

**SIP Trunking using the  
Optimum Business SIP  
Trunk Adaptor and the  
Avaya IP-Office 500  
version 9.0 IP-PBX**

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## 1 Overview

The purpose of this configuration guide is to describe the steps needed to configure the Avaya IP-PBX for proper operation with Optimum Business SIP Trunking.

## 2 Prerequisites

Please follow the instructions in the Optimum Business SIP Trunk Set-Up Guide. The Set-Up Guide was left by the Optimum Business technician at installation. If you do not have the Set-Up Guide, go to [www.optimumbusiness.com/SIP](http://www.optimumbusiness.com/SIP) to download a copy.

### SIP authentication credentials

- This guide provides the configuration steps for both PBX registration and static or non-registration modes of PBX operation.

### PBX Information

<b>Manufacturer:</b>	Avaya
<b>Model:</b>	IP Office 500
<b>Software Version:</b>	9.0
<b>Does the PBX send SIP Registration messages (Yes/No)?</b>	Yes
<b>Vendor Contact:</b>	<a href="http://www.avaya.com">www.avaya.com</a>

## 3 Avaya IP Office 500 PBX Configuration

The steps below describe the minimum configuration required to enable the PBX to use Optimum Business SIP Trunking for inbound and outbound calling. Please refer to the Avaya IP Office 500 product documentation for more information other advanced PBX feature configuration.

The configuration described here assumes that the PBX is already configured and operational with station side phones using assigned extensions or DIDs. This configuration is based on Avaya IP Office 500 version 9.0. In this document the address of the Avaya which is communicating with the Optimum Business SIP Trunk IP Adaptor is 10.10.101.11 /24 while the Optimum Business SIP Trunk Adaptor's IP address is 10.10.101.1 /24.

### 3.1 SIP Settings

To configure SIP navigate first to **System→LAN2→VoIP** and check **SIP Trunks Enable, SIP Registrar Enable, & Auto-create Extn/User**. Next to **Domain Name** enter the address of the Optimum Business SIP Trunk Adaptor which in this case was 10.10.101.1. The IP address was assigned to the Optimum Business SIP Trunk Adaptor in step 2 of the Optimum Business SIP Trunk Set-Up guide.

System	LAN1	LAN2	DNS	Voicemail	Telephony	Direct
LAN Settings		VoIP	Network Topology	DHCP Pools		
<input type="checkbox"/> H23 Gatekeeper Enable						
<input type="checkbox"/> Auto-create Extn			<input type="checkbox"/> Auto-create User			
<input checked="" type="checkbox"/> SIP Trunks Enable						
<input checked="" type="checkbox"/> SIP Registrar Enable						
<input checked="" type="checkbox"/> Auto-create Extn/User						
Domain Name						10.10.101.1

**NOTE:** Click the interface that is communicating to the Optimum Business SIP Trunk Adaptor. In this example it was LAN2.

Navigate to **Line** then click on the **SIP Line** tab. Enter the address of the Optimum Business SIP Trunk Adaptor next to **ITSP Domain Name**. Check **In Service**. Select **SIP** next to **URI Type** and **Request URI** next to **Call Routing Method**. The **Line Number** in this case was **17**. When done click **OK**.

SIP Line	Transport	SIP URI	VoIP	T38 Fax	SIP Credentials
Line Number	17				In Service <input checked="" type="checkbox"/>
ITSP Domain Name	10.10.101.1				Check OOS <input checked="" type="checkbox"/>
					Call Routing Method <b>Request URI</b>
					Originator number for forwarded and twinning calls
URI Type	SIP				

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**optimum.**  
let's connect more

Click on the **Transport** tab. Enter the address of the Optimum Business SIP Trunk Adaptor next to **ITSP Proxy Address**. Select **UDP** next to **Layer 4 Protocol** & enter **5060** for ports. Check **Calls Route via Registrar**. When done click **OK**.

SIP Line	Transport	SIP URI	VoIP	T38 Fax	SIP Credentials
ITSP Proxy Address <input type="text" value="10.10.101.1"/>					
Network Configuration					
Layer 4 Protocol		<input type="text" value="UDP"/>	Send Port		<input type="text" value="5060"/>
Use Network Topology Info		<input type="text" value="None"/>	Listen Port		<input type="text" value="5060"/>
Explicit DNS Server(s)		<input type="text" value="0 . 0 . 0 . 0"/>			<input type="text" value="0 . 0 . 0 . 0"/>
Calls Route via Registrar <input checked="" type="checkbox"/>					

Click on the **SIP Credentials** tab then click **Add**. Enter the appropriate SIP credentials that will be used between the PBX & the Optimum Business SIP Trunk Adaptor. The credentials must match the credentials configured for the Optimum Business SIP Trunk Adaptor. This was configured in step 3 of the Optimum Business SIP Trunk Set-Up Guide. Enter **60** next to **Expiry (mins)** then check **Registration required** to require registration. When done click **OK**.

