



## **Avaya Solution & Interoperability Test Lab**

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# **Application Notes for Inisoft Syntelate XA 2.0 with Avaya IP Office 11.0 – Issue 1.0**

### **Abstract**

These Application Notes describe the configuration steps required to integrate Inisoft Syntelate XA 2.0 with Avaya IP Office 11.0.

Syntelate XA integrates with IP Office using the Telephony Application Programming Interface (TAPI) to control the Avaya endpoints.

Readers should pay attention to **Section 2**, in particular the scope of testing as outlined in **Section 2.1** as well as any observations noted in **Section 2.2**, to ensure that their own use cases are adequately covered by this scope and results.

Information in these Application Notes has been obtained through DevConnect compliance testing and additional technical discussions. Testing was conducted via the DevConnect Program at the Avaya Solution and Interoperability Test Lab.

# 1. Introduction

These Application Notes describe the configuration steps required to integrate Inisoft Syntelate XA 2.0 with Avaya IP Office 11.0.

These Application Notes describe the Syntelate connection to IP Office using the Telephony Application Programming Interface (TAPI) to control the Avaya endpoints when answering incoming calls. TAPI3 is used and it also allows Syntelate agent desktop to hold, transfer and conference these calls.

The Syntelate XA solution consists of Syntelate XA Designer and Syntelate XA Studio both of which runs on an IIS web server. There is also a generic Database server and Syntelate XA Desktop. Syntelate XA Designer is a graphical tool used to define the call flow and custom desktop screen.

When Syntelate XA Desktop is launched, to connect to IP Office, configuration is retrieved from Syntelate server. Syntelate XA Desktop is an agent web application that allows inbound and outbound calls to be made using a web browser-based interface

## 2. General Test Approach and Test Results

The connection to the IP Office was tested by placing incoming calls and allowing the Syntelate XA Desktop to answer and process the calls. All calls are handled by the Syntelate XA desktop. Serviceability testing was carried out to observe the response of the Syntelate XA desktop when various LAN failures were simulated and restart of the Syntelate server.

DevConnect Compliance Testing is conducted jointly by Avaya and DevConnect members. The jointly-defined test plan focuses on exercising APIs and/or standards-based interfaces pertinent to the interoperability of the tested products and their functionalities. DevConnect Compliance Testing is not intended to substitute full product performance or feature testing performed by DevConnect members, nor is it to be construed as an endorsement by Avaya of the suitability or completeness of a DevConnect member's solution.

Avaya recommends our customers implement Avaya solutions using appropriate security and encryption capabilities enabled by our products. The testing referenced in these DevConnect Application Notes included the enablement of supported encryption capabilities in the Avaya products. Readers should consult the appropriate Avaya product documentation for further information regarding security and encryption capabilities supported by those Avaya products.

Support for these security and encryption capabilities in any non-Avaya solution component is the responsibility of each individual vendor. Readers should consult the appropriate vendor-supplied product documentation for more information regarding those products.

For the testing associated with these Application Notes, the interface between Avaya systems and Syntelate XA did not include use of any specific encryption features as requested by Inisoft.

## 2.1. Interoperability Compliance Testing

Interoperability compliance testing included feature and serviceability testing. The feature testing focused on the following functionality:

- Make/Receive internal phone calls.
- Make/Receive PSTN calls.
- Long duration calls
- Screen pop
- DTMF
- Feature call like Call Pickup, Do Not Disturb and Call Forwarding
- Incoming Hunt Group Calls either from internal or PSTN
- Hold and Resume, Blind or Supervised Transfer/Conference phone calls (incoming calls).
- Serviceability testing by simulating LAN failures.

The serviceability testing also focused on verifying the ability of the Syntelate XA solution to recover from adverse conditions, such as server restart and network disconnects.

## 2.2. Test Results

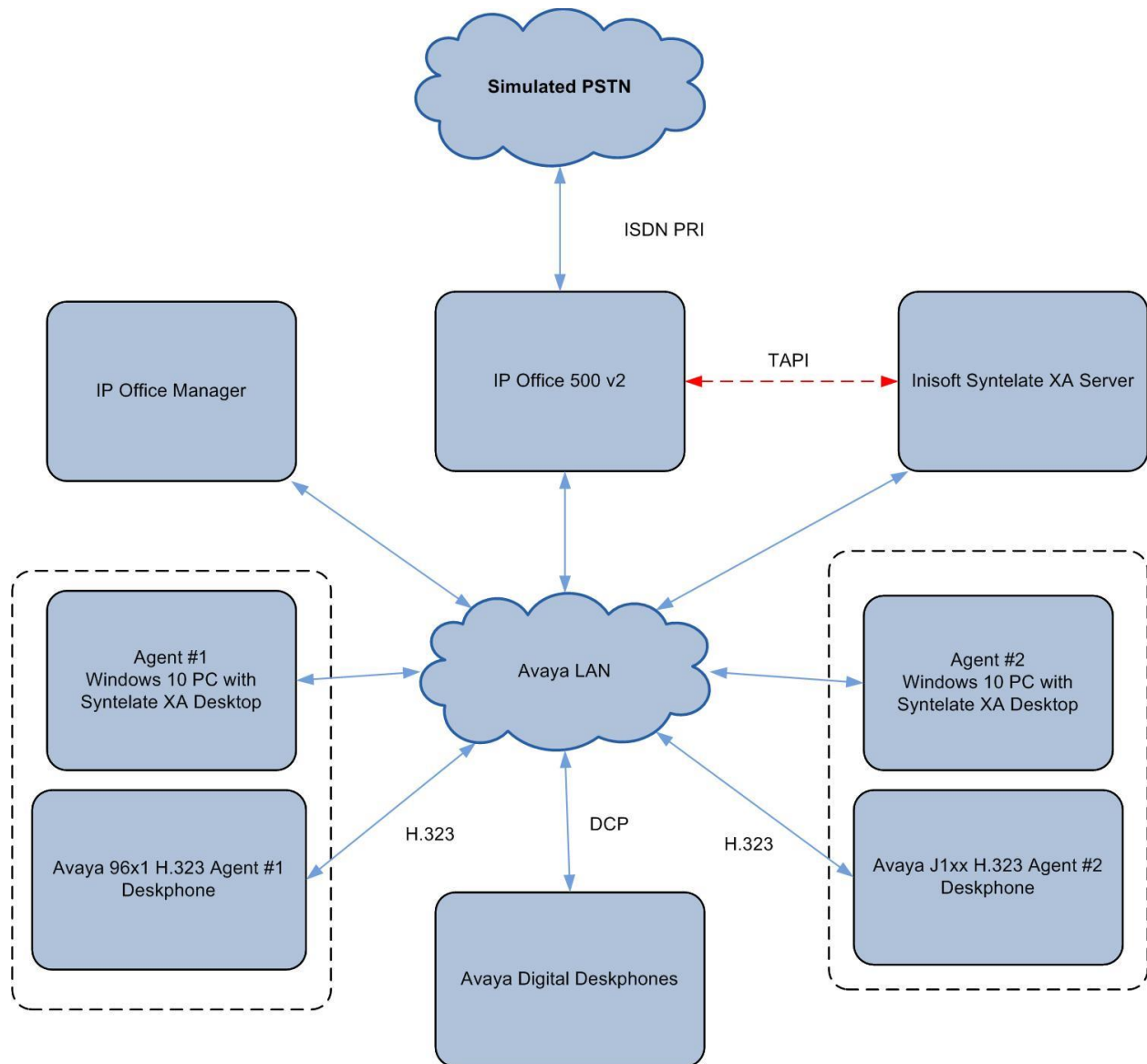
All test cases were successfully executed and verified. All applicable test cases passed successfully.

