

# OpenScape Business TAPI 120 Installation and Configuration

## Administrator Documentation

A31003-H3010-M101-4-76A9

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# 1 Introduction

## 1.1 General

### OpenScape Business TAPI 120

OpenScape Business TAPI 120 is a first party telephony provider based on MS Windows TAPI functionality and is always deployed on client PCs. OpenScape Business TAPI 120 enables TAPI-based applications to have the control and status / presence display of telephones connected to a OpenScape Business system. To enable this, OpenScape Business TAPI 120 communicates with the system directly via LAN protocols.

### OpenScape Business TAPI 120 and HiPath TAPI 120

Considering the released operating systems a parallel installation of OpenScape Business TAPI 120 and HiPath TAPI 120 is possible. Then there are two different TAPI providers with separate licensing. That means HiPath TAPI 120 licenses are not usable for OpenScape Business TAPI 120.

### Documentation

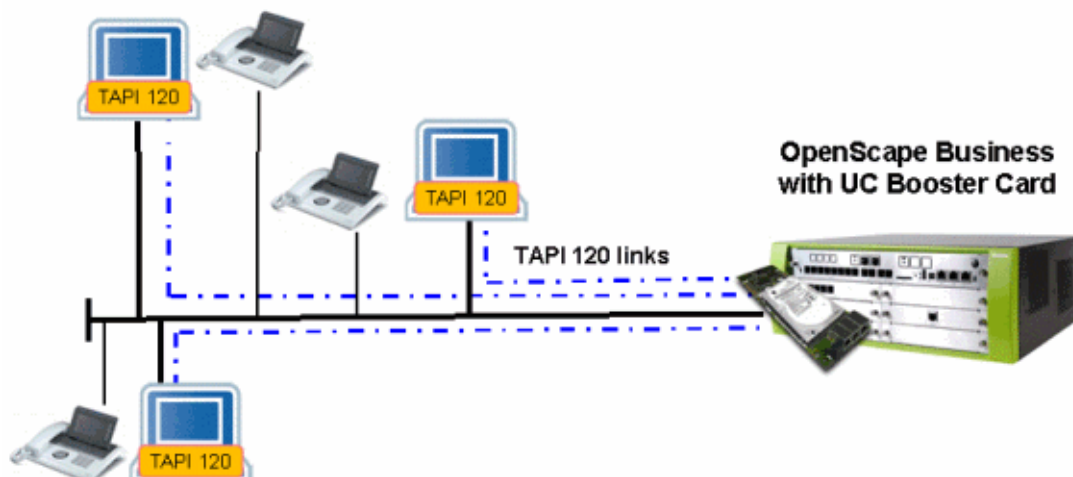
- To improve readability, "telecommunications system(s)" or "communication system(s)" have been abbreviated to "system(s)" in this document.
- The product name OpenScape Business TAPI 120 has also been abbreviated to **TAPI 120** for the same reason.
- All described operation sequences and dialogs refer to Windows 7. With using other released Windows versions you have to activate the functions accordingly.

### Operation modes

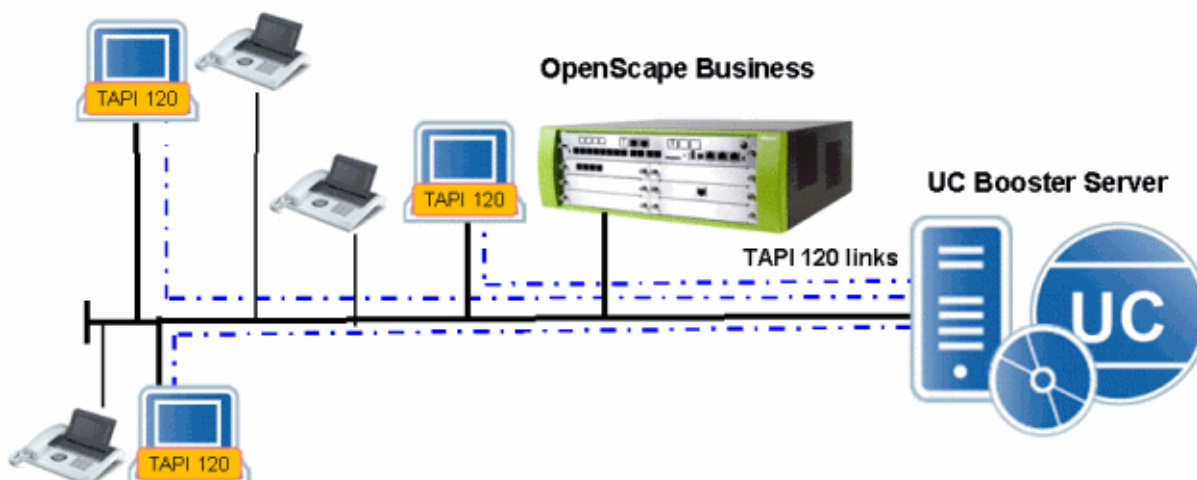
TAPI 120 can be connected to a OpenScape Business system with two operation modes. The basic functionality is identical, but the range of supported features varies:

1. Operation mode: **OpenScape Business TAPI CSTA**  
TAPI 120 is connected via CSTA to this OpenScape Business system models:
  - OpenScape Business with UC Booster Card
  - OpenScape Business with UC Booster Server
  - OpenScape Business S

### TAPI 120 connected to OpenScape Business with UC Booster Card



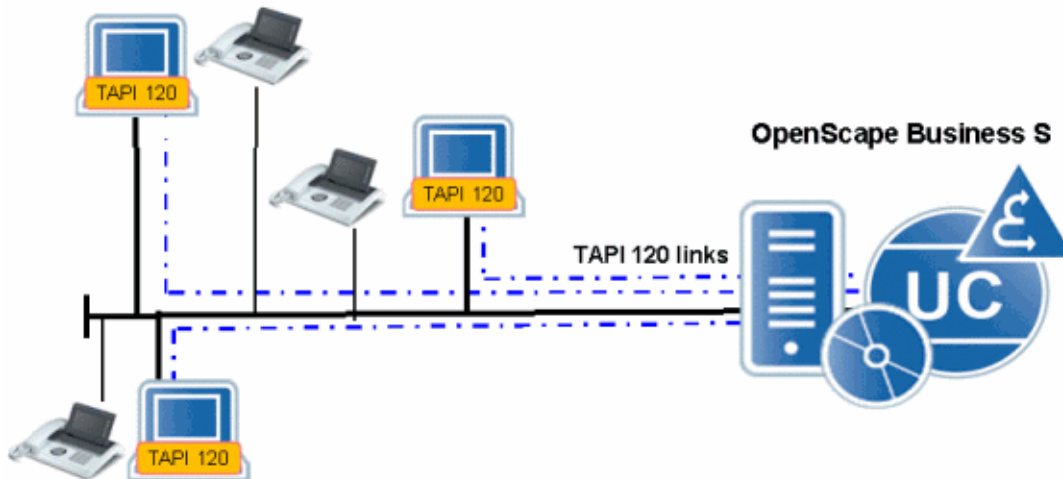
### TAPI 120 connected to OpenScape Business with UC Booster Server



## Introduction

### General

#### TAPI 120 connected to OpenScape Business S

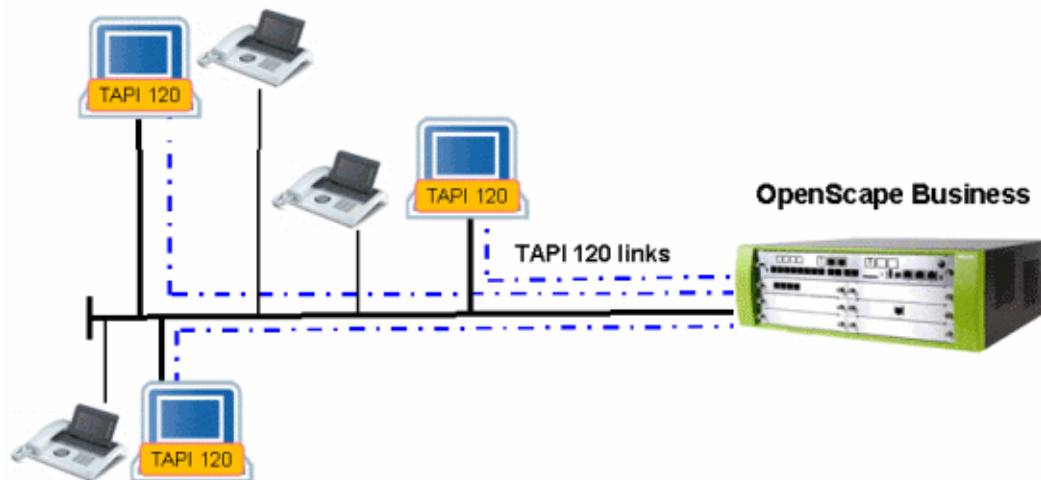


#### 2. Operation mode: **OpenScape Business TAPI UC Smart**

TAPI 120 is connected via WSI (web service interface) to a basic OpenScape Business system:

- OpenScape Business (without Booster Card / Booster Server)

#### TAPI 120 connected to OpenScape Business (operation mode TAPI UC Smart)



A parallel operation of TAPI 120 in both operation modes is not possible. TAPI 120 with operation mode OpenScape Business TAPI UC Smart runs only if no Booster Card / no Booster Server is installed or configured on the system.



When migrating a OpenScape Business system to a system with Booster Card / Booster Server the UC Server parameters have to be reconfigured for every TAPI 120 user. A reinstallation of TAPI 120 is not necessary.

## Licensing of TAPI 120

The TAPI 120 licensing is handled in the OpenScape Business. Further information is available in the OpenScape Business documentation.



Every TAPI 120 user connected to OpenScape Business requires a separate user licence (starting with the first user).



The use of older TAPI 120 licences is not possible.

