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Cuba for SDE - Avaya TSAPI Installation Guide Cuba Version 1.3

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0. PRELIMINARIES

0.1 PUBLISHED BY

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0.2 COPYRIGHT

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0.3 DOCUMENT HISTORY

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0.4 BIBLIOGRAPHY

0.4.1 Referenced Documents

- [1] TSAPI, http://support.avaya.com/elmodocs2/AES/4.2/02-300544_i4.pdf

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1. INTRODUCTION

This installation guide is designed to give you an in depth understanding of installing and integrating Cuba with your BMC Service Desk Express (SDE) Application and your Telephone System.

If you've already read our Quick Start Guide you'll recognise some of the information - particularly in the early pages. But further on you'll discover everything you need to know to implement more sophisticated CTI functionality.

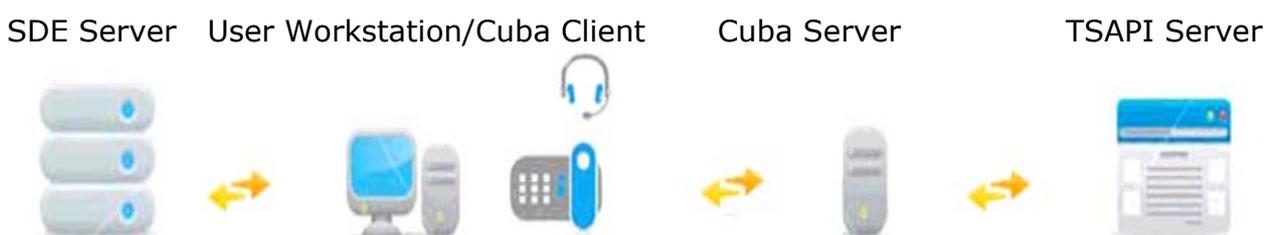
Unlike our Quick Start Guide – which is more focused on getting you up and running quickly with your trial software – this is to give you step-by-step instructions for everything from downloading your software to implementing Advanced Settings and SDE configuration.

2. OVERVIEW

Cuba for SDE software enables Computer Telephony Integration (CTI) between most business grade telecom systems, PBX's, and BMC's Service Desk Express application.

The Cuba software consists of two components; the Cuba Server and the Cuba Client. The Cuba Server communicates with your telephone system via a TSAPI (Telephony Server Application Programming Interface) interface. The Cuba Client communicates with your SDE application.

The diagram below illustrates a typical installation.



The Avaya TSAPI Server provides an application programming interface which allows Cuba Server to control your telephone system and receive events. This interaction is two-way.

A telephony request is initiated by Cuba and is sent to the telephone switch. A telephony event is received by Cuba from the telephone switch.

An example of a telephony request would be a dial request initiated by right clicking on the Cuba client systemtray icon, selecting the Softphone menu, entering a number and clicking on the dial button.

An example of a telephony event would be an alerting event on a phone causing the TSAPI interface to send alerting call information to Cuba which could result in Cuba client screen popping your application.

The TSAPI component above is a software product sourced from Avaya. The TSAPI Server connects to Definity G3, Avaya 8xxx Media servers with Communication

Manager with either Avaya Application Enablement Services, Avaya Computer Telephony 1.2 or 1.3 or Avaya CentreVu CT.

2.1 USER DATA

Cuba version 1.3 introduces the capability to associate custom data to a call. In this way custom data can be transported with a call. The custom data could for example be a database record ID so that a user answering a call can lookup or create a record, attach the record ID to the call and have the information transferred to an agent with the necessary skills to resolve the call. This application of attaching user data is sometimes referred to as 'screen passing'.

3. PREPARATION

3.1 OPERATING SYSTEM REQUIREMENTS

The Cuba Server can reside on the SDE Server or on a separate 'always on' PC on the network.

System Requirements are:

512MB RAM

1.2GHz CPU

Ethernet Port

Operating System – Microsoft Windows: Vista, XP, 2000, 2003, NT

Cuba client can run on any Microsoft Windows platform from Windows 95+.

Administering Cuba Settings

Cuba's settings are configured in the Cuba Web Administrator - a web interface to Cuba Server configuration. Your web browser must support Javascript.