## 2.3. Support

For technical support on the Syntelate XA, contact Inisoft via phone, email, or internet.

- **Phone:** +44 (0)800 668 1290
- **Email:** [support@inisoft.co.uk](mailto:support@inisoft.co.uk)
- **Web:** [www.Syntelate.com](http://www.Syntelate.com)

**Figure 1** shows the network topology during compliance testing. The Syntelate XA server was placed on the Avaya Telephony LAN. The TAPI provides the Syntelate XA desktop CTI capability on IP Office. The Syntelate XA Desktop can control an Avaya H.323 phone via a web browser on the agent's desktop.



**Figure 1: Network solution of Syntelate XA and IP Office**

### 3. Equipment and Software Validated

The following equipment and software were used for the sample configuration:

Avaya Equipment / Software	Release / Version
IP Office 500 v2	11.0.4.1.0 build 11
IP Office Manager	11.0.4.1.0 build 11
Avaya 9608 H323 Deskphone	6.8.2
Avaya J179 Series H323 Deskphone	6.8.2
Avaya 1408 Digital Deskphone	R48
Avaya 9508 Digital Deskphone	R60
Inisoft Equipment / Software	Release / Version
Inisoft Syntelate XA running on Microsoft Windows 2012 R2 server with TAPI3 driver	2.0 1.0.0.44
Inisoft Syntelate XA Desktop running on Microsoft Windows 10 Enterprise	2.0

*Note: Compliance Testing is applicable when the tested solution is deployed with a standalone IP Office 500 V2 only.*

## 4. Configure Avaya IP Office

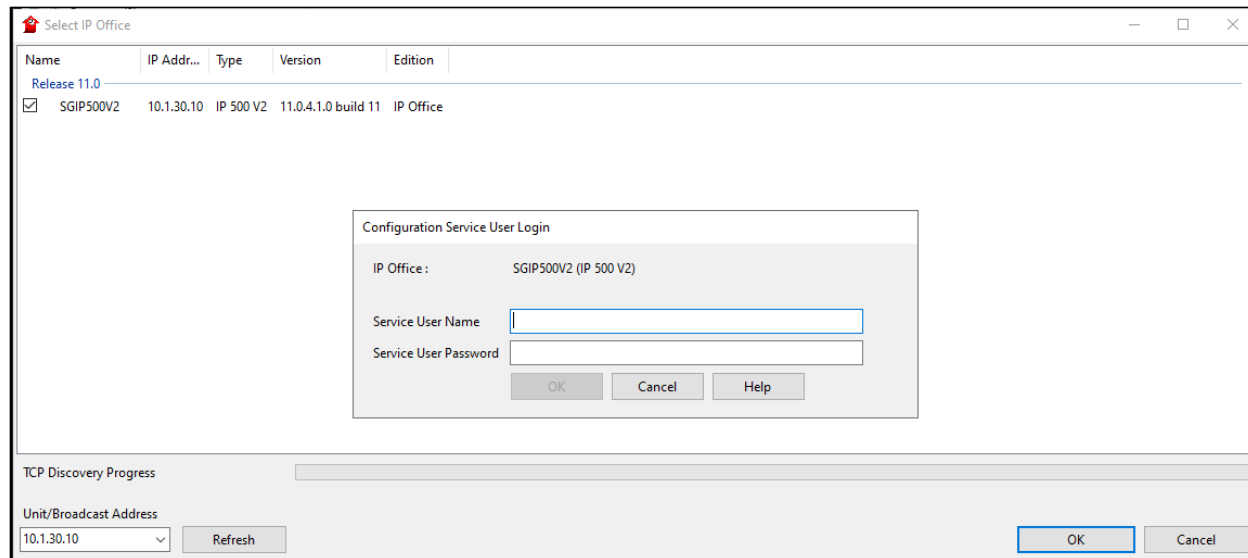
The configuration and verification operations illustrated in this section were all performed using IP Office Manager running on Windows 10 PC. The information provided in this section describes the configuration of IP Office for this solution. For all other provisioning information such as initial installation and configuration such as trunks, please refer to the product documentation in **Section 9**.

This section provides the procedures for configuring IP Office. The procedures include the following:

- Launch IP Office Manager
- Verify IP Office license
- Verify IP Office LAN address
- Verify security settings
- Administer system password
- Administer users
- Administer hunt group

### 4.1. Launch IP Office Manager

On the IP Office Manager PC, click on **Start → Programs → IP Office → Manager** to launch the Manager application. Log in to the Manager application using the appropriate credentials.



The home screen is shown below:

Avaya IP Office Manager SGIP500V2 [11.0.4.1.0 build 11] [Administrator/Administrator|ICR & User Rights Admin]

File Edit View Tools Help

SGIP500V2 System SGIP500V2

**IP Offices**

- BOOTP (2)
- Operator (3)
- SGIP500V2
  - System (1)
  - SGIP500V2
    - Line (8)
    - Control Unit (6)
    - Extension (55)
    - User (31)
    - Group (1)
    - Short Code (68)
    - Service (1)
    - RAS (2)
    - Incoming Call Route (2)
    - WanPort (0)
    - Directory (4)
    - Time Profile (0)
    - Firewall Profile (3)
    - IP Route (2)
    - Account Code (3)
    - Licence (33)
    - Tunnel (0)
    - User Rights (8)
    - ARS (1)
    - Location (0)
    - Authorization Code (0)

**SGIP500V2**

System LAN1 LAN2 DNS Voicemail Telephony Directory Services System Events SMTP SMDR VCM VoIP Contact Center

Name SGIP500V2 Locale United Kingdom (UK English) Location <None>

Provider 1

Device ID

TFTP Server IP Address 10 . 1 . 10 . 127

HTTP Server IP Address 10 . 1 . 10 . 101

Phone File Server Type Custom

Use Preferred Phone Ports ☐

Manager PC IP Address 0 . 0 . 0 . 0

Avaya HTTP Clients Only ☐

Enable Softphone HTTP Provisioning ☒

Automatic Backup ☐

Time Setting Config Source SNTP

Time Settings

Time Server Address 10.1.10.101

Time Zone (GMT+08:00) Kuala Lumpur, Singapore

Local Time Offset from UTC 08:00

Automatic DST ☐

☐ Favour RIP Routes, over static routes

OK Cancel Help

## 4.2. Verify IP Office License

In the Manager window, go to the Configuration Tree and double-click **License** to open the list of licenses installed in the IP Office system. On the right pane, verify the **CTI Link Pro** license is **Valid**.