## Maximum number of TAPI 120 users

The maximum number of TAPI 120 users / maximum number of parallel TAPI 120 connections depend on the OpenScape Business system operation mode and model. You find more information about this limitations in the corresponding sales information.

## CTI firewall / access control in the OpenScape Business

The user accounts for TAPI 120 are monitored depending on the operation mode:

- With operation mode OpenScape Business TAPI CSTA the user licensing and the CTI firewall monitors user logins. By default CTI Firewall is activated, so a login of TAPI 120 users even with valid licenses is not possible and therefore the automatic registration of this users in the firewall is also impossible. You receive more information in the OpenScape Business documentation.
- With operation mode OpenScape Business TAPI UC Smart the TAPI 120 user access is controlled by both, the user licensing and the integrated user account control of UC Smart.

## Supported features

Feature	TAPI CSTA	TAPI UC Smart
Call signalling of incoming and outgoing calls with identification of call number	x	x
Additional information with redirected calls	x	x
Answer incoming and outgoing calls	x	x
Make call to external or internal parties	x	x
Dialing /DTMF signaling	x	x
Release existing calls (drop call)	x	x

## Introduction

### General

Feature	TAPI CSTA	TAPI UC Smart
Initiate callback call to internal or external parties	x	x
Toggling between calls	x	x
Consultative call transfer	x	x
Consultative call transfer with dialing the extension of the destination party (one step transfer)	x	x
Unattended call transfer (Blind Transfer)	x	
Set /delete call forwarding	x	x
Set /delete DND	x	x
Start conference	x	
Add participants to conference	x	
Redirect incoming call	x	
Call Pickup	x	
Group call signalling with group pickup	x	
Park existing calls	x	
Unpark parked calls	x	
Hold existing calls	x	
Unhold calls which are on hold	x	
Set automatic callback	x	
Support of code-dependent functions	x	
Call data exchange between TAPI applications	x	
Key access to optiPoint / OpenStage keypad	x	
Control volume of Microphone	x	
Control/select use of Handset/Speaker/Headset	x	
Control volume of Handset/Speaker/Headset	x	
Display / LED access to optiPoint / OpenStage displays (with limitation to 50 active displays per system)	x	

### Supported phones / devices

The supported phones / devices and the supported features per device depend on the CSTA / WSI capabilities of the connected OpenScape Business. Details are described within the sales information.



## **Support of MULAP (multi line appearance)**

TAPI 120 directly supports basic MULAP groups, i.e. an OpenScape Business MULAP group can be used as a TAPI 120 user.



Each OpenScape Business member of a MULAP group requires a separate TAPI 120/170 user licence.

## **TAPI application: Example**

The easiest way to work with TAPI 120 is to use the default Windows application **Dialer**. It is possible to start outgoing calls with this application. You can find more information about this application in your Windows documentation.

## 1.2 Requirements

### TAPI 120 and OpenScape Business

The TAPI 120 clients connect directly via TCP/IP. On the System the clients therefore are connected via CSTA interface or web service interface (WSI). These OpenScape Business models are supported:

OpenScape Business model	operation mode: OpenScape Business TAPI CSTA	operation mode: OpenScape Business UC Smart
X1	-	Connection to a OpenScape Business basic system (without Booster Card / Booster Server) via web service interface (WSI)
X3 (X3W and X3R)	Connection to a OpenScape Business basic system via UC Booster Card or UC Booster Server	
X5 (X5W and X5R)		
X8		
S	integrated	-

### Hardware requirements for the TAPI 120 PC

The TAPI 120 PC has to be network compatible and has to comply with the hardware requirements of the installed Windows version.

### Released operation system versions for the TAPI 120 PC

- 32-bit operating system:
  - Windows 7 (Professional / Ultimate)
  - Windows 8/10 (Pro / Enterprise)
- 64-bit operating system:
  - Windows 7 (Professional / Ultimate)
  - Windows 8/10 (Pro / Enterprise)



These above listed operation systems are not released in virtual environments.



For recent information about appropriate operating systems please check the file `readme.txt` on the TAPI 120 installation CD.

### **Other requirements**

- Network protocol: TCP/IP must be installed and activated.
- Installation of TAPI 120 must be executed by an user with administration rights.

### **Used TAPI 120 IP address (default)**

In the TAPI 120 configuration you enter the IP address of the OpenScape Business system correspondent to the operation mode. This IP address is shown in the WBM under “Application Selection”:

- With operation mode OpenScape Business TAPI CSTA it is the IP address of the Booster Card / Booster Server / the Business S.
- With operation mode OpenScape Business TAPI UC Smart it is the IP address of the OpenScape Business System (X1 / X3 / X5 / X8).

### **Used TAPI 120 IP port (default)**

- With operation mode OpenScape Business TAPI UC Smart the WSI-link to the OpenScape Business uses the IP port 8802 for a secure connection (HTTPS) or 8801 for an unsecure connection (HTTP).
- With operation mode OpenScape Business TAPI CSTA the CSTA-link to the OpenScape Business uses the IP Port 8900.

