



Application Notes for Configuring Aculab's ApplianX IP Gateway to Enable an Avaya Communication Server 1000E 7.6 using a SIP Trunk via Avaya Aura® Session Manager to Interoperate with a Digital Private Network Signaling Trunk - Issue 1.0

Abstract

These Application Notes describe the configuration steps for provisioning an Aculab ApplianX IP Gateway to enable an Avaya Communication Server 1000E 7.6 using a SIP Trunk via Avaya Aura® Session Manager to Interoperate with a Digital Private Network Signalling Trunk.

Readers should pay attention to section 2, in particular the scope of testing as outlined in Section 2.1 as well as the 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

The ApplianX IP Gateway can be used in a variety of TDM and VoIP migration strategies, whether it is connecting a TDM-based PBX to a new IP network, or IP PBX, or providing a PSTN front end to SIP-based solutions. The ApplianX IP Gateway is a 'plug & play' gateway. On the PSTN side, the ApplianX IP Gateway provides one, two or four universal T1/E1 (USA, Japan, Europe, worldwide) interfaces, with a wide range of signalling protocols, including PRI/ISDN types, T1 robbed bit and E1 CAS, R1, R2 and DTMF, plus PBX protocols, such as QSIG and DPNSS. A different protocol can be selected for each trunk.

2. General Test Approach and Test results

The general test approach was to configure an E1 trunk of the Aculab ApplianX IP Gateway (ApplianX) as Digital Private Network Signalling System (DPNSS). The DPNSS trunk connected to the ApplianX then converted the signalling to SIP to communicate with the Avaya Aura® Session Manager. Avaya Communication Server 1000E (CS1000) was used to terminate SIP Calls.

Note: During compliance testing a CS1000 was used to host the DPNSS trunk.

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

The testing included:

- Verification of connectivity between CS1000 (SIP) and CS1000 (DPNSS) via the ApplianX IP Gateway
- Basic call tests: Calls from DPNSS to SIP and vice versa
- Calls on hold (including music-on-hold)
- Transfers and conferences
- Call back when free (Ring again)
- Accessing voice mail
- Route optimisation (Path replacement)
- Call forwards

2.2. Test Results

Tests were performed to ensure full interoperability of an Aculab ApplianX IP Gateway when configured for SIP (CS1000) and DPNSS. The tests were all functional in nature and performance testing was not included. All the test cases passed successfully.

Note: Although during testing a CS1000 was configured with DPNSS trunks, an ApplianX IP Gateway will function with any PBX supporting DPNSS.

2.3. Support

Technical support can be obtained for Aculab products as follows:

- E-mail: support@aculab.com
- Phone: +44(0)1908 273805

Note: An Aculab support contract is required to gain access to Aculab support services.

3. Reference Configuration

Figure 1 illustrates the network configuration used during compliance testing. The CS1000 was configured to use SIP and was configured with a connection to the Session Manager. The DPNSS PBX was connected to a DPNSS port on the ApplianX. The ApplianX was configured with one SIP trunk and one DPNSS trunk. Avaya 1120 IP Phones were used for SIP and digital telephones were used to make and receive calls to the DPNSS PBX.

Note: During compliance testing the DPNSS PBX was an Avaya Communication Server 1000E R7.6.

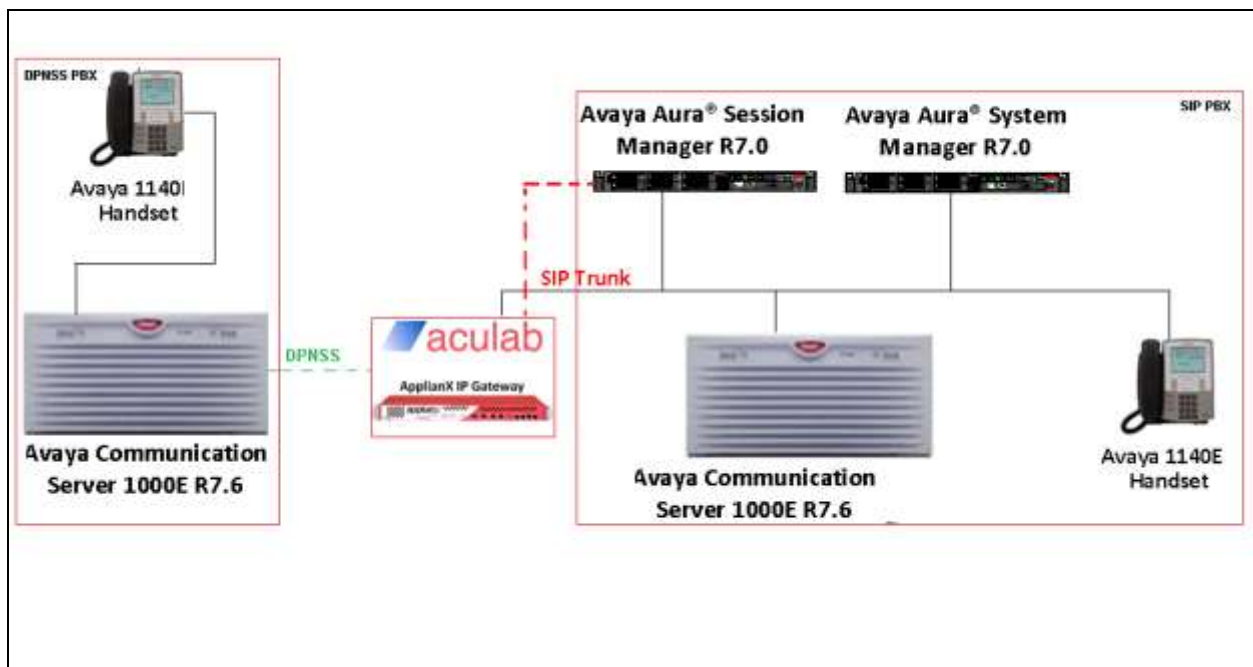


Figure 1: Avaya Communication Server 1000E with Aculab ApplianX IP Gateway Reference Configuration

4. Equipment and Software Validated

The hardware and associated software used in the compliance testing is listed below.

Avaya Equipment	Software Version
Avaya Aura® System Manager running on VMWare Virtual Machine	System Manager 7.0 – FP1 Build No. - 7.0.0.0.16266-7.0.9.912 Software Update Revision No: 7.0.0.03929
Avaya Aura® Session Manager running on VMWare Virtual Machine	Session Manager R7.0 SM 7.0.0.0.700007
Avaya CPPM running Avaya Communication Server 1000E	R7.6 (See Appendix 3 for Call Server Patches)
Avaya 1140 Series Deskphone	UNISim
Aculab Equipment	Software Version
ApplianX IP Gateway	Version 2.3.5 (Release 1453)
Gateway Engine	Version 1.5.7-14

Table 1: Hardware and Software Version Numbers

Note: The DPNSS PBX was an Avaya Communication Server 1000E running Release 7.6. A Sample DPNSS configuration is shown in **Appendix 1**

5. Configure Avaya Communication Server 1000E

The configuration and verification operations illustrated in this section were all performed using the PUTTY program. The information provided in this section describes the configuration of CS1000 for this solution. For all other provisioning information such as initial installation and configuration, please refer to the product documentation in **Section 10**.

Note: It is assumed that the CS1000 has already been configured for SIP and a connection is in place to Session Manager. The CS1000 SIP trunk configuration is shown in **Appendix 2**

5.1. Create a Route for SIP calls

The following sections illustrate the setup of a new route and Coordinated Dial Plan (CDP) in order to send calls to ApplianX via Session Manager. To create a new route on the CS1000E overlay 16 is used. Use the **new** command in overlay 16 to create a new SIP route. Type **LD 16** at the > prompt to enter overlay 16. The route created is a **TIE** route in order to connect to ApplianX via Session Manager. Subsets of these commands are listed below.

LD 16

Prompt	Response	Description
>	LD 16	Enter Overlay 16
REQ	new	Create new
TYPE	RDB	Route Data block
CUST	0	Customer Number as defined in LD15

ROUT	20	Route Number
TKTP	TIE	Route Type
VTRK	YES	Virtual Route
ZONE	1	Zone number associated with the route
PCID	SIP	Protocol for the route

5.2. Configure a Coordinated Dial Plan

A Coordinated Dial Plan is added to place calls across the SIP trunk to the ApplianX. Add a Route List Block (RLB) to place calls over the SIP route created in **Section 5.1** above. Enter overlay 86 to configure a new RLB by typing **LD 86** at the > prompt. As shown below a new Route List Index (RLI) is added with a **ROUT** equal to that of the SIP Route created in **Section 5.1**.

LD 86

Prompt	Response	Description
>	LD 86	Enter Overlay 86
REQ	new	new/add
CUST	0	Customer number (default is 0)
FEAT	rlb	Route List Block
RLI	20	Route List index Number (any unused number)
ENTR	0	First Entry (0-2)
ROUT	20	Route Number configured in Section 5.1
DMI	0	Digit Manipulation Table (default is 0)
Return to end		

Once the RLB is added the Coordinated Dial Plan (CDP) is added in the form of a Distance Steering Code (**DSC**). Note that in the example below, **4xxx** is the **DSC** as this is the number used to route calls to the ApplianX during the compliance testing. Enter overlay 87 to add a new **CDP** by typing **LD 87** at the > prompt.

LD 87

Prompt	Response	Description
>	LD 87	Enter Overlay 87
REQ	new	new/add
CUST	0	Customer number (default is 0)
FEAT	cdp	Coordinated Dial Plan
TYPE	dsc	Distance Steering Code
DSC	4	Extension number of the TENS Application
FLEN	6	Ext Length
DSP	LSC	DSP Type (Least Cost Routing)
RLI	20	Which RLB to use (Enter the RLB setup above)
Return to end		

6. Configuring Avaya Aura® Session Manager

This section provides the procedures for configuring Session Manager. Session Manager is configured via System Manager. The procedures include the following areas:

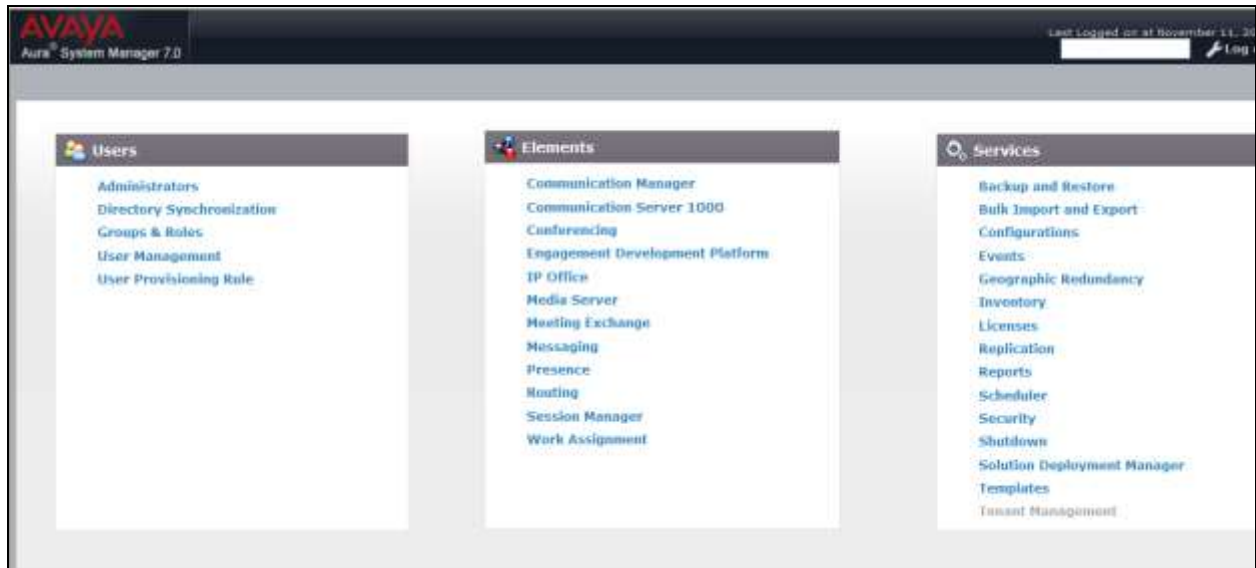
- Log in to Avaya Aura® Session Manager
- Administer SIP Domain
- Administer Location
- Administer SIP Entities
- Administer Routing Policies
- Administer Dial Patterns

6.1. Log in to Avaya Aura® System Manager

Access the System Manager using a Web Browser by entering **http://<FQDN>/SMGR**, where **<FQDN>** is the fully qualified domain name of System Manager or **http://<IP Address>/SMGR**. Log in using appropriate credentials.

6.2. Administer SIP Domain

Once logged in, select **Routing** from the **Elements** column.



Click on **Domains** in the left window. If there is not a domain already configured click on **New** highlighted below.

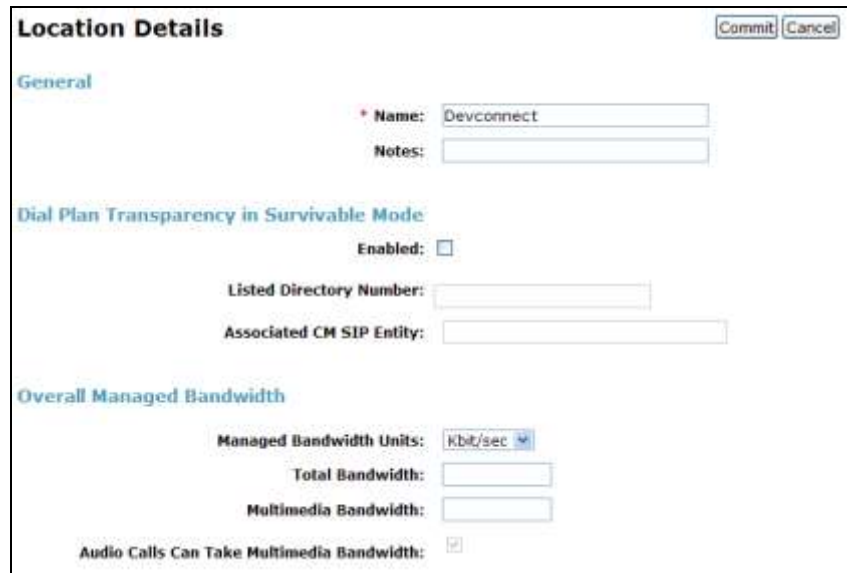


Note the domain **Name** used in the compliance testing was **devconnect.local**. Note this domain is also referenced on the CS1000E Signalling Server the setup of which is outside the scope of these Application Notes. For more information on the Signalling Server setup please refer to **Section 10**. Once the domain name is entered click on **Commit** to save this.