3.2 CONFIGURING TELEPHONY INTERFACE

The Cuba Server communicates with the Avaya telephone system via a TSAPI Server, which must be fully installed and configured.

Avaya sites typically use the following components:

Media Gateway. Essentially a 'gateway' to telephone hardware such as telephones, trunks, etc.

Media Server. A server component which is available to the computing function – eg Cuba.

The media gateway is traditionally what people consider as a telephone system. The media server is a component which opens up telephony for CTI applications. The interface component, TSAPI Server, lets Cuba access the telephone hardware, Media Gateway, via the Media Server.

Legacy Avaya Definity or G3 systems can be configured with a MAPD card which provides a network interface. The interface to Avaya Media Servers is Avaya Communications manager.

Whatever Avaya hardware is used, the TSAPI Server must be installed and configured. On the TSAPI Server configuration create a user account which has full control over all the devices (agent extensions) which you would like to control via Cuba. Email support@iteloffice.com should you require assistance.

The following information is required:

IP address of TSAPI Server.

Advertised name of TSAPI Server. (Advertised TSAPI name is of the form AVAYA#CSTASERV#CSTA#TSAPISERV where TSAPISERV is the hostname of the TSAPI Server).

TSAPI Server username. User account configured in TSAPI Server assigned to control selected extensions.

TSAPI Server password.

This information is required to configure Cuba Server via the web administrator discussed later in this document.

A TSAPI configuration file, TSLIB.INI, must be configured on the Cuba Server computer with the IP address of the TSAPI Server. Here is an example TSLIB.INI file where the TSAPI Server IP address is 192.168.0.50:

```
[Telephony Servers]
192.168.0.50=450
```

Refer to the Cuba Server installation section for more information.

3.3 CONFIGURING SERVICE DESK EXPRESS

The current version of Cuba for SDE can screenpop Service Desk Express. The SDE push service is used as the mechanism to deliver a screenpop to a specified logged in user. The Cuba client sends a http request to the SDE server specifying the username, the telephony data to send and SDE specific information. If the specified user is logged into SDE and a match is found in the field specified in the request, a form is screenpopped.

Telephone systems provide caller information such as Caller ID as a string with no spaces or formatting characters. The text in the specified field must exactly match the text provided by the telephone system. If telephone numbers in the SDE database contain spaces or formatting characters then a match will not be successful. This is a very important consideration and should not be overlooked.

3.3.1 Configure SDE Push Service

Ensure that your version of SDE is at least version 9.8. If 9.6, update to v9.8 for best results.

Launch SDE and log in as administrator. Click on System Administration, Application Administration menu. Click System tab. Tick Enable Push Service checkbox and click on Configure Push button. Click Create New Push Event button.

Enter these parameters:

Push Event ID = CUBAEVENT

Module = Incident

Form = <Use Group Default Form>

Form mode = Create a new record with preloaded data

Pre-populate = All fields from a linked module

Linked modules = Clients (Client ID)

Save this configuration.

3.3.2 Configure IIS

Launch Internet Information Manager (IIS). On Windows 2003 Server this can be accessed via Start... App Programs... Administrative Tools... Internet Information Services (IIS) Manager. Select Default Web Site branch and check if a pps virtual folder has been created. If not create a virtual directory called pps with real path=C:\Program Files\BMC\Service Desk Express\PPS\PPSWEB if you installed SDE to the default location. If not, adjust accordingly. Close IIS Manager.

3.3.3 Configure SDE Component Services

In Windows go into Component Services (Control Panel, Administrative Tools, Component Services). Navigate to DCOM Config branch and select SDE Push Service - SDEPPS, right click Properties. Click Security tab.

In Launch and Activation Permissions section select Customise and click Edit button. Select Internet guess account (IUSR_<computername>) and allow everything. Do same for IWAM_<computername> account. Do the same for Access Permissions and Configuration Permissions. Click OK.

Go into Windows Services and configure Push SDE Push Service - SDEPPS to start automatically at computer startup.

Restart computer.

3.4 NETWORK CONFIGURATION

Your Cuba Server communicates on ports 6090 and 8080. Port 6090 is used for communication of telephony data and port 8080 is used for web administration. So you should make sure that these ports are not used by other applications.