### **Restrictions**

A parallel operation of TAPI 120 and TAPI 170 on the same PC is not possible. This limitation refers to both OpenScape Business TAPI and HiPath TAPI.

## 2 Installation of TAPI 120

### 2.1 Starting the installation

1. Log on as an administrator and close all running applications.
2. Insert the TAPI 120 installation CD labeled **OpenScape Business TAPI 120/170 Service Provider**.
3. Select **Start - Run**, enter the file `\TAPI120\setup.exe` on the installation drive and confirm with **OK**.



The setup determines the operation system version (32-bit or 64-bit) and automatically starts the installation of the correct TAPI 120 setup version.



Confirm the UAC (User Account Control) prompt that appears during installation now.

4. Select the language for the installation dialogs, the installation is resuming.
5. After installation preparation the welcome dialog appears. Confirm it with **Next**.



Make sure, that the service-control dialog and all TAPI applications are inactive. Corresponding to this a red marked notice appears in the installation dialog.

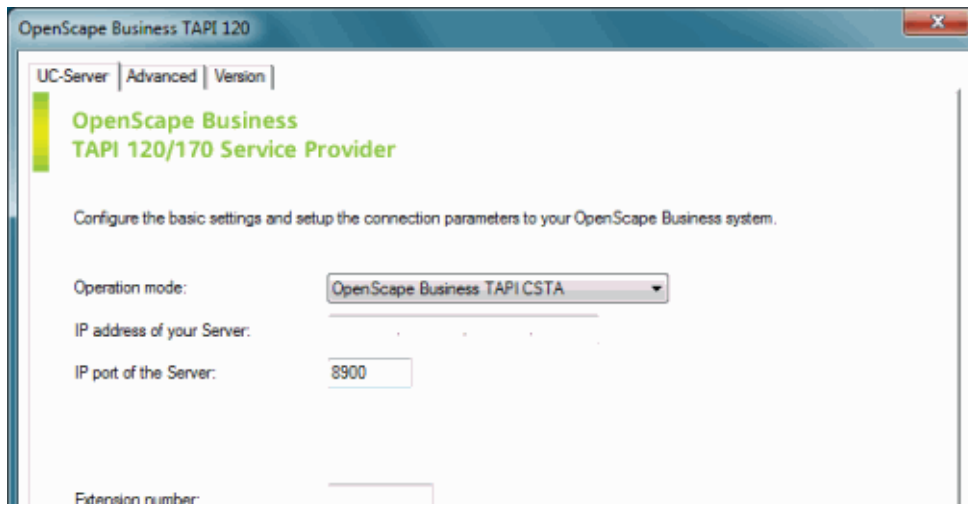
6. Continue installation with clicking **Install**.



The initial installation of TAPI 120 requires a restart of the TAPI-PC. In that case the installation dialog displays an additional red marked notice. You then can cancel the installation. For continuing the installation you click on **Install**, the PC automatically reboots. After logging on you automatically return to this point of the TAPI 120 installation procedure.

7. Installation is started, installation progress will be shown.
8. To finish installation click on the **Finish** button displayed in the final dialog.
9. The TAPI 120 configuration dialog opens automatically after the successful installation. The required parameters can be entered in this dialog or configured at a later stage.

## Display



Each configuration parameter is described under [Configuration of TAPI 120](#).

The TAPI 120 installation is complete once you have exited the configuration dialog.

## Installation of TAPI 120

### *Uninstall TAPI 120*

## 2.2 Uninstall TAPI 120

To uninstall TAPI 120 proceed as follows:

- > Open the Windows Control Panel (with activated option **Small icons** or **Large icons**) and select **Programs and Features**.
- > Activate the entry **OpenScape Business TAPI 120 SP V1**, click the **Remove** button and follow the instructions.

## 3 Configuring TAPI 120

### 3.1 General

#### Configuration dialog

The individual TAPI 120 configuration can be done in the configuration dialog started during the installation automatically or at a later point in time.

#### Effectiveness of modified configuration parameters

Modified configuration parameters are saved with clicking **Apply** or **OK** in the configuration dialog. The modification will be effective once the Telephony service on the TAPI PC has been restarted.

## **3.2 Configuration of TAPI 120**

### **3.2.1 Activation of the configuration dialog**

The configuration dialog for TAPI 120 is displayed automatically during installation. To edit TAPI 120 configuration parameters after installation, activate the configuration dialog as follows:

#### **Activating the configuration dialog**

- > Open the Windows Control Panel and make sure, that all Control Panel icons are displayed (select **Large icons** or **Small icons**).
- > Activate **Phone and Modem**.

The **Phone and Modem Options** dialog is displayed.

- Activate the **Advanced** tab.
- Select the entry **OpenScape Business TAPI 120/170 TAPI 2.2 SP** from the list of providers displayed.
- And click **Configure**.

The TAPI 120 configuration dialog appears.