Domain Management			Commit	Cancel
1 Item				
Name	Type	Notes		
* devconnect.local	sip			

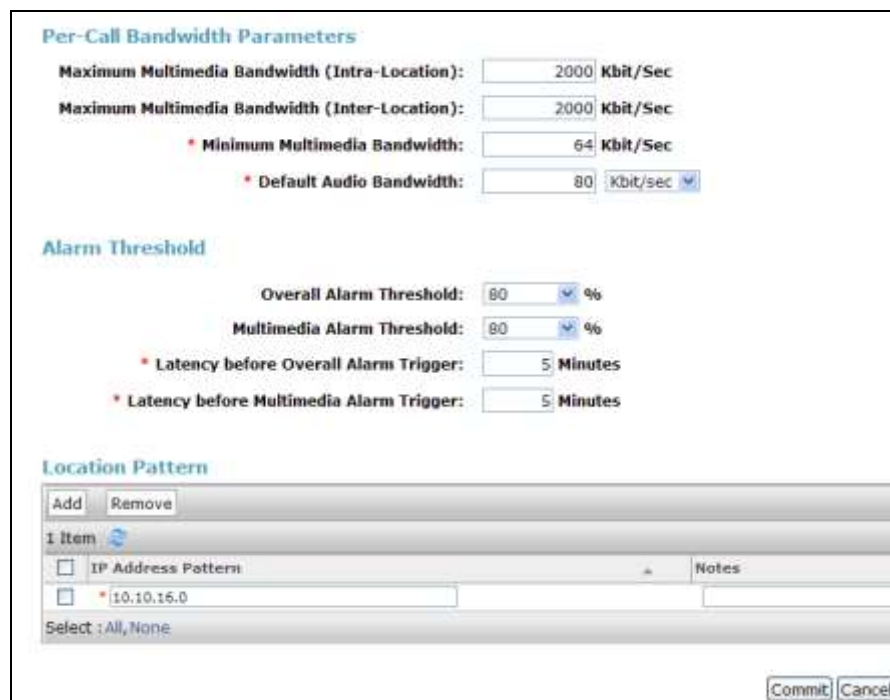
6.3. Administer Location

Session Manager uses the origination location to determine which dial patterns to look at when routing a call. In this example, one Location has been created which will reference both the Session Manager location and the OpenGate location. Navigate to **Home → Elements → Routing → Locations → New** and enter an identifying **Name**, as shown below.



The 'Location Details' form is divided into three sections. The 'General' section contains a required 'Name' field with the value 'Devconnect' and an empty 'Notes' field. The 'Dial Plan Transparency in Survivable Mode' section has an 'Enabled' checkbox, which is unchecked, and two empty text fields for 'Listed Directory Number' and 'Associated CM SIP Entity'. The 'Overall Managed Bandwidth' section includes a 'Managed Bandwidth Units' dropdown set to 'Kbit/sec', and empty text fields for 'Total Bandwidth' and 'Multimedia Bandwidth'. At the bottom, there is a checkbox for 'Audio Calls Can Take Multimedia Bandwidth' which is checked. 'Commit' and 'Cancel' buttons are in the top right corner.

At the bottom of the same page the **Location Pattern** is defined. Click **Add** and enter the IP address range used to logically identify the location. In this case the **IP Address Pattern** is **10.10.16.*** as shown below. Click **Commit** when done.



This form contains two main sections. The 'Per-Call Bandwidth Parameters' section has five fields: 'Maximum Multimedia Bandwidth (Intra-Location):' (2000 Kbit/Sec), 'Maximum Multimedia Bandwidth (Inter-Location):' (2000 Kbit/Sec), '* Minimum Multimedia Bandwidth:' (64 Kbit/Sec), '* Default Audio Bandwidth:' (80 Kbit/sec), and a dropdown for units. The 'Alarm Threshold' section has four fields: 'Overall Alarm Threshold:' (80 %), 'Multimedia Alarm Threshold:' (80 %), '* Latency before Overall Alarm Trigger:' (5 Minutes), and '* Latency before Multimedia Alarm Trigger:' (5 Minutes). The 'Location Pattern' section at the bottom features an 'Add' button, a 'Remove' button, and a table with one item. The table has columns for a checkbox, the pattern name, a text input field, and a 'Notes' column. The first row shows a checked checkbox, the name 'IP Address Pattern', the value '10.10.16.0' in the text field, and an empty 'Notes' field. Below the table is a 'Select' dropdown set to 'All, None'. 'Commit' and 'Cancel' buttons are in the bottom right corner.

6.4. Administer SIP Entities

Each SIP device (other than Avaya SIP Phones) that communicates with Session Manager requires a SIP Entity configuration. This section details the steps to create SIP Entities for Session Manager SIP Signalling Interface, CS1000E and ApplanX solution respectively.

6.4.1. Configure Session Manager SIP Signalling Interface Entity

Click **Home** → **Elements** → **Routing** → **SIP Entities** → **New** and assign an identifying **Name**, the **FQDN or IP Address** for Session Manager SIP Signalling Interface, set the **Type** to **Session Manager** and the **Location** to the Location configured in **Section 6.3** and click on **Commit**.

SIP Entity Details [Commit] [Cancel]

General

* **Name:** SM1676

* **FQDN or IP Address:** 10.10.16.77

Type: Session Manager

Notes:

Location:

Outbound Proxy:

Time Zone: Europe/Dublin

Credential name:

SIP Link Monitoring

SIP Link Monitoring: Use Session Manager Configuration

Tick the box next to the entity that was just created and click **Edit** (not shown). Scroll down the page until the **Port** section is displayed, click **Add** and configure the **Port** as **5060** the **Protocol** **TCP** and the **Default Domain** as the domain configured in **Section 6.2**. Repeat this for the **UDP** connection, which will be established to the ApplanX. Click **Commit** when done (not shown).

Listen Ports

TCP Failover port:

TLS Failover port:

[Add] [Remove]

3 Items

<input type="checkbox"/>	Listen Ports	Protocol	Default Domain	Notes
<input type="checkbox"/>	5060	TCP	devconnect.local	
<input type="checkbox"/>	5060	UDP	devconnect.local	
<input type="checkbox"/>	5061	TLS	devconnect.local	

6.4.2. Configure Avaya Communication Server 1000E SIP Entity

Click **Home** → **Elements** → **Routing** → **SIP Entities** → **New** and assign an identifying **Name**, the **FQDN or IP Address** for the CS1000E Node IP Address, which can be obtained from the Signalling Server, set the **Type** to **SIP Trunk** and the **Location** to the Location configured in **Section 6.3** and click on **Commit**.

SIP Entity Details [Commit] [Cancel]

General

* **Name:** CS1kPG

* **FQDN or IP Address:** 10.10.40.111

Type: SIP Trunk

Notes:

Adaptation:

Location:

Time Zone: Europe/Dublin

* **SIP Timer B/F (in seconds):** 4

Credential name:

Securable:

Call Detail Recording: egress

6.5. Create ApplanX as a SIP Entity

A SIP Entity must be added for the ApplanX. To add a SIP Entity, select **SIP Entities** on the left panel menu and then click on the **New** button (not shown).

Note: A SIP Entity was already configured for Communication Manager and was called **CM70**.

Enter the following for the ApplanX SIP Entity:

Under **General** enter the following:

- **Name** Enter an informative name (e.g., **Applanx**)
- **FQDN or IP Address** Enter the IP address of the signalling interface of the ApplanX
- **Type** Select **SIP Trunk** from the dropdown box
- **Location** Select the location from the dropdown box that was configured in **Section 6.3**
- **Time Zone** Select Time zone for this location from the dropdown box
- **SIP Timer** Enter **4**

Once the correct information is entered click the **Commit** Button.

Note: During compliance testing **Adaptation** was left blank.

Home

Routing

Routing

Domains

Locations

Adaptations

SIP Entities

Entity Links

Time Ranges

Routing Policies

Dial Patterns

Regular Expressions

Defaults

Home / Elements / Routing / SIP Entities

SIP Entity Details

Commit

Cancel

General

* Name: Applanx

* FQDN or IP Address: 10.10.60.40

Type: SIP Trunk

Notes: SIP Trunk to ApplanX

Adaptation:

Location: DevConnectMC

Time Zone: Europe/Dublin

* SIP Timer B/F (in seconds): 4

Credential name:

Call Detail Recording: egress

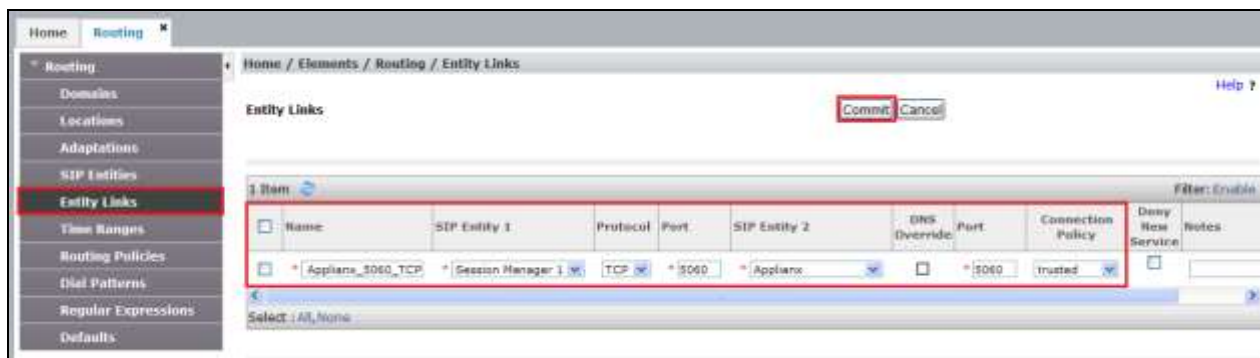
6.6. Create an Entity Link for ApplianX

The SIP trunk between Session Manager and the ApplianX requires an Entity Link.

To add an Entity Link, select **Entity Links** on the left panel menu and click on the **New** button, (not shown), enter the following:

- **Name** An informative name, (e.g. **Applianx_5060_TCP**)
- **SIP Entity 1** Select **Session Manager 1** from the **SIP Entity 1** dropdown box
- **Protocol** Select **TCP** or **UDP*** from the Protocol drop down box.
- **Port** Enter **5060**
- **SIP Entity 2** Select **Applianx** from the **SIP Entity 2** dropdown box (configured in **Section 6.4**)
- **Port** Enter **5060** as the Port
- **Connection Policy** Check the **Trusted** check box

Click **Commit** to save changes. The following screen shows the Entity Links used.



***Note:** The UDP protocol was also used in this test and is also supported for the SIP trunk to the ApplianX.

6.7. Create a Routing Policy for ApplianX

Create routing policies to direct calls to the ApplianX via Session Manager. To add a routing policy, select **Routing Policies** on the left panel menu and then click on the **New** button (not shown). In **Routing Policy Details** enter an informative name in the **Name** field, (example **To applianX**), and enter **0** in the **Retries** field. At **SIP Entity as Destination**, click the **Select** button. A Routing Policy was also configured to direct calls to Communication Manager, but is outside the scope of these Application Notes.

Home / Elements / Routing / Routing Policies

Routing Policy Details [Commit] [Cancel]

General

* Name: To applianX

Disabled: ☐

* Retries: 0

Notes: Calls to applianX

SIP Entity as Destination

[Select]

Once the **SIP Entity** list screen opens, check the **ApplianX** radio button. Click on the **Select** button to confirm the chosen options and then return to the Routing Policies Details screen and select the **Commit** button (not shown) to save.

Home / Elements / Routing / Routing Policies

SIP Entities [Select] [Cancel] [Help ?]

SIP Entities

4 Items [Filter: Enable]

Name	FQDN or IP Address	Type	Notes
6.3 CH	10.10.16.211	CH	Richards CH6.3
ApplianX	10.10.60.40	SIP Trunk	SIP Trunk to ApplianX
CH62VMRC	10.10.60.11	CH	
Session Manager 1	10.10.60.14	Session Manager	

Select: None

6.8. Administer Dial Patterns

As one of its main functions, Session Manager routes SIP traffic between connected devices. Dial patterns are created as part of the configuration to manage SIP traffic routing, which will direct calls based on the number dialled to the appropriate system.

6.8.1. Create a Dial Pattern for ApplianX

A dial pattern must be created on Session Manager to route calls to and from the ApplianX. During compliance testing a number of patterns were used. The example below shows 4. To configure the dial pattern to route calls to the ApplianX, select **Dial Patterns** on the left panel menu and then click on the **New** button (not shown). A dial pattern was also configured to route calls to Communication Manager, but is outside the scope of these Application Notes. Under **General** enter out the following:

- **Pattern** Enter 4
- **Min** Enter 4 as the minimum length of dialled number
- **Max** Enter 4 as the maximum length of dialled number
- **SIP Domain** Select **All** from the drop down box

Click the **Add** button in **Originating Locations and Routing Policies**.

The screenshot displays the 'Dial Pattern Details' configuration page in the Session Manager interface. The left sidebar shows the 'Routing' menu with 'Dial Patterns' selected. The main content area is titled 'Dial Pattern Details' and includes a 'Commit' button. The 'General' tab is active, showing the following fields:

- * Pattern:** 4
- * Min:** 4
- * Max:** 4
- Emergency Call:** ☐
- Emergency Priority:** 1
- Emergency Type:** (empty field)
- SIP Domain:** -ALL- (dropdown menu)
- Notes:** (empty text area)

At the bottom, the 'Originating Locations and Routing Policies' section contains an 'Add' button (highlighted with a red box) and a 'Remove' button.

In **Originating Location** check the **DevConnectMC** check box. Under **Routing Policies** check the **To applianX** check box. Click on the **Select** button to confirm the chosen options and then be returned to the Dial Pattern screen (shown previously), select **Commit** button to save (not shown).

The screenshot shows the 'Routing' tab in the Session Manager interface. The left sidebar lists various configuration options, with 'Dial Patterns' selected. The main area is titled 'Home / Elements / Routing / Dial Patterns'. It features a 'Select' button in the top right corner. Below this, the 'Originating Location' section includes a checkbox for 'Apply The Selected Routing Policies to All Originating Locations' and a list of one item, 'DevConnectMC', which is checked. The 'Routing Policies' section shows a list of two items: 'CM1' and 'To applianX'. The 'To applianX' policy is checked. The 'Select' button is highlighted in the top right corner.

6.8.2. Create Dial Pattern to Avaya Communication Server 1000E

An additional dial pattern must be created on Session Manager to route incoming calls from ApplianX to CS1000 Extensions 3xxx. To create a dial pattern to route 3xxx from Session Manager to the CS1000, click **Home → Elements → Routing → Dial Patterns → New**. Under **Pattern** enter the numbers presented to Session Manager by ApplianX destined for CS1000, in the **Patterns** box. Set **Min** and **Max** digit string length.

The screenshot shows the 'Dial Pattern Details' form. The 'General' section contains the following fields: 'Pattern' (3xxx), 'Min' (4), 'Max' (4), 'Emergency Call' (unchecked), 'Emergency Priority' (1), 'Emergency Type' (empty), 'SIP Domain' (-ALL-), and 'Notes' (empty). The 'Originating Locations and Routing Policies' section is visible at the bottom, with 'Add' and 'Remove' buttons.

In the **Originating Locations and Routing Policies** section of the web page, click **Add**. In the **Origination Section**, click **All**, in the **Routing Policies** section click the routing policy created for the CS1000. Click **Select** when done. Click **Commit** when returned to Dial Pattern Details (not shown).

Originating Location

Select

Cancel

Originating Location

☒ Apply The Selected Routing Policies to All Originating Locations

1 Item

☒ Name

☐ Disconnect

Select : All, None

Routing Policies

12 Items

<input type="checkbox"/>	Name	Disabled	Destination
<input type="checkbox"/>	AAEP1619_RP	<input type="checkbox"/>	AAEP1619
<input type="checkbox"/>	AAEP1620_RP	<input type="checkbox"/>	AAEP1620
<input type="checkbox"/>	AMS1616_RP	<input type="checkbox"/>	AMS1616
<input type="checkbox"/>	CM1623_RP	<input type="checkbox"/>	CM1623
<input type="checkbox"/>	CM1627_RP	<input type="checkbox"/>	CM1627
<input checked="" type="checkbox"/>	CS1K_RP	<input type="checkbox"/>	CS1kPG

7. Configure Aculab ApplianX IP Gateway

A number of steps are required to configure the Aculab ApplianX IP Gateway, the initial assigning of the administration IP address, administration user name and password are assumed to be completed. The configuration operations described in this section can be summarized as follows:

- Login to ApplianX IP Gateway
- Run the Setup Wizard
- Configure DPNSS Trunk
- Configure SIP Trunk
- Configure Endpoints
- Configure Groups
- Configure Routes
- Configure SIP
- Configure Codecs
- Save configuration
- Use configuration

7.1. Login to ApplianX IP Gateway

Login by accessing the browser-based GUI, using the URL *http://<ip-address>* assigned to the ApplianX. Once the ApplianX IP Gateway web page opens, log in with the appropriate credentials and click on the **Log in** button.



