



Avaya Solution & Interoperability Test Lab

Application Notes for Presence CRM Optimizer V5.4 with Avaya Communication Manager 2.1 and Avaya Computer Telephony V1.3 – Issue 1.0

Abstract

These Application Notes describe the configuration steps required in order for Presence CRM Optimizer to successfully interoperate with Avaya Communication Manager 2.1.

Presence CRM is a multi-channel contact management able to generate phantom calls for non-voice contacts and provide routing for external calls.

An Avaya S8700 Media Server with an Avaya G600 Media Gateway running Communication Manager 2.1 was used as the hosting PBX. Features and functionality were validated and performance testing was conducted in order to verify operation under light load.

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

1. Introduction

These Application Notes describe the compliance-tested configuration using a Presence CRM Optimizer server and Avaya Communication Manager. They address the Computer Telephony Interface (CTI) capability of Communication Manager.

Presence CRM Optimizer is a multi-channel contact management suite able to handle voice, text chat, e-mail and web contact mechanisms. The Avaya Computer Telephony TSAPI interface is used to both monitor and control agent stations, generate phantom calls for non-voice contacts, and handle routing of external calls.

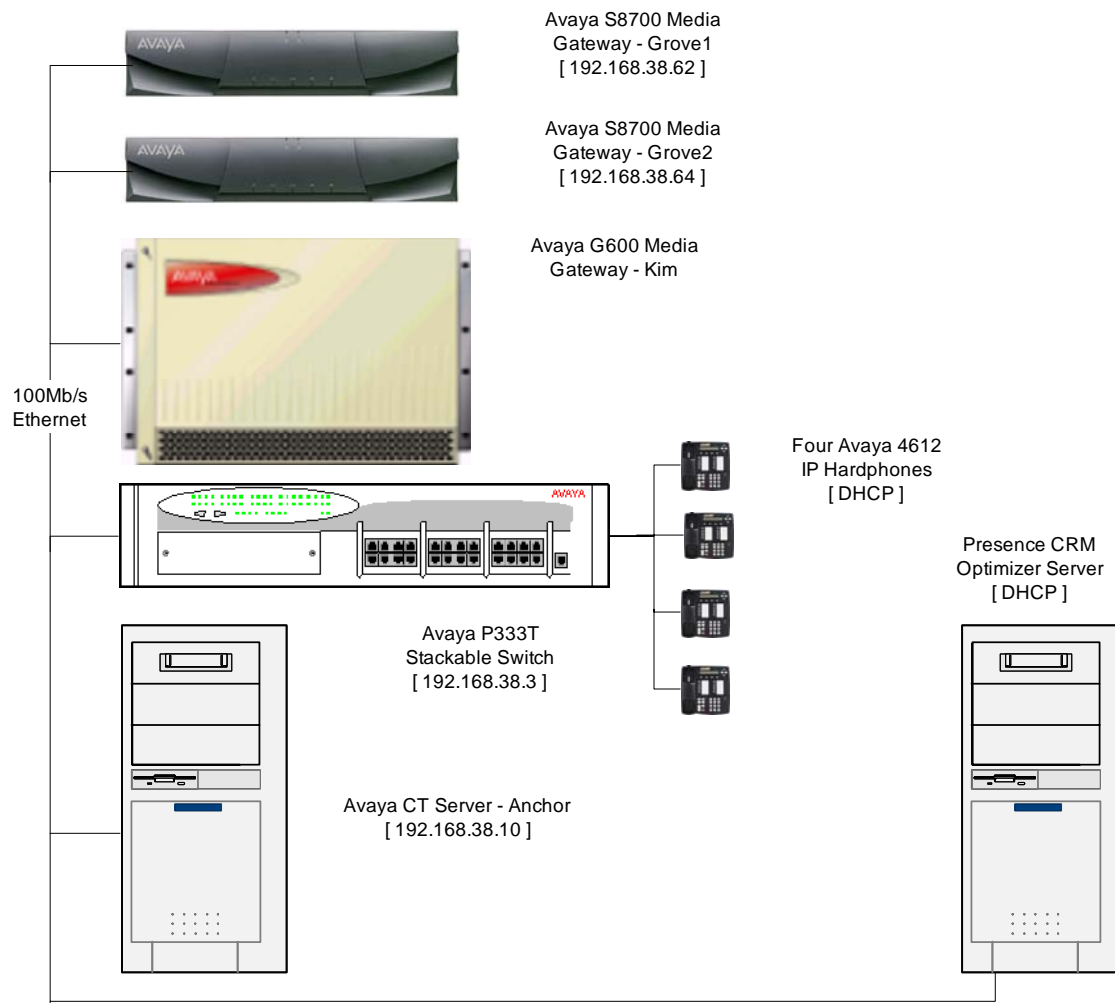


Figure 1: Tested Avaya Communication Manager System with Presence CRM Optimizer Server

