



Avaya Solution & Interoperability Test Lab

Application Notes for Komutel Kontakt with Avaya IP Office Server Edition - Issue 1.0

Abstract

These Application Notes describe the steps required to integrate Komutel Kontakt with Avaya IP Office Server Edition. Komutel Kontakt is a contact center solution for inbound call dispatch management tool for managing agents and distributing calls. In the compliance test, Komutel Kontakt successfully connected to IP Office via SIP trunk, distributed calls to available agents in the appropriate queue, and transferred calls to agent deskphone. In addition, Komutel Kontakt used TAPI link interface with IP Office to obtain information of monitored extensions on IP Office.

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 steps required to integrate Komutel Kontakt with Avaya IP Office Server Edition. Komutel Kontakt is a contact center solution for inbound call dispatch management tool for managing agents and distributing calls. In the compliance test, Komutel Kontakt successfully connected to IP Office via SIP trunk, distributed calls to available agents in the appropriate queue, and transferred calls to agent deskphone. Komutel Kontakt also used TAPI link interface with IP Office to obtain information of monitored extensions on IP Office.

The IP Office Server Edition configuration consisted of two IP Office systems, a primary Linux server at the Main site and an expansion IP500V2 at the Remote site that were connected via Small Community Network (SCN) trunks.

In compliance test, two Komutel Kontakt servers were installed. Each Komutel Kontakt server consists of two services: DAK service which receives and handles calls via SIP trunks and the BLF agent service that monitors agent status via TAPI. On the main Komutel Kontakt server there are 2 mandatory components that manage Komutel components centrally. The first is Kloud, which is a cloud-based management platform to provide portal to configure Kontakt servers from anywhere, and the second is the database. Kloud and database are also used to manage the second Kontakt server.

One Kontakt server connected to primary IP office system via SIP trunk and TAPI to act as call center for main site, and the other Kontakt server connected with expansion IP Office system via SIP trunk and TAPI to act as call center for remote site. Kontakt DN for main and remote sites, queues, phone profile and users for Kontakt are managed via Kloud Kontakt page. Below is detail of objects configured on Kontakt that interacted with IP Office.

In Kloud Kontakt, Phone System contains information for SIP connection to IP Office along with Kontakt DN. Kontakt DN can be any available number configured as short code on IP Office to route calls to specific Kontakt server via SIP trunk. In the compliance test, for the Kontakt server that connects to primary IP Office (Kontakt 1), two DN were added: 26210 and 26211. Optionally, a second SIP connection from Kontakt server (Kontakt 2) to expansion IP Office can be created (used in this compliance test). Kontakt 2 was for the remote site and has two DN 26220 and 26221 configured as short codes to direct calls over SIP trunk from expansion IP Office to Kontakt 2.

Note: There is another possible setup for this solution with only one SIP trunk from primary IP Office to Kontakt 1, TAPI connections between primary IP Office and Kontakt 1, and TAPI connection between expansion IP Office and Kontakt 2.

Since IP Office TAPI driver can only be installed on one instance of Windows and can only connect to one IP Office system so a second Kontakt server needs to be installed to get information of users on IP Office expansion. The BLF agent service monitors Kontakt user's extension status on IP Office via TAPI interface and update these status on Kontakt Agent tab such as alerting, held, connected, and idle.

Queue is assigned to Kontakt DN, queue is where to configure how to handle calls such as play pre-recorded announcements, hold music, overflow and used collected DTMF digits to determined destination. This destination can be any available extension on IP Office or existing Kontakt queue.

Phone profile is created to manage extension on IP Office that intent to assign to Kontakt user, this profile contains phone ID of BLF agent service installed on Kontakt – this ID is needed for Kontakt to identify extensions belong to the primary or expansion IP Office. Agent is configure as user on Kontakt, each user contains user name and phone profile and assigned to one or more existing queue in Kontakt.

Incoming calls from PSTN to Kontakt DN were routed to associated Kontakt at main site or at remote site (see detail of queued configured in compliance test in **Section 3**). Kontakt used the TAPI interface to determine agent's deskphone status on IP Office, if available then used SIP REFER to perform blind transfer of call to the agent user on IP Office. If there is no available agent in the queue, call is placed in the queue, Kontakt played pre-recorded announcements, hold music, and used collected DTMF digits to determine the route destination. If the agent's extension on IP office is not available, agent will see the call being placed in their queue on the Kontakt Agent's page in Queue tab and other agent which belong the same queue also see this call in the queue on their page, therefore any agent in that queue can pick up the phone by click on the call in queue and their extension on IP Office will ring or they can transfer the call to a destination on the PSTN by using the manual transfer button on the Agent's page.

2. General Test Approach and Test Results

The feature test cases were performed manually. Calls were placed manually from emulated PSTNs to Kontakt DN at main and remote sites, as well as cross-node PSTN scenarios.

The serviceability test cases were performed manually by disconnecting and reconnecting the Ethernet connection to the Kontakt servers.

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.

2.1. Interoperability Compliance Testing

Interoperability compliance testing covered the following features and functionality:

- Successful SIP trunk connection of Kontakt to IP Office primary and expansion systems. Note that the SIP trunk connection to the expansion IP Office system is optional.
- Cross-nodes incoming PSTN call is routed correctly to Kontakt, for example: an incoming PSTN call via PRI trunk on expansion is directed to Kontakt Agent who resides on primary and vice versa.
- Proper handling of non-distributed and distributed queue (distributed queue consist of multiple agents reside on different phone systems) calls routed from Kontakt to an available agent on primary as well as on expansion.
- Proper handling when agent hot desking with other agent's phone on the same or different phone system.
- Manual transfer of call in a queue by Kontakt to a specified extension on IP Office or on the PSTN.
- Tracking agent status such as ringing, on call, on hold.
- Playing music on hold by Kontakt.
- Playing announcement to queued calls periodically by Kontakt.
- Verify overflow to a number or queue for timeout, max calls in queues, timeout if no agent ready and ratio of calls on Ready agent by Kontakt.
- Tracking statistics such as abandoned calls and incoming/outgoing calls in the call log.
- Caller ID display on Kontakt.
- Proper system recovery after restart of the Kontakt server and loss of IP connectivity.
- Once LAN connection to expansion IP Office is disconnected, all H323 extension on it will register to primary. TAPI interface will be disrupted and therefore Kontakt will not be able to get status of these H323 extensions. Verified failed over agents with H323 extension still able to handle queue calls.

The feature testing call flows included calls from emulated PSTN (SIP PSTN trunk to primary and PRI PSTN trunk to expansion) to Kontakt of primary IP Office at the main site and to Kontakt of Expansion IP Office at the remote site, as well as calls with resources between the two IP Office systems such as cross-nodes PSTN call.

The serviceability testing focused on verifying the ability of Komutel to recover from adverse conditions, such as disconnecting/reconnecting the Ethernet connection to the Komutel server.

2.2. Test Results

All test cases passed with the following observations noted:

- During active call, if agent's PC is restarted, then Kontact will change agent's status to "Not Ready".
- After adding expansion on the main Kontact phone profile, the incoming call was not able to deliver to the agent's deskphone which belong to expansion. Reboot IP Office system and issue is solved. Incoming call is transfer to appropriated agent's deskphone. Need to investigate more when the issue happens again to understand more why IP Office stopped allowing REFER for calls sent from Kontact.
- After disconnect and re-connect LAN cable to Kontact server, it will take more than 5 minutes for IP Office to update the status of SIP trunk to Kontact from Out Of Service to Idle.

2.3. Support

For technical support on Kontact, contact Komutel Support via phone, email, or website.

- **Phone:** (877) 225-9988
- **Email:** service@komutel.com
- **Web:** <http://www.komutel.com/en/services/43/technical-support>

3. Reference Configuration

The IP Office Server Edition configuration used in the compliance testing consisted of a primary Linux server at the Main site, and an expansion IP500V2 at the Remote site, with SCN trunks connectivity between the two systems. Each IP Office system has connectivity to the emulated PSTN.

The detailed administration of IP Office resources is not the focus of these Application Notes and will not be described. Four DN were created for two Kontakt servers, upon incoming call to selected Kontakt DN, Kontakt will distribute the call to available agent's extension.