The screenshot shows the login interface for the ApplianX IP Gateway. At the top, the logo "applianx IP Gateway" is displayed. Below the logo, there is a section titled "Account" with a link "→ Log In". To the right of this, there is a "Log in" button. Below the "Log in" button, there are two input fields: "User Name" and "Password". At the bottom of the form, there is a red "Log in" button.

7.2. Run the Setup Wizard

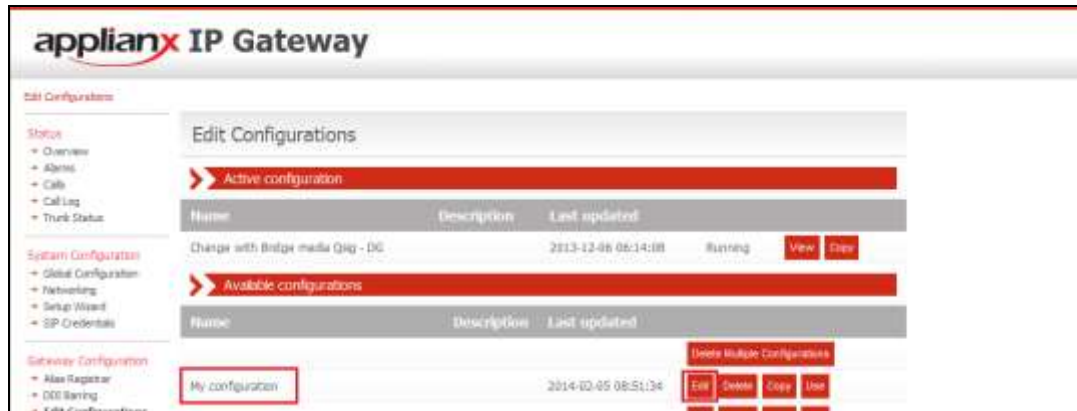
After the main web page opens, select **Setup Wizard** from System Configuration section.



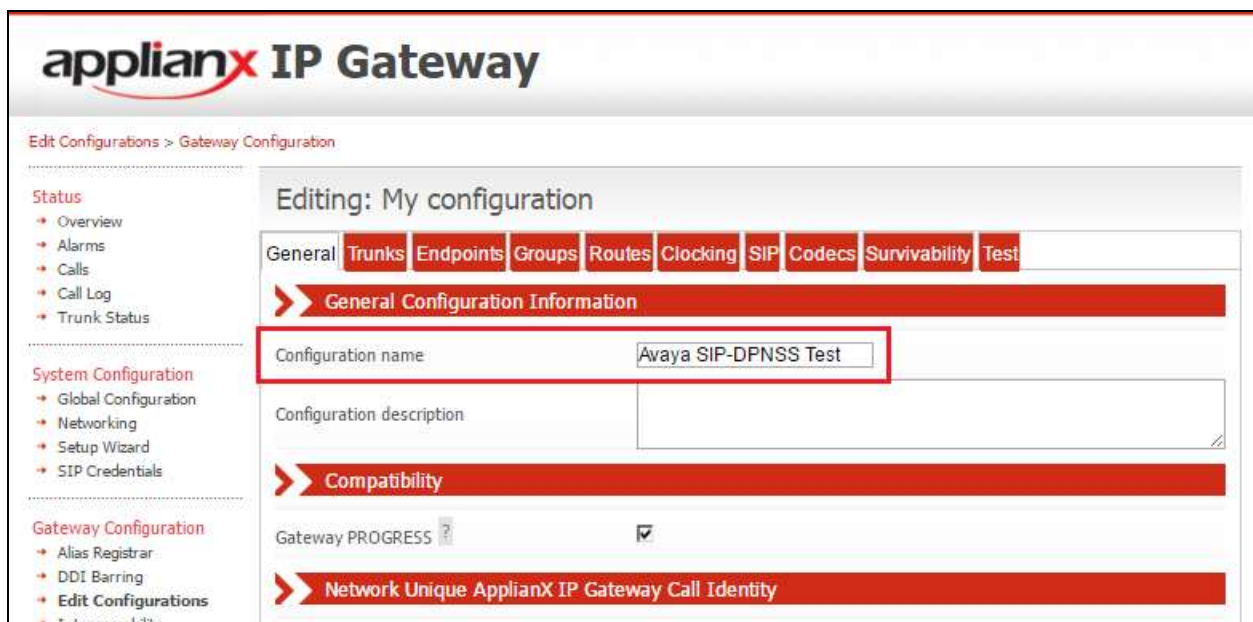
Once the **Setup Wizard** page opens, select **DPNSS** from the **Protocol for all trunks**, drop-down box, and click on the **Apply** button.



After clicking the **Apply** button in the previous step, the **Edit Configurations** page opens. Click on the **Edit** button for **My Configuration**.



In the **General** tab, give a descriptive name to the configuration. During compliance testing, **Avaya SIP-DPNSS Test** was used.



7.3. Configure DPNSS Trunk

Click on the **Trunks** Tab followed by the **Trunk 1 Edit** button. This trunk was configured for DPNSS. A cable was connected between the E1/T1 Trunk 1 port on the front of the ApplianX and the T1/E1 port on the CS1000. Please note that the configurations of the DPNSS trunk are dependent on the configuration of the DPNSS gateway of connecting PBX, pay special attention to the Master/Slave configuration. The screenshots in this section relate to the configuration used during compliance testing of this solution.

The screenshot shows the 'Editing: Avaya SIP-QSIP Test' configuration page in the ApplianX IP Gateway. The 'Trunks' tab is active, displaying a table of configured trunks. The table is divided into two sections: 'SIP trunks' and 'TDM trunks'. The 'SIP trunks' section shows 'Trunk 1' with Type 'SIP' and Group 'No group'. The 'TDM trunks' section shows 'Trunk 1' through 'Trunk 4' with Type 'TDM' and Group 'TDM trunks'. Each row has an 'Edit' button. The 'Trunk 1' row in the TDM section is highlighted with a red box. The interface also includes a left sidebar with navigation links and a top status bar.

Name	Description	Type	Group	Edit
SIP trunks				
Trunk 1		SIP	No group	Edit
TDM trunks				
Trunk 1		TDM	TDM trunks	Edit
Trunk 2		TDM	TDM trunks	Edit
Trunk 3		TDM	TDM trunks	Edit
Trunk 4		TDM	TDM trunks	Edit

In the **Trunk Name** field (i.e., Avaya DPNSS Trunk) and in the **Trunk description** field enter a description (i.e., Trunk to Avaya CS1000). Configure the remaining fields as shown in the following screen shot. Click on the **Change** button in the **Protocol configuration** section.

applanx IP Gateway

Edit Configurations > Trunk Overview > Edit Trunk

Status

- Overview
- Alarms
- Calls
- Call Log
- Trunk Status

System Configuration

- Global Configuration
- Networking
- Setup Wizard
- SIP Credentials

Gateway Configuration

- Alias Register
- DID Barring
- Edit Configurations
- Interoperability
- Cause Mapping

Diagnostics

- Remote Logging
- Network Diagnostics
- Watchdog Status
- Restart
- Diagnostic Log
- Endpoint Status
- About
- Hardware

Account

- Log Out
- Change Password

Editing: Avaya SIP-DPNSS Test

Apply **Cancel**

General settings

Trunk name: Avaya DPNSS Trunk

Trunk description: Trunk to Avaya CS1000

Open inward speech path before answer: ☒

Routing group: TDM trunks

Block trunk from call activity: No

Outgoing timeslot allocation strategy: Highest available

Minimum digit count: 0

Interdigit timeout (milliseconds): 3000

Interdigit timeout for virtual calls (milliseconds): 1000

Send sending complete on outgoing calls: ☒

Send overlap digits on outgoing calls: ☒

Response to unrouteable incoming calls: Release

SNMP configuration

Enable SNMP traps: ☒

Protocol configuration

Protocol: DPNSS **Edit** **Change**

Click on the **Select** button for **DPNSS**.

applanx IP Gateway

You are logged in as: admin
IP Gateway: 210796
Version: 3.3.2 build 1002

Select a protocol

Status

- Overview
- Alarms
- Calls
- Call Log
- Trunk Status

System Configuration

- Global Configuration
- Networking
- Setup Wizard
- SIP Credentials

Gateway Configuration

- Alias Register
- DID Barring
- Edit Configurations
- Interoperability
- Cause Mapping

Diagnostics

- Remote Logging
- Network Diagnostics
- Watchdog Status
- Restart
- Diagnostic Log
- Endpoint Status
- About
- Hardware

Select a protocol

Protocol	Description	Select
DPNSS	DPNSS Enhanced, Conforming to BTW-188.	Select
QSIG	QSIG, also known as FSL, Conforming to ETSI-143.	Select
ETSI88	ETSI88, Conforming to ETSI88-100.	Select
INS1508	T1 Q.931 variant conforming to the INS-Net Interface and Services specification published by the ITU.	Select
DA652	DA652 conforming to BTW-188.	Select
AT&T	T1 Q.931 variant conforming to AT&T TR 43488. Sometimes called SESS.	Select
DP6108	T1 Q.931 variant conforming to the Nortel RB1-A211-1 Primary Rate User Network Interface Specification.	Select
R2	T1 Q.931 variant conforming to National ISDN 2 (Bellcore).	Select
E15	E1 Linecard as implemented by AT&T Definity and Nortel Meridian switches. E1 Immediate Start, Delay Out and Wink Start, Loopstart User (LSU) and Loopstart Network (LSN), Feature Group D (FGD), and Feature Group D (FGD) configuration options available. MFRL, DTHP or Decadic Register signaling available. (A-Law)	Select
T3P8	A highly configurable implementation of T1 E15-based DE. E1 Immediate Start, Delay Out and Wink Start, Loopstart User (LSU) and Loopstart Network (LSN), Feature Group D (FGD), and Feature Group D (FGD) configuration options available. MFRL, DTHP or Decadic Register signaling available. (A-Law)	Select
R2T1	A highly configurable implementation of R2 based on the CGTT Blue Book, a collection of Ericsson specifications, and a multitude of National signaling specifications. MFRL DTHP or Decadic Register signaling available. (A-Law)	Select
ISDN	ISDN E1 protocol, also known as ISDN-Net, ISDN-Net, MFRL, DTHP or Decadic Register signaling available. (A-Law)	Select
T3P8	T1 E1-based DE for Hong Kong. MFRL, DTHP or Decadic Register signaling available. (A-Law)	Select

Cancel

Configure all as is shown in the following screen shots.

Protocol Options

Status

- Overview
- Alarms
- Calls
- Call Log
- Trunk Status

System Configuration

- Global Configuration
- Networking
- Setup Wizard
- SIP Credentials

Gateway Configuration

- Alias Registrar
- DDI Barring
- Edit Configurations
- Interoperability
- Cause Mappings

Diagnostics

- Remote Logging
- Network Diagnostics
- Watchdog Status
- Restart
- Diagnostic Log
- Endpoint Status
- About
- Hardware

Account

- Log Out
- Change Password

DPNSS

General settings

Impedence

CRC enabled ☐

Master/Slave configuration

Basic features

Display direction

Allow incoming data calls ☒

Loop avoidance mapping ☐ Disabled
☒ Transparent
☐ Transit

Global transit limit

Insert loop avoidance in outgoing calls ☐

Do-not-disturb mapping ☒

Method for generating CLC ☐ Use a fixed value
☒ Map from the other call leg (default)
☐ Map from the calling name

CLC when map is not possible

Override CLC when OLI restricted

Insert Bearer Service Selection (BSS) ☒ Disabled
☐ Preferred
☐ Mandatory

Call Offer Enabled ☒

Call Transfer Enabled ☒

Continuation....

Call Diversion Supplementary Service Support	
Call Diversion Enabled ?	<input checked="" type="checkbox"/>
Divert as proxy ?	<input type="checkbox"/>
Divert unmatched to outgoing group ?	<input checked="" type="checkbox"/>
Send Diverted Address ?	<input checked="" type="checkbox"/>
Automatic Diversion Validation ?	<input type="checkbox"/>
Call Redirection Enabled ?	<input checked="" type="checkbox"/>
CBWF/CBWNNU (CC) Supplementary Service Support	
CBWF/CBWNNU (CC) Enabled ?	<input checked="" type="checkbox"/>
Postpone CBWNNU request until the real call (waiting for answer) has cleared ?	<input checked="" type="checkbox"/>
Message Waiting Supplementary Service Support	
Message Waiting Method ?	Custom NSI strings
Message Waiting On NSI string ?	B*AN*1
Message Waiting Off NSI string ?	B*AN*0
Route Optimisation	
Route Optimisation Enabled ?	<input checked="" type="checkbox"/>
Use newer call reference embedding scheme ?	<input checked="" type="checkbox"/>
Pad digit for DPNSS call references ?	9
Operate as originating end if other side cannot ?	<input checked="" type="checkbox"/>
Operate as terminating end if other side cannot ?	<input checked="" type="checkbox"/>
Delay in seconds after transfer before a Route Optimisation/Path Replacement proposal can be sent	30
Delay in seconds after a Route Optimisation/Path Replacement rejection before a new proposal can be sent	60
Remove call identifier from DA in route optimisation call setup ?	<input checked="" type="checkbox"/>
Raw configuration options	
Options ?	
Apply	Cancel

Enter the remaining values and click on the **Apply** button.

After returning to the **Editing** page, click on the **Apply** button.

applianX IP Gateway

Edit Configurations > Trunk Overview > Edit Trunk

Status

- Overview
- Alarms
- Calls
- Call Log
- Trunk Status

System Configuration

- Global Configuration
- Networking
- Setup Wizard
- SIP Credentials

Gateway Configuration

- Alias Registrar
- DDI Barring
- Edit Configurations**
- Interoperability
- Class Mappings

Diagnostics

- Remote Logging
- Network Diagnostics
- Watchdog Status
- Restart
- Diagnostic Log
- Endpoint Status
- About
- Hardware

Account

- Log Out
- Change Password

Editing: Avaya SIP-DPNSS Test

Apply **Cancel**

General settings

Trunk name: Avaya DPNSS Trunk

Trunk description: Trunk to Avaya CS1000

Open inward speech path before answer: ☒

Routing group: TDM trunks

Block trunk from call activity: No

Outgoing timeslot allocation strategy: Highest available

Premium digit count: 0

Interdigit timeout (milliseconds): 3000

Interdigit timeout for actual calls (milliseconds): 1000

Send sending complete on outgoing calls: ☒

Send overlap digits on outgoing calls: ☒

Response to unrouteable incoming calls: Release

SNMP configuration

Enable SNMP traps: ☒

Protocol configuration

Protocol: DPNSS **Edit** **Change**

7.4. Configure SIP Trunk

To configure the SIP trunk, click on the **Edit** button.

applianX IP Gateway

Edit Configurations > Trunk Overview

Editing: Avaya SIP-DPNSS Test

General **Trunks** **Endpoints** **Groups** **Routes** **Clocking** **SIP** **Codecs** **Survivability** **Test**

SIP trunks

Name	Description	Type	Group	
Trunk 5		SIP	No group	Edit

TDM trunks

Name	Description	Type	Group	
Avaya DPNSS Trunk	Trunk to Avaya G430	TDM(DPNSS)	TDM trunks	Edit
Trunk 2		TDM(DPNSS)	TDM trunks	Edit
Trunk 3		TDM(DPNSS)	TDM trunks	Edit
Trunk 4		TDM(DPNSS)	TDM trunks	Edit

Save Changes **Save and Return** **Cancel Changes**

Enter a descriptive name in the **Trunk Name** field (i.e., Avaya SIP Trunk) and in the **Trunk description** field enter a description (i.e., SIP Trunk to Avaya SM). Configure the remaining fields as shown in the following screen shot. Click on the **Apply** button to save the changes.