**IP Offices**

- BOOTP (2)
- Operator (3)
- SGIP500V2
  - System (1)
  - Line (8)
  - Control Unit (6)
  - Extension (55)
  - User (31)
  - Group (1)
  - Short Code (68)
  - Service (1)
  - RAS (2)
  - Incoming Call Route (2)
  - WanPort (0)
  - Directory (4)
  - Time Profile (0)
  - Firewall Profile (3)
  - IP Route (2)
  - Account Code (3)
  - License (33)
  - Tunnel (0)
  - User Rights (8)
  - ARS (1)
  - Location (0)
  - Authorization Code (0)

**License**   Remote Server

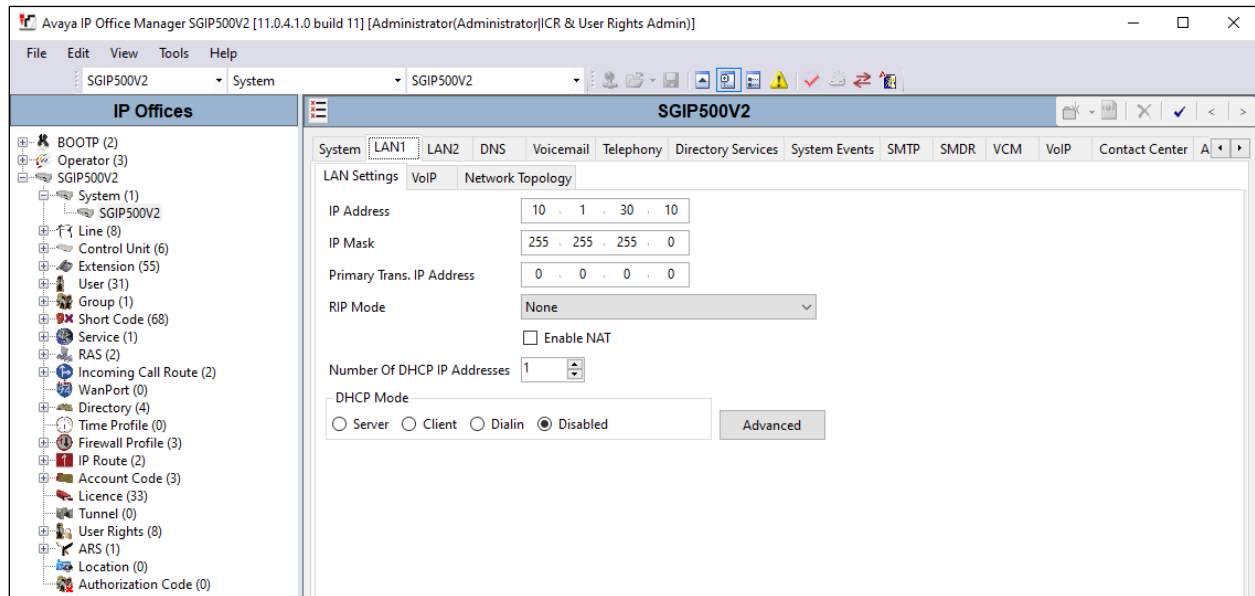
Licence Mode    Licence Normal  
 Licensed Version    11.0  
 PLDS Host ID    111347985536  
 PLDS File Status    Valid

Feature	Instances	Status	Expiry Date	Source
Receptionist	4	Valid	Never	PLDS Nodal
Additional Voicemail Pro Ports	150	Valid	Never	PLDS Nodal
VMPro Recordings Administrators	1	Valid	Never	PLDS Nodal
Essential Edition Additional Voice...	4	Valid	Never	PLDS Nodal
VMPro TTS (Generic)	40	Valid	Never	PLDS Nodal
Teleworker	384	Valid	Never	PLDS Nodal
Mobile Worker	384	Valid	Never	PLDS Nodal
Office Worker	384	Valid	Never	PLDS Nodal
Avaya Softphone Licence	100	Valid	Never	PLDS Nodal
VMPro TTS (Scansoft)	40	Valid	Never	PLDS Nodal
VMPro TTS Professional	40	Valid	Never	PLDS Nodal
IPSec Tunnelling	1	Valid	Never	PLDS Nodal
Power User	384	Valid	Never	PLDS Nodal
Avaya IP endpoints	384	Valid	Never	PLDS Nodal
IP500 Voice Networking Channels	32	Valid	Never	PLDS Nodal
SIP Trunk Channels	128	Valid	Never	PLDS Nodal
IP500 Universal PRI (Additional cha...	100	Valid	Never	PLDS Nodal
<b>CTI Link Pro</b>	<b>1</b>	<b>Valid</b>	<b>Never</b>	<b>PLDS Nodal</b>



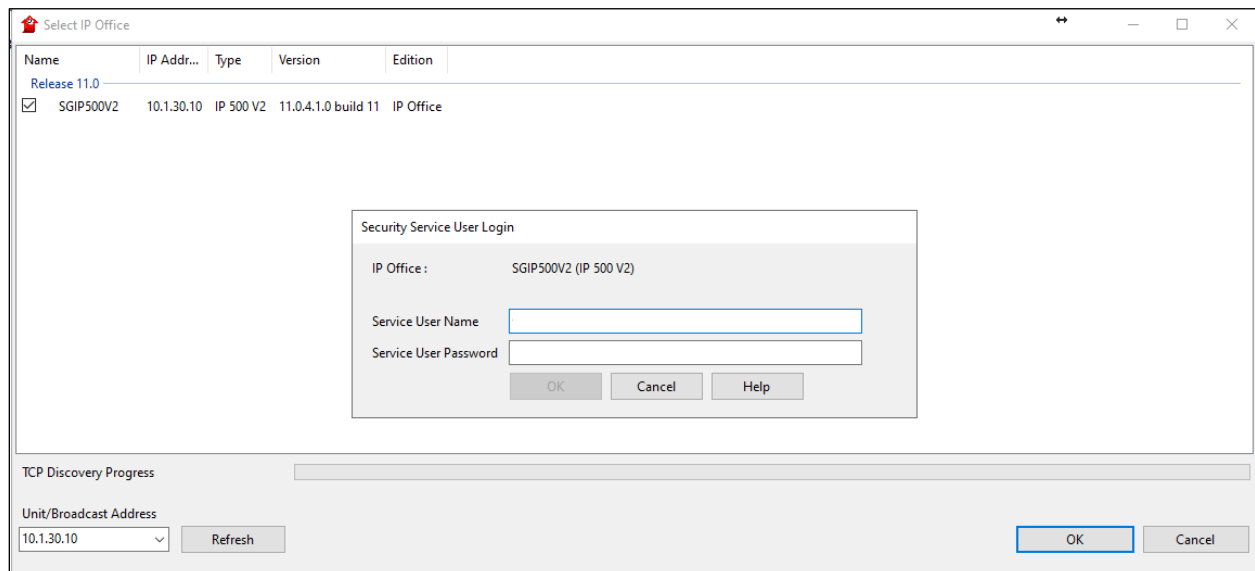
### 4.3. Verify IP Office LAN IP Address

In the Manager window, go to the Configuration Tree and double-click **System** and **LAN1** on the right pane. Make a note of the **IP Address**, which will be used later to configure TAPI on the Syntelate XA server i.e., 10.1.30.10 in this compliance testing.