### 3.2.2 General parameters

For configuring basic settings and the setup connection parameters to your OpenScape Business system select the UC-Server tab.



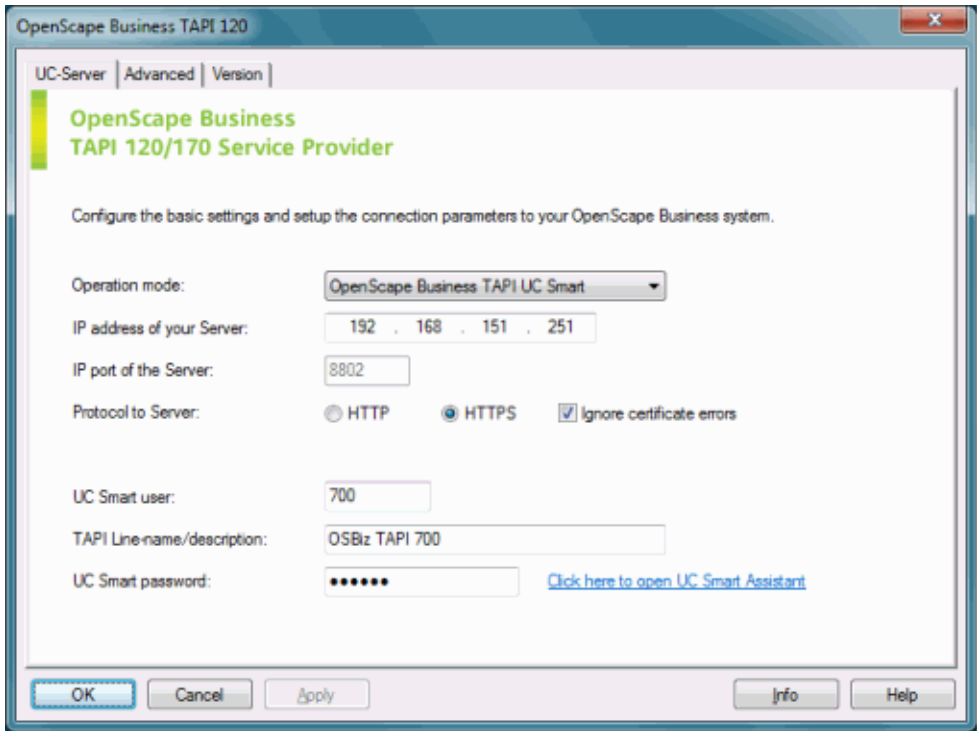
Depending on the selected operation mode the number and type of settings change.

#### Display (operation mode OpenScape Business TAPI CSTA)

The screenshot shows the 'OpenScape Business TAPI 120' configuration window with the 'UC-Server' tab selected. The window title bar includes 'OpenScape Business TAPI 120' and a close button. Inside the window, there are three sub-tabs: 'UC-Server', 'Advanced', and 'Version'. The 'UC-Server' tab is active, displaying the 'OpenScape Business TAPI 120/170 Service Provider' logo and a message: 'Configure the basic settings and setup the connection parameters to your OpenScape Business system.' Below this, there are several configuration fields: 'Operation mode' is a dropdown menu set to 'OpenScape Business TAPI CSTA'; 'IP address of your Server' is a text field containing '192 . 168 . 151 . 251'; 'IP port of the Server' is a text field containing '8900'; 'Extension number' is a text field containing '700'; and 'TAPI Line-name/description' is a text field containing 'OSBiz TAPI 700'. At the bottom of the window, there are six buttons: 'OK', 'Cancel', 'Apply', 'Test Connection', 'Info', and 'Help'.

**Configuring TAPI 120**  
*Configuration of TAPI 120*

**Display (Operation mode OpenScape Business UC Smart)**



The parameters in the UC-Server tab contain the following information:

Parameter	Description
Operation mode	Available Operation modes are: <ul style="list-style-type: none"><li>● <b>OpenScape Business TAPI CSTA</b> Your OpenScape Business system is connected via the available CSTA interface (Booster Card / Booster Server or integrated).</li><li>● <b>OpenScape Business TAPI UC Smart</b> Your OpenScape Business basic system is connected via the WSI interface.</li></ul>
IP address of your Server	IP address of the system determined during its installation and configuration of OpenScape Business. <ul style="list-style-type: none"><li>● In operation mode OpenScape Business TAPI CSTA this is the IP address of the Booster Card / Booster Server / Business S).</li><li>● In operation mode OpenScape Business TAPI UC Smart this is the IP address of the OpenScape Business system (X1 / X3 / X5 / X8).</li></ul>