2. Equipment and Software Validated

Equipment	Software
Avaya S8700 Media Server	CM2.1 load 410.0
Avaya G600 Media Gateway	N/A
Avaya Computer Telephony Server	V1.3
Avaya P333T Stackable Switch	V4.0.17
Presence CRM Optimizer Server	V5.4

3. Configure the Communication Manager System

Minimal configuration was required for testing over and above the provision of a fully working Communication Manager system with external trunks and a fully working Computer Telephony server. Basic configuration of the Communication Manager and the Computer Telephony Server are beyond the scope of these Application Notes. Please refer to the Administrators Guide for Communication Manager for further details – Avaya Document number 555-233-506 [1] and the Avaya Computer Telephony Installation Guide [2].

However, some Phantom Extensions were specifically created for CRM Optimizer testing as detailed below. Additionally, a VDN and Vector were created to allow external calls to be handled by the CRM Optimizer server.

3.1. Phantom Extensions

Extensions 10601 through to 10604 were created as phantom extensions for Presence. These are configured as stations that do not have a physical port assigned. The configuration for the first of these stations is shown below:

Display Station 10601

Voice System name: Grove - STATION		
Extension: 10601	Lock Messages? n	BCC: 0
Type: 6408D+	Security Code:	TN: 1
Port: X	Coverage Path 1:	COR: 1
Name: Presence Phantom 1	Coverage Path 2:	COS: 1
	Hunt-to Station:	
STATION OPTIONS		
Loss Group: 2	Personalized Ringing Pattern: 1	
Data Module? n	Message Lamp Ext: 10601	
Speakerphone: 2-way	Mute Button Enabled? y	
Display Language: english		
	Media Complex Ext:	
	IP SoftPhone? n	

3.2. Phantom Extension VDN

A Vector Directory Number (VDN) (x17062) was made accessible via a DDI number for external access during testing. The configuration of this VDN is show below:

Display VDN 17062

Voice System name: Grove - VECTOR DIRECTORY NUMBER
--

```
Extension: 17062
Name: Presence I/B
Vector Number: 62
```

```
Meet-me Conferencing? n
Allow VDN Override? n
COR: 1
TN: 1
Measured: none
```

3.3. Phantom Extension Vector

The previous VDN used this vector. Please note the initial adjunct route to the CRM Optimizer server. If this fails for any reason, the Vector will queue to skill 11 as a backup. This is a standard Presence technique to provide call handling in the event of a major fault with CRM Optimizer.

Display Vector 62

```
Voice System name: Grove - CALL VECTOR

Number: 62                      Name: Presence I/B
Multimedia? n                  Meet-me Conf? n          Lock? n
Basic? y      EAS? y      G3V4 Enhanced? y      ANI/II-Digits? y      ASAI Routing? y
Prompting? y   LAI? n      G3V4 Adv Route? y      CINFO? y      BSR? y      Holidays? n
Variables? n
01 adjunct      routing link 1
02 wait-time    5      secs hearing silence
03 queue-to     skill 11      pri m
04 wait-time    10      secs hearing silence
05 goto         step 3      if unconditionally
06
```

3.4. Backup Skill 11

In the event of an adjunct route failure, the previous Vector will queue the call to the backup skill. This is a conventional Call Center skill allowing Communication Manager to handle the inbound call. For the purposes of testing, Skill 11 was used as detailed below:

Display Hunt 11

```
Voice System name: Grove - HUNT GROUP

Group Number: 11                      ACD? y
Group Name: Backup Skill 11           Queue? y
Group Extension: 16011                Vector? y
Group Type: ucd-mia
TN: 1
COR: 1                                MM Early Answer? n
Security Code:
ISDN Caller Display:

Calls Warning Threshold:      Port:
Time Warning Threshold:      Port:

Skill? y      Expected Call Handling Time (sec): 180
AAS? n
Measured: none      Service Objective (sec): 20
Supervisor Extension:      Service Level Supervisor? n
```

4. Configure the Avaya P333T Stackable Switch

No special configuration of this device is necessary in this configuration.