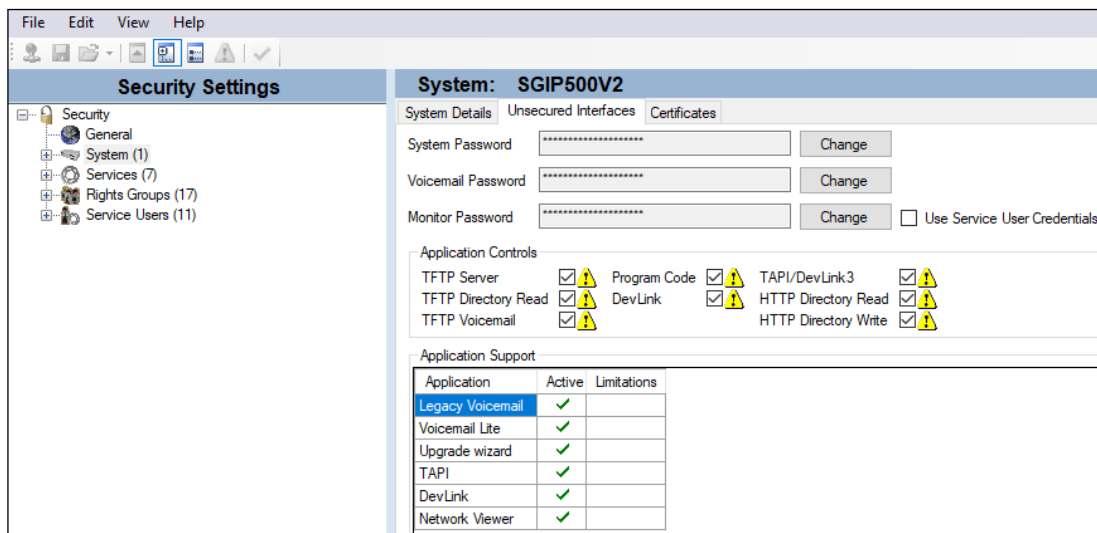


### 4.4. Verify Security Settings

In the Manager window, click **File** → **Advanced** → **Security Settings** (not shown) and select the IP Office system to login with the appropriate credentials.



On the Configuration Tree, go to **Security** → **System** and select **Unsecured Interfaces** tab on the right pane. Verify **TAPI/DevLink3** is ticked. Configure the appropriate **System Password** if desired for TAPI integration in **Section 6.1** by selecting the **Change** button below.



## 4.5. Administer Users

In the Manager window, go to the Configuration Tree and double-click **User** to open the list of users on the IP Office system (not shown). Right click in the User list window and select **New** (not shown). In the User window that appears, set **Name** to “ExtnX” where **X** is the number of the agent extension desired, (e.g., 301) and **Extension** to the agent extension number to be used. The remaining fields are default.

Extn301: 301	
User	Voicemail DND ShortCodes Source Numbers Telephony Forwarding Dial In Voice Recording
Name	Extn301
Password	•••••
Confirm Password	•••••
Unique Identity	
Audio Conference PIN	
Confirm Audio Conference PIN	
Account Status	Enabled
Full Name	Timothy
Extension	301
Email Address	
Locale	
Priority	5
System Phone Rights	None
Profile	Basic User
	<input type="checkbox"/> Receptionist <input type="checkbox"/> Enable Softphone

In the **Telephony** tab of the User window, uncheck **Call Waiting On** and click **OK** (not shown). Repeat the steps from beginning of this section for each Syntelate agent extension needed. For the purpose of this compliance testing, another agent extension 302 was created.

Extn301: 301	
User	Voicemail
DND	ShortCodes
Source Numbers	Telephony
Forwarding	Dial In
Voice Recording	Button Programming
Menu	
Call Settings	Supervisor Settings
Multi-line Options	Call Log
TUI	
Outside Call Sequence	Default Ring
Inside Call Sequence	Default Ring
Ringback Sequence	Default Ring
No Answer Time (secs)	11
Wrap-up Time (secs)	2
Transfer Return Time (secs)	Off
Call Cost Mark-Up	100
Advertise Callee State To Internal Callers	System Default (Off)
<input type="checkbox"/> Call Waiting On	
<input type="checkbox"/> Answer Call Waiting On Hold	
<input type="checkbox"/> Busy On Held	
<input checked="" type="checkbox"/> Offhook Station	

## 4.6. Administer Hunt Group

In the Manager window, go to the Configuration Tree and double-click **Group** to open the list of hunt groups on IP Office. Right click in the **Group** list window and select **New** (not shown). In the **Group** window tab, enter a desired **Name** and **Extension** available. Select a desired **Ring Mode** and leave the rest as default.

Rotary Group Standard: 388*	
Group	Queuing
Overflow	Fallback
Voicemail	Voice Recording
Announcements	SIP
Name	Standard
Extension	388
Ring Mode	Rotary
Hold Music Source	No Change
Ring Tone Override	None
Agent's Status on No-Answer Applies To	None
Profile	Standard Hunt Group
<input type="checkbox"/> Exclude From Directory	
No Answer Time (secs)	System Default (12)
User List	

Click on the **Queuing** tab, and check the **Queuing On**. Leave the rest as default.

Rotary Group Standard: 388	
Group	Queuing
Overflow	Fallback
Voicemail	Voice Recording
Announcements	SIP
<input checked="" type="checkbox"/> Queuing On	
Queue Length	No Limit
<input checked="" type="checkbox"/> Normalize Queue Length	
Queue Type	Assign Call On Agent Answer
Calls In Queue Alarm	
Calls In Queue Threshold	1
Analog Extension to Notify	<None>

Add the users created in **Section 5.5** to the User List by clicking on the **Edit** button (not shown). On the pop up screen, click on **Append** to add members to the hunt group which will be shown on the right panel.