<b>Parameter</b>	<b>Description</b>
IP port of the Server	<p>IP port number of the OpenScape Business system.</p> <ul style="list-style-type: none"> <li>• In operation mode OpenScape Business TAPI CSTA this is 8900 by default.</li> <li>• In operation mode OpenScape Business TAPI UC Smart the IP port is displayed subject to the selected Protocol to Server. The IP port is 8802 for secure connection (HTTPS) and 8801 for unsecure connection (HTTP).</li> </ul>
Protocol to Server	<p>In OpenScape Business TAPI UC Smart operation mode you configure this settings for the server protocol:</p> <ul style="list-style-type: none"> <li>• Transfer protocol for the TAPI 120 connection to the system. You can select <b>HTTP</b> (unsecure connection) or by default <b>HTTPS</b> (secure connection). This option has to correspond with the setting on the system.</li> <li>• If HTTPS certificate prompts (e.g. when using a self-signed certificate) should be automatically ignored, activate the <b>Ignore certificate errors</b> option.</li> </ul>
UC Smart User	In OpenScape Business TAPI UC Smart operation mode you enter the <b>UC Smart user</b> .
Extension number	In OpenScape Business TAPI CSTA operation mode enter the <b>Extension</b> of the telephone to be controlled.
TAPI Line-name/description	For a better identification of the TAPI 120 line in the application you enter a <b>TAPI Line-name</b> or a <b>description</b> here.
UC Smart Password	<p>In OpenScape Business TAPI UC Smart operation mode you enter the password assigned to the UC Smart User.</p> <p>UC Smart user informations can be edited in the UC Smart Assistant. Click on the <b>Click here to open UC Smart Assistant</b> for starting the Assistant.</p> <p>You find more information about UC Smart Assistant in the myPortal documentation.</p>

### **Saving parameters**

- > Click **Apply** to save entries without closing the dialog. e.g. to configure parameters in other tabs.
- > Click **OK** to save changes and to exit the configuration dialog.
- > A confirmation message appears in both cases. Click **Yes** to confirm this message. Changes take effect after a Telephony service restart on the TAPI PC.

### Operation mode TAPI CSTA: Connection test between TAPI 120 and the system



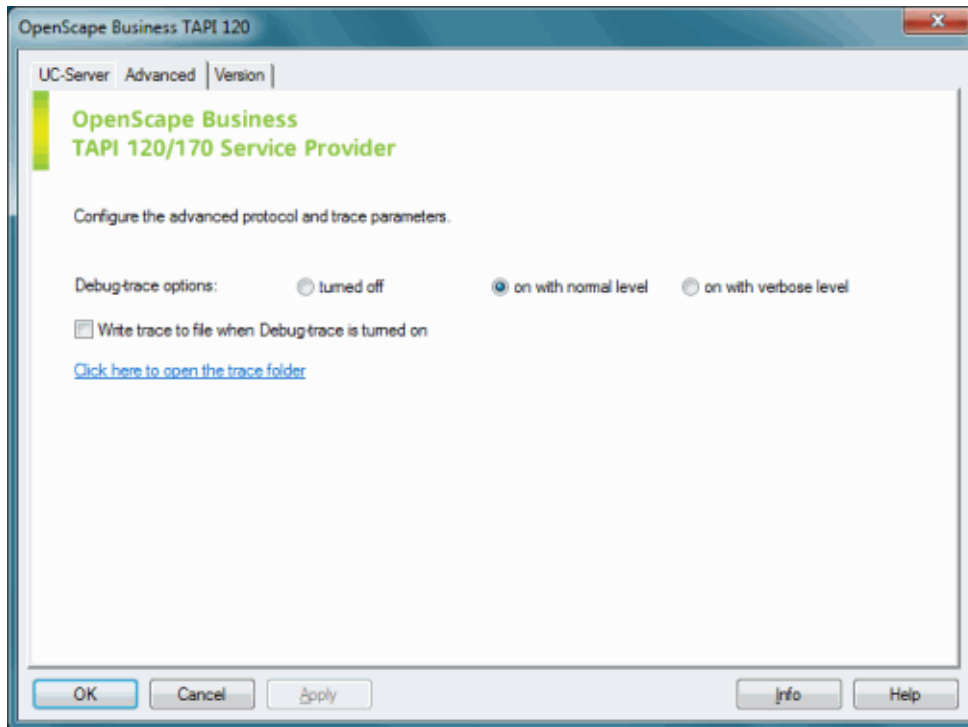
Immediately after installation of TAPI 120 Windows does not know the TAPI 120 user (TAPI Line-name/description). Therefore in the TAPI 120 configuration dialog the button **Test Connection** is not shown during the initial installation of TAPI 120.

After entering the Extension number respectively the TAPI Line-name/description of the telephone to be controlled you can test the connection of TAPI 120 to this Extension number with click on **Test connection**. The tests result is displayed in a info box:

- Connection OK  
Between TAPI 120 and the system the connection can be established, the licensing of the extension is correct, TAPI 120 is ready.
- Please check the TAPI License for this subscriber!  
Between TAPI 120 and the system the connection can be established, the licensing of the extension is not correct, TAPI 120 is not ready.
- CTI Firewall Ok, but unspecified error at startMonitor!  
Between TAPI 120 and the system the connection can be established, the extension / name is identified on the system but can not be activated, TAPI 120 is not ready.
- Used subscriber not known by the system!  
Between TAPI 120 and the system the connection can be established, the extension / name is not configured on the system. TAPI 120 is not ready.
- Please check the CTI firewall!  
Between TAPI 120 and the system no connection can be established. The CTI firewall of OpenScape Business rejects this users login (possibly the automatic registration is inactive). TAPI 120 is not ready.
- Please check the connection settings!  
The system is not accessible in the network. This can originate from general network problems, an inactive system / inactive CSTA link, an invalid IP address / IP port if the system, etc.