5. Configure the Presence CRM Optimizer Server

Since the CRM Optimizer uses the Avaya Computer Telephony link to Communication Manager, many of the configuration options are pre-configured. However, the system is highly configurable and several forms can be modified to control the overall system operation.

Since this product is largely sold in the Spanish market, the configuration screens are in Spanish, with specific entities translated into English as required.

5.1. Main Presence Server Configuration

The following screen shot is the core configuration of the Presence Server. This includes system-wide elements such as the Automatic Route Selection (ARS) code and the extension numbers that can originate phantom calls.

The screenshot shows a window titled "Servidor Presence" with a tabbed interface. The "General" tab is selected. The window contains the following elements:

- Tabbed interface: Identificación, Base de datos, General, Centralita, Links, Nortel, Lic.
- Section: Configuración de valores para centralita
- Field: Prefijo para realizar llamadas salientes: (value: 9)
- Field: Operador CTI. Login que se asignará a aquellas llamadas salientes gestionadas por la centralita: (value: 99999)
- Checkbox: ☒ Especificar extensiones fantasma para la modalidad aviso previo:
- Text: Para especificar las extensiones fantasma se pueden introducir rangos de extensiones de la forma (Rango1-Rango2). Para la separación de rangos utilizar el punto y coma.
- Field: 10601-10602
- Buttons: Aceptar, Cancelar

Figure 2: Main Presence CRM Optimizer Configuration

- “Prefijo para realizar llamadas salientes”: Prefix code to make external calls.

- “Operador CTI”: Virtual agent used to identify the calls processed by the server (it’s not necessary to do any administration in the switch)
- “Especificar extensiones fantasma...”: Range of phantom extensions used by the server to route calls in preview mode.

5.2. CTI Link Configuration

The links tab allows the configuration of both primary and secondary CTI servers. Please note that for the testing, only a primary CTI server was configured. One or more secondary servers may optionally be configured to provide fault tolerance on CTI traffic.

Servidor Presence

Identificación | Base de datos | General | Centralita | **Links** | Nortel | Lic

Es necesario especificar un link primario que será el que se utilizará por defecto. Se pueden especificar 7 links alternativos para utilizarlos en emisión predictiva. Para habilitar esta opción es necesario tener TSAPI.

☒ Habilitar Links

Primario

Nombre servidor: AVAYA#GROVE#CSTA#ANCHOR

Editar | Quitar

Secundarios

Agregar | Editar | Quitar

Aceptar | Cancelar

Figure 3: CTI Link Configuration

- “Habilitar Links”-“Primario”: Information for the primary TSAPI link used by the server. You must specify the name of the link, user and password after pressing the edit (Editar) button.

Figure 4: Primary CTI Link Configuration

- “Secundarios”: You can add additional links for use in the outbound predictive services (for example to route the calls for different trunks).

Figure 5: Secondary CTI Link Configuration

5.3. Mail Server Configuration

In a similar fashion to voice contacts, Presence allows the stations that can originate phantom calls for e-mail contacts to be specifically configured.

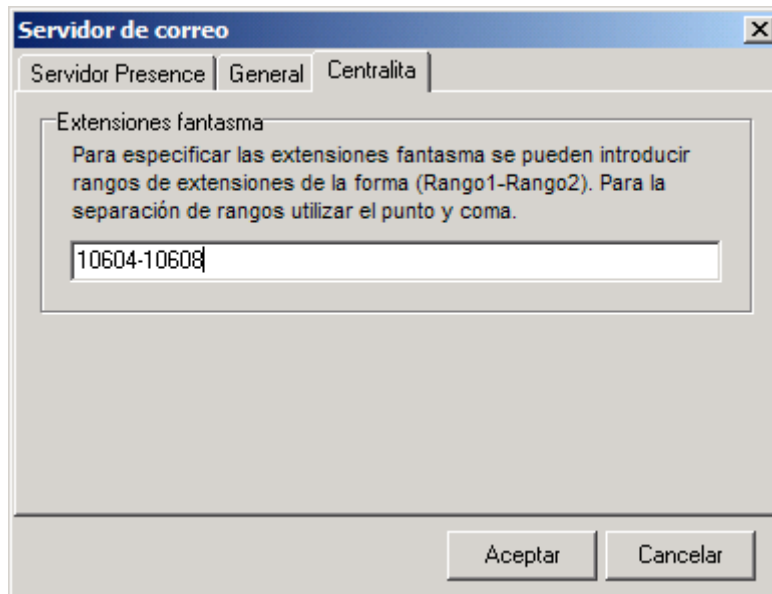


Figure 6: Mail Server Configuration

- “Extensiones fantasma”: Range of phantom extensions used by the server to route mails to the agents

5.4. Web Server Configuration

As with e-mail contacts, Presence allow the stations that can originate phantom calls for Web contacts to be specifically configured.