Rotary | HuntGroup | 388 Standard - Select Members

Filters  
 Extn Name  Extn Number

Available Users ( 28/28 )		Members ( 2/2 )			
Name	Extn	Order	Enabled	Name	Extn
311	311	1	<input checked="" type="checkbox"/>	Extn301	301
312	312	2	<input checked="" type="checkbox"/>	Extn302	302
313	313				
315	315				
316	316				
317	317				
319	319				
Extn301	301				
Extn302	302				
Extn303	303				
Extn304	304				
Extn305	305				
Extn314	314				
Extn321	321				
Extn322	322				
Extn323	323				
Extn324	324				
Extn325	325				
Extn326	326				
Extn327	327				
Extn328	328				
Extn332	332				
Extn333	333				
Extn334	334				
Extn335	335				
Extn336	336				
Extn337	337				
Extn338	338				

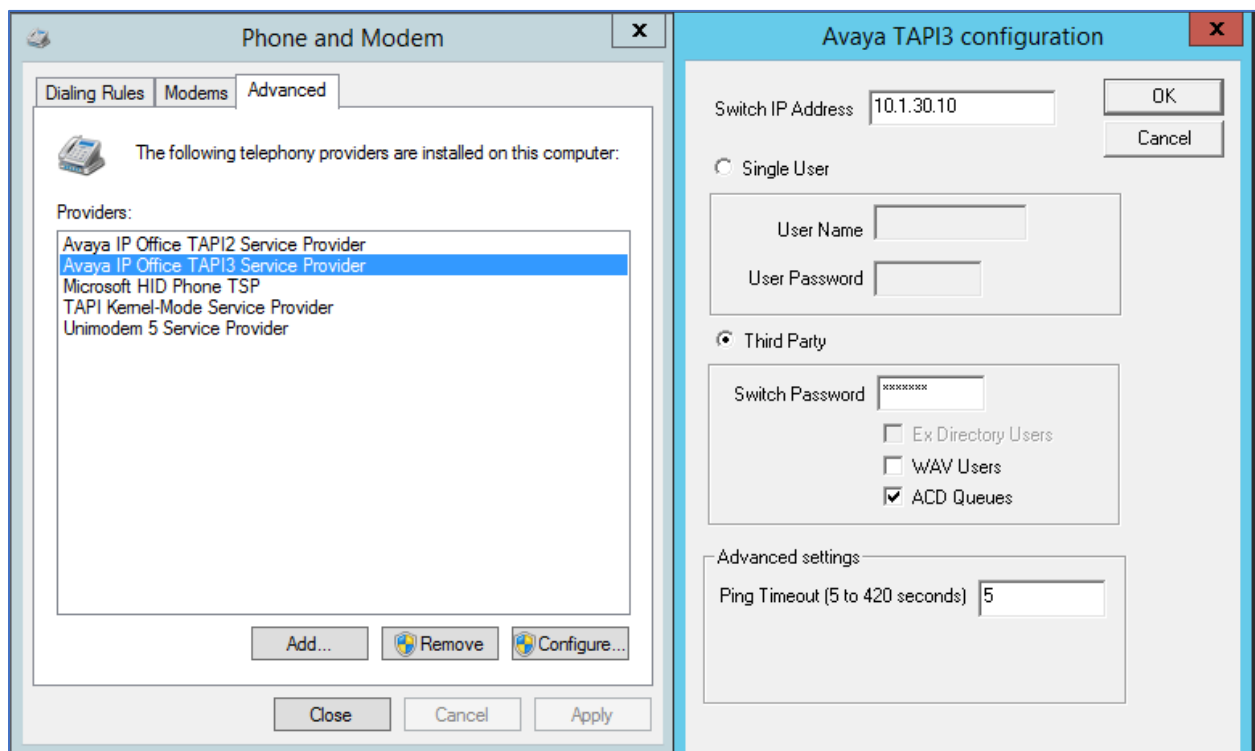
## 5. Configure Inisoft Syntelate XA

The configuration of the Syntelate XA server consists of installing and configuring IP Office TAPI3 and to configure the Workzone on the Syntelate XA server.

### 5.1. Installing and Configuring IP Office TAPI3 Service Provider

Avaya provides the IP Office TAPI and DevLink installers for DevConnect members. The latest drivers can be obtained from the DevConnect Program Portal at <http://www.devconnectprogram.com/> using a web browser and log in using a valid DevConnect member account. Then click **Downloads → IP Office™**. Select from the **Choose Interface → DevLink Pro (Third Party TAPI and Wave Drivers)**. Locate and download the latest drivers which is available from the User CD 4.2.88. Member implementation engineer will then deploy the files onto the Syntelate XA server.

On the Syntelate XA Windows server, go to Control Panel and click on **Phone and Modem** (not shown). Select the **Advanced** tab and double-click **Avaya IP Office TAPI3 Service Provider**. Enter the LAN IP Address from **Section 5.3**. Check **Third Party** and enter the System Password from **Section 5.4**. Check also **WAV Users** and **ACD Queues**.

