diagnostics)	X	X	X

Configuration example for IE:



Here the system data has to be configured. Under login username and password for I55 system entry has to be entered. Under links ip address and port of the system has to be entered. If you wand to use a public nework respektivly a connection to an other system, you have to make the entries under 6.13. Under 6.15 the access codes for outgoing calls must be entered.



Configuration of the monitorpoints: SVAManager tries to start all monitors between „From“ to „To“. For monitorpoints, that could not be started, a new trial will be started at 09:00 am(GMT).

Load of the system and the net through services of the One-X Attendant, some hints:

Calendar Status

The synchronization of the calendar status is between each individual one-X Attendant client and the appropriate mail server (eg Exchange).
The polling status of the calendar is done here only for those numbers that appear in the local busy indicator. These are max. 2000 numbers.
The cycle for a maximum of 2000 numbers per client takes about 4 minutes in idealized test environment without burdening the network and the mail server.
The CPU Load of the one-X Attendant Clients rises up to 40% with this activity.
The The one-X Attendant server is on this synchronization not affected.
The interval of the query can be set with the configuration tools on the server (default 10 min.).
If the cycle takes longer than the set interval, the start is postponed for the time of one interval, as long until the running cycle is finished.
An upper limit for the number of mail server postboxes has not to be set from the view of the one-X attendant.
The calendar status is also displayed in the phone book. The client asks the information separately for each of the selected phonebook entry. So, this has no effect on load.

Absenceinformation

The synchronisation of the absence information runs between the one-X Attendant Server and the appropriate mail server (e.g.. Exchange).
The polling of the absence information is performed for all entries in the directory.
A cycle of 10000 mailboxes takes about 40 minutes in ideal test environment without load on the net and the mail server. The load of the one-X Attendant Server will be increased up to 75 % (maxima up to 100%) by this operation. The load is not dependend from the number of mailboxes, only the endurance of a cycle.
On the one-X Attendant Client no load increasing was detectable.
Parallel queries to the one-X Attendant Server will be worked out without nameable delay in cycle.
The interval of the query can be set with the configuration-tool AIS (default: 240 Min.).
If the cycle takes longer as the set interval, a waiting time of 30 seconds will be insert until the next cycle starts.
If a change in the absence information in a mailbox is detected, this information will be written into the one-X Attendant database. All running and registered clients will be informed about the change, to update their absence info displays.

An upper limit for the number of mail server postboxes has not to be calculated from load conditions from a technical point of view.
The upper would make sense in the expectation of a timely update of the information in the one-X Attendant Client.
As the endurance of a cycle increases with the number of postboxes, there could be the danger of an absence info display showing not current values.
Because of the not known for every customer individual net load and load on the mail server with other services, no detailed value can be named.
The up to. 70 % increased CPU workload has to be seen together with the workload of other running one-X Attendant services.

Abbreviations

A

A Ampere
AC External Line Code
ACM Avaya Communication Manager
ACW After Call Work
AE Additional Equipment
AEI Additional Equipment Interface
AES Applications Enablement Services
API Application Programming Interface
ARVT Routing (Anrufverteilung)
ARS Auto Route Selection
ASA Adaptive Server Anywhere
Avaya Site Administration
ASCII American Standard Code for Information Interchange

C

CCITT International Telegraph and Telephone Consultative Committee (Comité Consultatif International Télégraphique et Téléphonique)
CE European Community (CE mark)
CD Compact Disc
CM Communication Manager
CN Telephone Number
COR Class of Restriction
COS Class of Service
CPU Central Processing Unit
CSTA Computer Supported Telecommunications Applications
CTI Computer Telephony Integration

D

DC Direct current
DID direct inward dial
DOS Disc Operating System
DSS Direct Station Select
DTMF Dual–Tone Multi–Frequency Dialing
DUWA DID direct inward dial (Durchwahl)

E

eCons Electronic Consoles
EDS Enterprise directory system (central electronic phone book)
EEPROM Electrically Erasable Programmable Read Only Memory
EMC Electromagnetic capability
ETB Electronic Telephone Book
ETSI European Telecommunication Standards Institute

H

HSG Handset and headset unit (Hör- und Sprechgarnitur)

BIOS Basic Input Output System (operating system) Bit Binary digit (binary digit 0 or 1, smallest information unit)
BLS1 Base PCB with S0 interface
Byte Information unit consisting of 8 bits (= 1 character or code)

I

I55 Integral 55
ISDN Integrated Services Digital Network
ISO International Organization for Standardization
ITB Integrated Telephone Book

J

JDK Java Development Kit
JOnAS Java Open Application Server

L

LAN Local Area Network
LCD Liquid Crystal Display
LDAP Lightweight Directory Access Protocol
LDN long distance number
LED Light Emitting Diode

M

MAC Media Access Control
MS Microsoft

N

NBA Network–wide busy display (Netzweite Besetztanzeige)

O

ODBC Open Database Connectivity
OS Operator Set Standard OSM Operator Service Manager OSPC Operator Set PC