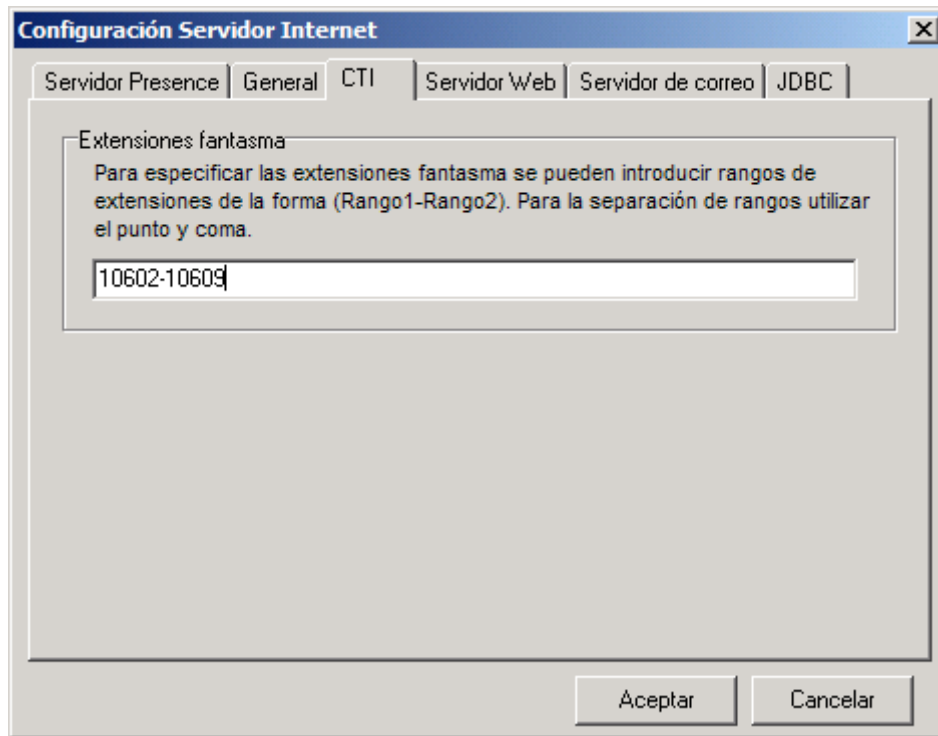


Figure 7: Web Server Configuration

- “Extensiones fantasma”: Range of phantom extensions used by the server to route chat/webcallback and webcollaboration to the agents

5.5. Outbound Server Configuration

Although Presence is not a Predictive Dialing application as such, its outbound call capabilities allow a variety of dialing modes, including Predictive, to be configured. For the purposes of testing, the predictive mode was chosen as show below.

Servicio emisión

General Tipo emisión Máximos Colas Funciones llamada Teléfonos alternativos Otros Logotipo

Tipo:

- ☒ Predictivo
- ☐ Aviso previo
- ☐ Marcación automática
- ☐ Manual

Valores para llamada predictiva

VDN/CDN: 17061

Extension/Skill: 16001

Generar llamada predictiva por

- ☐ Tiempo
- ☒ Aplicación

Nivel: 1

Links: AVAYA#GROVE#CSTA#ANCHOR

☒ Activar captura de llamadas

VDN/CDN para captura: 17061

☐ Tiempo máximo para llamada:

Número de llamadas simultáneas: 1

☐ Comprobar disponibilidad de agentes

Aceptar Cancelar

Figure 8: Outbound Server Configuration

- “VDN/CDN”: VDN extension used by MakePredictiveCall to route the outbound calls.
- “Extension/Skill”: Skill extension where the outbound calls are queued.
- “Links”: TSAPI link used to make the predictive calls.
- “VDN/CDN para captura”: VDN extension used to route the outbound captured calls.