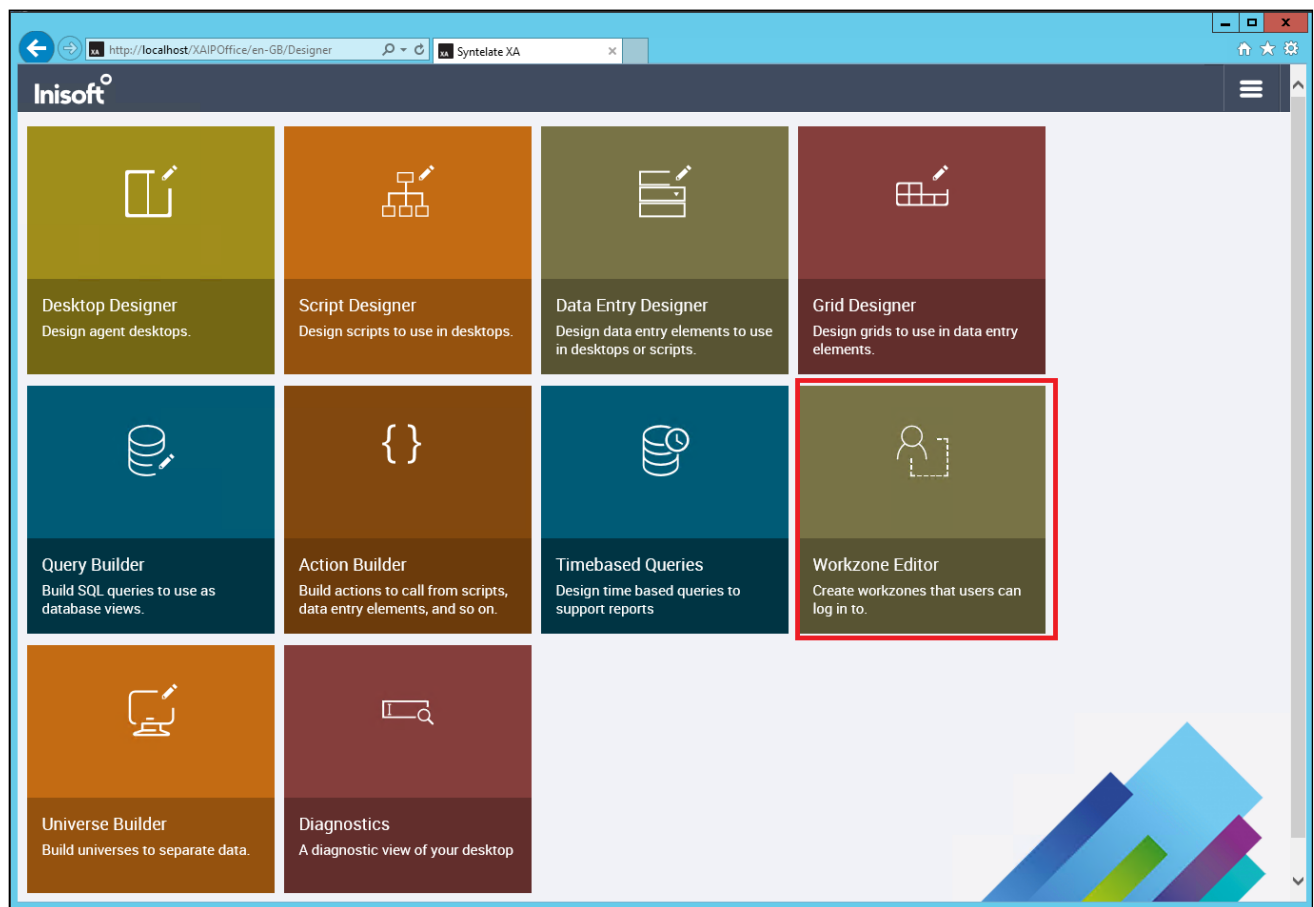


## 5.2. Configure Syntelate XA Server









Installation and configuration of the Syntelate XA server is done by member implementation engineer. The following briefly shows how the configuration is done.

Configuration of the Syntelate XA server is carried out by opening a web browser to the Syntelate XA server's IP address. Open a URL to **http://<SyntelateXAServerIP>/XAIPOffice/en-GB/Designer** (Note this will be different on each customer site).

From the main page, click on **Workzone Editor**.



The following Workzones are already configured. In this compliance testing, **Kapture** Workzone is created. Click on the edit icon on the appropriate Workzone to show the configuration details.

Inisoft						
Workzone Editor <span>BACK TO TILES</span> <span>NEW</span> Filter <input type="text" value="by name or universe"/> Universe <input type="text" value="Select Universe"/>						
Name	Universe	Amended by	Amended at	Locked by	Locked at	
Agents with Booking Access TEST	BMA	simoneh	2019-10-23 15:56			 
Kapture ACCS	BMA	fraserc	2019-10-14 11:01			 
Agent Control Centre	Supervisor	paulm	2019-09-19 13:12	paulam	2019-10-17 10:04	 
Kapture	BMA	paulam	2019-08-11 10:31			 

The information on the connection to IP Office is located in the CTI configuration (JSON) window as shown below. Scroll down through this window to see the relevant information. The following displays the CTI configuration “CtiSource” as **IP Office**.

CTI configuration (JSON)

```

{"CtiSource": "IPOffice",
"CtiApiUrl": "http://SYNTELATE/XATAPI/",
>LoginRequired": true,
"cancelPreviewCode": "~PrvCncl~"}

```

Optionally enter JSON to configure the selected CTI solution.

CRM configuration (JSON)

```


```

Optionally enter JSON to configure XA to work with a separate customer relationship management system.

CTI run options (JSON)

```

"ExtnLength": 3,
"ExtnLengthComparison": ">",
"ExternalPrefix": "",
},
"ConsultAsExternalOnly": true}

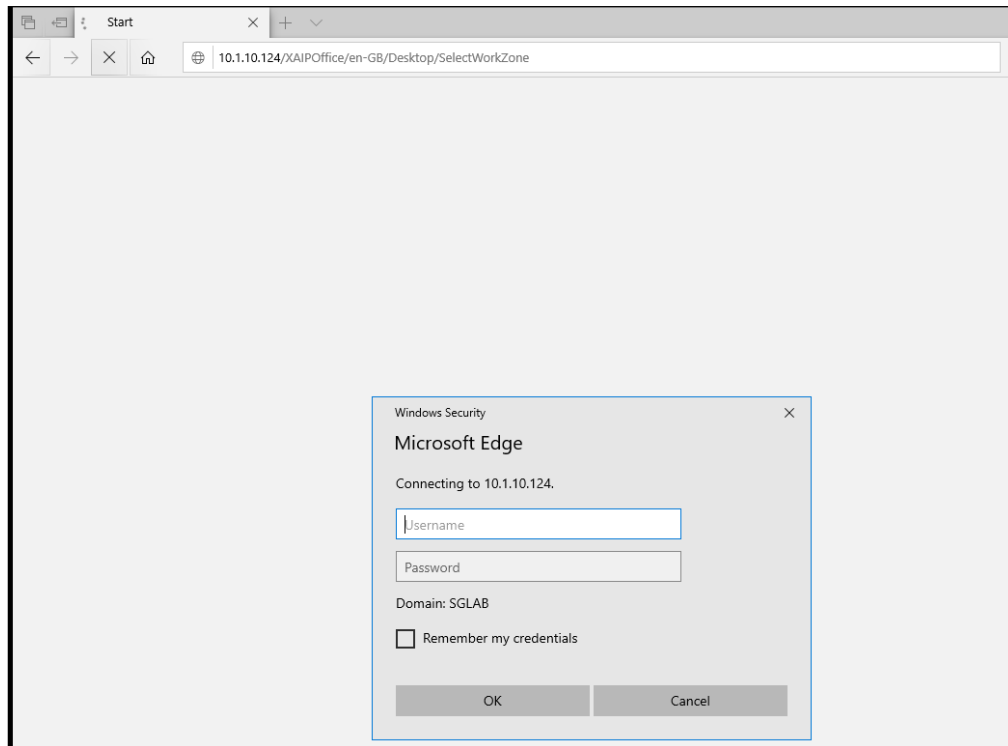
```

## 6. Verification Steps

The connection on the Syntelate XA side is verified by using the desktop to make and receive calls.