Kontakt DN	Main site DN: 26210	Main site DN: 26211	Remote site DN: 26220	Remote site DN: 26221
Queue name	Primary Queue	Primary Distributed Queue	Expansion Queue	Expansion Distributed Queue
Agent (with Extension reside on IP Office Primary)	Test1(26004) Test2(26006)	Test2(26006)		Test6(26008)
Agent (with Extension reside on Expansion)		Test3(26103)	Test3(26103) Test4(26104)	Test5(26108)

As shown in **Figure 1** below, two Kontakt servers were deployed with each TAPI connections to connect to primary IP Office and to IP Office Expansion. One SIP trunk connects to primary IP Office system and second SIP trunk on expansion to second Kontakt (this second SIP trunk is optional, used in compliance test to verify that SIP trunk can either connect to primary as well as expansion).

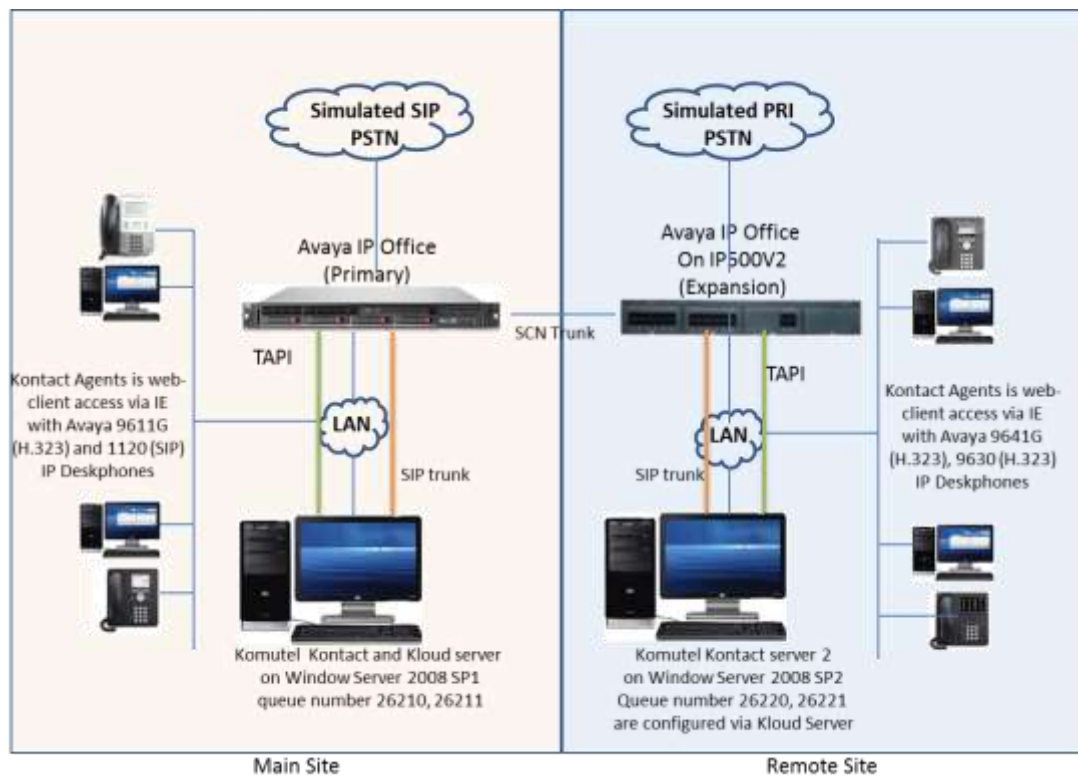


Figure 1: Compliance Testing Configuration

4. Equipment and Software Validated

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

Equipment/Software	Release/Version
Avaya IP Office Server Edition (Primary)	9.1 SP6
Avaya IP Office on IP500V2 (Expansion)	9.1 SP6
Avaya 1120E IP Deskphone (SIP)	4.4.26
Avaya 9641 Series IP Deskphones (H.323)	6.6.1.15
Avaya Digital Deskphone 1416	NA
Komutel Kloud Kontakt installed on Windows Server 2008 SP1 at Main site: <ul style="list-style-type: none">▪ Komutel Kontakt BLF Agent Service▪ Komutel Kontakt DAK Service	1.5.2.2 (25172) 2.2.2.23883 1.4.7.24982
Komutel Kontakt server installed on Windows Server 2008 SP1 at Remote site: <ul style="list-style-type: none">▪ Komutel Kontakt BLF Agent Service▪ Komutel Kontakt DAK Service	1.5.2.2 (25172) 2.2.2.23883 1.4.7.24982
Kontakt client is web base client access via Internet Explorer browser on agent's desktop Window 10	IE 11.0 Window 10 Pro 1511

Compliance Testing is applicable when the tested solution is deployed with a standalone IP Office 500 V2 and also when deployed with IP Office Server Edition in all configurations

5. Configure Avaya IP Office

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

- Administer SIP Trunk
- Administer ARS
- Administer Short Code

Note that the configuration presented in these Application Notes represents the sample used in the compliance test, and that the actual configuration can vary based on customer needs. For more information configuration, see reference [1].

5.1. Administer SIP Trunk

From a PC running the IP Office Manager application, select **Start → Programs → IP Office → Manager** to launch the application. Select the proper primary IP Office system, and log in using the appropriate credentials.

From the configuration tree in the left pane, select **Solution → DevCon IPO Sev1 → Line**, where **DevCon IPO Sev1** is the name of the primary IP Office system and select **New** from pop-up list to add a new SIP line to Kontact server, if not already defined and operational.

The screenshot below shows the SIP Line added for the primary IP Office system with the following parameter in **SIP Line** tab:

- **ITSP Domain Name:** Enter IP address of Kontact server, example: 10.10.98.26
- **Incoming Supervised REFER:** Select Always.
- **Outgoing Supervised REFER:** Select Always.

Retain default values for remaining fields.

The screenshot displays the 'SIP Line - Line 11*' configuration window. On the left is a 'Configuration' tree showing a hierarchy: Solution (40) > User (40) > Group (4) > Short Code (52) > Directory (0) > Time Profile (0) > Account Code (2) > User Rights (11) > Location (1) > DevCon IPO Sev1 > System (1) > Line (5). Line 11 is selected. The main window has tabs: SIP Line, Transport, SIP URI, VoIP, SIP Credentials, SIP Advanced, and Engineering. The 'SIP Line' tab is active, showing fields for Line Number (11), ITSP Domain Name (10.10.98.26), URI Type (SIP), Location (Cloud), Prefix, National Prefix (0), International Prefix (00), Country Code, Name Priority (System Default), and Description. On the right, there are checkboxes for 'In Service' and 'Check OOS', both checked. Below these are sections for 'Session Timers' (Refresh Method: Reinvite, Timer: On Demand), 'Forwarding and Twinning' (Originator number, Send Caller ID: None), and 'Redirect and Transfer' (Incoming Supervised REFER: Always, Outgoing Supervised REFER: Always).

In the Transport tab, **ITSP Proxy Address** must be set to Kontact IP Address, in this example it is 10.10.98.26.

Configuration

- BOOTP (11)
- Operator (3)
- Solution
 - User (40)
 - Group(4)
 - Short Code(52)
 - Directory(0)
 - Time Profile(0)
 - Account Code(2)
 - User Rights(11)
 - Location(1)
 - DevCon IPO Sev1
 - System (1)
 - Line (5)
 - 1
 - 2
 - 10
 - 11
 - 12

SIP Line - Line 11*

SIP Line | Transport | SIP URI | VoIP | SIP Credentials | SIP Advanced | Engineering

ITSP Proxy Address: 10.10.98.26

Network Configuration

Layer 4 Protocol: UDP | Send Port: 5060

Use Network Topology Info: None | Listen Port: 5060

Explicit DNS Server(s): 0 . 0 . 0 . 0 | 0 . 0 . 0 . 0

Calls Route via Registrar: ☒

Separate Registrar:

In the **SIP URI** tab, add a new entry with the following information:

- **Local URI:** Enter *.
- **Contact:** Enter *.
- **Display Name:** Enter *.
- **PAI:** Select None.
- **Incoming Group:** Enter an available incoming group number, for example: 11.
- **Outgoing Group:** Enter an available outgoing group number, for example: 11.

Retain default values for other fields. Click **OK** to add SIP URI entry.

