Avaya Solution & Interoperability Test Lab

Application Notes for Orange Open Trade with Avaya Aura® Communication Manager and Avaya Aura® Session Manager – Issue 1.1

Abstract

These Application Notes describe the configuration steps required for Orange Open Trade trading solution to interoperate with Avaya Aura® Communication Manager and Avaya Aura® Session Manager. Orange Open Trade trading solution consists of trading turret endpoints attached to a server which communicates with Avaya Aura® Session Manager via a SIP trunk.

Information in these Application Notes has been obtained through compliance testing and additional technical discussions. Testing was conducted via the DevConnect Program at the member's test lab.

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1. Introduction

These Application Notes describe the configuration used to enable the Orange Business Services – Trading Solutions Open Trade to interoperate with Avaya Aura® Communication Manager and Avaya Aura® Session Manager. Orange Open Trade trading solution consists of trading turret endpoints attached to a pair of servers which communicates with Avaya Aura® Session Manager via a SIP trunk.

Orange Business Services - Trading Solutions is a leading provider of convergent voice and electronic trading infrastructure and services for the trading communities. In 2010, Orange Business Services - Trading Solutions launched Open Trade. Open Trade is a complete solution that meets the mandatory high-demanding Voice trading communication requirements. It is made of the Open Trade Smart Turrets (the terminal), the Open Trade Communication Manager and Plug-in Units. Open Trade is SIP compliant and interfaces with Avaya Aura Session Manager via a SIP trunk

The Open Trade endpoints do not register with Session Manager. Calls to Open Trade endpoints from Avaya endpoints are established using appropriate call routing for both Communication Manager and Session Manager, as described in these application notes.

2. General Test Approach and Test Results

The compliance testing between Open Trade and Communication Manager was performed manually. The tests were all functional in nature, and no performance testing was done. The test method employed can be described as follows:

- Avaya Aura® Communication Manager was configured to support various local IP telephones, as well as a SIP connection to Session Manager.
- The Session Manager was configured to connect to Communication Manager and the Open Trade server (Plug-in Unit) pair via SIP trunk.
- The Orange Open Trade was configured to connect to Session Manager.
- The major telephony features supported by Open Trade were verified using local Avaya extensions and the Open Trade smart turrets connected to the Open Trade server pair (Plug-in Units) to perform telephony operations.

2.1. Interoperability Compliance Testing

Although the Open Trade system would normally be connected to the PSTN in a customer environment, there was no PSTN connection available for the tested configuration. Thus, interaction between Open Trade and PSTN endpoints could not be tested.

The following tests were performed as part of the compliance testing:

- The following test scenarios were used to test the various Open Trade features:

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  - Basic call
  - Call forwarding
  - Transfer / Blind transfer
  - Name/number presentation
  - Conferencing
- Open Trade's robustness was tested by verifying its ability to recover from interruptions to its external connections including:
  - The LAN connection between each of the Open Trade Plug-in units and the LAN
  - The LAN connection between both of the Open Trade Plug-in units and the LAN
- Open Trade's robustness was further tested by verifying its ability to recover from power interruptions to the following components:
  - The Open Trade server (Plug-in Units)

Since the Open Trade solution does not support the following features, these were not taken into consideration during the evaluation of test results:

- Open Trade smart turrets do not update their displays as a reaction to such actions as call transfer, conference, etc. which are performed by Avaya endpoints which are participating in a call with the Open Trade endpoint.
- Open Trade smart turrets do not notify Avaya endpoints of such actions as call transfer, conference, etc. which they may perform during calls in which Avaya endpoints are participating, thus preventing the displays of the Avaya endpoints from being updated.
- Open Trade smart turrets have a "Hold" key which is used to stop/resume the sending of audio, but does not result in call signaling. Thus, the call hold/resume feature was not included in testing.

2.2. Test Results

The tests performed are shown in **Section 2.1**. All tests performed produced the expected result.