Also, ensure that any firewalls configured between the Cuba Server and Cuba clients do not block ports 6090 and 8080.

3.5 CUBA CLIENT

The Cuba Client communicates with the Cuba Server on port 6090* so this (tcp) port must be open between Cuba client and server. The Cuba Client communicates with your SDE application via the http port 80. Therefore, port 80 must be open from each client to the SDE Server.

* This can be edited in the 'Telephony Server Port' field under 'Server Settings' in the Cuba Web Administrator.

4. INSTALLATION

This section covers the basics of downloading and installing your Cuba software and introduces you to the Cuba Web Administrator - the web administration panel where you can modify your settings. The Web Administrator is covered in depth in Section 4.6.

Download and installation of Cuba is fast and intuitive but we've covered it here anyway in a step-by step guide.

4.1 TRIAL PERIOD & LICENCING

During the trial period your Cuba Server software restricts your operation of Cuba for SDE to three hours of continuous use at a time. Restart the Cuba Server to resume operation.

You are free to install the Cuba Client on as many workstations as you have available.

You can apply for a licence by filling in the application form under 'Unlock you Trial' in the Cuba [Web Administrator](#) – or contact us direct: support@iteloffice.com

4.2 DOWNLOADING CUBA

Download your Cuba Software at: www.iteloffice.com

To get going with Cuba you need to first download the software. The download operates intuitively and takes just a couple of minutes – but just for the record here's a simple visual overview – using Firefox as the web browser...

Log onto the designated Windows NT/2000/XP/Vista/2003 PC as an administrator.



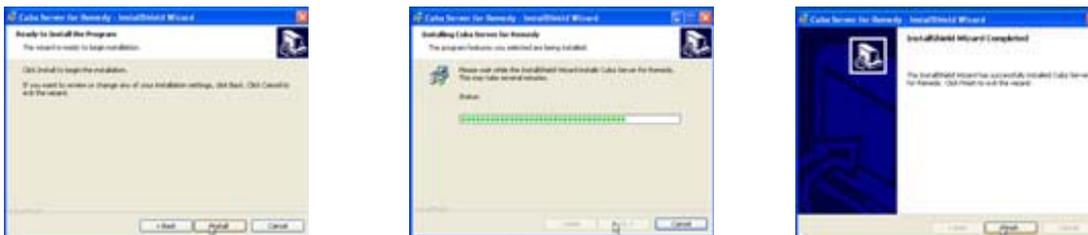
click 'Save File' >> double click on details >> click 'OK' >>

4.3 INSTALLING CUBA SERVER

Then the InstallShield Wizard will launch - this will first install the Cuba Server. In this section we will first install the Cuba Server then the Cuba Client.

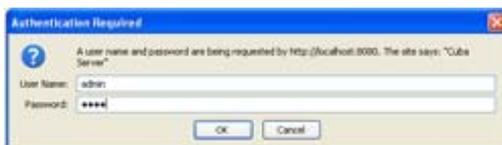


Click Next >> accept licence >> enter name >> click Next >>



Click Next >> installs >> click finish >>

A dialog box will appear...



Enter:

User Name: **admin**

Password: **cuba**

Click 'OK' and the Cuba Web Administrator launches automatically on the 'Settings' page. You can start entering your settings immediately but for the purpose of this tutorial we'll return to install the Cuba Client and deal with settings in the next Section.

The Cuba Server installation copies a file, TSLIB.INI, to the install folder. The default install folder is **C:\Program Files\office\Cuba**. Edit this file by entering the IP address of the TSAPI Server. If Cuba server is installed on the same computer as the TSAPI server you can enter 127.0.0.1 as the IP address.

Example where the IP address of the TSAPI Server is 192.168.0.50:
[Telephony Servers]
192.168.0.50=450

After editing, copy this file to the computers Windows directory. This is usually C:\Windows. On some computers it may be C:\WINNT or a custom location. If in doubt type echo %WINDIR% <ENTER> at a command prompt.

4.4 INSTALLING THE CUBA CLIENT

To install your Cuba Client,

Click: 'Start' > 'All Programs' > 'Cuba' > 'Install Cuba Client' >

As previously, the InstallShield Wizard will launch... again, work through the wizard until you reach 'Finish'.