SIP Line - Line 11*

SIP Line | Transport | SIP URI | VoIP | SIP Credentials | SIP Advanced | Engineering

Channel	Groups	Via	Local URI	Contact	Display Name	PAI	Cre
1	11 11	<None>	*	*	*	N...	0: <None>

Add...
Remove
Edit...

Edit Channel

Via: <None>

Local URI: *

Contact: *

Display Name: *

PAI: None

Registration: 0: <None>

Incoming Group: 11

Outgoing Group: 11

Max Calls per Channel: 10

OK
Cancel

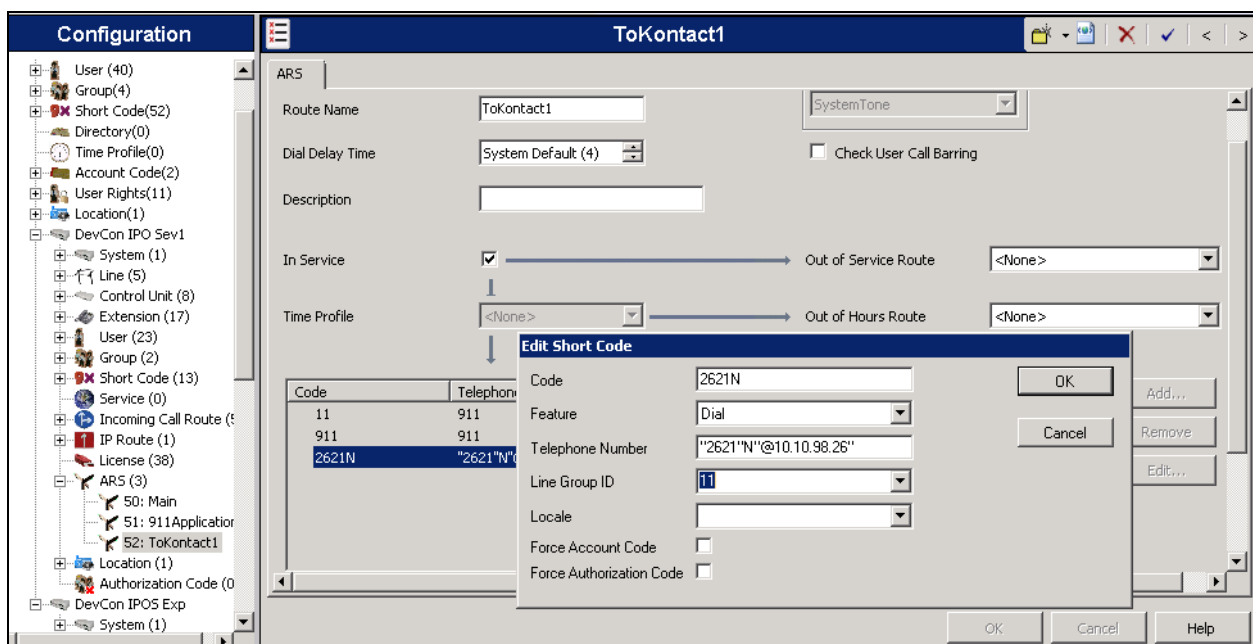
Repeat this section to add a SIP Line for the expansion IP Office system, in this case: **DevCon IPOS Exp** is the name of expansion and Line **19** is added to connect expansion to second Kontact server, in this case it is 10.10.98.25.

[illegible]

5.2. Administer ARS

From the configuration tree in the left pane, right-click on **Solution → DevCon IPO Sev1 → ARS**, where **DevCon IPO Sev1** is the name of the primary IP Office system, and select **New** from pop-up list to add a new ARS entry for routing calls to Kontact, if not already defined and routable.

The screenshot below shows the ARS entry added for the primary IP Office system, where **Line Group ID 11** is the line number from **Section 5.1** for connection to Kontact server 1, **Telephone Number** to dial must end with a @ followed by Kontact IP address. The phone number dialed will be used later to configure Kontact in **Section 6.1**, for example: 2621N is phone number routed to Kontact server 1.



Repeat this section to add an ARS entry for the expansion IP Office system. In the compliance testing, **Line Group ID 19** is the line number from **Section 5.1** for connection to Kontakt server 2, **Telephone Number** to dial must end with @ followed by second Kontakt IP address, for example: 2622N is phone number routed to Kontakt server 2.

Configuration

- Short Code(52)
- Directory(0)
- Time Profile(0)
- Account Code(2)
- User Rights(11)
- Location(1)
- DevCon IPO Sev1
- DevCon IPoS Exp
- System (1)
- Line (5)
- Control Unit (4)
- Extension (38)
- User (19)
- Group (2)
- Short Code (9)
- Service (0)
- RAS (1)
- Incoming Call Route (0)
- WAN Port (0)
- Firewall Profile (1)
- IP Route (1)

ToKontakt2

ARS

Route Name: ToKontakt2

Dial Delay Time: System Default (4)

Description:

In Service: ☒ Out of Service Route: <None>

Time Profile: <None> Out of Hours Route: <None>

Code	Telephone Number	Feature	Line Group ID
11	911	Dial Emergency	0
911	911	Dial Emergency	0
2622N	"2622"N"@135.10.98.25"	Dial	19

Buttons: Add..., Remove, Edit...

5.3. Administer Short Code

To configure a short code to dial to ARS, from the configuration tree in the left pane, right-click on **Solution → DevCon IPO Sev1 → Short Code**, where **DevCon IPO Sev1** is the name of the primary IP Office system, select **New** from pop-up list to add a new short code for routing call to Kontakt server 1. In the event that such short code already exists, then select the short code to make modifications. Enter the following values for the specified fields, and retain the default values for the remaining fields.

- **Code:** Digits that will be dialed to reach Kontakt server 1, in this case 2621X.
- **Feature:** Select Dial.
- **Telephone Number:** Applicable number for proper routing call to Kontakt, 2621N.
- **Line Group ID:** The applicable ARS entry from **Section 5.2**.

The screenshot shows the '2621X: Dial' configuration window. The left pane displays the configuration tree with 'Short Code (13)' expanded and '2621X' selected. The right pane contains the following fields and values:

Field	Value
Code	2621X
Feature	Dial
Telephone Number	2621N
Line Group ID	52: ToKontakt1
Locale	
Force Account Code	<input type="checkbox"/>
Force Authorization Code	<input type="checkbox"/>

Buttons at the bottom: OK, Cancel, Help.

Repeat this section to add or modify similar short code for routing calls to second Kontakt server as shown below:

The screenshot shows the '2622X: Dial' configuration window. The left pane displays the configuration tree with 'Short Code (9)' expanded and '2622X' selected. The right pane contains the following fields and values:

Field	Value
Code	2622X
Feature	Dial
Telephone Number	2622N
Line Group ID	52: ToKontakt2
Locale	
Force Account Code	<input type="checkbox"/>
Force Authorization Code	<input type="checkbox"/>

Buttons at the bottom: OK, Cancel, Help.

6. Configure Komutel Kontakt

This section provides the procedures for configuring Komutel Kontakt, all SIP configurations for Kontakt server 1 and 2 is configured via Kontakt server 1 Kcloud web page, except BLF agent service is configured separately on each Kontakt server. The procedures include the following areas:

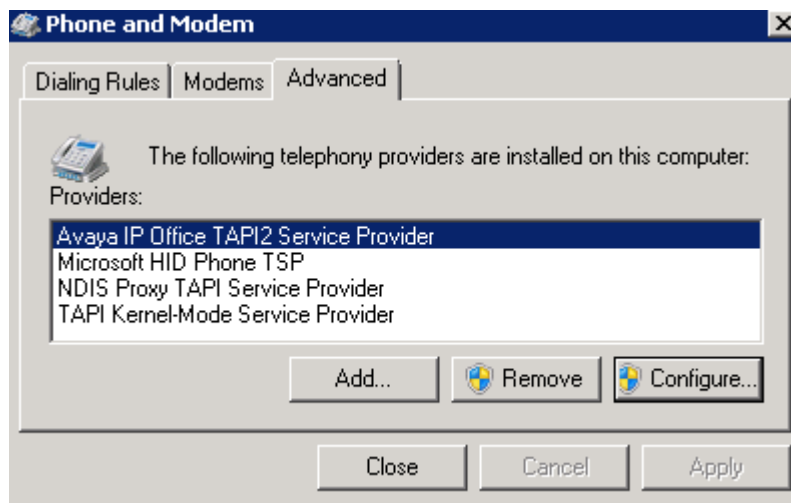
- Configure TAPI Service Provider
- Administer BLF Agent Configuration
- Administer Kontakt Phone System
- Configure Queues
- Configure Phone Profile for Agents
- Configure Agents

It is assumed that the Kontakt server, applications and database was successfully installed on the PC by Komutel Administrator.