7.5. Configure Endpoints

The ApplianX requires information relating to Session Manager so as to communicate with Communication Manager. After clicking on the **Endpoints** tab, click on the icon for **Proxy** as shown in the screen shot below.

Enter a descriptive name in the **Name** field (i.e., Avaya Session Manager) and in the **Description** field enter a description (i.e., Avaya Session Manager Proxy). Configure the following in the remaining fields:

- **Routing Group** Select **Proxy group** from the dropdown box
- **Endpoint address** Enter the IP address of the Session Manager (this is the same IP address as configured in **Section 5.1**)
- **UDP port** Enter **5060**
- **TCP port** Enter **5060**

Configure the remaining fields as shown in the following screen shot.

The screenshot displays the Avaya Session Manager configuration interface. The left sidebar contains a navigation menu with sections: System Configuration, Gateway Configuration, Diagnostics, and Account. The main content area is divided into two tabs: General and Endpoint Options. The General tab is active, showing fields for Name (Avaya Session Manager), Description (Session Manager Proxy), and Routing group (Proxy group). The Endpoint Options tab is also visible, showing fields for Endpoint address (10.10.60.14), UDP port (5060), and TCP port (5060). Below these fields are several checkboxes for monitoring and trust settings, all of which are checked. The bottom of the interface shows the Registration section with a checkbox for 'Register a user name with the endpoint'.

Continuation....

After configuring the remaining fields, click on the **Apply** button on the top of the screen (not shown) to save the changes.



The screenshot shows the 'T.38 Fax Gateway Configuration' window. It contains the following fields and values:

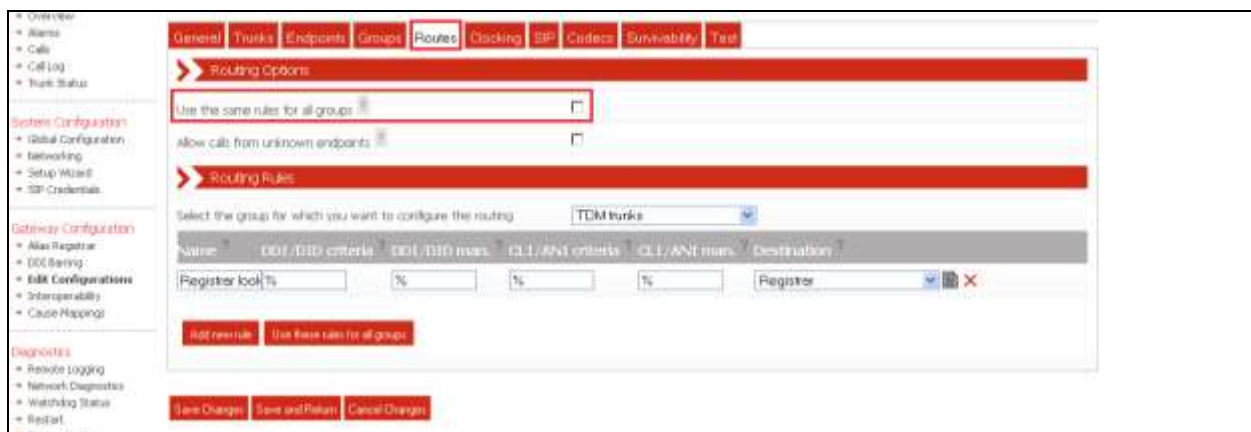
Field	Value
Allow T.38 on this endpoint	<input checked="" type="checkbox"/>
Allow EDR negotiation for this endpoint	<input checked="" type="checkbox"/>
Allow V.17 Modem to be negotiated for this endpoint	<input checked="" type="checkbox"/>
Redundancy level	2
Re-INVITE delay	500

7.6. Configure Groups

During compliance testing no group configuration was required as only one TDM trunk was configured. If multiple TDM trunks are required please refer to the Aculab documentation (see **Section 10**).

7.7. Configure Routes

To configure the DPNSS Route, click on the **Routes** tab and uncheck **Use the same rules for all groups** the check box.



The screenshot shows the 'Routes' configuration screen. The 'Routes' tab is selected. The 'Routing Options' section contains the following fields and values:

Field	Value
Use the same rules for all groups	<input type="checkbox"/>
Allow calls from unknown endpoints	<input type="checkbox"/>

The 'Routing Rules' section contains the following fields and values:

Field	Value
Select the group for which you want to configure the routing	TDM trunks
Name	DDI/DDO criteria
DDI/DDO criteria	DDI/DDO mask
DDI/DDO mask	DDI/ANI criteria
DDI/ANI criteria	DDI/ANI mask
DDI/ANI mask	Destination
Register look	%
Register	%

Buttons at the bottom: **Save Changes**, **Save and Publish**, **Cancel Changes**.

7.7.1. Configure DPNSS Route

- Select **TDM trunks** from the **Select the group for which you want to configure the routing** dropdown box
- **Name** Enter a descriptive name (i.e., toSIP)
- **Destination** Select **Proxy group** from the dropdown box

Click on the **Save Changes** button.

The screenshot shows the 'ApplianX IP Gateway' web interface. The main heading is 'Editing: Avaya SIP-DPNSS Test'. Below this, there are tabs for 'General', 'Trunks', 'Endpoints', 'Groups', 'Routes', 'Clocking', 'SIP', 'Codecs', 'Survivability', and 'Test'. The 'Routes' tab is selected. The 'Routing Options' section has two checkboxes: 'Use the same rules for all groups' (unchecked) and 'Allow calls from unknown endpoints' (checked). The 'Routing Rules' section has a dropdown menu 'Select the group for which you want to configure the routing' with 'TDM trunks' selected. Below this is a table with columns: 'Name', 'DDI/DID criteria', 'DDI/DID man.', 'CLI/ANI criteria', 'CLI/ANI man.', and 'Destination'. The first row has 'ToSIP' in the 'Name' column, and 'Proxy Group' in the 'Destination' column. At the bottom, there are buttons for 'Add new rule', 'Use these rules for all groups', 'Save Changes', 'Save and Return', 'Cancel Changes', and 'Restart'.

7.7.2. Configure SIP Route

- Select **Proxy group** from the **Select the group for which you want to configure the routing** dropdown box
- Click on the **Add new rule** button
- **Name** Enter a descriptive name (i.e., toDPNSS)
- **Destination** Select **TDM trunks** from the dropdown box

Click on the **Save Changes** button.

The screenshot shows the 'ApplianceX IP Gateway' web interface. The main title is 'Editing: Avaya SIP-DPNSS Test'. Below the title are tabs for 'General', 'Trunks', 'Endpoints', 'Groups', 'Routes', 'Clocking', 'SIP', 'Codecs', 'Survivability', and 'Test'. The 'Routes' tab is selected. Under 'Routing Options', there are two checkboxes: 'Use the same rules for all groups' (unchecked) and 'Allow calls from unknown endpoints' (checked). Under 'Routing Rules', there is a dropdown menu 'Select the group for which you want to configure the routing' with 'Proxy Group' selected. Below this is a table with columns: 'Name', 'DDI/DID criteria', 'DDI/DID mask', 'CLI/ANI criteria', 'CLI/ANI mask', and 'Destination'. A rule is listed with 'Name' 'toDPNSS', 'DDI/DID criteria' '%', 'DDI/DID mask' '%', 'CLI/ANI criteria' '%', 'CLI/ANI mask' '%', and 'Destination' 'TDM trunks'. At the bottom are buttons for 'Add new rule', 'Use these rules for all groups', 'Save Changes', 'Save and Return', and 'Cancel Changes'.

7.8. Configure Clocking

During compliance testing clocking was provided by the Avaya DPNSS trunk. To configure clocking, click on the **Clocking** tab and move the **DPNSS Trunk** to the **Selected clock sources** frame using the arrow buttons. Click on the **Save Changes** button.

The screenshot shows the 'Applianx IP Gateway' web interface. The breadcrumb trail is 'Edit Configurations > Clocking'. The left sidebar contains a tree view with sections: Status (Overview, Alarms, Calls, Call Log, Trunk Status), System Configuration (Global Configuration, Networking, Setup Wizard, SIP Credentials), Gateway Configuration (Alias Registrar, DDI Barring, Edit Configurations, Interoperability, Cause Mappings), and Diagnostics (Remote Logging, Network Diagnostics, Watchdog Status, Restart, Diagnostic Log, Endpoint Status, About, Hardware). The main content area is titled 'Editing: Avaya SIP-DPNSS Test' and has tabs for General, Trunks, Endpoints, Groups, Routes, Clocking (selected), SIP, Codecs, Survivability, and Test. The 'Clocking' tab is active, showing two columns: 'Available clock sources' and 'Selected clock sources'. The 'Available' column lists 'Trunk 4', 'Trunk 2', and 'Trunk 3'. The 'Selected' column contains 'Avaya DPNSS Trunk'. Between the columns are four red arrow buttons: '>', '>>', '<', and '<<'. At the bottom of the main area are 'Move up' and 'Move down' buttons. A checkbox 'Fall back to local clock' is checked. At the very bottom are three buttons: 'Save Changes', 'Save and Return', and 'Cancel Changes'.

7.9. Configure SIP

To configure the SIP settings click on the **SIP** tab and enter all the information as shown in the screen shot below. **TCP** or **UDP** can be selected as both are supported in this configuration.

	General	Trunks	Endpoints	Groups	Routes	Clocking	SIP	Codecs	Survivability	Test
System Configuration <ul style="list-style-type: none">→ Alarms→ Calls→ Call Log→ Trunk Status System Configuration <ul style="list-style-type: none">→ Global Configuration→ Networking→ Setup Wizard→ SIP Credentials Gateway Configuration <ul style="list-style-type: none">→ Alias Registrar→ DDI Barring→ Edit Configurations→ Interoperability→ Cause Mappings Diagnostics <ul style="list-style-type: none">→ Remote Logging→ Network Diagnostics→ Watchdog Status→ Restart→ Diagnostic Log→ Endpoint Status→ About→ Hardware Account <ul style="list-style-type: none">→ Log Out→ Change Password	Transport for outgoing calls									
	Transport protocol						TCP ▼			
							UDP			
							TCP			
	DTMF over IP send method ?						RFC2833 encoded RTP ▼			
	Tone duration of regenerated DTMF ?						250			
	Interdigit duration of regenerated DTMF ?						250			
	Support comfort noise ?						<input checked="" type="checkbox"/>			
	Send 183 for Ringing ?						<input checked="" type="checkbox"/>			
	Discontinuous Transmission (DTX) ?						Enabled - With Comfort Noise ▼			
Enable Packet Loss Concealment (PLC) ?						<input checked="" type="checkbox"/>				
Enable RTCP ?						<input type="checkbox"/>				
Use 'sendonly' for Hold						<input checked="" type="radio"/>				
Use 'inactive' for Hold						<input type="radio"/>				
Use 'recvonly' for Hold						<input type="radio"/>				
Bridge media streams ?						<input type="checkbox"/>				
Jitter Buffer										

Continuation....

After configuring the remaining fields, click on the **Save Changes** button to save the changes.

The screenshot displays a configuration window with a sidebar on the left containing a tree view with categories like System Configuration, Outcomes Configuration, and Diagnostics. The main area has a top navigation bar with tabs: General, Trunks, Endpoints, Groups, Routes, Clocking, SIP, Codecs, Survivability, and Test. The 'SIP' tab is active, showing several expandable sections: 'Jitter Buffer' (Manual jitter buffer configuration), 'Listening ports' (UDP listen port: 5060, TCP listen port: 5060), 'Endpoint monitoring' (Polling interval: 60), 'Message Waiting Supplementary Service Support' (Accept and Send uncollected message summary: checked), 'Call Diversion Supplementary Service Support' (Call Diversion Enabled, History Info Method Preferred, Divert as proxy, Divert unmatched to outgoing group, Send Diverted Address: all checked), and 'Custom messages conveying non-SIP features' (Exchange transfer information, Exchange Route Optimisation/Path Replacement information, CBWF/CBAMU Enabled: all checked). At the bottom are buttons for 'Save Changes', 'Save and Return', and 'Cancel Changes'.

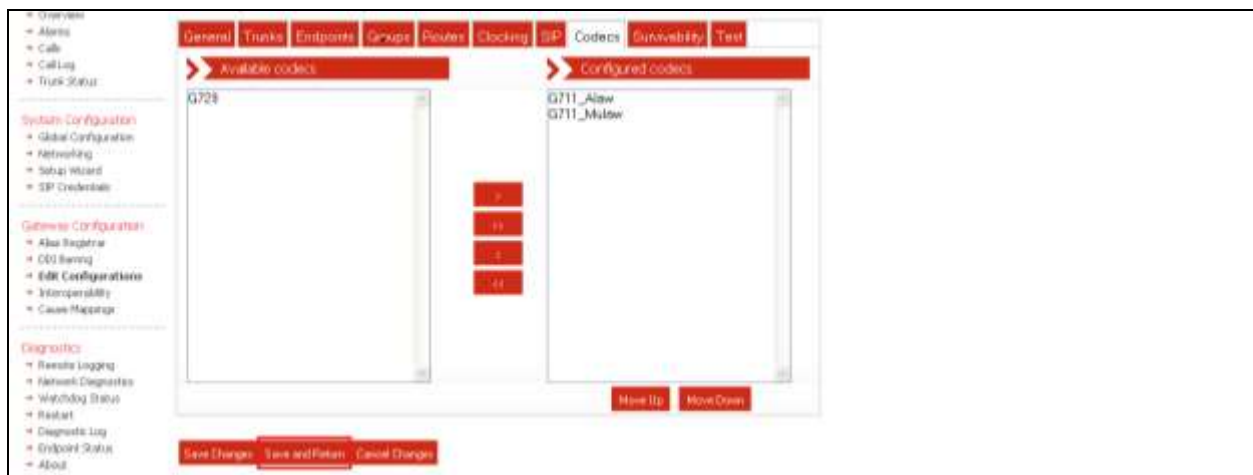
7.10. Configure Codecs

During compliance testing the codec settings were left as default. The screen shot below shows the configured codecs.

The screenshot shows the 'Codecs' tab in the SIP configuration window. It features two list boxes: 'Available codecs' containing 'G729' and 'Configured codecs' containing 'G711_Alaw' and 'G711_Mulaw'. Between the lists are four buttons: '+', '-', '+', and '-'. At the bottom right of the lists are 'Move Up' and 'Move Down' buttons. The same 'Save Changes', 'Save and Return', and 'Cancel Changes' buttons are at the bottom of the window.