2.3. Support

Support for Avaya is available at: http://support.avaya.com

Support for Open Trade is available at: 0033-(0)144556699
0033-(0)670930326

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3. Reference Configuration

The following diagram shows the configuration used for compliance testing**.**

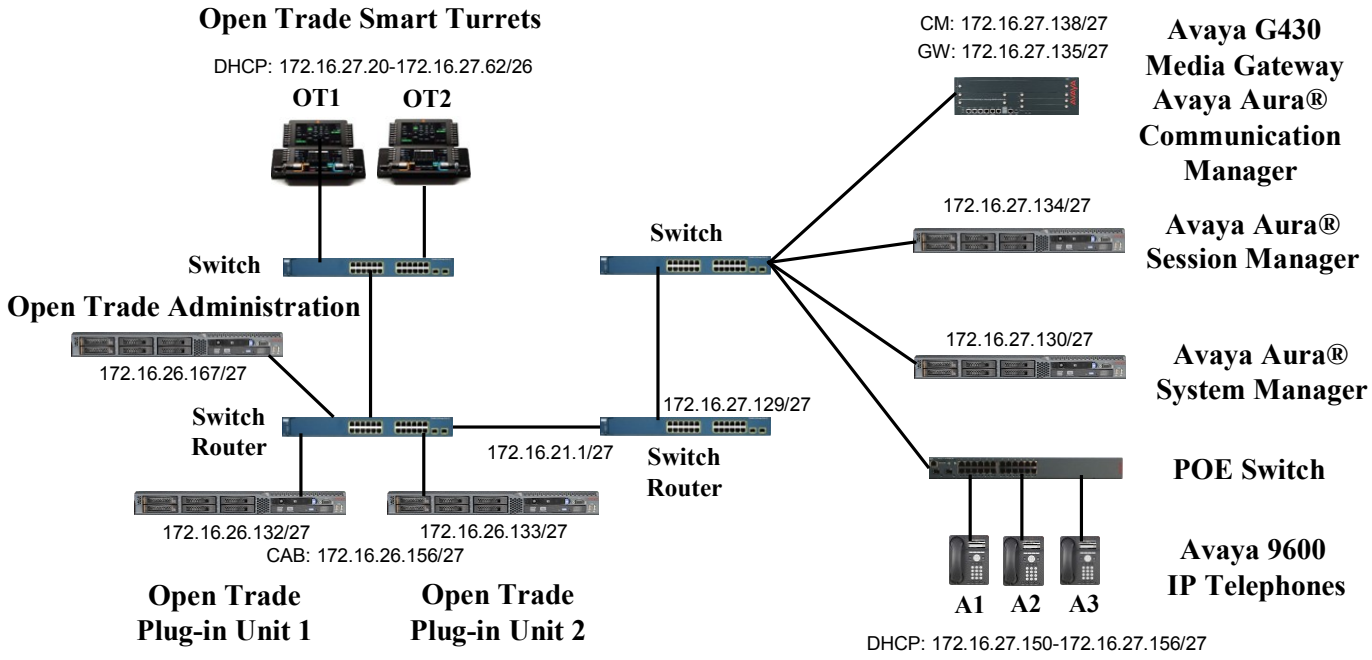

Figure 1: **Open Trade Test Configuration**

The test environment did not include an interface to the public switched telephone network, which would normally be included in an actual customer installation.

Note the Open Trade Application servers Plug-in Unit 1 and Plug-in Unit 2 operate as a pair, sharing the common virtual IP address 172.16.26.156 for manager SIP traffic (named CAB). One of the servers is always considered “active”, and will be replaced by the remaining server should it fail.

The Open Trade Smart Turrets are telephone endpoints which are designed for a trading environment.

The active Open Trade Application servers Plug-in Units handle SIP signaling between the Open Trade Smart Turrets and Session Manager.

Open Trade Administration consists of client and server applications. The client provides a console interface to the server program which is used to configure the Open Trade components. Although the client and server can be installed on separate systems, for the tested configuration both client and server are installed on the same PC.

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The endpoint extension numbers used for testing are shown in the following table.

Endpoint	Extension
Endpoint OT1	2481
Endpoint OT2	2482
Endpoint A1	6002
Endpoint A2	6003
Endpoint A3	6004

Table 1: Endpoint Extension Assignment

4. Equipment and Software Validated

Component	Version
Avaya Aura® Communication Manager	System Platform 6.0.2.1.5 CM 6.0.1, GA load 510.1, with patch 18621
Avaya Aura® Session Manager	Linux RH 5.5 SM software 6.1.0.0.610023
Avaya Aura® System Manager	System Platform 6.0.2.0.5 System Manager software 6.1 Patch 06_01_SP0_r873
Avaya G430 Media Gateway	31.17.1
Avaya 96x1 SIP Phones	6.0.0
Open Smart Turret	1.3.0.29
Open Trade Plug-in Unit	1.3.0.29
Open Trade Administration	1.0.9.1
Open Trade Administration ClientEtrali Plug-in Unit	1.0.9.1

Table 2: Hardware/Software Component Versions

5. Configure Avaya Aura® Communication Manager

The configuration and verification operations illustrated in this section were all performed using the Communication Manager System Administration Terminal (SAT).

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5.1. Verify system-parameters customer-options

Use the **display system-parameters customer options** command to verify that Communication Manager is configured to meet the minimum requirements to run Open Trade. Those items shown in **bold** indicate required values or minimum capacity requirements. If these are not met in the configuration, please contact an Avaya representative for further assistance.

Parameter	Usage
Maximum Administered SIP Trunks (Page 2)	The number of available licensed SIP trunks must be sufficient to accommodate the number of trunk members assigned to the trunk group used to interface to Session Manager in **Figure 10**.