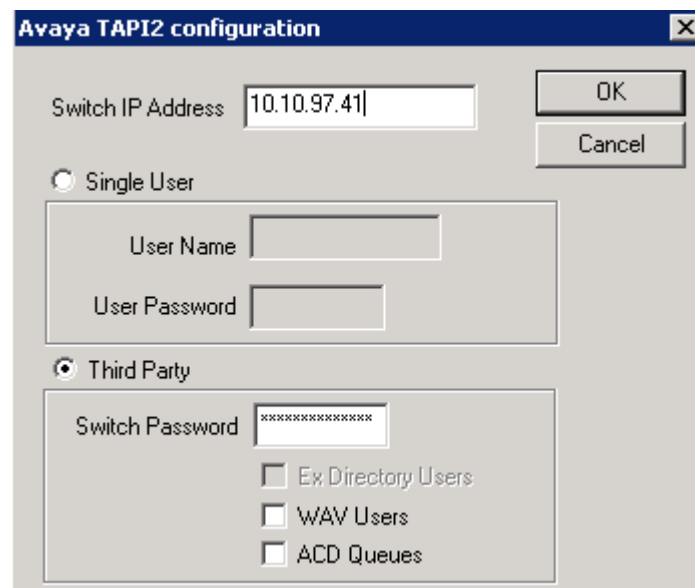
6.1. Configure TAPI Service Provider

This section will describes step to configure TAPI interface to IP Office on Kontact Server, this setup is required before the BLF Agent Configuration in **Section 6.2**.

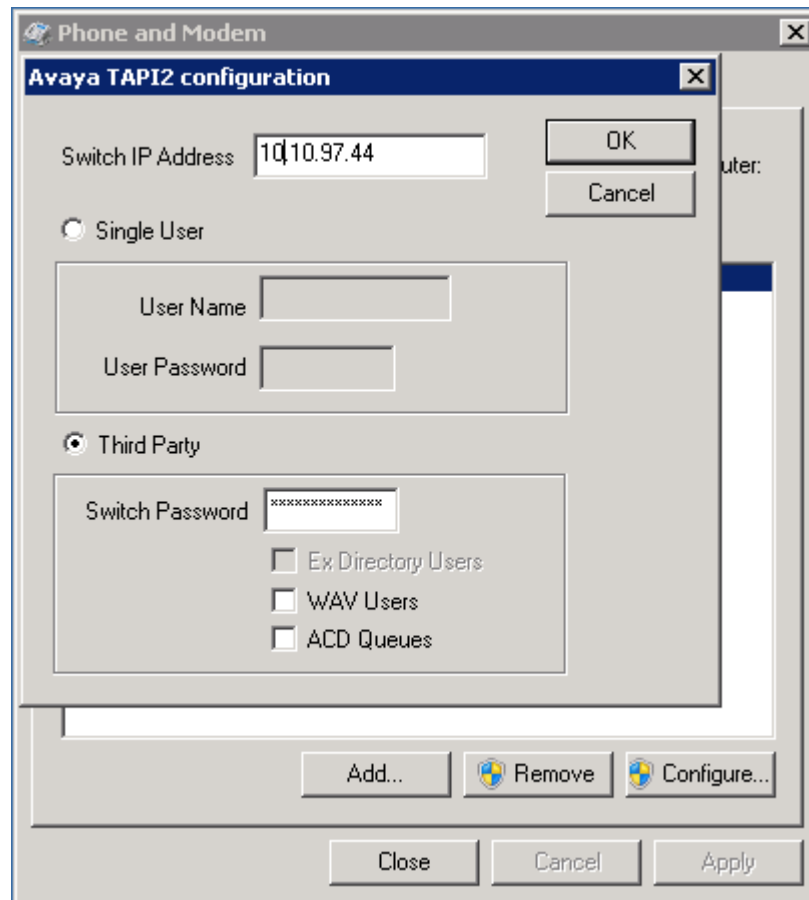
On Kontact server at the main site, select **Control Panel → Phone and Modem → Advance** tab, select **Avaya IP Office TAPI2 Service Provider** and click on **Configure** button.



In **Avaya TAPI2 configuration** window. Enter IP address of primary IP Office in **Switch IP Address**, in this case it is 10.10.97.41. Select **Third Party**, and enter appropriate password for **Switch Password**.

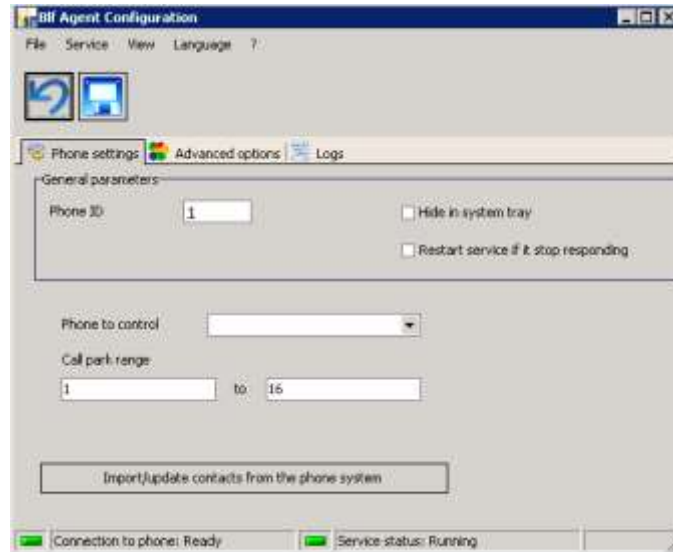


Repeat the same steps to configure TAPI driver on Kontakt server at the remote site as shown below:

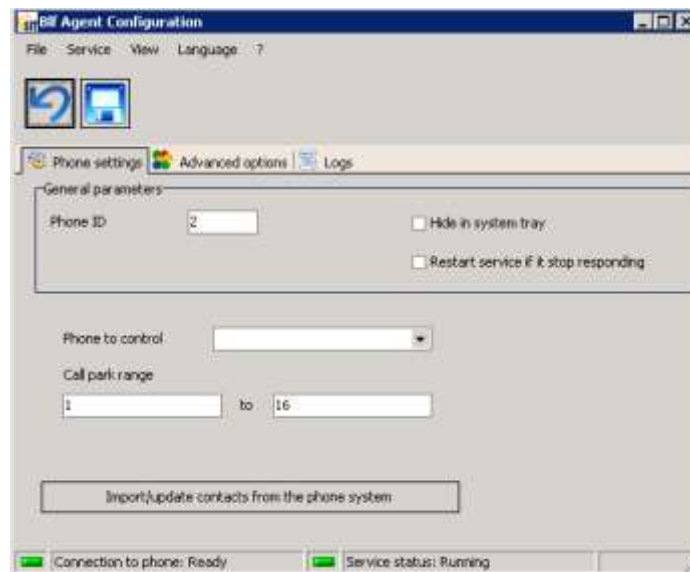


6.2. Administer BLF Agent Configuration

How to configure BLF Agent is not the focus of these Application Notes. The information displayed in this section is for reference in order to setup agent phone profile in **Section 6.5**. In **Blf Agent Configuration** screen on Kontakt server at main site, take note of **Phone ID**, in this case it is 1. Also verify **Connect to phone: Ready** and **Service status: Running**, at bottom of the window, these statuses indicate Kontakt successfully connect to primary IP Office and obtain extensions status reside on primary via TAPI interface.



Perform same step on second Kontakt server at remote site, take note of the **Phone ID**, in this case it is 2 and verify TAPI connection status is connected successfully.



6.3. Administer Kontakt Phone System

From a web browser access the page <http://KontaktServer1name:82>, and login in with the appropriate admin credentials. This will launch the Kloud admin web interface. Select the **Configuration** tab then click on the **Configurations** link (not shown). In the configuration page, select **Kontakt → Phone System** to verify the Kontakt server information as displayed in the screenshot:

Kontakt 1:

- **Phone system:** Select Avaya IP Office SIP Trunk.
- **Domain:** Enter IP Office primary IP address, 10.10.97.41.
- **DN configuration:** Enter desired DNs start with 2621X as configured in **Section 5.3**, ex: 26210, 26211.