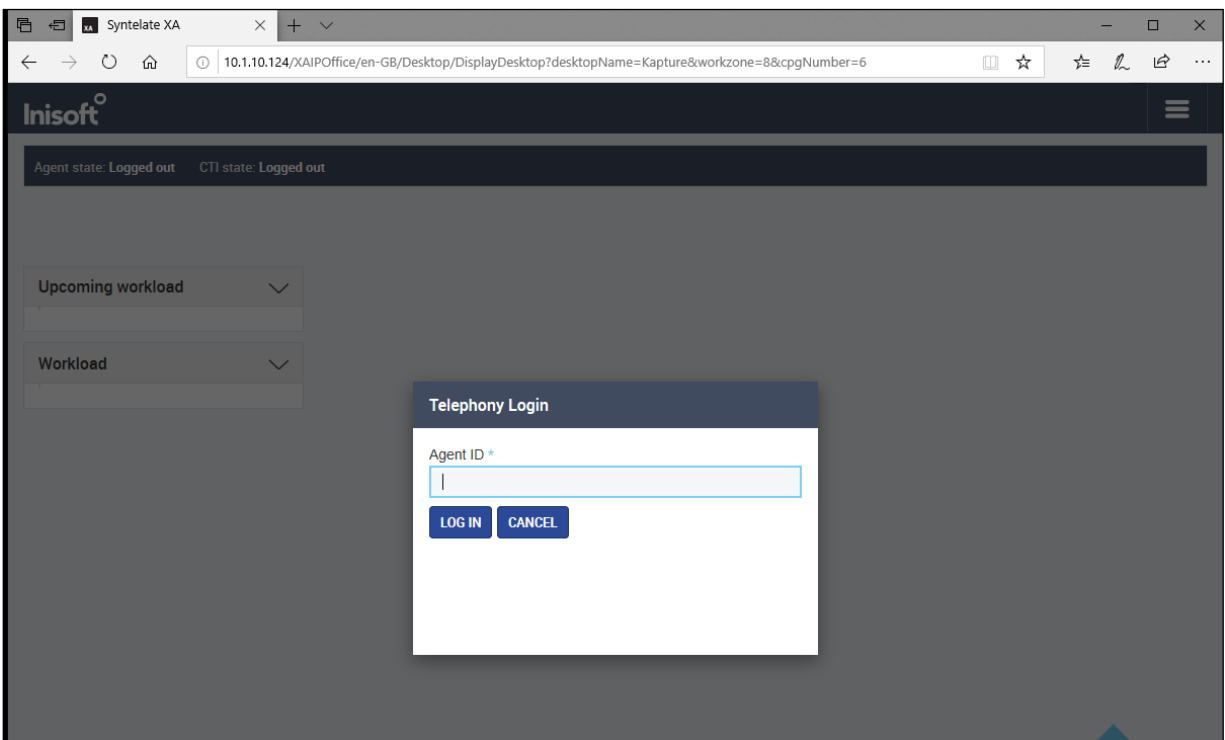
### 6.1. Verify the Connection from Syntelate XA Desktop

From the agent PC, open a URL to the Syntelate XA server IP address with the appropriate address. The example below is **http://<ServerIP>/XAIPOffice/en-GB/Desktop/SelectWorkzone/**. A new window should appear looking for the username and password of the user setup on the domain. Enter the appropriate *Username* and *Password* and click **OK**.

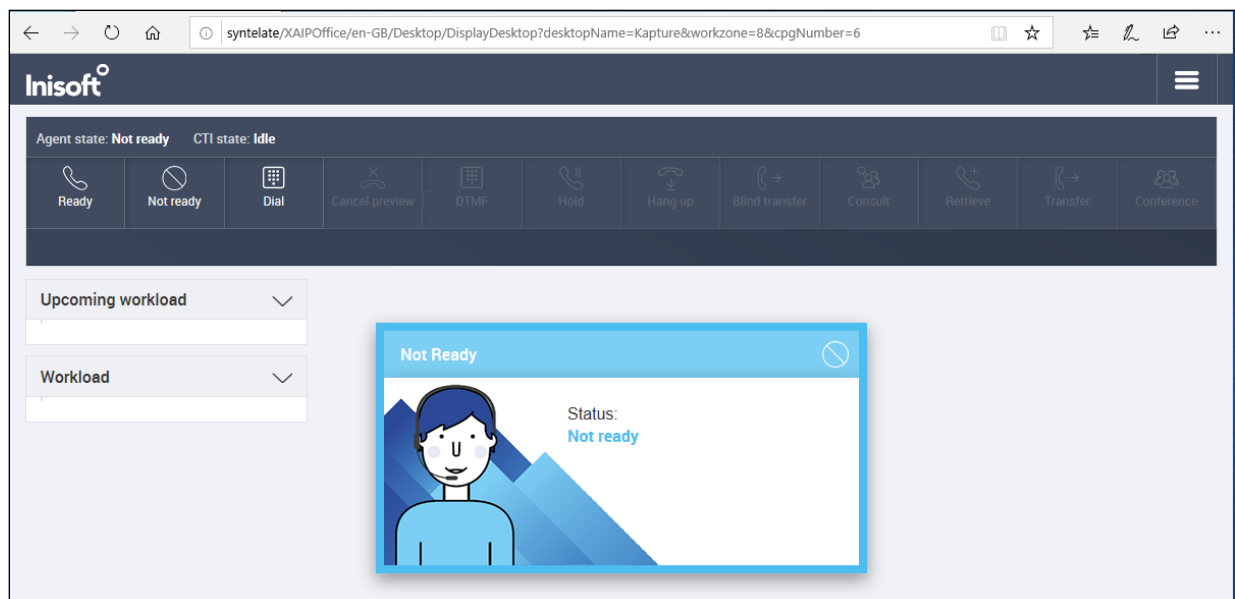




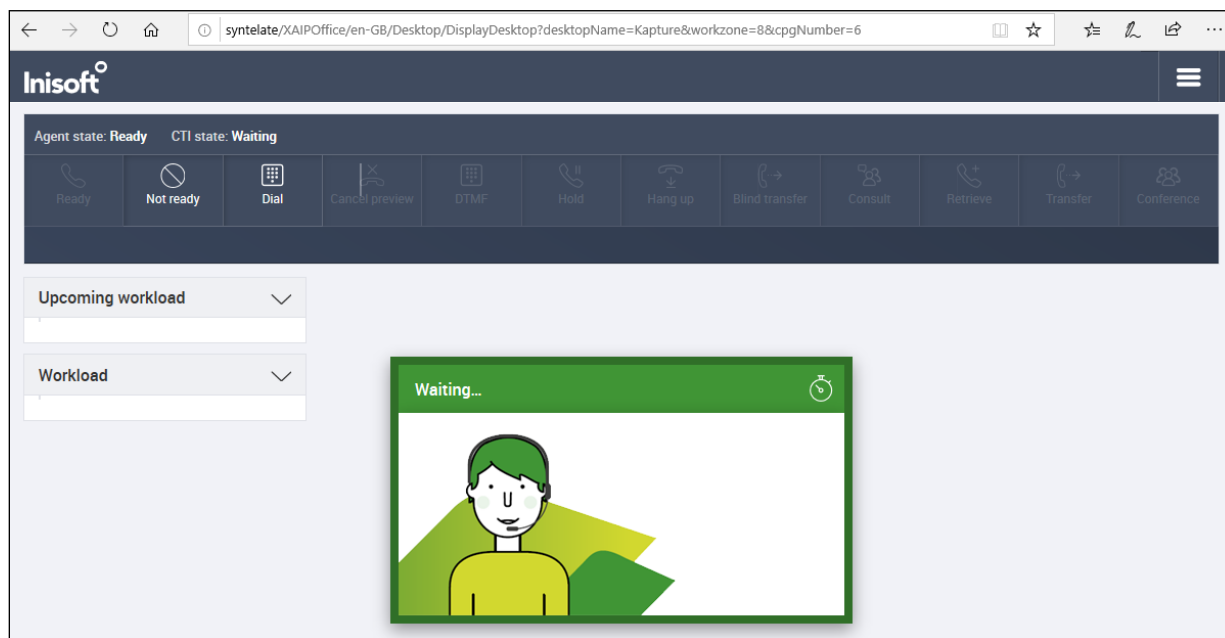
However, if windows authentication is enabled and using the URL earlier will decide which Workzone to connect base on the windows login. Enter the appropriate extension in IP Office for **Agent ID** as per **Section 5.6**. Click on **LOG IN** to continue.