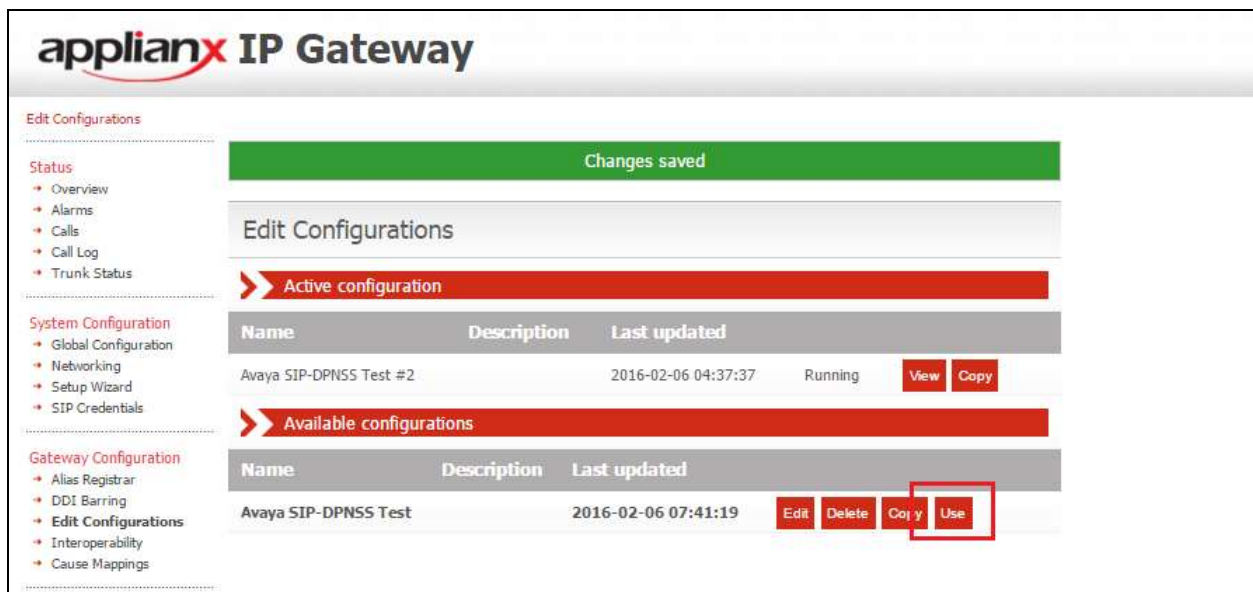
7.11. Save Configuration

Once all the configuration changes have been made, click on the **Save and Return** button.



7.12. Use Configuration

Once all the configurations have been made and saved, click on the **Use** button for this configuration (Avaya SIP-DPNSS Test) to apply them to the ApplianX.



Click on the **Yes** button to confirm.

The screenshot shows the 'Applianx IP Gateway' web interface. On the left, there is a navigation menu with two main sections: 'Status' (containing Overview, Alarms, Calls, Call Log, and Trunk Status) and 'System Configuration' (containing Global Configuration, Networking, Setup Wizard, and SIP Credentials). The 'Status' section is currently selected. In the center, a dialog box titled 'Question' asks, 'Are you sure you want to use the configuration Avaya SIP-DPNSS Test?'. At the bottom of the dialog, there are two buttons: 'Yes' (highlighted with a red box) and 'No'.

Once the configuration is active, the web page should update to something similar to the screen below.

The screenshot shows the 'Edit Configurations' page in the 'Applianx IP Gateway' web interface. The left navigation menu is the same as in the previous screenshot, but the 'System Configuration' section is now selected. The main content area has a title 'Edit Configurations' and a red bar with a right-pointing arrow and the text 'Active configuration'. Below this is a table with three columns: 'Name', 'Description', and 'Last updated'. The table contains one row for the 'Avaya SIP-DPNSS Test' configuration, which is in a 'Running' state. To the right of the table, there are 'View' and 'Copy' buttons.

Name	Description	Last updated
Avaya SIP-DPNSS Test		2016-02-06 07:41:19

8. Verification Steps

This section provides the tests that can be performed to verify correct configuration of the Avaya and ApplianX solution.

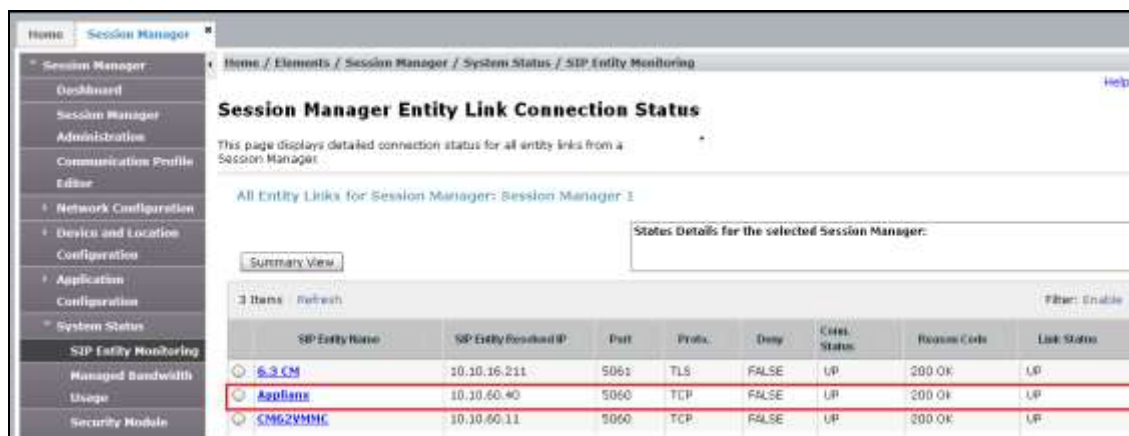
8.1. Verify the SIP Entity Link status for the ApplianX IP Gateway

From System Manager select **Session Manager** from under the **Elements** column (not shown). When the **Session Manager** tab opens select **System Status** followed by **SIP Entity Monitoring**, then click on **Session Manager**.



Name	Type	Down	Partially Up	Up	Not Monitored	Copy	Total
Session Manager 1	Core	0	0	3	0	0	3

When the **Session Manager Entity Link Connection Status** window opens, observe the **Conn Status** and **Link Status** and ensure that they are both showing as **up** for the **ApplianX** SIP Entity.



SIP Entity Name	SIP Entity Resolved IP	Port	Proto	Desc	Conn. Status	Reason Code	Link Status
6.3 CM	10.10.16.211	5061	TLS	FALSE	UP	200 OK	UP
ApplianX	10.10.60.40	5060	TCP	FALSE	UP	200 OK	UP
CM62VMHC	10.10.60.11	5060	TCP	FALSE	UP	200 OK	UP

8.2. Verify calls via the ApplianX IP Gateway

1. Make a call to the DPNSS PBX from the CS1000. Ensure the call is connected and there is two-way speech.
2. Make a call to the CS1000 from the DPNSS PBX. Ensure the call is connected and there is two-way speech.

9. Conclusion

These Application Notes describe the configuration steps required for an Aculab ApplianX IP Gateway to enable an Avaya Communication Server 1000E using a SIP trunk to interoperate with a Digital Private Network Signalling trunk. All test cases have passed and met the objectives outlined in **Section 2.2**.

10. Additional References

This section references the Avaya and Aculab documentation that is relevant to these Application Notes.

Product documentation for Avaya products may be found at:

<http://support.avaya.com>

[1] Software Input Reference Administration Avaya Communication Server 1000, Release 7.6; Document No. NN43001-611_05.02

[2] Administering Avaya Aura® Session Manager, Release 7.0, August 2015

[3] Administering Avaya Aura® System Manager, Release 7.0, August, 2015

Product Documentation for ApplianX IP Gateway can be at the following location:

<http://www.aculab.com/documents/>

Appendix 1

Sample CS1000 Route for DPNSS Trunk configuration

```
TYPE RDB
CUST 00
ROUT 42
DES DPNSS
TKTP IDA
NPID_TBL_NUM 0
SIGL DPN
CNVT NO
RCLS EXT
VTRK NO
NODE
DTRK NO
  INAC NO
  SPN NO
DSEL VOD
CNDP UKWN
AUTO NO
ICOG IAO
SRCH RRB
TRMB YES
STEP
ACOD 42
TARG 01
CLEN 1
BILN NO
INST
TIMR EOD 13952
  RMA 5120
  SRM 32640
  RAS 13952
  NRAG 30
  VSS 0
  VGD 6
DRNG NO
CDR NO
NATL YES
CFWR NO
IDOP NO
VRAT NO
MUS NO
PANS YES
```

RACD NO
FRL 0 0
FRL 1 0
FRL 2 0
FRL 3 0
FRL 4 0
FRL 5 0
FRL 6 0
FRL 7 0
OHQ NO
TTBL 0
ACNI NO
PLEV 2
ALRM NO
ART 0
SGRP 0
CCBA NO
ARDN NO
CTBL 0
AACR NO

DDSL (D Channel for DPNSS)

DDSL 42
S2 1
SIGL DA
DDCS 042
PRIV YES
SIDE BNT
MWIF STD
L2_RST YES
SAT NO
ALRM TBF 05(S) 00(H) 01
 FAE 02(S) 01(H) 04
 HER 01(M) 01(H) 10
 TSF 00(S) 00(H) 00
 AIS 01(M) 01(H) 04
 LOI 00(S) 00(H) 00
 DAI 01(M) 01(H) 05
CNTR CRT 120
 TMT 50
 SCT 20
 NMT 100
 MPT 2048
 OTH 5
 LDT 32

DPNSS Real Channel

DES DPNSS
TN 042 01 VIRTUAL
TYPE RDC
CUST 0
NCOS 0
RTMB 42 1
PRIO XHP
NITE
TGAR 1
SIGL DPN
AST NO
IAPG 0
CLS UNR CND ECD WTA APN THFD SPCD
DDSL 42
AACR NO
DATE NO DATE

DPNSS Virtual Channel

DES V_CHAN
TN 042 01 VIRTUAL
TYPE VDC
CUST 0
NCOS 0
RTMB 42 1
PRIO XHP
NITE
TGAR 1
SIGL DPN
AST NO
IAPG 0
DDSL 42
AACR NO
DATE NO DATE

Appendix 2

Sample SIP Information on CS1000

D Channel

ADAN DCH 1
CTYP DCIP
DES SIPL
USR ISLD
ISLM 4000
SSRC 3700
OTBF 32
NASA NO
IFC SL1
CNEG 1
RLS ID 25
RCAP ND2
MBGA NO
H323
OVLN NO
OVLS NO

Route Data Block

TYPE RDB
CUST 00
ROUT 22
DES SIPTRK
TKTP TIE
M911P NO
ESN NO
RPA NO
CNVT NO
SAT NO
RCLS EXT
VTRK YES
ZONE 00066
PCID SIP
CRID YES
SBWM NO
NODE 111
DTRK NO

ISDN YES
MODE ISLD
DCH 1
IFC SL1
PNI 00001
NCNA YES
NCRD YES
TRO YES
FALT NO
CTYP UKWN
INAC NO
ISAR NO
DAPC NO
MBXR NO
MBXOT NPA
MBXT 0
PTYP ATT
CNDP UKWN
AUTO NO
DNIS YES
NDGT 4
DDLY NO
DCDR YES
ICOG IAO
SRCH LIN
TRMB YES
STEP
ACOD 8022
TCPP NO
PII NO
AUXP NO
TARG
CLEN 1
BILN NO
OABS
INST
IDC YES
DCNO 0
NDNO 0 *
DNAM NO
ANTK
SIGO STD
STYP SDAT
MFC NO
ICIS YES

PAGE 002

OGIS YES

PTUT 0

TIMR ICF 1920

OGF 1920

EOD 13952

LCT 256

DSI 34944

NRD 10112

DDL 70

ODT 4096

RGV 640

GTO 896

GTI 896

SFB 3

PRPS 800

NBS 2048

NBL 4096

IENB 5

TFD 0

RTD 12

VSS 0

VGD 6

EESD 1024

SST 5 0

DTD NO

SCDT NO

2 DT NO

NEDC ORG

FEDC ORG

CPDC NO

DLTN NO

HOLD 02 02 40

SEIZ 02 02

SVFL 02 02

DRNG NO

CDR YES

INC YES

LAST YES

QREC YES

OAL YES

AIA YES

OAN YES

OPD NO
NDP EXC 0
NATL YES
SSL
CFWR NO
IDOP NO
VRAT NO
MUS NO
PANS YES
MANO NO
FRL 0 0
FRL 1 0
FRL 2 0
FRL 3 0
FRL 4 0
FRL 5 0
FRL 6 0
FRL 7 0
OHQ NO

PAGE 003

OHQT 00
CBQ NO
AUTH NO
TDET NO
TTBL 0
ATAN NO
OHTD NO
PLEV 2
OPR NO
ALRM NO
ART 0
PECL NO
DCTI 0
TIDY 8022 22
ATRR NO
TRRL NO
SGRP 0
CCBA NO
ARDN NO
CTBL 0
ANIE 0
CAC_CIS 3
AACR NO

SIP Trunk

DES SIPTRK
TN 100 0 03 00 VIRTUAL
TYPE IPTI
CDEN 8D
CUST 0
XTRK VTRK
ZONE 00066
TIMP 600
BIMP 600
AUTO_BIMP NO
NMUS NO
TRK ANLG
NCOS 0
RTMB 22 1
CHID 11
TGAR 0
STRI/STRO IMM IMM
SUPN YES
AST NO
IAPG 0
CLS UNR DIP CND ECD WTA LPR APN THFD XREP SPCD MSBT
P10 NTC MID
TKID
AACR NO
DATE 27 AUG 2013

Routing to 4xxx

RLI 22
ELC NO
ENTR 0
LTER NO
ROUT 22
TOD 0 ON 1 ON 2 ON 3 ON
4 ON 5 ON 6 ON 7 ON
VNS NO
SCNV NO
CNV NO
EXP NO
FRL 0
DMI 0
CTBL 0
ISDM 0
FCI 0
FSNI 0
BNE NO
DORG NO
SBOC NRR
PROU 1
IDBB DBD
IOHQ NO
OHQ NO
CBQ NO

ISET 0
NALT 5
MFRL 0
OVLL 0

DSC 4
FLEN 4
DSP LSC
RRPA NO
RLI 22
CCBA NO
NPA
NXX

Appendix 3

CS1000 Patches installed on SIP PBX

VERSION 4121

RELEASE 7

ISSUE 65 P +

DepList 1: core Issue: 01 (created: 2015-09-30 08:02:03 (est))