Kontakt 2: Verify similar information of expansion IP Office system.

The screenshot displays the Kloud admin web interface with the 'Kontakt' tab selected. The 'Phone system' sub-tab is active, showing configuration details for two systems: Kontakt1 and Kontakt2.

Kontakt1 Configuration:

- Phone connection:**
 - Phone system: Avaya Ip Office SIP Trunk
 - Save statistics as: KOMUTEL
 - Username: Kontakt
 - Password:
 - Domain: 10.10.97.41
 - Transfer display type: Caller display
 - SIP port: 5060
- DN configuration:**

Can call	DN	Max number of calls
<input checked="" type="checkbox"/>	26210	10
<input checked="" type="checkbox"/>	26211	10

Kontakt2 Configuration:

- Phone connection:**
 - Phone system: Avaya Ip Office SIP Trunk
 - Save statistics as: KOMUTEL
 - Username: Kontakt
 - Password:
 - Domain: 10.10.97.44
 - Transfer display type: Caller display
 - SIP port: 5060
- DN configuration:**

Can call	DN	Max number of calls
<input checked="" type="checkbox"/>	26220	10
<input checked="" type="checkbox"/>	26221	10

System configuration:

- Dialing plan: Default

Buttons: Restart Kontakt service, Save

Click on the **Recorded announcements** and **Music on hold** tabs to manage different audio files for announcement and music on hold so that selected announcement or music can be played while a caller is in queue. This configuration is not shown in these Application Notes, it is assumed that list of announcement and audio are already in place. Detail of how audio file and announcement are assigned to each queue is described in **Section 6.4**.

Select **Kontakt** → **General** to manage general information for Kontakt, below is the setup used for the compliance test. These rules apply to both Kontakt servers.

Configurations - Kloud - Internet Explorer

http://2008pc1:82/Config

Home - Kloud Configurat...

Users General Komand Kontakt Schedule Management 911 Services Call recording Licenses

Queues General Phone system Recorded announcements Music on hold IVR Statistics Calls colors

Configurations

Default quick transfer number

Number of seconds to ring before changing agent status to Not Ready 25

Minimum number of seconds before marking call as Dropped 5

Max number of days to display dropped calls 2

Number of minute after resetting call park state from abandoned to empty 15

Number of seconds for agent to rest after answering a phone call 7

Join on attendant answer ☐

Send calling card URL ☐

Calling card URL

Save

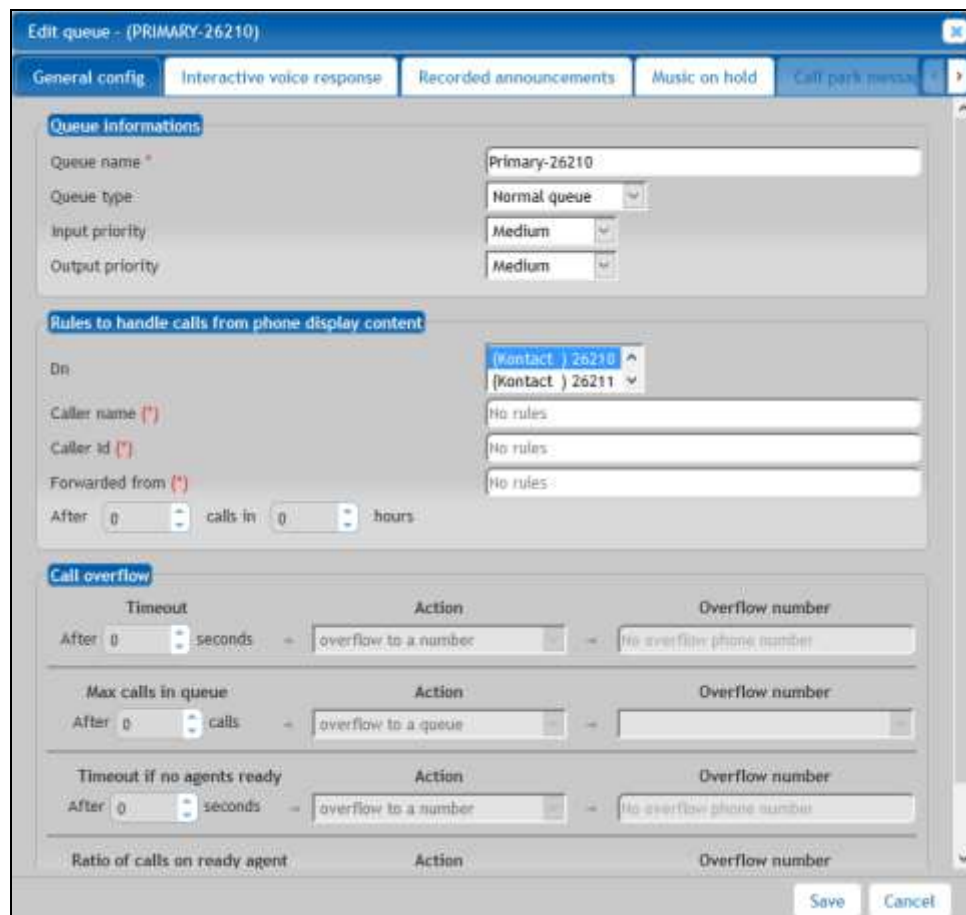
6.4. Configure Queues

Select **Kontakt** → **Queues** → **Call**. This tab shows the current list of call queues for Kontakt 1 and Kontakt 2. Queues for both Kontakt servers are managed on the same page, as shown below. Two queues were created and linked to Kontakt 1 DN and two queues created and linked to Kontakt 2 DN. Click on the “+” plus sign to add new queue.



Queue name	Input priority	Output priority	Caller Name	Caller Id	Forwarded from
Primary-26210	Medium	Medium			
PrimaryDistributed-26211	Medium	Medium			
General	Medium	Medium			
Expansion-26220	Medium	Medium			
ExpansionDistributed-26221	Medium	Medium			

Below is an example of primary queue which linked to Kontakt 1 DN 26210 configured in **Section 6.3**.



Edit queue - (PRIMARY-26210)

General config. | Interactive voice response | Recorded announcements | Music on hold | Call park message

Queue Informations

Queue name: Primary-26210

Queue type: Normal queue

Input priority: Medium

Output priority: Medium

Rules to handle calls from phone display content

DN: (Kontakt) 26210

Caller name: No rules

Caller id: No rules

Forwarded from: No rules

After 0 calls in 0 hours

Call overflow

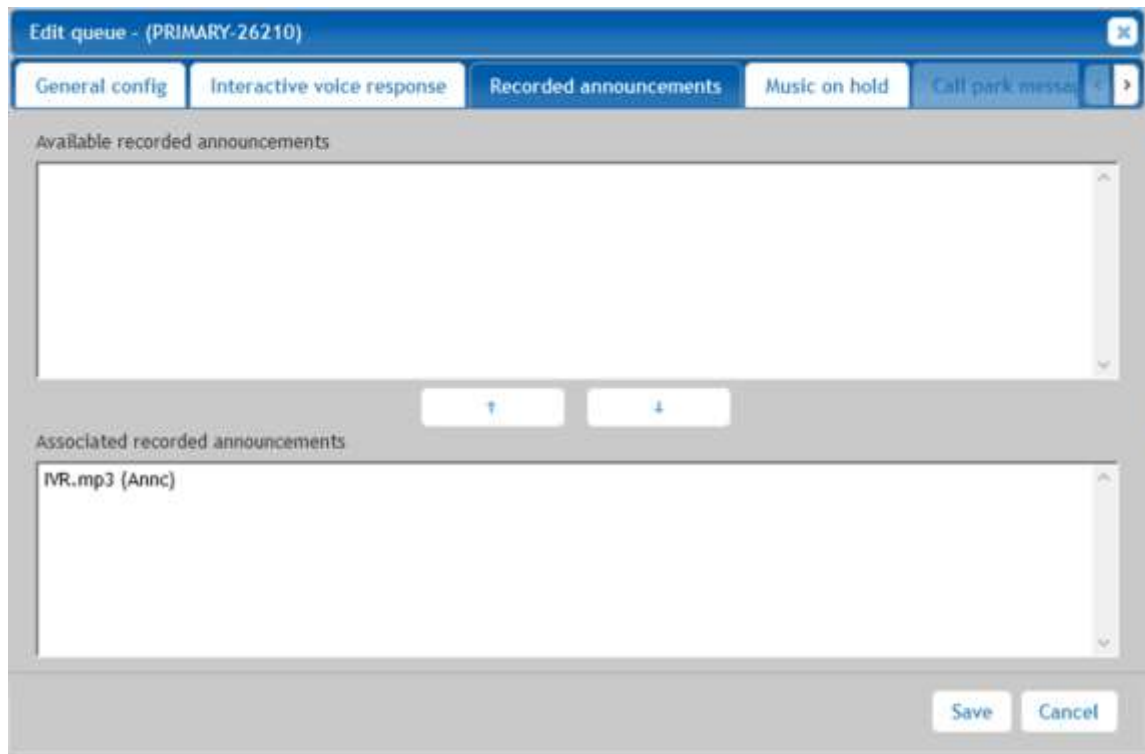
Timeout	Action	Overflow number
After 0 seconds	overflow to a number	No overflow phone number
Max calls in queue: After 0 calls	overflow to a queue	
Timeout if no agents ready: After 0 seconds	overflow to a number	No overflow phone number
Ratio of calls on ready agent		