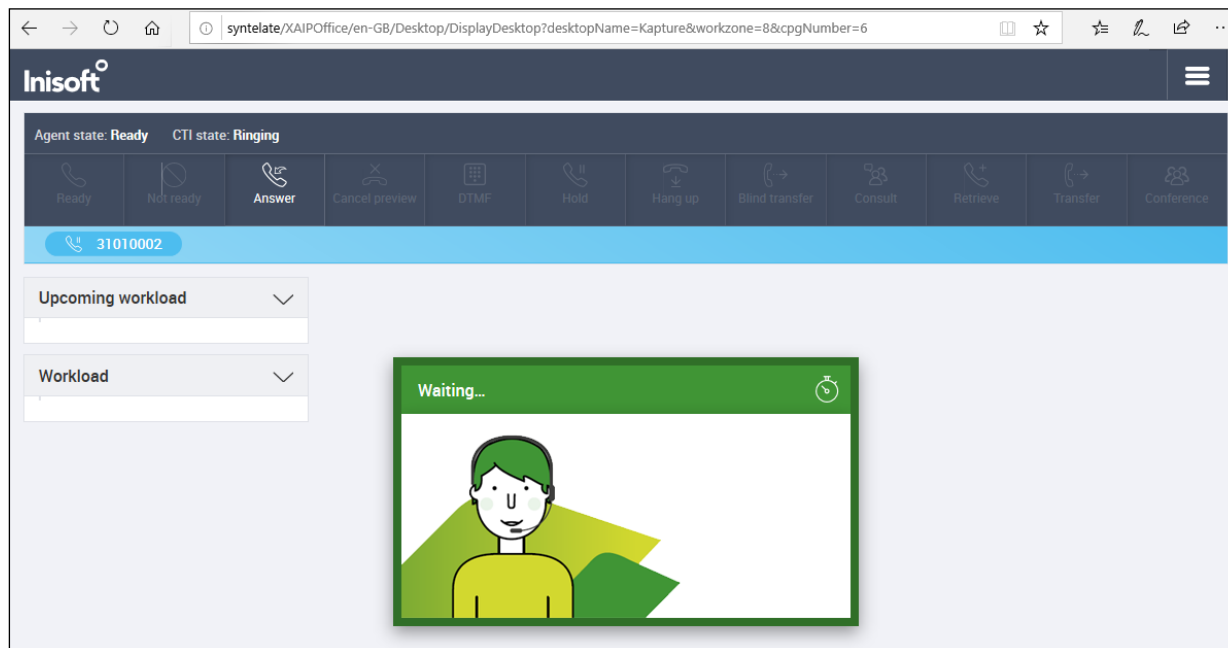
The initial screen shows the **Agent state** as being **Not ready** and the **CTI state** is **Idle**.



Pressing the **Ready** button on the screen above will place the agent **CTI state** in **Waiting** mode as shown below.



A call is then placed to the Hunt Group from simulated PSTN ISDN PRI and can be answered using the **Answer** button. The caller number is displayed on the left of the blue bar.



Once the call is answered, information on the caller is displayed and the call can be held, Blind Transferred or Consulted (for Supervised Transfer later if desired). Once the call is completed the **COMPLETE CALL** is pressed and the call is hung up.

The screenshot displays the Inisoft Syntelate desktop application interface. At the top, the browser address bar shows the URL: `syntelate/XAIPOffice/en-GB/Desktop/DisplayDesktop?desktopName=Kapture&workzone=8&cpqNumber=6`. The application header includes the Inisoft logo and a menu icon. Below the header, a status bar indicates "Agent state: Ready" and "CTI state: Talking". A row of icons represents various call actions: Ready, Not ready, Cancel preview, DTMF, Hold, Hang up, Blind transfer, Consult, Retrieve, Transfer, and Conference. A green bar at the top of the main workspace displays the caller's phone number: 31010002.

The main workspace is divided into several sections:

- Welcome:** A yellow speech bubble contains the text: "You are speaking with Agent2. How can I help you?". Below it is a large empty text area with a circular arrow icon.
- Upcoming workload:** A section with a dropdown arrow.
- Workload:** A section with a dropdown arrow, showing an "Inbound: 36934" entry.
- Call Information:** A section on the right with the following fields:
  - Callers Phone Number: 31010002
  - Phone Number called by Caller: 301
  - View: Kapture (dropdown)
  - Workload ID: 36934
  - NO ID Provided: (dropdown menu)
  - Select a reason no ID was provided: (text)
  - CLI: 31010002
  - Contact Name: (text field)
  - Address: (text field)
- Actions:** Two buttons are located on the right side: "COMPLETE CALL" and "AGENTS VOICEMAIL".

## 7. Conclusion

These Application Notes describe the configuration steps required to integrate Syntelate XA 2.0 with IP Office 11.0. All feature and serviceability test cases were completed successfully.

## 8. Additional References

This section references the product documentation that is relevant to these Application Notes.

Documentation for Avaya products may be obtained via <http://support.avaya.com>

- [1] *Administering Avaya IP Office™ Platform with Manager*, Release 11.0, February 2019.
- [2] *Deploying IP Office Essential Edition (IP500 V2)*, Document ID 15-601042 Issue 34b, 15<sup>th</sup> February 2019.
- [3] *IP Office TAPI Link Installation*, Document ID 15-601034 Issue 12a, 14<sup>th</sup> January 2013.

Documentation related to Syntelate may directly be obtained from inisoft.

- [4] *Syntelate XA – User Notes v13-3*
- [5] *Syntelate v4 User Document*, 2014

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