5.6. Inbound Server Configuration

Presence has been designed to route each and every inbound call but does take advantage of the Call Centre functionality within Communication Manager. For this reason, it is necessary to configure a list of Vector Directory Numbers (VDN's) that will be used for Adjunct Routing. It is also necessary to configure a monitor for each skill so that Presence can maintain an internal model of the Call Centre agent status. Both of these are shown below:

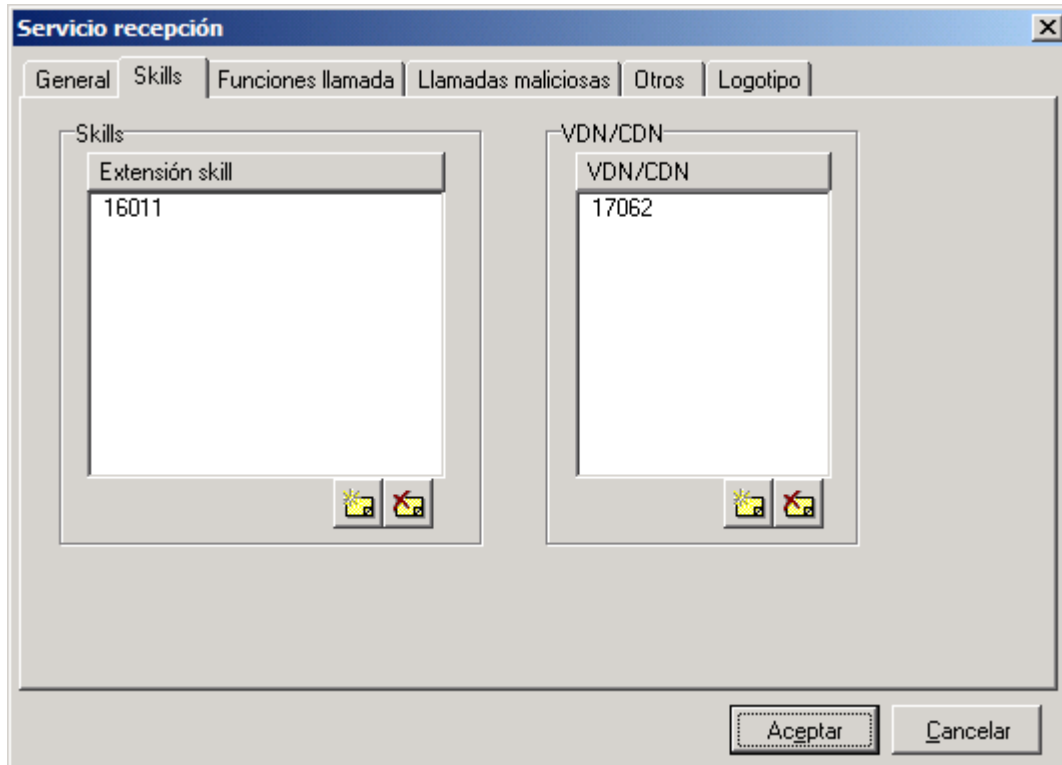


Figure 9: Outbound Server Configuration

- “Skill”: List of skill extensions associated to the service.
- “VDN/CDN”: List of VDN extensions associated to the service.

5.7. Malicious Call Configuration

Since Presence is routing all inbound calls, it is able to apply rules before the calls are routed to call centre agents. One of these rules is the detection of contacts that have been classified as Malicious Calls. The screenshot below allows the configuration of this rule.