Once you have completed the wizard you will notice that the Cuba Telephone Icon... appears in your System Tray.



Double Click on the Telephone Icon and a dialog box with a drop down menu will appear - click on the down arrow to reveal a drop down box that displays your extensions.



Choose your telephone extension and enter the username you use to log into BMC Service Desk Express and click 'Select'. You'll see that the Cuba Telephone Icon has turned green to indicate you have successfully connected Cuba to your telephone extension.



4.5 INSTALLING CUBA CLIENT ON A TARGET WORKSTATION

You'll find the Cuba Client installation program in your Cuba Server installation folder - which by default is: <C:\Program Files\office\Cuba>.

The Cuba Client installation file is: [cubasde_client_setup.exe](#).

If you want to install the Cuba client on other workstations, copy the [cubasde_client_setup.exe](#) file to a shared network location - accessible from other workstations - then run the Setup Program on as many workstations as you require.

Our free trial allows unlimited concurrent Cuba Clients but the Cuba Server shuts down after 3 hours operation. Restart the Cuba Server to resume operation. Unlock your trial to remove this limitation.

4.6 THE CUBA WEB ADMINISTRATOR

You can control Cuba's Application Settings in the Cuba Web Administrator.

This is a web front end that allows quick and easy configuration of your Cuba Server.

The Web Administrator launches automatically during initial installation and opens on the 'Settings' tab. This gives you a series of simple form fields where you can enter configuration details.

4.6.1 NAVIGATING TO THE WEB ADMINISTRATOR

You'll be able to return here to review and edit all of your settings whenever you need to. You'll find the Cuba Web Administrator alongside the Cuba Software Files in your Program File - simply click on:

Start > All Programs > Cuba > Cuba Web Administrator > or

If your Cuba Server is installed on your local machine you can use the address 127.0.0.1.

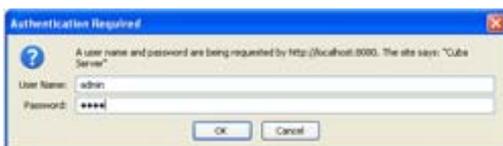
If your Cuba Server is installed elsewhere on your network, launch your web browser and navigate to the hostname or IP address of the computer where your Cuba Server is installed.

Append : 8080 to the hostname, for example: <http://CubaServerHostname:8080>

This is because the Cuba web server uses the non standard port 8080 so as not to conflict with alternative web servers which may be configured on the Cuba Server computer.

4.6.2 PASSWORD PROTECTION

Each time you open it a dialogue box will appear...



As before enter:

User Name: [admin](#)

Password: [cuba](#)

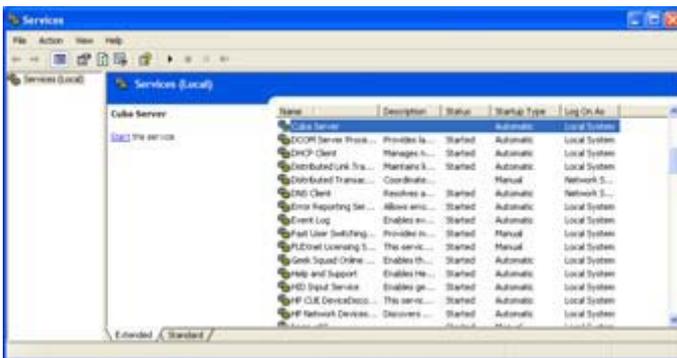
Click 'OK' and the Cuba Web Administrator launches automatically on the 'Settings' page.

If you get a Page Load Error then either the Cuba Server is not hosted on your machine or your trial version needs to be restarted.

Go to:

Start > Control Panel > Administrative Tools > Services >

Scroll Down to 'Cuba Server' > Click 'Start'



The Cuba Server will restart. You may need to restart your browser in order to access the Cuba Web Administrator.

5. CUBA CONFIGURATION

5.1 CONFIGURING CUBA SERVER

All of Cuba's settings can be controlled in the Cuba Web Administrator. A menu on the left hand side can be used to navigate to the individual sections.

5.2 SDE SETTINGS

You can get going straightaway by simply entering data in the Basic Settings fields.