Save Cancel

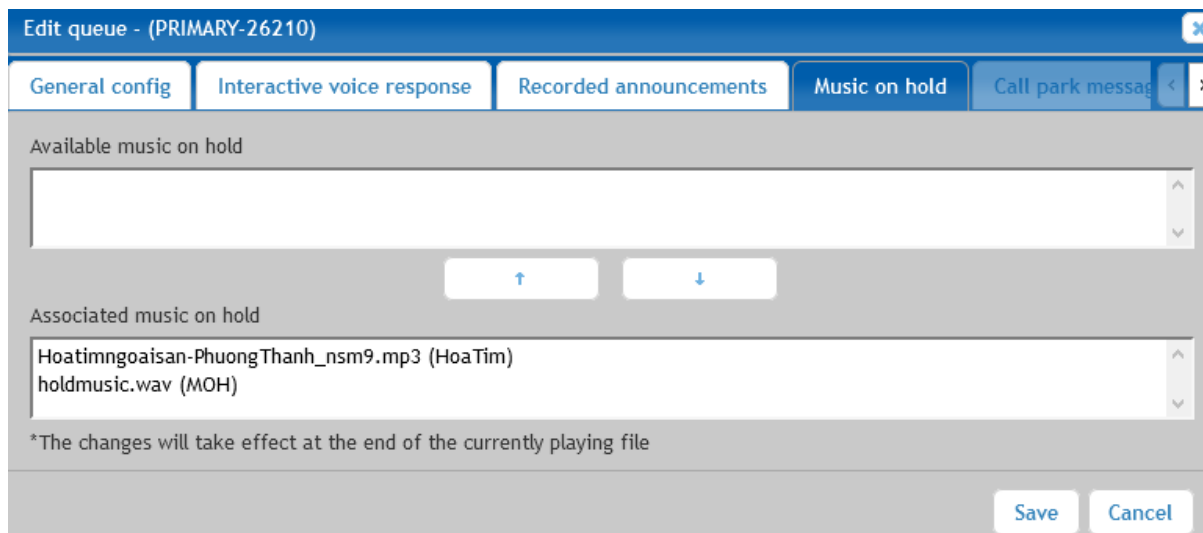
Click on **Interactive voice response** tab to manage how call is routed when incoming call user press selected key, below is an example used in compliance test:

Keys	Action type	Parameter
0	Transfer	26008
1	Change queue	PrimaryDistributed-26211
2	Transfer	26104
3	none	
4	none	
5	none	
6	none	
7	none	
8	none	
9	none	
#	none	
*	none	

Click on **Recorded announcements** tab to select recorded announcements in **Available recorded announcements** and click on (↓) icon to add it to **Associated recorded announcements**, as show below with recorded **IVR.mp3** selected for the Primary-26210 queue:



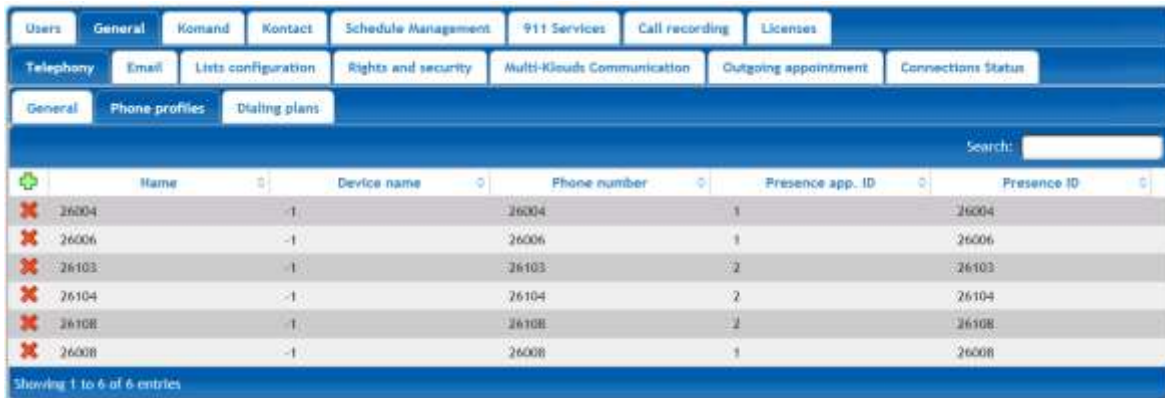
Click on **Music on hold** tab to manage music on hold:



Click **Save** to save changes.

6.5. Configure Phone Profile for Agents

Select **General** → **Telephony** → **Phone profiles**. This tab shows the current list of phone profile for Kontakt 1 and Kontakt 2.



	Name	Device name	Phone number	Presence app. ID	Presence ID
+	26004	-1	26004	1	26004
+	26006	-1	26006	1	26006
+	26103	-1	26103	2	26103
+	26104	-1	26104	2	26104
+	26108	-1	26108	2	26108
+	26008	-1	26008	1	26008

Showing 1 to 6 of 6 entries

Click on the “+” plus sign to add new phone profile with following information.

- **Name:** Enter any descriptive name.
- **Phone number:** Extension of agent’s physical phone on IP Office.
- **Presence app.ID:** Enter appropriate Phone ID listed in **Section 6.1**
- **Presence ID:** Enter associated agent phone DN to be monitored by BLF Agent.



Edit Phone Profile

Name * 26004

Device name

Dialing plan Default

Phone number * 26004

Presence app. ID 1

Presence ID * 26004

Third line display None

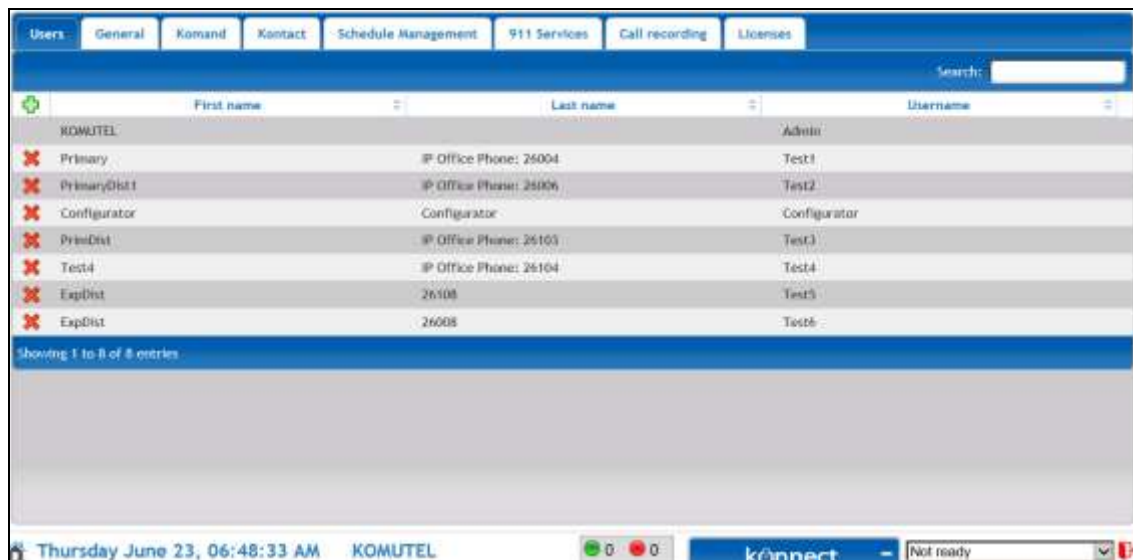
Phone lines

Line	Label	Can make call

6.6. Configure Agents

Next, configure agent and its extension that will be monitored by Kontakt. Repeat these steps for each agent and extension to be monitored.