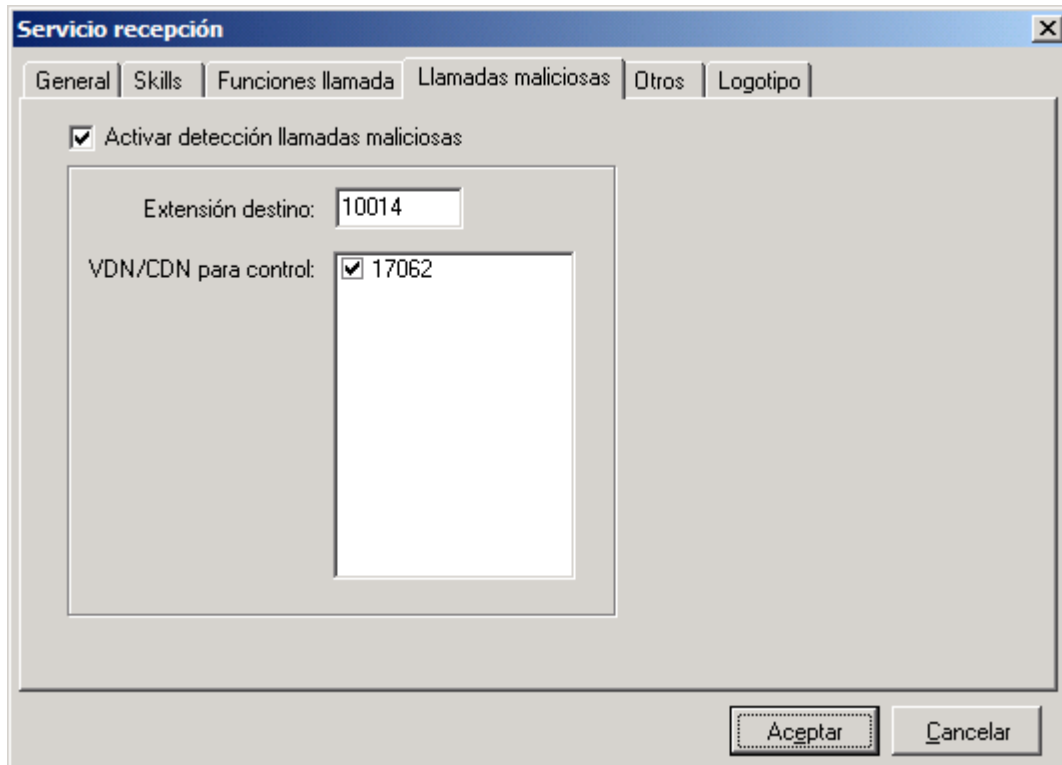


Figure 10: Malicious Call Configuration

- “Extensión destino”: Destination extension for the malicious calls, can be a VDN extension, phone extension, agent-id, etc.
- “VDN/CDN para control”: Check the VDN that the system should control to detect the malicious calls.

5.8. Agent Transfer Configuration

The agent application supplied by Presence has the capability of controlling the transfer of a contact to another agent. The form show below allows this capability to be configured.

The screenshot shows a Windows-style dialog box titled "Servicio recepción". It has several tabs: "General", "Skills", "Funciones llamada" (which is selected), "Llamadas maliciosas", "Otros", and "Logotipo". The "Funciones llamada" tab contains the following settings:

- ☐ Activar sonido del PC al contestar llamada
- Captura de llamadas:**
 - ☒ Activar captura de llamadas
 - ☐ Forzar routing a agente que capturó la llamada
 - ☐ Capturar automáticamente las llamadas durante minutos
 - ☐ Gestión de capturas por Intelligent Routing
- Transferencia agentes:**
 - ☒ Activar transferencia directa a agentes de este servicio
 - Usar el siguiente VDN/CDN para la transferencia:
- ☐ Tiempo mínimo en trabajo tras llamada:

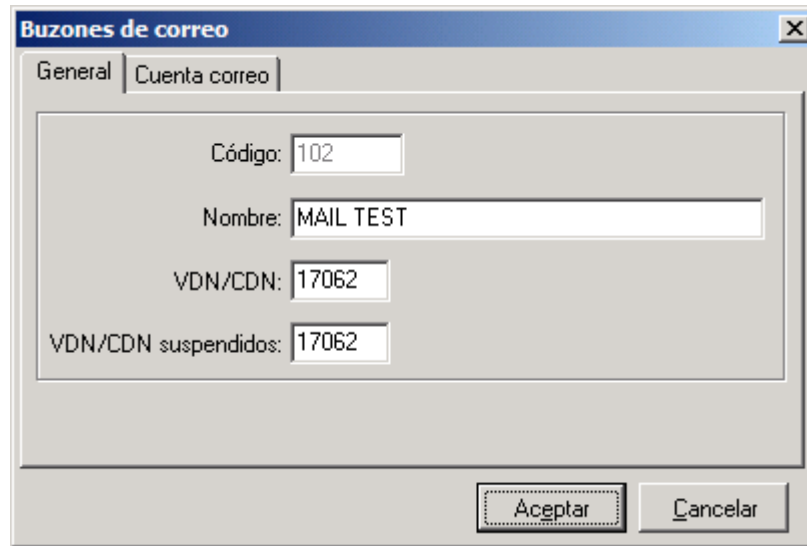
At the bottom right of the dialog are two buttons: "Aceptar" and "Cancelar".