P

PBX Private branch exchange
PC Personal computer
PROM Programmable Read Only Memory
PSTN Public Switched Telephone Network
PUM Private User Mobility

Q

QSIG ISDN based signaling protocol for signaling between private branch exchanges

R

RAM Random Access Memory RFA Remote Feature Activation
ROM Read Only Memory

S

SIP Session Initiation Protocol
SQL Structured Query Language
SRG Feed module (Speisebaugruppe)
SVA Smart operating device (Smart Vermittlungs Apparat)
SW Software

T

TAPI Telephone Application Programming Interface
TCP/IP Transmission Control Protocol/Internet Protocol
TE Terminal
TFT Thin-Film Transistor

U

UAE Universal connection unit (Universal-Anschluss-Einheit)
UI User Interface
URL Uniform Resource Locator

V

V.24 Interface for data transmission according to ITU-T Recommendation V.24
V Volt
VGA Video Graphics Adapter
VT Switching–related (vermittlungstechnisch)

W

W Watt
WE Western Electric

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Glossary

1st party call control

With 1st party call control, there is a clear relationship between the telephone and the PC at each workstation. Generally, both devices are connected with a cable for the purpose of exchanging information.

3rd party call control

A large range of features can be used with what is known as 3rd party call control. Here, CTI-software controls not just one single telephone, but a private branch-exchange (PBX). As all information about the telephones is saved in the PBX, a direct connection between the computer and the telephone is not necessary. Instead, the PBX must have a CTI interface. A
CTI server is connected to this interface. The telephony software which now controls the PBX can be divided into two parts: Firstly, there is control software on the CTI server which communicates directly with the PBX. Then there is a telephony program which runs on every PC and which establishes the connection to the CTI application. Apart from the functions offered by
1st party call control applications, 3rd party call control provides a number of additional features, such as switching of incoming calls to certain
extensions based on the caller's number or database queries. 3rd party call
control is especially useful for call centers and telemarketing agencies. Incoming calls are routed to suitable agents according to different criteria, and an appropriate application is actuated on the particular PC. 3rd party call control is also useful for outgoing calls. For example, it can establish calls using a power or predictive dialer.

API

API stands for Application Programming Interface.

Client

Client is a computer networking term. A client uses services, which is why a workstation connected to the server is called a client. The client sends user queries in a special protocol to the server and displays the server responses in readable form on the screen.

CSTA

CSTA stands for Computer Supported Telecommunications Application. This standard is an ECMA specification. For further information please refer to the following manuals: Standard ECMA-179, Standard ECMA-180, Standard ECMA-217, Standard ECMA-218
More information is available on the Internet at:

CTI

CTI means Computer Telephony Integration. In practice, the following CTI functions play an important role. The option of initiating a call from various applications by mouse click is especially convenient for everyday use. If the connection is not made, the number is redialed automatically later. The scope and options available in CTI integration depend greatly on the type of implementat
ion.

DLL

DLL stands for Dynamic Link Library.

ID

ID stands for Identification Number.

ISDN

ISDN stands for Integrated Services Digital Network.

JAVA	JAVA is a programming language developed by SUN.
JTAPI	JTAPI stands for Java Telephony Application Programming Interface. JTAPI is an interface definition specified by a consortium of well–known telecommunications manufacturers for connecting Java applications to PBXs.
JVM	JVM stands for Java Virtual Machine. Java Virtual Machine is required for running Java programs.
LAN	LAN stands for Local Area Network.
NETBEUI	NETBEUI stands for NETBIOS Extended User Interface.
NETBIOS	NETBIOS stands for Network Basic Input Output System.
QTAPI	QTAPI is a client-server based CTI server, which provides an interface for Microsoft TAPI applications (also Microsoft Outlook for example) and the ACM or the I55.
RPC	RPC stands for Remote Procedure Call . An RPC is the call of a procedure in a module or task that is located on a (possibly) remote computer. Strictly speaking, a procedure is called on one computer (local host) and executed on the other computer (remote host). Any results and the notification that the procedure has ended are returned to the first computer (local host).
Server	The term server is derived from “to serve” (or “to provide service” to someone). A server is a central computer in a network that provides data, memory, and resources to the workstations/clients.
Socket	A socket is a mechanism which allows a virtual connection between two processes. It is activated using a socket address. The socket address consists of a port number and the host address.
SPI	SPI stands for Service Provider Interface. This interface is created by the corresponding manufacturer.
TAPI	TAPI stands for Telephony Application Programming Interface. TAPI is a telephony software interface from Microsoft.

TCP/IP Protocol.	TCP stands for Transmission Control Protocol. IP stands for Internet TCP/IP meets the two most important requirements to be fulfilled in a network. First, it ensures secure transmission. Second, TCP/IP offers an address scheme so that each computer can be assigned an unambiguous address. Computers are numbered by the IP protocol.
TSAPI	TSAPI stands for Telephony Server Application Programmer Interface.

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