IN-SERVICE PEPS

PAT#	CR #	PATCH REF #	NAME	DATE	FILENAME	SPECINS
0000	wi01199336	ISS1:1OF1	p33410_1	19/04/2016	p33410_1.cpl	NO
0001	wi01088055	ISS1:1OF1	p32607_1	19/04/2016	p32607_1.cpl	NO
0002	wi01098433	ISS1:1OF1	p32736_1	19/04/2016	p32736_1.cpl	NO
0003	wi01199608	ISS1:1OF1	p33414_1	19/04/2016	p33414_1.cpl	NO
0004	wi01146254	ISS1:1OF1	p33127_1	19/04/2016	p33127_1.cpl	NO
0005	wi01075149	ISS1:1OF1	p32475_1	19/04/2016	p32475_1.cpl	NO
0006	wi01070585	ISS1:1OF1	p32383_1	19/04/2016	p32383_1.cpl	NO
0007	wi01128512	ISS1:1OF1	p32997_1	19/04/2016	p32997_1.cpl	NO
0008	wi01098783	ISS1:1OF1	p32748_1	19/04/2016	p32748_1.cpl	NO
0009	wi01133960	ISS1:1OF1	p33034_1	19/04/2016	p33034_1.cpl	NO
0010	wi01137694	ISS1:1OF1	p33081_1	19/04/2016	p33081_1.cpl	NO
0011	wi01068011	ISS1:1OF1	p33182_1	19/04/2016	p33182_1.cpl	NO
0012	wi01153896	ISS1:1OF1	p33185_1	19/04/2016	p33185_1.cpl	NO
0013	wi01115369	ISS1:1OF1	p32889_1	19/04/2016	p32889_1.cpl	NO
0014	wi01171418	ISS1:1OF1	p33278_1	19/04/2016	p33278_1.cpl	NO
0015	wi01122174	ISS1:1OF1	p32936_1	19/04/2016	p32936_1.cpl	NO
0016	wi01201882	ISS1:1OF1	p33427_1	19/04/2016	p33427_1.cpl	NO
0017	wi01079444	ISS1:1OF1	p32564_1	19/04/2016	p32564_1.cpl	NO
0018	wi01089519	ISS1:1OF1	p32665_1	19/04/2016	p32665_1.cpl	NO
0019	wi01065248	ISS1:1OF1	p32412_1	19/04/2016	p32412_1.cpl	NO
0020	wi01052968	ISS1:1OF1	p32540_1	19/04/2016	p32540_1.cpl	NO
0021	wi01144609	ISS1:1OF1	p33119_1	19/04/2016	p33119_1.cpl	NO
0022	wi01132244	ISS1:1OF1	p33041_1	19/04/2016	p33041_1.cpl	NO
0023	wi01045058	ISS1:1OF1	p32214_1	19/04/2016	p32214_1.cpl	NO
0024	wi01053920	ISS1:1OF1	p32303_1	19/04/2016	p32303_1.cpl	NO
0025	wi01169714	ISS1:1OF1	p33335_1	19/04/2016	p33335_1.cpl	NO
0026	wi01151870	ISS1:1OF1	p33162_1	19/04/2016	p33162_1.cpl	YES
0027	wi01099300	iss1:1of1	p32704_1	19/04/2016	p32704_1.cpl	NO
0028	wi01171467	ISS1:1OF1	p33270_1	19/04/2016	p33270_1.cpl	NO
0029	wi01207693	ISS1:1OF1	p33452_1	19/04/2016	p33452_1.cpl	NO
0030	wi01120705	ISS1:1OF1	p32930_1	19/04/2016	p32930_1.cpl	NO
0031	wi00959458	ISS1:1OF1	p31551_1	19/04/2016	p31551_1.cpl	NO
0032	wi01197054	ISS1:1OF1	p33397_1	19/04/2016	p33397_1.cpl	NO
0033	wi01065118	ISS1:1OF1	p32397_1	19/04/2016	p32397_1.cpl	NO
0034	wi01181174	ISS1:1OF1	p33316_1	19/04/2016	p33316_1.cpl	NO

0035	wi01053597	ISS1:1OF1	p32304_1	19/04/2016	p32304_1.cpl	NO
0036	wi01071996	ISS1:1OF1	p32461_1	19/04/2016	p32461_1.cpl	NO
0037	wi01127527	ISS1:1OF1	p32988_1	19/04/2016	p32988_1.cpl	YES
0038	wi01008182	ISS1:1OF1	p33277_1	19/04/2016	p33277_1.cpl	NO
0039	wi01096842	ISS1:1OF1	p32731_1	19/04/2016	p32731_1.cpl	NO
0040	wi01068922	ISS1:1OF1	p32454_1	19/04/2016	p32454_1.cpl	NO
0041	wi01182880	ISS1:1OF1	p33328_1	19/04/2016	p33328_1.cpl	NO
0042	wi01138136	ISS1:1OF1	p33191_1	19/04/2016	p33191_1.cpl	NO
0043	CS1000-6738	ISS1:1OF1	p33495_1	19/04/2016	p33495_1.cpl	NO
0044	wi01156086	ISS1:1OF1	p33269_1	19/04/2016	p33269_1.cpl	NO
0045	wi01045144	ISS1:1OF1	p33202_1	19/04/2016	p33202_1.cpl	NO
0046	wi01120458	ISS1:1OF1	p32929_1	19/04/2016	p32929_1.cpl	NO
0047	wi01078721	ISS1:1OF1	p32553_1	19/04/2016	p32553_1.cpl	NO
0048	wi01113374	ISS1:1OF1	p32874_1	19/04/2016	p32874_1.cpl	NO
0049	wi01059388	iss1:1of1	p32628_1	19/04/2016	p32628_1.cpl	NO
0050	wi01065922	ISS1:1OF1	p32516_1	19/04/2016	p32516_1.cpl	NO
0051	wi01205975	ISS1:1OF1	p33447_1	19/04/2016	p33447_1.cpl	NO
0052	wi01142100	ISS1:1OF1	p33090_1	19/04/2016	p33090_1.cpl	NO
0053	wi01153039	ISS1:1OF1	p17588_1	19/04/2016	p17588_1.cpl	NO
0054	WI01077073	ISS1:1OF1	p32534_1	19/04/2016	p32534_1.cpl	NO
0055	wi01215810	ISS1:1OF1	p33494_1	19/04/2016	p33494_1.cpl	NO
0056	wi01066991	ISS1:1OF1	p32449_1	19/04/2016	p32449_1.cpl	NO
0057	wi01106658	ISS1:1OF1	p32812_1	19/04/2016	p32812_1.cpl	NO
0058	wi01068851	ISS1:1OF1	p32439_1	19/04/2016	p32439_1.cpl	NO
0059	wi01053314	ISS1:1OF1	p32555_1	19/04/2016	p32555_1.cpl	NO
0060	wi01123389	ISS1:1OF1	p33045_1	19/04/2016	p33045_1.cpl	NO
0061	wi01087528	ISS1:1OF1	p32700_1	19/04/2016	p32700_1.cpl	NO
0062	wi01165881	ISS1:1OF1	p33239_1	19/04/2016	p33239_1.cpl	NO
0063	wi01065125	ISS1:1OF1	p32416_1	19/04/2016	p32416_1.cpl	NO
0064	wi01119086	ISS1:1OF1	p32917_1	19/04/2016	p32917_1.cpl	NO
0065	wi01109251	ISS1:1OF1	p32827_1	19/04/2016	p32827_1.cpl	NO
0066	wi01173768	ISS1:1OF1	p33288_1	19/04/2016	p33288_1.cpl	NO
0067	wi01180594	ISS1:1OF1	p33312_1	19/04/2016	p33312_1.cpl	NO
0068	wi01126552	ISS1:1OF1	p32975_1	19/04/2016	p32975_1.cpl	NO
0069	CS1000-6979	ISS1:1OF1	p33548_1	19/04/2016	p33548_1.cpl	NO
0070	wi01204623	ISS1:1OF1	p33444_1	19/04/2016	p33444_1.cpl	NO
0071	wi01099724	ISS1:1OF1	p32742_1	19/04/2016	p32742_1.cpl	YES
0072	wi01118819	ISS1:1OF1	p32954_1	19/04/2016	p32954_1.cpl	NO
0073	wi01094305	ISS1:1OF1	p32640_1	19/04/2016	p32640_1.cpl	NO
0074	wi01188722	ISS1:1OF1	p33365_1	19/04/2016	p33365_1.cpl	NO
0075	wi01134602	ISS1:1OF1	p32398_1	19/04/2016	p32398_1.cpl	NO
0076	wi01101876	ISS1:1OF1	p32858_1	19/04/2016	p32858_1.cpl	NO
0077	wi01142792	ISS1:1OF1	p33099_1	19/04/2016	p33099_1.cpl	NO
0078	CS1000-6911	ISS1:1OF1	p33518_1	19/04/2016	p33518_1.cpl	NO
0079	CS1000-6789	ISS1:1OF1	p33508_1	19/04/2016	p33508_1.cpl	NO
0080	wi01164281	ISS1:1OF1	p33232_1	19/04/2016	p33232_1.cpl	NO

0081	wi01133985	ISS1:1OF1	p33049_1	19/04/2016	p33049_1.cpl	NO
0082	wi01149017	ISS1:1OF1	p33145_1	19/04/2016	p33145_1.cpl	NO
0083	wi01186846	ISS1:1OF1	p33332_1	19/04/2016	p33332_1.cpl	NO
0084	wi01188972	ISS1:1OF1	p33352_1	19/04/2016	p33352_1.cpl	NO
0085	wi01088915	ISS1:1OF1	p32638_1	19/04/2016	p32638_1.cpl	NO
0086	wi01107601	ISS1:1OF1	p32970_1	19/04/2016	p32970_1.cpl	NO
0087	wi01111194	ISS1:1OF1	p32821_1	19/04/2016	p32821_1.cpl	NO
0088	wi01189247	ISS1:1OF1	p33382_1	19/04/2016	p33382_1.cpl	YES
0089	wi01099606	iss1:1of1	p32713_1	19/04/2016	p32713_1.cpl	NO
0090	wi01088775	ISS1:1OF1	p32659_1	19/04/2016	p32659_1.cpl	NO
0091	wi01148697	ISS1:1OF1	p33187_1	19/04/2016	p33187_1.cpl	NO
0092	wi01130348	ISS1:1OF1	p33014_1	19/04/2016	p33014_1.cpl	NO
0093	CS1000-6844	ISS1:1OF1	p33507_1	19/04/2016	p33507_1.cpl	NO
0094	wi01134756	ISS1:1OF1	p33453_1	19/04/2016	p33453_1.cpl	NO
0095	wi01184588	ISS1:1OF1	p33338_1	19/04/2016	p33338_1.cpl	NO
0096	wi01147091	ISS1:1OF1	p33137_1	19/04/2016	p33137_1.cpl	NO
0097	CS1000-6745	ISS1:1OF1	p33492_1	19/04/2016	p33492_1.cpl	YES
0098	wi01087543	ISS1:1OF1	p32662_1	19/04/2016	p32662_1.cpl	NO
0099	wi01166011	ISS1:1OF1	p33235_1	19/04/2016	p33235_1.cpl	NO
0100	wi01035976	ISS1:1OF1	p32173_1	19/04/2016	p32173_1.cpl	NO
0101	wi01146804	ISS1:1OF1	p33132_1	19/04/2016	p33132_1.cpl	NO
0102	wi01153104	ISS1:1OF1	p33174_1	19/04/2016	p33174_1.cpl	NO
0103	wi01092443	ISS1:1OF1	p32676_1	19/04/2016	p32676_1.cpl	NO
0104	wi01136429	ISS1:1OF1	p33037_1	19/04/2016	p33037_1.cpl	NO
0105	wi01113712	ISS1:1OF1	p32877_1	19/04/2016	p32877_1.cpl	NO
0106	wi01150846	ISS1:1OF1	p33157_1	19/04/2016	p33157_1.cpl	NO
0107	CS1000-6956	ISS1:1OF1	p33538_1	19/04/2016	p33538_1.cpl	NO
0108	wi01153844	ISS1:1OF1	p33172_1	19/04/2016	p33172_1.cpl	NO
0109	wi01093071	ISS1:1OF1	p32701_1	19/04/2016	p32701_1.cpl	NO
0110	wi01182050	ISS1:1OF1	p33322_1	19/04/2016	p33322_1.cpl	NO
0111	wi01190506	ISS1:1OF1	p33361_1	19/04/2016	p33361_1.cpl	NO
0112	wi01118714	ISS2:1OF1	p32952_2	19/04/2016	p32952_2.cpl	NO
0113	wi01075538	ISS1:1OF1	p32469_1	19/04/2016	p32469_1.cpl	NO
0114	wi01091447	ISS1:1OF1	p32675_1	19/04/2016	p32675_1.cpl	NO
0115	wi01159931	ISS1:1OF1	p33231_1	19/04/2016	p33231_1.cpl	YES
0116	WI01108562	ISS1:1OF1	p32832_1	19/04/2016	p32832_1.cpl	NO
0117	wi01099810	ISS1:1OF1	p32796_1	19/04/2016	p32796_1.cpl	NO
0118	wi01200095	ISS1:1OF1	p33418_1	19/04/2016	p33418_1.cpl	NO
0119	wi01128596	ISS1:1OF1	p33000_1	19/04/2016	p33000_1.cpl	NO
0120	wi01185642	ISS1:1OF1	p33342_1	19/04/2016	p33342_1.cpl	NO
0121	wi01193201	ISS1:1OF1	p33381_1	19/04/2016	p33381_1.cpl	YES
0122	cs1000-6998	ISS1:1OF1	p33555_1	19/04/2016	p33555_1.cpl	NO
0123	CS1000-6791	ISS1:1OF1	p33501_1	19/04/2016	p33501_1.cpl	YES
0124	wi01191767	ISS1:1OF1	p33368_1	19/04/2016	p33368_1.cpl	NO
0125	wi01144354	ISS1:1OF1	p33117_1	19/04/2016	p33117_1.cpl	NO
0126	wi01121374	ISS1:1OF1	p31107_1	19/04/2016	p31107_1.cpl	NO

0127	wi01185751	ISS1:1OF1	p33409_1	19/04/2016	p33409_1.cpl	YES
0128	WI01169289	ISS1:1OF1	p33257_1	19/04/2016	p33257_1.cpl	NO
0129	wi01100508	ISS1:1OF1	p32761_1	19/04/2016	p32761_1.cpl	NO
0130	wi01189516	ISS1:1OF1	p33373_1	19/04/2016	p33373_1.cpl	NO
0131	wi01101969	ISS1:1OF1	p32726_1	19/04/2016	p32726_1.cpl	NO
0132	wi01102296	ISS1:1OF1	p32780_1	19/04/2016	p32780_1.cpl	NO
0133	wi01136640	ISS1:1OF1	p33052_1	19/04/2016	p33052_1.cpl	NO
0134	wi01097598	ISS1:1OF1	p32797_1	19/04/2016	p32797_1.cpl	NO
0135	wi01132215	ISS1:1OF1	p33084_1	19/04/2016	p33084_1.cpl	NO
0136	wi01094832	iss1:1of1	p32718_1	19/04/2016	p32718_1.cpl	NO
0137	wi01197246	ISS1:1OF1	p33400_1	19/04/2016	p33400_1.cpl	NO
0138	CS1000-6872	ISS1:1OF1	p33520_1	19/04/2016	p33520_1.cpl	NO
0139	wi01147983	ISS1:1OF1	p33141_1	19/04/2016	p33141_1.cpl	NO
0140	wi01060826	ISS1:1OF1	p32379_1	19/04/2016	p32379_1.cpl	NO
0141	wi01077639	ISS1:1OF1	p32883_1	19/04/2016	p32883_1.cpl	NO
0142	wi01085855	ISS1:1OF1	p32658_1	19/04/2016	p32658_1.cpl	NO
0143	wi01053195	ISS1:1OF1	p32297_1	19/04/2016	p32297_1.cpl	NO
0144	wi01174116	ISS1:1OF1	p33287_1	19/04/2016	p33287_1.cpl	NO
0145	wi01095255	ISS1:1OF1	p33027_1	19/04/2016	p33027_1.cpl	NO
0146	wi01203516	ISS1:1OF1	p33438_1	19/04/2016	p33438_1.cpl	NO
0147	wi01094727	ISS1:1OF1	p32848_1	19/04/2016	p32848_1.cpl	NO
0148	wi01151898	ISS1:1OF1	p33175_1	19/04/2016	p33175_1.cpl	NO
0149	wi01173798	ISS1:1OF1	p33285_1	19/04/2016	p33285_1.cpl	NO
0150	wi01080753	ISS1:1OF1	p32518_1	19/04/2016	p32518_1.cpl	NO
0151	wi01125238	ISS1:1OF1	p32971_1	19/04/2016	p32971_1.cpl	NO
0152	wi01110593	ISS1:1OF1	p32849_1	19/04/2016	p32849_1.cpl	NO
0153	wi01119100	ISS1:1OF1	p32925_1	19/04/2016	p32925_1.cpl	NO
0154	CS1000-6978	ISS1:1OF1	p33551_1	19/04/2016	p33551_1.cpl	YES
0155	wi01156999	ISS1:1OF1	p33180_1	19/04/2016	p33180_1.cpl	NO
0156	wi01141625	ISS1:1OF1	p33324_1	19/04/2016	p33324_1.cpl	NO
0157	wi01102093	ISS1:1OF1	p32760_1	19/04/2016	p32760_1.cpl	NO
0158	wi01132883	ISS1:1OF1	p33030_1	19/04/2016	p33030_1.cpl	NO
0159	wi01070279	ISS1:1OF1	p32262_1	19/04/2016	p32262_1.cpl	NO
0160	wi01102475	ISS1:1OF1	p32782_1	19/04/2016	p32782_1.cpl	YES
0161	cs1000-6924	ISS1:1OF1	p33523_1	19/04/2016	p33523_1.cpl	NO
0162	wi01181423	ISS1:1OF1	p33318_1	19/04/2016	p33318_1.cpl	NO
0163	wi01150083	ISS1:1OF1	p33152_1	19/04/2016	p33152_1.cpl	NO
0164	wi01181854	ISS1:1OF1	p33323_1	19/04/2016	p33323_1.cpl	NO
0165	wi00897254	ISS1:1OF1	p31127_1	19/04/2016	p31127_1.cpl	NO
0166	wi01083036	ISS1:1OF1	p32571_1	19/04/2016	p32571_1.cpl	NO
0167	wi01070468	iss1:1of1	p32418_1	19/04/2016	p32418_1.cpl	NO
0168	wi01181197	ISS1:1OF1	p33317_1	19/04/2016	p33317_1.cpl	NO
0169	wi01063864	ISS1:1OF1	p32410_1	19/04/2016	p32410_1.cpl	YES
0170	wi01075355	ISS1:1OF1	p32594_1	19/04/2016	p32594_1.cpl	NO
0171	wi01127447	ISS1:1OF1	p32990_1	19/04/2016	p32990_1.cpl	NO
0172	wi01133106	ISS1:1OF1	p33032_1	19/04/2016	p33032_1.cpl	NO