They will enable Cuba to ScreenPop your selected Service Desk Express form onto your screen as your contacts call in. Cuba displays your Callers details inside the SDE Form by matching the telephone no. of the incoming call - the Caller ID - to data within the Caller ID Field in the SDE Form. Note that Cuba uses the database name of the field. Not the field label.

As a default ScreenPop is set to occur on an Alerting Call (when the phone first starts ringing) - however there are further options under 'Advanced Settings'

The data fields in basic settings are:

SDE Server Name Enter the IP address/hostname/domain name of your Service desk express application server.

Push Service IIS Cuba uses the default pps as described in the preceding

Virtual Directory	section. However, if a different IIS virtual folder has been configured, enter the name used here.
ASP File	Generally, ScreenPop.asp should be used. But if a different asp file has been configured enter the filename here.
Push event name	If the procedure in the preceding section has been followed enter CUBAEVENT here. If not, enter whatever event name has been configured.
Telephony data	Select Caller ID to screenpop the callers number. However, if preferred you can screenpop the dialed number.
Pop type	Select Alerting to screenpop as soon as the agents phone starts ringing. Select connected if you prefer the screenpop to occur on answering the call.
Screenpop internal calls	Internal calls include calls transferred from agent to agent so generally it is most appropriate to select this option.

5.3 CUBA LOGS

Select the Logs section to view or delete Cuba Server logs. The log file provides a history of what is happening on the Cuba Server.

5.4 DEVICES

In this section you need to enter all the call centre agents extension numbers. Not the agent ID, the actual telephone hardware/handset extension number. The Cuba client extension logon dialog is populated with the contents of the list defined here.

5.5 CTI LINK

Enter the TSAPI Server name, TSAPI User name and TSAPI password as discussed in the preparation section.

5.6 QUEUES

In this section you need to enter the queues into which call centre agents login to. Cuba monitors the queues specified in this section at startup. So if this setting is changed it is necessary to restart Cuba Server for the changes to take effect. As agents login and logout of these queues, Cuba intercepts the logon and logoff events and retains an internal mapping between devices (agent phone) and AgentID.

5.7 SERVER SETTINGS

Web Server Port	This is the port that the Cuba web server listens on and is 8080 by default. If you wish to communicate on another port enter the port no. here. Remember to restart the Cuba (Server) after editing this value.
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Telephone Server Port This is the port that the Cuba telephony server listens on and is 6090 by default. If you wish to communicate on another port enter the port no. here. Remember to restart Cuba (Server) after editing this value.

5.8 HELP

Help on configuring Cuba Server.

5.9 UNLOCK TRIAL

To get a full user licence you will need to purchase an Activation Key. Enter your contact details here and click 'Send Registration Request'. We will contact you to discuss payment options and the registration process.

5.10 REGISTER

Once you have received your Activation Key copy and paste it here and click 'Save'. You will then get unrestricted use of Cuba for the number of seats that you have purchased.

6. TROUBLESHOOTING

6.1 LOGGING

Cuba Server writes logging information to a log file, cubasvr.txt, in the Itel subdirectory of the common application data folder. The location of this folder varies dependent on Windows version. On Windows XP this folder is likely to be C:\Documents and Settings\All Users\Application Data\Itel. Type ECHO %ALLUSERSPROFILE% <ENTER> at a command prompt to find this folder on your system. Prepend \Application Data\Itel to the returned string.

To enable full logging select Full in the Logging level dropdown in the server section of Cuba web administrator.

Now debug level errors and informational messages will be logged to cubasvr.txt which can provide very useful troubleshooting information.

7. SIMULATING CALLS

A SDE integrator can use the Cuba simulator to test a configuration without requiring a connection to a real telephone system. Therefore, CTI development and basic testing can be performed on a laptop. Full end to end testing can then be performed at a later stage when a CTI link is available.

To use the simulator, install the Cuba client program and follow these steps:

1. Right click on Cuba client systemtray icon and select Open menu.
2. Click Settings button.
3. Click Simulator button.
4. The Cuba Simulator screen allows you to enter a caller ID, called number, call ID or user data which can be posted to a SDE form.

Note that the behaviour will be dependent on the rules configured in the Cuba web administrator. Complete this configuration first.