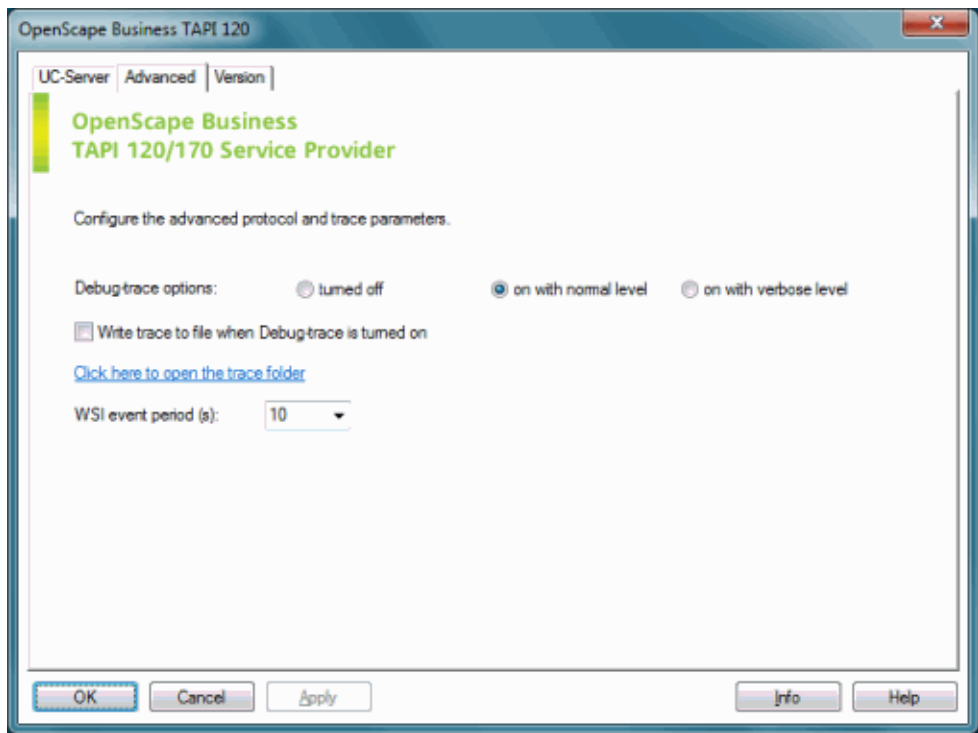
### 3.2.3 Advanced parameters

#### Display (Operation mode OpenScape Business TAPI CSTA)



Configuring TAPI 120  
Configuration of TAPI 120

Display (Operation mode OpenScape Business TAPI UC Smart)



The parameters in the **Advanced** tab represent this:

Parameter	Description
Debug-trace options	<div>To evaluate the TAPI 120 trace with default trace tools you have these options:</div> <ul style="list-style-type: none"><li>– <b>turned off</b> Default trace is inactive</li><li>– <b>on with normal level</b> Default trace activated, trace can be analyzed with default trace tools.</li><li>– <b>on with verbose level</b> Verbose default trace activated, trace can be analyzed with default trace tools.</li></ul>

Parameter	Description
Write trace to file when Debug-trace is turned on	<p>If the Debug-trace option <b>on with normal level</b> or <b>on with verbose level</b> is selected, the TAPI 120 trace can be saved in files. Therefore you activate the <b>Write trace to file when Debug-trace is turned on</b> option.</p> <p>TAPI 120 trace messages are saved in these files:</p> <ul style="list-style-type: none"> <li>– OSB_T1x0yyyymmddhhmmss.trc (TSP tracing)</li> <li>– OSB_T_UIyyyymmddhhmmss.trc (UI tracing)</li> </ul> <p>where &lt;yyyymmdd&gt; is the date and &lt;hhmmss&gt; time of trace file creation.</p>
Click here to open the trace folder	The trace files are saved in a default folder depending on the Windows version. With click on <b>Click here to open the trace folder</b> a Windows explorer windows with the trace file folder active opens.
WSI event period(s)	Here you select the interval in seconds for the waiting period between two HTTP-requests (long term polling) from the TAPI PC to the system. Default is 10 seconds.



Activate the option for tracing in files on request only. Tracing in files affects the TAPI 120 performance.