0173	wi01212017	ISS1:1OF1	p33482_1	19/04/2016	p33482_1.cpl	YES
0174	wi01099292	ISS1:1OF1	p32886_1	19/04/2016	p32886_1.cpl	NO
0175	wi01167427	ISS1:1OF1	p33264_1	19/04/2016	p33264_1.cpl	NO
0176	wi01075540	ISS1:1OF1	p32492_1	19/04/2016	p32492_1.cpl	NO
0177	wi01072027	ISS1:1OF1	p32689_1	19/04/2016	p32689_1.cpl	NO
0178	wi01114038	ISS1:1OF1	p32869_1	19/04/2016	p32869_1.cpl	NO
0179	CS1000-6933	ISS1:1OF1	p33529_1	19/04/2016	p33529_1.cpl	NO
0180	wi01212527	ISS1:1OF1	p33481_1	19/04/2016	p33481_1.cpl	YES
0181	wi01181578	ISS1:1OF1	p33321_1	19/04/2016	p33321_1.cpl	NO
0182	wi01092300	ISS1:1OF1	p32692_1	19/04/2016	p32692_1.cpl	NO
0183	wi01063263	ISS1:1OF1	p32573_1	19/04/2016	p32573_1.cpl	NO
0184	wi01102091	ISS1:1OF1	p32744_1	19/04/2016	p32744_1.cpl	YES
0185	wi01104473	ISS1:1OF1	p32818_1	19/04/2016	p32818_1.cpl	NO
0186	wi01053950	ISS1:1OF1	p32654_1	19/04/2016	p32654_1.cpl	YES
0187	wi01139981	ISS1:1OF1	p33083_1	19/04/2016	p33083_1.cpl	NO
0188	wi01058378	ISS1:1OF1	p32344_1	19/04/2016	p32344_1.cpl	NO
0189	wi01070580	ISS1:1OF1	p32380_1	19/04/2016	p32380_1.cpl	NO
0190	wi01187059	ISS1:1OF1	p33346_1	19/04/2016	p33346_1.cpl	NO
0191	wi01043367	ISS1:1OF1	p32232_1	19/04/2016	p32232_1.cpl	NO
0192	wi01145002	ISS1:1OF1	p33186_1	19/04/2016	p33186_1.cpl	NO
0193	wi01175294	ISS1:1OF1	p33290_1	19/04/2016	p33290_1.cpl	NO
0194	wi01041453	ISS1:1OF1	p32587_1	19/04/2016	p32587_1.cpl	NO
0195	wi01185441	ISS1:1OF1	p33341_1	19/04/2016	p33341_1.cpl	NO
0196	wi01130815	ISS1:1OF1	p33017_1	19/04/2016	p33017_1.cpl	NO
0197	wi01214452	ISS1:1OF1	p33488_1	19/04/2016	p33488_1.cpl	NO
0198	wi01089807	ISS1:1OF1	p32957_1	19/04/2016	p32957_1.cpl	NO
0199	CS1000-6873	ISS1:1OF1	p33524_1	19/04/2016	p33524_1.cpl	NO
0200	wi01149384	ISS1:1OF1	p33147_1	19/04/2016	p33147_1.cpl	NO
0201	WI01121737	ISS1:1OF1	p32939_1	19/04/2016	p32939_1.cpl	NO
0202	CS1000-6794	ISS1:1OF1	p33539_1	19/04/2016	p33539_1.cpl	NO
0203	wi01208580	ISS1:1OF1	p33461_1	19/04/2016	p33461_1.cpl	NO
0204	wi01083896	ISS1:1OF1	p32937_1	19/04/2016	p32937_1.cpl	NO
0205	wi01210497	ISS1:1OF1	p33468_1	19/04/2016	p33468_1.cpl	YES
0206	wi01178476	ISS1:1OF1	p33305_1	19/04/2016	p33305_1.cpl	NO
0207	wi01039280	ISS1:1OF1	p32423_1	19/04/2016	p32423_1.cpl	NO
0208	wi01081510	ISS1:1OF1	p32582_1	19/04/2016	p32582_1.cpl	NO
0209	wi01088797	ISS1:1OF1	p32844_1	19/04/2016	p32844_1.cpl	NO
0210	wi01098905	ISS1:1OF1	p32556_1	19/04/2016	p32556_1.cpl	NO
0211	wi01146766	ISS1:1OF1	p33131_1	19/04/2016	p33131_1.cpl	NO
0212	wi00937672	ISS1:1OF1	p31276_1	19/04/2016	p31276_1.cpl	NO
0213	wi01170583	ISS1:1OF1	p33261_1	19/04/2016	p33261_1.cpl	NO
0214	wi01057403	ISS1:1OF1	p32591_1	19/04/2016	p32591_1.cpl	NO
0215	wi01132204	ISS1:1OF1	p32501_1	19/04/2016	p32501_1.cpl	NO
0216	wi01112655	ISS1:1OF1	p32870_1	19/04/2016	p32870_1.cpl	NO
0217	wi01195807	ISS1:1OF1	p33470_1	19/04/2016	p33470_1.cpl	NO
0218	wi01201045	ISS1:1OF1	p33424_1	19/04/2016	p33424_1.cpl	YES

0219	wi01058621	ISS1:1OF1	p32339_1	19/04/2016	p32339_1.cpl	NO
0220	wi01185138	ISS1:1OF1	p33411_1	19/04/2016	p33411_1.cpl	NO
0221	wi01025156	ISS1:1OF1	p32136_1	19/04/2016	p32136_1.cpl	NO
0222	wi01127138	ISS1:1OF1	p33304_1	19/04/2016	p33304_1.cpl	NO
0223	wi01070756	ISS1:1OF1	p32444_1	19/04/2016	p32444_1.cpl	NO
0224	wi01132599	ISS1:1OF1	p33025_1	19/04/2016	p33025_1.cpl	NO
0225	wi01056633	ISS1:1OF1	p32322_1	19/04/2016	p32322_1.cpl	NO
0226	wi01060241	ISS1:1OF1	p32381_1	19/04/2016	p32381_1.cpl	NO
0227	wi01134952	ISS1:1OF1	p33039_1	19/04/2016	p33039_1.cpl	NO
0228	wi01132902	ISS1:1OF1	p33028_1	19/04/2016	p33028_1.cpl	NO
0229	wi01201986	ISS1:1OF1	p33433_1	19/04/2016	p33433_1.cpl	NO
0230	wi01071379	ISS1:1OF1	p32522_1	19/04/2016	p32522_1.cpl	NO
0231	cs1000-6845	ISS1:1OF1	p33509_1	19/04/2016	p33509_1.cpl	NO
0232	wi01069441	ISS1:1OF1	p32097_1	19/04/2016	p32097_1.cpl	NO
0233	WI11032038	ISS1:1OF1	p33022_1	19/04/2016	p33022_1.cpl	NO
0234	wi01089355	ISS1:1OF1	p32674_1	19/04/2016	p32674_1.cpl	YES
0235	wi01134354	ISS1:1OF1	p33031_1	19/04/2016	p33031_1.cpl	NO
0236	CS1000-6946	ISS1:1OF1	p33543_1	19/04/2016	p33543_1.cpl	NO
0237	wi01096910	ISS1:1OF1	p32734_1	19/04/2016	p32734_1.cpl	NO
0238	wi01076948	ISS1:1OF1	p32526_1	19/04/2016	p32526_1.cpl	YES
0239	wi01093118	ISS1:1OF1	p32496_1	19/04/2016	p32496_1.cpl	NO
0240	wi01202917	ISS1:1OF1	p33434_1	19/04/2016	p33434_1.cpl	NO
0241	wi01198794	ISS1:1OF1	p33408_1	19/04/2016	p33408_1.cpl	NO
0242	wi01160967	ISS1:1OF1	p33213_1	19/04/2016	p33213_1.cpl	NO
0243	wi01104867	ISS1:1OF1	p32828_1	19/04/2016	p32828_1.cpl	NO
0244	wi01154485	ISS1:1OF1	p33194_1	19/04/2016	p33194_1.cpl	NO
0245	wi01146705	ISS1:1OF1	p33129_1	19/04/2016	p33129_1.cpl	NO
0246	wi01096712	ISS1:1OF1	p32708_1	19/04/2016	p32708_1.cpl	NO
0247	wi01061481	ISS1:1OF1	p32382_1	19/04/2016	p32382_1.cpl	NO
0248	wi01070465	iss1:1of1	p32562_1	19/04/2016	p32562_1.cpl	NO
0249	wi01201395	ISS1:1OF1	p33426_1	19/04/2016	p33426_1.cpl	NO
0250	wi01187443	ISS1:1OF1	p33359_1	19/04/2016	p33359_1.cpl	NO
0251	wi01034307	ISS1:1OF1	p32615_1	19/04/2016	p32615_1.cpl	NO
0252	CS1000-6964	ISS1:1OF1	p33541_1	19/04/2016	p33541_1.cpl	NO
0253	wi01135146	ISS1:1OF1	p33033_1	19/04/2016	p33033_1.cpl	NO
0254	CS1000-6852	ISS1:1OF1	p33517_1	19/04/2016	p33517_1.cpl	NO
0255	wi01195975	ISS1:1OF1	p33394_1	19/04/2016	p33394_1.cpl	NO
0256	wi01108262	ISS1:1OF1	p32865_1	19/04/2016	p32865_1.cpl	YES
0257	wi01104627	ISS1:1OF1	p32819_1	19/04/2016	p32819_1.cpl	NO
0258	wi01204274	ISS1:1OF1	p33451_1	19/04/2016	p33451_1.cpl	NO
0259	wi01115894	ISS1:1OF1	p32910_1	19/04/2016	p32910_1.cpl	NO
0260	wi01129028	ISS1:1OF1	p33016_1	19/04/2016	p33016_1.cpl	NO
0261	wi01096967	ISS1:1OF1	p32735_1	19/04/2016	p32735_1.cpl	NO
0262	wi01177690	ISS1:1OF1	p33320_1	19/04/2016	p33320_1.cpl	YES
0263	wi01060611	ISS1:1OF1	p32809_1	19/04/2016	p32809_1.cpl	NO
0264	wi01163826	ISS1:1OF1	p33229_1	19/04/2016	p33229_1.cpl	NO

0265	wi01182523	ISS1:1OF1	p33327_1	19/04/2016	p33327_1.cpl	NO
0266	CS1000-6732	ISS1:1OF1	p33506_1	19/04/2016	p33506_1.cpl	YES
0267	wi01090535	ISS1:1OF1	p32519_1	19/04/2016	p32519_1.cpl	NO
0268	wi01124074	ISS1:1OF1	p32989_1	19/04/2016	p32989_1.cpl	NO
0269	wi01034961	ISS1:1OF1	p32144_1	19/04/2016	p32144_1.cpl	NO
0270	wi01127874	ISS1:1OF1	p25747_1	19/04/2016	p25747_1.cpl	NO
0271	wi01062607	ISS1:1OF1	p32503_1	19/04/2016	p32503_1.cpl	NO
0272	CS1000-6910	ISS1:1OF1	p33528_1	19/04/2016	p33528_1.cpl	NO
0273	wi01060382	iss1:1of1	p32623_1	19/04/2016	p32623_1.cpl	YES
0274	wi01215563	ISS1:1OF1	p33412_1	19/04/2016	p33412_1.cpl	NO
0275	wi01181456	ISS1:1OF1	p33319_1	19/04/2016	p33319_1.cpl	NO
0276	wi01075359	ISS1:1OF1	p32671_1	19/04/2016	p32671_1.cpl	NO
0277	wi01120406	ISS1:1OF1	p32956_1	19/04/2016	p32956_1.cpl	NO
0278	wi01095462	ISS1:1OF1	p32723_1	19/04/2016	p32723_1.cpl	NO
0279	wi01213334	ISS1:1OF1	p33485_1	19/04/2016	p33485_1.cpl	NO
0280	wi01070473	ISS1:1OF1	p32413_1	19/04/2016	p32413_1.cpl	NO
0281	wi01114695	ISS1:1OF1	p32885_1	19/04/2016	p32885_1.cpl	NO
0282	wi01129098	ISS1:1OF1	p32951_1	19/04/2016	p32951_1.cpl	NO
0283	wi01134799	ISS1:1OF1	p33069_1	19/04/2016	p33069_1.cpl	NO
0284	wi01163048	ISS1:1OF1	p33223_1	19/04/2016	p33223_1.cpl	YES
0285	wi01096718	ISS1:1OF1	p33138_1	19/04/2016	p33138_1.cpl	YES
0286	wi01119312	ISS1:1OF1	p32919_1	19/04/2016	p32919_1.cpl	NO
0287	wi01166065	ISS1:1OF1	p33241_1	19/04/2016	p33241_1.cpl	NO
0288	wi01130836	ISS1:1OF1	p33008_1	19/04/2016	p33008_1.cpl	YES
0289	wi01109345	ISS1:1OF1	p32830_1	19/04/2016	p32830_1.cpl	NO
0290	wi01104410	ISS1:1OF1	p32801_1	19/04/2016	p32801_1.cpl	NO
0291	wi01183783	ISS1:1OF1	p33333_1	19/04/2016	p33333_1.cpl	NO
0292	wi01064599	iss1:1of1	p32580_1	19/04/2016	p32580_1.cpl	NO
0293	wi01124477	ISS1:1OF1	p32963_1	19/04/2016	p32963_1.cpl	NO
0294	wi01072062	ISS1:1OF1	p32776_1	19/04/2016	p32776_1.cpl	NO
0295	wi01118320	ISS1:1OF1	p32753_1	19/04/2016	p32753_1.cpl	NO
0296	wi01126454	ISS1:1OF1	p32973_1	19/04/2016	p32973_1.cpl	NO
0297	wi01154253	ISS1:1OF1	p33206_1	19/04/2016	p33206_1.cpl	NO
0298	wi01146543	ISS1:1OF1	p33097_1	19/04/2016	p33097_1.cpl	NO
0299	wi01021522	ISS1:1OF1	p32863_1	19/04/2016	p32863_1.cpl	NO
0300	CS1000-6786	ISS1:1OF1	p33497_1	19/04/2016	p33497_1.cpl	NO
0301	wi01108828	ISS1:1OF1	p32831_1	19/04/2016	p32831_1.cpl	NO
0302	wi01150771	ISS1:1OF1	p33210_1	19/04/2016	p33210_1.cpl	NO
0303	wi01022598	ISS1:1OF1	p32066_1	19/04/2016	p32066_1.cpl	NO
0304	wi01146289	ISS1:1OF1	p33146_1	19/04/2016	p33146_1.cpl	NO
0305	wi01184272	ISS1:1OF1	p33336_1	19/04/2016	p33336_1.cpl	NO
0306	CS1000-6752	ISS1:1OF1	p33540_1	19/04/2016	p33540_1.cpl	NO
0307	wi01082456	ISS1:1OF1	p32596_1	19/04/2016	p32596_1.cpl	NO
0308	wi01177614	ISS1:1OF1	p33303_1	19/04/2016	p33303_1.cpl	NO
0309	wi01163521	ISS1:1OF1	p33226_1	19/04/2016	p33226_1.cpl	NO
0310	wi01071296	ISS1:1OF1	p32836_1	19/04/2016	p32836_1.cpl	NO