Figure 11: Agent Transfer Configuration

- “Usar el siguiente VDN/CDN para la transferencia”: VDN extension to route the calls transferred between agents.

5.9. Mail Service Configuration

The mail capabilities of Presence allow phantom calls to be generated to both route new e-mails and ones that have been previously viewed and/or actioned. The form below allows the routine VDN's to be configured for these two categories of e-mail.



The screenshot shows a Windows-style dialog box titled "Buzones de correo". It has two tabs: "General" and "Cuenta correo". The "Cuenta correo" tab is selected. Inside the dialog, there are four text input fields arranged vertically. The first field is labeled "Código:" and contains the text "102". The second field is labeled "Nombre:" and contains the text "MAIL TEST". The third field is labeled "VDN/CDN:" and contains the text "17062". The fourth field is labeled "VDN/CDN suspendidos:" and contains the text "17062". At the bottom right of the dialog, there are two buttons: "Aceptar" (Accept) and "Cancelar" (Cancel).

Figure 12: Mail Service Configuration

- “VDN/CDN”: VDN extension used to route the mails
- “VDN/CDN suspendidos”: VDN extension used to route the suspended mails

5.10. Internet Service Configuration

The form below allows the behavior of Internet contacts to be configured.

Servicio Internet

General | Applet | Correo

Datos generales:

Código: 103 Nombre: INTERNET TEST

Idioma: Español

URL Linkador:

URL Espera: http://192.168.38.135/wait.html

URL Despedida: http://192.168.38.135/hastalavista.html

URL desactivado: http://192.168.38.135/serv_desactivado.html

Opciones:

☒ Servicio Chat: VDN/CDN: 17062

☒ Servicio Callback: VDN/CDN: 17062

☐ Traducción simultánea

Aceptar Cancelar

Figure 13: Internet Service Configuration

- “URL Espera”: URL to be displayed whilst routing the contact to an agent.
- “URL Despedida”: URL to be displayed at the end of an agent session.
- “URL Desactivado”: URL to be displayed if this capability is not currently available.

6. Interoperability Compliance Testing

6.1. General Test Approach

Testing included validation of correct operation of typical CRM functions including In-Bound Voice Calls, In-Bound Text Chats, In-Bound E-Mail, In-Bound Web Collaboration, and Out-Bound Voice Calls. Light load testing and link integrity testing were also carried out.

6.2. Test Results

All tests passed.

7. Verification Steps

The following verification steps can be used to isolate problems in the field and to ensure that the CTI link is correctly passing data between the various components of the solution. Please note that it is a requirement of the Compliance Test that a fully operational Avaya CT server be provided prior to testing. As such, the operation of the Avaya CT server is assumed to be in service. This section verifies the connectivity from this server to the CRM Optimizer Server.

1. Avaya CT is shipped with a very simple TSAPI application called "TSTEST". Whilst this utility only allows connection to a server and the origination of a single call, it is invaluable in verifying CTI connectivity. There is also a small application called "TSSPY" which can be used to trace the messages to and from the Avaya CT Server. These two in conjunction are able to ensure that the CTI link is operating correctly. Hence the only required verification step for CTI is to use "TSTEST" to initiate a call from one known physical extension to another. Having made the CTI call, ensure that the physical devices are indeed trying to call each other, manually answer the call, and then use "TSTEST" to clear the call.
2. CRM Optimizer has a CTI Message tracing capability to aid fault diagnosis in the field. Generate a simple inbound test call to the inbound VDN and ensure that the Message Trace contains a set of events related to the test call. This message trace should also contain additional diagnostic information about the test call.

8. Support

If technical support is required for the Presence CRM Server, contact their Technical Support Department

Email: support@presenceco.com

Web: www.presenceco.com

9. Conclusion

These Application Notes describe the configuration steps required in order for Presence CRM Optimizer to successfully interoperate with Avaya Communication Manager 2.1. An Avaya S8700 Media Server with an Avaya G600 Media Gateway running Communication Manager 2.1 was used as the hosting PBX. Features and functionality were validated and performance testing was conducted in order to verify operation under light load. The configuration described in these application notes has been successfully compliance tested.

10. Additional References

- [1] Administrators Guide for Communication Manager (Doc ID: 555-233-506) can be found at <http://support.avaya.com>.
- [2] Installation Guide for Avaya Computer Telephony can be also be found at <http://support.avaya.com>.

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