In the **Configurations** page (not shown), select **User** tab. It shows the current list of agents in the system.



The screenshot shows the 'Users' configuration page with tabs for General, Komand, Kontakt, Schedule Management, 911 Services, Call recording, and Licenses. The 'Kontakt' tab is selected. A table lists agents with columns for First name, Last name, and Username. The table contains 8 entries, including 'KOMUTEL' and several test agents. A search bar is at the top right. The status bar at the bottom shows the date and time, and the 'konnnect' logo.

	First name	Last name	Username
+	KOMUTEL		Admin
✗	Primary	IP Office Phone: 26004	Test1
✗	PrimaryDist1	IP Office Phone: 26006	Test2
✗	Configurator	Configurator	Configurator
✗	PrimeDist	IP Office Phone: 26103	Test3
✗	Test4	IP Office Phone: 26104	Test4
✗	ExpDist	26108	Test5
✗	ExpDist	26008	Test6

Showing 1 to 8 of 8 entries

Click on the “+” plus sign to add new agent. The following screen shows the **User information** fields populated for an agent previously configured.



The screenshot shows the 'Edit user - (Primary IP Office Phone: 26004)' dialog box. It has tabs for Details, Permissions, Kontakt, Phone profiles, Skill sets, and Other. The 'Details' tab is selected. The 'User information' section contains fields for Password security level, First name, Last name, Department, Title, Email, Language, Username, New password, New password confirmation, Allowed simultaneous connections, and Default application. The fields are populated with values for the 'Primary' agent.

Field	Value
Password security level	[Dropdown]
First name *	Primary
Last name *	IP Office Phone: 26004
Department	Sale
Title	Director
Email *	pmacneil@avaya.com
Language	English
Username	Test1
New password	[Empty]
New password confirmation	[Empty]
Allowed simultaneous connections	1
Default application	Kontakt

Force user to reset his password

Save Cancel

Select the **Phone profiles** tab to add phone number for this agent:

- **Associated phone profiles:** Select phone profile and click (→) to add extension to.
- **Phone profile selection:** From the dropdown list, select profile.

The screenshot shows a web-based interface for editing a user's phone settings. The window title is "Edit user - (Primary IP Office Phone: 26004)". There are five tabs: "Details", "Permissions", "Kontakt", "Phone profiles" (which is selected), and "Skill sets".

Under the "Phone profiles" tab, there are three main sections:

- Phone profiles association:** This section contains two lists. The "Available phone profiles" list on the left includes: 26006 (26006), 26008 (26008), 26103 (26103), 26104 (26104), and 26108 (26108). The "Associated phone profiles" list on the right contains: 26004 (26004). Between the lists are two buttons: a right-pointing arrow (→) and a double-headed arrow (↔).
- Phone system:** This section has a label "Phone profile selection" and a dropdown menu currently showing "26004 (26004)".
- Phone numbers:** This section contains a table with four columns: "phone", "extension", "note", and "default".

The "Phone numbers" table has three rows:

	phone	extension	note	default
Work *	26004			<input checked="" type="radio"/>
Phone2				<input type="radio"/>
Phone3				<input type="radio"/>

At the bottom right of the window are "Save" and "Cancel" buttons.

7. Verification Steps

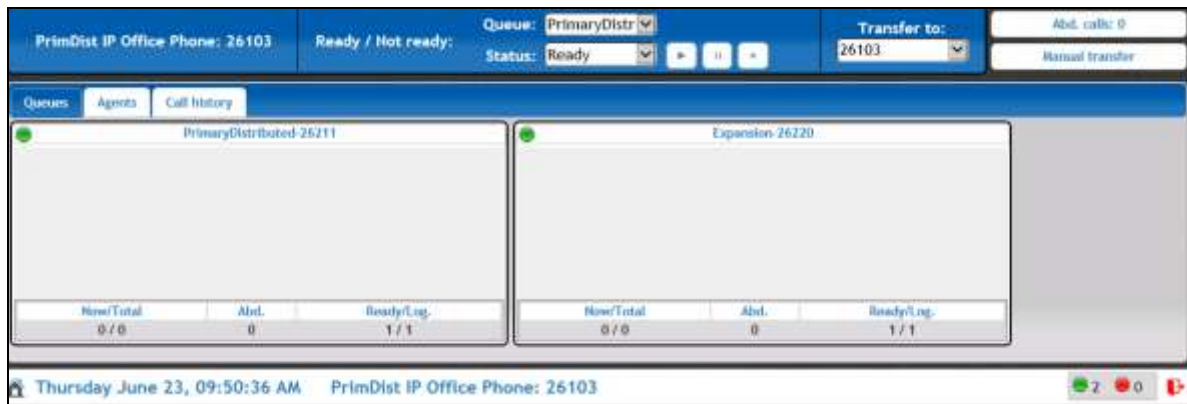
This section provides the tests that can be performed to verify proper configuration of the Komutel Kontakt with Avaya IP Office Server Edition.

Verify status of SIP trunk from IP Office to Kontakt server is in service. In **System Status** screen, click on **Trunks** and **Line** which was configured for connection to Kontakt, in this case it is **Line:19**, verify **Line Service State** is **In Service** as shown below.

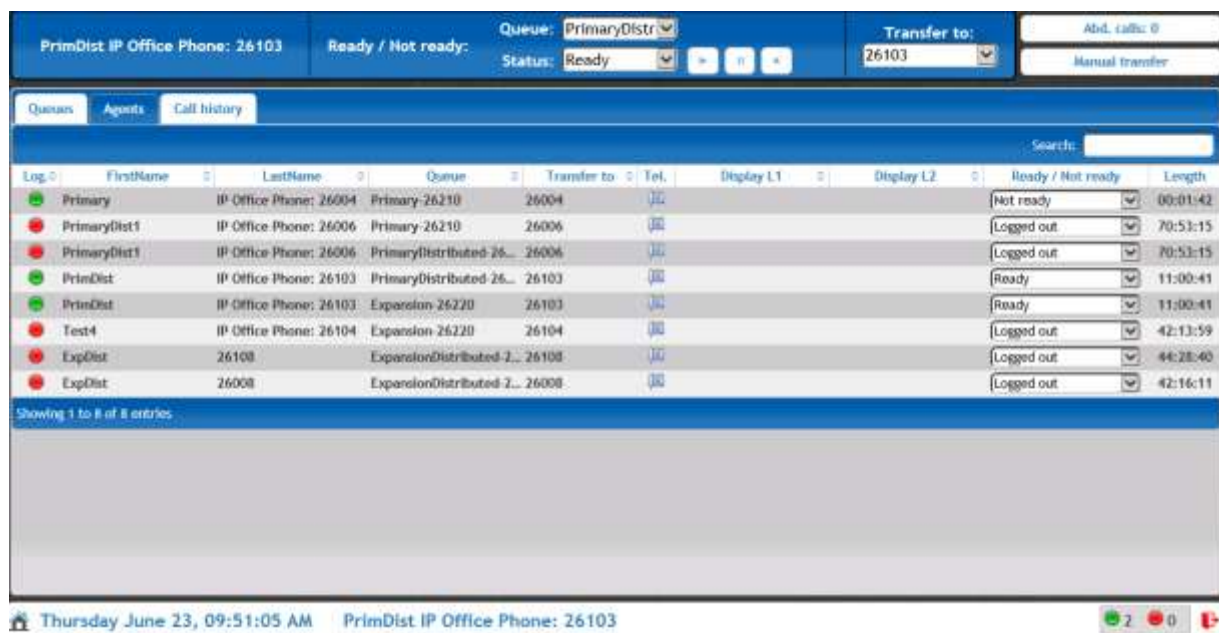
The screenshot shows the Avaya IP Office System Status window. The left sidebar contains a tree view with the following items: System, Alarms (17), Extensions (28), Trunks (5), Line:1, Line:2, Line:17, Line:18, Line:19 (selected), Active Calls, Resources, Voicemail, IP Networking, and Locations. The main window has three tabs: Status, Utilization Summary, and Alarms. The Status tab is active, displaying the SIP Trunk Summary for Line 19. The summary shows the Line Service State as 'In Service', Peer Domain Name as '10.98.25', Resolved Address as '10.98.25', Line Number as '19', Number of Administered Channels as '10', Number of Channels in Use as '0', Administered Compression as 'G711 Mu, G722', Enable Faststart as 'Off', Silence Suppression as 'Off', Media Stream as 'RTP', Layer 4 Protocol as 'UDP', SIP Trunk Channel Licenses as '254', SIP Trunk Channel Licenses in Use as '0' (represented by a green circle and '0%'), and SIP Device Features as 'REFER (Incoming and Outgoing)'. Below the summary is a table with 11 columns: Channel Number, URI Gr..., Call Ref, Current State, Time in State, Remote Media Address, Codec, Connection Type, Caller ID or Dialed Digits, Other Party on Call, and Direction of Call. The table contains 9 rows of data, all showing 'Idle' current state and '20:03:10' time in state. At the bottom of the window are several buttons: Trace, Trace All, Pause, Ping, Call Details, Graceful Shutdown, Force Out of Service, Print..., and Save As...