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0311 wi01118928 ISS1:1OF1 p32922_1 19/04/2016 p32922_1.cpl NO
0312 wi01068669 ISS1:1OF1 p32333_1 19/04/2016 p32333_1.cpl NO
0313 wi01137003 ISS1:1OF1 p33053_1 19/04/2016 p33053_1.cpl NO
0314 wi01165870 ISS1:1OF1 p33238_1 19/04/2016 p33238_1.cpl NO
0315 wi01136194 ISS1:1OF1 p33051_1 19/04/2016 p33051_1.cpl NO
0316 wi01068751 ISS1:1OF1 p32445_1 19/04/2016 p32445_1.cpl NO
0317 wi01075353 ISS1:1OF1 p32613_1 19/04/2016 p32613_1.cpl NO
0318 wi01208515 ISS1:1OF1 p33455_1 19/04/2016 p33455_1.cpl NO
0319 wi01165461 ISS1:1OF1 p33237_1 19/04/2016 p33237_1.cpl NO
0320 wi01132222 ISS1:1OF1 p33023_1 19/04/2016 p33023_1.cpl NO
0321 WI0110261 ISS1:1OF1 p32758_1 19/04/2016 p32758_1.cpl NO
MDP>LAST SUCCESSFUL MDP REFRESH :2016-03-06 17:34:06(Local Time)
MDP>USING DEPLIST ZIP FILE DOWNLOADED :2016-03-02 11:03:12(est)

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Linux Patches

Product Release: 7.65.16.00

In system patches: 8

PATCH#	NAME	IN_SERVICE	DATE	SPECINS	TYPE	RPM
42	p31484_1	Yes	07/03/16	NO	FRU	cs1000-shared-general-7.65.16-00.i386
43	p33125_1	Yes	07/03/16	NO	FRU	cs1000-OS-1.00.00.00-00.noarch
44	p33274_1	Yes	07/03/16	YES	FRU	initscripts-8.45.25-1.el5.i386
45	p33384_1	Yes	07/03/16	NO	FRU	cs1000-OS-1.00.00.00-00.noarch
46	p33456_1	Yes	07/03/16	YES	FRU	cs1000-OS-1.00.00.00-00.noarch
47	p33493_1	Yes	07/03/16	NO	FRU	cs1000-OS-1.00.00.00-00.noarch
48	p33554_1	Yes	07/03/16	YES	FRU	cs1000-OS-1.00.00.00-00.noarch
49	p33557_1	Yes	07/03/16	YES	FRU	cs1000-OS-1.00.00.00-00.noarch

In System service updates: 42

PATCH#	IN_SERVICE	DATE	SPECINS	REMOVABLE	NAME
0	Yes	06/03/16	YES	YES	cs1000-patchWeb-7.65.16.23-1.i386.000
1	Yes	04/03/16	NO	YES	cs1000-Jboss-Quantum-7.65.16.23-5.i386.000
2	Yes	07/03/16	NO	YES	cs1000-pd-7.65.16.21-00.i386.000
3	Yes	04/03/16	YES	YES	cs1000-dmWeb-7.65.16.23-4.i386.000
4	Yes	06/03/16	YES	YES	cs1000-linuxbase-7.65.16.23-21.i386.000
5	Yes	07/03/16	NO	YES	cs1000-shared-carndtct-7.65.16.21-01.i386.000
6	Yes	07/03/16	NO	YES	cs1000-shared-tpselect-7.65.16.21-01.i386.000
7	Yes	07/03/16	NO	yes	cs1000-dbcom-7.65.16.21-00.i386.000
8	Yes	07/03/16	NO	YES	cs1000-snmp-7.65.16.21-00.i686.000
9	Yes	07/03/16	NO	YES	cs1000-shared-omm-7.65.16.21-2.i386.000
10	Yes	07/03/16	YES	YES	cs1000-emWebLocal_6-0-7.65.16.22-1.i386.000
11	Yes	07/03/16	YES	YES	cs1000-ipsec-7.65.16.22-1.i386.000
12	Yes	07/03/16	YES	YES	cs1000-csmWeb-7.65.16.22-2.i386.000
13	Yes	07/03/16	YES	YES	cs1000-csoneksvrmgr-7.65.16.22-5.i386.000
14	Yes	07/03/16	YES	YES	cs1000-baseWeb-7.65.16.22-4.i386.000
15	Yes	07/03/16	YES	YES	cs1000-oam-logging-7.65.16.22-4.i386.000
16	Yes	07/03/16	YES	YES	cs1000-csv-7.65.16.22-2.i386.000
17	Yes	07/03/16	YES	YES	cs1000-nrsm-7.65.16.22-3.i386.000
18	Yes	07/03/16	YES	YES	cs1000-mscTone-7.65.16.22-2.i386.000

19	Yes	07/03/16	YES	YES	cs1000-mscMusc-7.65.16.22-4.i386.000
20	Yes	07/03/16	YES	YES	cs1000-mscConf-7.65.16.22-2.i386.000
21	Yes	07/03/16	YES	YES	cs1000-mscAnnc-7.65.16.22-2.i386.000
22	Yes	07/03/16	YES	YES	cs1000-mscAttn-7.65.16.22-2.i386.000
23	Yes	07/03/16	NO	YES	cs1000-gk-7.65.16.22-1.i386.000
24	Yes	07/03/16	YES	YES	cs1000-shared-xmsg-7.65.16.22-1.i386.000
25	Yes	07/03/16	NO	YES	cs1000-sps-7.65.16.23-1.i386.000
26	Yes	07/03/16	YES	YES	cs1000-cs-7.65.P.100-03.i386.000
27	Yes	07/03/16	NO	YES	bash-3.2-33.el5_11.4.i386.000
28	Yes	07/03/16	YES	YES	cs1000-shared-pbx-7.65.16.23-1.i386.000
29	Yes	07/03/16	YES	YES	cs1000-emWeb_6-0-7.65.16.23-3.i386.000
30	Yes	07/03/16	NO	YES	libxml2-2.6.26-2.1.25.el5_11.i386.000
31	Yes	07/03/16	NO	YES	libxml2-python-2.6.26-2.1.25.el5_11.i386.000
32	Yes	07/03/16	NO	YES	freetype-2.2.1-32.el5_9.1.i386.000
33	Yes	07/03/16	NO	YES	cs1000-cs1000WebService_6-0-7.65.16.23-1.i386.000
34	Yes	07/03/16	YES	YES	cs1000-ftpkg-7.65.16.23-1.i386.000
35	Yes	07/03/16	NO	YES	cs1000-cppmUtil-7.65.16.23-4.i686.000
36	Yes	07/03/16	NO	YES	tzdata-2015a-1.el5.i386.000
37	Yes	07/03/16	YES	YES	cs1000-tps-7.65.16.23-15.i386.000
38	Yes	07/03/16	YES	YES	kernel-2.6.18-406.el5.i686.000
39	Yes	07/03/16	YES	YES	jdk-1.6.0_101-fcs.i586.000
40	Yes	07/03/16	YES	YES	cs1000-vtrk-7.65.16.23-76.i386.000
41	Yes	07/03/16	YES	YES	cs1000-bcc-7.65.16.23-10.i386.000

spstat

There is no SP in loaded status.

The last applied SP: SP_7.6_7_1.zip

It is a STANDARD SP.

Has been applied by user admin2 on Mon Mar 7 10:06:22 2016.

spins command completed with no errors detected.

CS1000 Patches installed on DPNSS PBX

VERSION 4121

RELEASE 7

ISSUE 65 P +

DepList 1: core Issue: 01 (created: 2013-06-14 03:54:33 (est))

IN-SERVICE PEPS

PAT#	CR #	PATCH REF #	NAME	DATE	FILENAME	SPECIS
000	wi01057403	ISS1:1OF1	p32591_1	19/04/2016	p32591_1.cpl	NO
001	wi01091447	ISS1:1OF1	p32675_1	19/04/2016	p32675_1.cpl	NO
002	wi01063263	ISS1:1OF1	p32573_1	19/04/2016	p32573_1.cpl	NO
003	wi01070474	iss1:1of1	p32407_1	19/04/2016	p32407_1.cpl	NO
004	wi00996734	ISS1:1OF1	p32550_1	19/04/2016	p32550_1.cpl	NO
005	wi01060382	iss1:1of1	p32623_1	19/04/2016	p32623_1.cpl	YES
006	wi01052968	ISS1:1OF1	p32540_1	19/04/2016	p32540_1.cpl	NO
007	wi00884716	ISS1:1OF1	p32517_1	19/04/2016	p32517_1.cpl	NO
008	wi01055480	ISS1:1OF1	p32712_1	19/04/2016	p32712_1.cpl	NO
009	wi01065842	ISS1:1OF1	p32478_1	19/04/2016	p32478_1.cpl	NO
010	wi01075352	ISS1:1OF1	p32603_1	19/04/2016	p32603_1.cpl	NO
011	wi01067822	ISS1:1OF1	p32466_1	19/04/2016	p32466_1.cpl	YES
012	wi01075359	ISS1:1OF1	p32671_1	19/04/2016	p32671_1.cpl	NO
013	wi01075355	ISS1:1OF1	p32594_1	19/04/2016	p32594_1.cpl	NO
014	wi01083584	ISS1:1OF1	p32619_1	19/04/2016	p32619_1.cpl	NO
015	wi01063864	ISS1:1OF1	p32410_1	19/04/2016	p32410_1.cpl	YES
016	wi01068042	ISS1:1OF1	p32669_1	19/04/2016	p32669_1.cpl	NO
017	wi01088775	ISS1:1OF1	p32659_1	19/04/2016	p32659_1.cpl	NO
018	wi01065922	ISS1:1OF1	p32516_1	19/04/2016	p32516_1.cpl	NO
019	wi01034961	ISS1:1OF1	p32144_1	19/04/2016	p32144_1.cpl	NO
020	wi01088585	ISS1:1OF1	p32656_1	19/04/2016	p32656_1.cpl	NO
021	wi01070473	ISS1:1OF1	p32413_1	19/04/2016	p32413_1.cpl	NO
022	wi00897254	ISS1:1OF1	p31127_1	19/04/2016	p31127_1.cpl	NO
023	wi01073100	ISS1:1OF1	p32599_1	19/04/2016	p32599_1.cpl	NO
024	wi01060826	ISS1:1OF1	p32379_1	19/04/2016	p32379_1.cpl	NO
025	wi01070468	iss1:1of1	p32418_1	19/04/2016	p32418_1.cpl	NO
026	wi01053597	ISS1:1OF1	p32304_1	19/04/2016	p32304_1.cpl	NO
027	wi01085855	ISS1:1OF1	p32658_1	19/04/2016	p32658_1.cpl	NO
028	wi01061484	ISS1:1OF1	p32576_1	19/04/2016	p32576_1.cpl	NO
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032	wi01022599	ISS1:1OF1	p32080_1	19/04/2016	p32080_1.cpl	NO
033	wi01075353	ISS1:1OF1	p32613_1	19/04/2016	p32613_1.cpl	NO
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036	wi01032756	ISS1:1OF1	p32673_1	19/04/2016	p32673_1.cpl	NO

037	wi01072027	ISS1:1OF1	p32689_1	19/04/2016	p32689_1.cpl	NO
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042	wi01035980	ISS1:1OF1	p32558_1	19/04/2016	p32558_1.cpl	NO
043	wi01078723	ISS1:1OF1	p32532_1	19/04/2016	p32532_1.cpl	NO
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051	wi01055300	ISS1:1OF1	p32543_1	19/04/2016	p32543_1.cpl	NO
052	wi01053314	ISS1:1OF1	p32555_1	19/04/2016	p32555_1.cpl	NO
053	wi01094305	ISS1:1OF1	p32640_1	19/04/2016	p32640_1.cpl	NO
054	wi01064599	iss1:1of1	p32580_1	19/04/2016	p32580_1.cpl	NO
055	wi01080753	ISS1:1OF1	p32518_1	19/04/2016	p32518_1.cpl	NO
056	wi01072023	ISS1:1OF1	p32130_1	19/04/2016	p32130_1.cpl	YES
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058	wi01062607	ISS1:1OF1	p32503_1	19/04/2016	p32503_1.cpl	NO
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061	wi01034307	ISS1:1OF1	p32615_1	19/04/2016	p32615_1.cpl	NO
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064	WI0110261	ISS1:1OF1	p32758_1	19/04/2016	p32758_1.cpl	NO
065	wi01043367	ISS1:1OF1	p32232_1	19/04/2016	p32232_1.cpl	NO
066	wi01072032	ISS1:1OF1	p32448_1	19/04/2016	p32448_1.cpl	NO
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069	wi01035976	ISS1:1OF1	p32173_1	19/04/2016	p32173_1.cpl	NO
070	wi01056067	ISS1:1OF1	p32457_1	19/04/2016	p32457_1.cpl	NO
071	wi01053920	ISS1:1OF1	p32303_1	19/04/2016	p32303_1.cpl	NO
072	wi00933195	ISS1:1OF1	p32491_1	19/04/2016	p32491_1.cpl	NO
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075	wi01065118	ISS1:1OF1	p32397_1	19/04/2016	p32397_1.cpl	NO
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079	wi01074003	ISS1:1OF1	p32421_1	19/04/2016	p32421_1.cpl	NO
080	wi01065125	ISS1:1OF1	p32416_1	19/04/2016	p32416_1.cpl	NO
081	wi01068669	ISS1:1OF1	p32333_1	19/04/2016	p32333_1.cpl	NO
082	wi01087543	ISS1:1OF1	p32662_1	19/04/2016	p32662_1.cpl	NO

083 wi01058621 ISS1:1OF1 p32339_1 19/04/2016 p32339_1.cpl NO
084 wi01075360 iss1:1of1 p32602_1 19/04/2016 p32602_1.cpl NO
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