New SIP Credentials	
User name	<input type="text" value="4085555555"/>
Authentication Name	<input type="text" value="4085555555"/>
Contact	<input type="text" value="4085555555"/>
Password	<input type="password" value="••••••••"/>
Confirm Password	<input type="password" value="••••••••"/>
Expiry (mins)	<input type="text" value="60"/>
Registration required	<input checked="" type="checkbox"/>

To change DTMF to Inband click on the **VoIP** tab & select **Inband** from the **DTMF Support** menu.

DTMF Support	<input type="text" value="Inband"/>
	<input type="text" value="Inband"/>
	<input type="text" value="RFC2833"/>
	<input type="text" value="Info"/>

**IMPORTANT:** The Cablevision network only supports in-band DTMF tones. For proper operation with Optimum Business SIP Trunking, the PBX must be configured to send Inband DTMF. Note, DTMF tone duration can't be modified in the system.

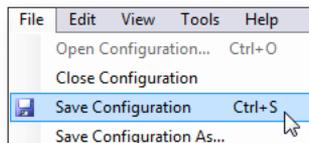
When the device is registered to the Optimum Business SIP Trunk Adaptor the **Register** column within the **SIP Credentials** tab will display **True** as shown.



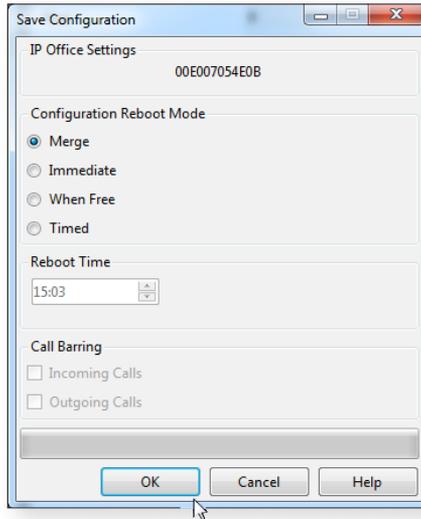
To configure Static Mode simply edit the line configured within the **SIP Credentials** tab & uncheck **Registration Required** as shown. You must configure the Optimum Business SIP Trunk Adaptor for a passive connection using the local, private IP Address of hre PBX. This is step 3 of the Optimum Business SIP Trunk Set-Up Guide.

Edit SIP Credentials	
User name	4085555555
Authentication Name	4085555555
Contact	4085555555
Password	••••••••
Confirm Password	••••••••
Expiry (mins)	60
Registration required	<input type="checkbox"/>

When done click **OK**. Finally click **File→Save Configuration**.



When the below screen appears simply click **Merge**.



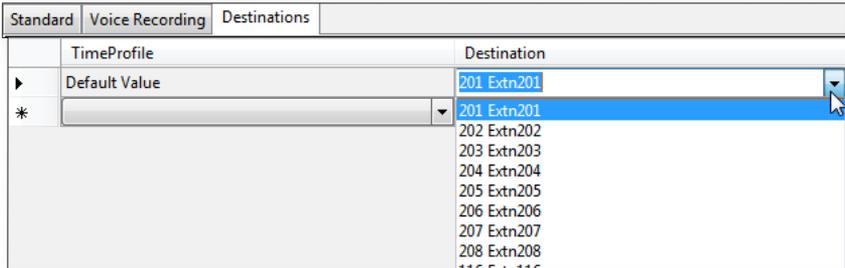
**NOTE:** Repeat this step each time a change is made to the device for the configuration to take effect.

## 3.2 DID Configuration

To associate DIDs to extensions navigate to **Incoming Call Route** & click on the empty screen then select **New**. Select the appropriate **Line Group ID**. Enter the DID next to **Incoming Number**.

Standard	Voice Recording	Destinations
Bearer Capability	Any Voice	
Line Group ID	17	
Incoming Number	4085555556	

Then click on the **Destinations** tab & associate the DID to the appropriate extension.



Repeat this for remaining extensions. When done click **OK**.

## 3.3 Backup/Restore

To backup or restore navigate to **File→Backup/Restore**.