Channel Number	URI Gr...	Call Ref	Current State	Time in State	Remote Media Address	Codec	Connection Type	Caller ID or Dialed Digits	Other Party on Call	Direction of Call
1			Idle	20:03:10						
2			Idle	20:03:10						
3			Idle	20:03:10						
4			Idle	20:03:10						
5			Idle	20:03:10						
6			Idle	20:03:10						
7			Idle	20:03:10						
8			Idle	20:03:10						
9			Idle	20:03:10						

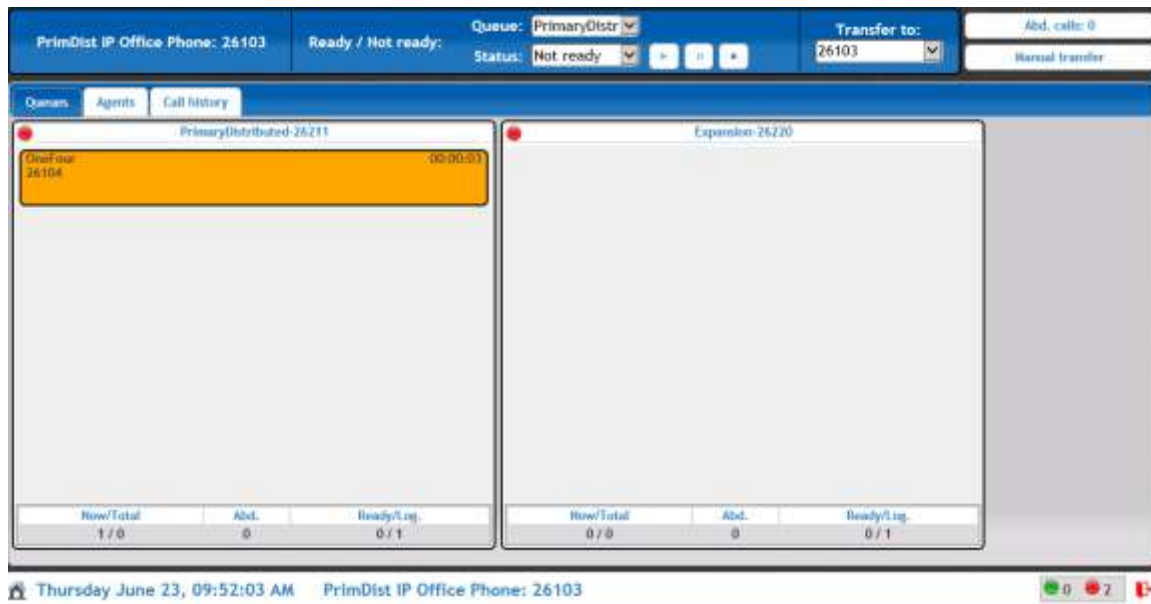
Log an agent into Komutel Kloud from a web browser by access the page <http://KontaktServer1name:82>, and agent username and password configured in **Section 6.6**, select the **Kontakt** link (not shown). In the **Queues** tab, all queues will be displayed for the logged in agent. In the screen shown below, agent is ready, and all of the queues are in the **Ready** state as indicated by the green circle by the queue name.



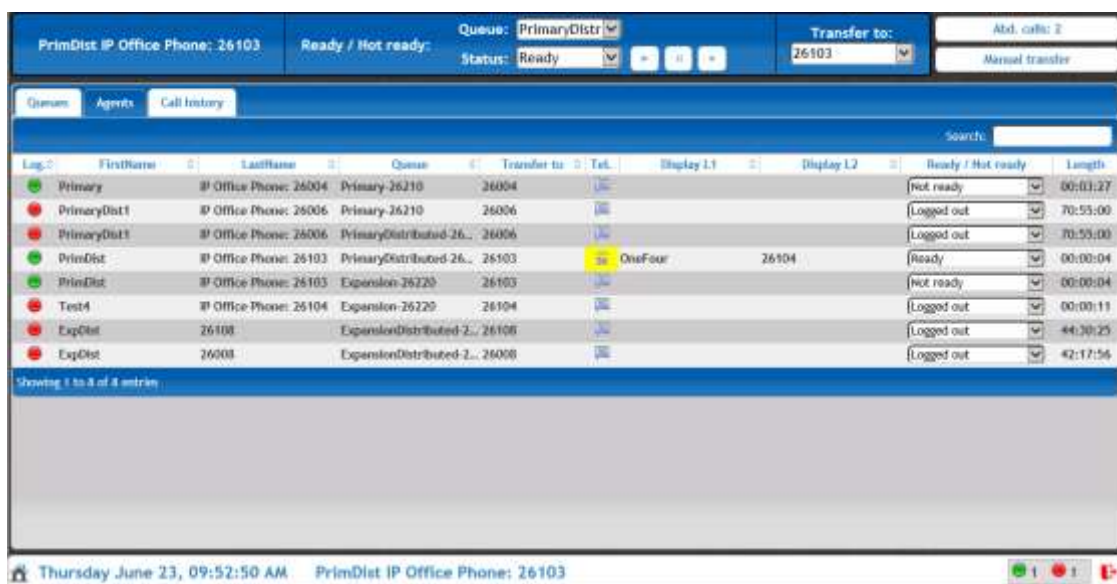
Click on the **Agents** tab, all of the configured agents are displayed as shown below. In order for an agent to become available to handle an incoming call, the agent's state must be set to **Ready**. In this example, agent PrimaryDist1 is logged in with the green light indicator at the first column and it is "Ready" for 2 queues PrimaryDistributed-26211 and Expansion-26220.



Place a call to a queue that has no available agents and verify that the call is successfully queued as shown below in the **Queues** tab. In this example, a call is queued for the PrimaryDistributed queue and the caller ID is also displayed. The queued call can also be manual transferred to another internal or external number by entering number in the **Transfer to** field and clicking on the queued call in orange.



Make agent ready for PrimDistribute-26211 queue by selecting **Ready** in **Status** dropdown list. Place a call to queue 26211 and verify that agent's phone, 26103, is ringing and phone icon turns yellow as shown below in the **Agents** tab.



8. Conclusion

These Application Notes have described the administration steps required to integrate the Komutel Kontakt with Avaya IP Office Server Edition. Kontakt was able to distribute incoming call to available agent's extensions on IP Office Server Edition. All test cases passed with observations noted in **Section 2.2**.

9. References

This section references the Avaya documentation relevant to these Application Notes. The following Avaya product documentation is available at <http://support.avaya.com> and Komutel documents are available upon request.

[1] *Administering Avaya IP Office™ Platform with Manager* Release 9.1.2 Issue 10.38 February 2016.

[2] *Kontakt - Quick Reference Guide (2015-04-07).pdf*

[3] *Kontakt - User Guide (2016-01-14).pdf*

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