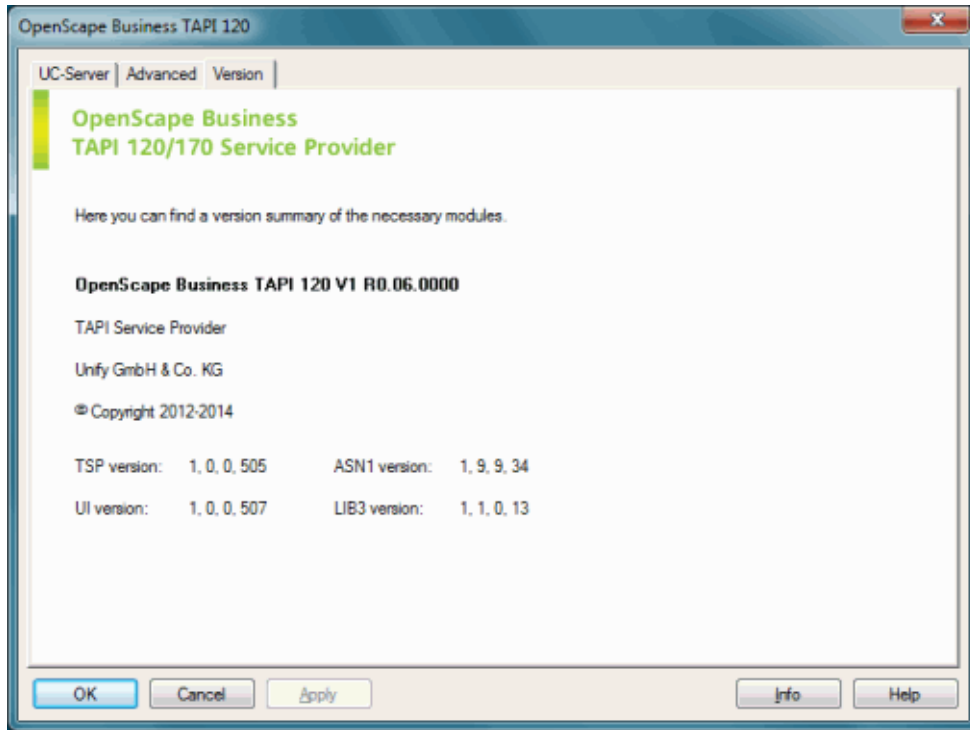
### Saving parameters

- > Click **Apply** to save entries without closing the dialog. e.g. to configure parameters in other tabs.
- > Click **OK** to save changes and to exit the configuration dialog.
- > A confirmation message appears in both cases. Click **Yes** to confirm this message. Changes take effect after a Telephony service restart on the TAPI PC.

### 3.2.4 Version information

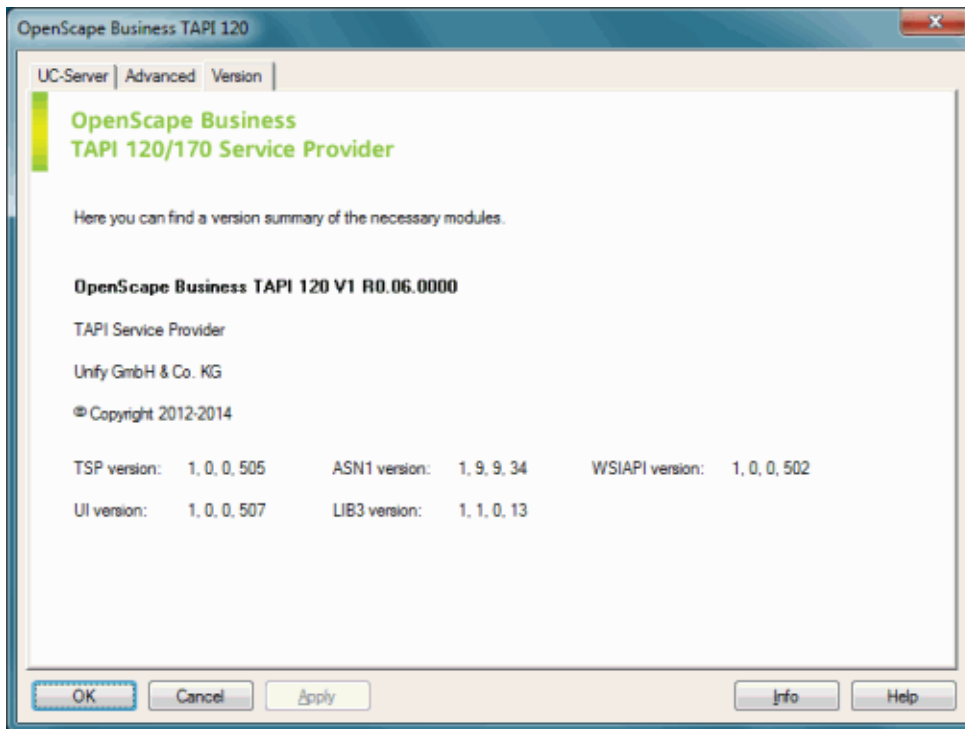
The version numbers of the components that are used and installed are listed in the **Version** tab.

#### Display (operation mode OpenScape Business TAPI CSTA)





## Display (operation mode OpenScape Business TAPI Smart)



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