Table 3: System-Parameters Customer-Options Parameters

```
display system-parameters customer-options                    Page   2 of  11
                              OPTIONAL FEATURES

IP PORT CAPACITIES                                            USED
                     Maximum Administered H.323 Trunks: 4000  0
           Maximum Concurrently Registered IP Stations: 2400  1
             Maximum Administered Remote Office Trunks: 4000  0
Maximum Concurrently Registered Remote Office Stations: 2400  0
              Maximum Concurrently Registered IP eCons: 50    0
  Max Concur Registered Unauthenticated H.323 Stations: 100   0
                       Maximum Video Capable Stations: 2400  0
                   Maximum Video Capable IP Softphones: 0     0
                     Maximum Administered SIP Trunks: 4000  10
  Maximum Administered Ad-hoc Video Conferencing Ports: 4000  0
   Maximum Number of DS1 Boards with Echo Cancellation: 80    0
                            Maximum TN2501 VAL Boards: 10    0
                     Maximum Media Gateway VAL Sources: 50    0
           Maximum TN2602 Boards with 80 VoIP Channels: 128   0
          Maximum TN2602 Boards with 320 VoIP Channels: 128   0
   Maximum Number of Expanded Meet-me Conference Ports: 0     0
```

Figure 2: System-Parameters Customer-Options Screen, Page 2

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5.2. Verify system-parameters features

Use the **change system-parameters features** command to configure the system features as shown in the following table.

Parameter	Usage
Trunk-to-Trunk Transfer	Set this parameter to "y".

Table 4: System-Parameters Features Parameters

```
change system-parameters features                                Page   1 of  19
                            FEATURE-RELATED SYSTEM PARAMETERS
                               Self Station Display Enabled? n
                                    Trunk-to-Trunk Transfer: all
                 Automatic Callback with Called Party Queuing? n
    Automatic Callback - No Answer Timeout Interval (rings): 3
                       Call Park Timeout Interval (minutes): 10
        Off-Premises Tone Detect Timeout Interval (seconds): 20
                                  AAR/ARS Dial Tone Required? y

              Music (or Silence) on Transferred Trunk Calls? no
                       DID/Tie/ISDN/SIP Intercept Treatment: attd
    Internal Auto-Answer of Attd-Extended/Transferred Calls: transferred
                  Automatic Circuit Assurance (ACA) Enabled? n


             Abbreviated Dial Programming by Assigned Lists? n
       Auto Abbreviated/Delayed Transition Interval (rings): 2
                    Protocol for Caller ID Analog Terminals: Bellcore
    Display Calling Number for Room to Room Caller ID Calls? n
```

Figure 3: System-Parameters Features Screen

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5.3. Node Names

Use the **change node-names ip** command to configure the node name for the Session Manager SIP trunk.

Parameter	Usage
Name / IP Address	Enter an appropriate name to identify the Session Manager SIP trunk, along with the IP address of the trunk.

Table 5: Node-Names IP Parameters

```
change node-names ip
                                  IP NODE NAMES
    Name              IP Address
SM01                172.16.27.134
default             0.0.0.0
procr               172.16.27.138
procr6              ::
```

Figure 4: Node-Names IP Form

5.4. Dialplan

Use the **change dialplan analysis** command to configure the dial plan using the parameters shown below.

Dialed String	Usage
2	Make an entry for Open Trade extensions.
6	Make an entry for Avaya extensions.
*8	Make an entry for the Trunk Access Code used in the SIP trunk group defined in **Figure 10**.

Table 6: Dialplan Analysis Parameters

```
change dialplan analysis                                    Page   1 of  12
                          DIAL PLAN ANALYSIS TABLE
                               Location: all            Percent Full: 4

    Dialed   Total  Call     Dialed   Total  Call     Dialed   Total  Call
    String   Length Type     String   Length Type     String   Length Type
   2           4   ext
   6           4   ext
   *8          4   dac
```

Figure 5: Dialplan Analysis Form

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5.5. Configure Network Region

Use the **change ip-network-region** command to assign an appropriate domain name to be used by Communication Manager. This name is also used in **Figure 19**.

```
change ip-network-region 1                                    Page   1 of  20
                            IP NETWORK REGION
  Region: 1
Location: 1       Authoritative Domain: avayasip.com
    Name:
MEDIA PARAMETERS                Intra-region IP-IP Direct Audio: yes
      Codec Set: 1              Inter-region IP-IP Direct Audio: yes
   UDP Port Min: 2048                     IP Audio Hairpinning? n
   UDP Port Max: 3329
DIFFSERV/TOS PARAMETERS
 Call Control PHB Value: 46
        Audio PHB Value: 46
        Video PHB Value: 26
802.1P/Q PARAMETERS
 Call Control 802.1p Priority: 6
        Audio 802.1p Priority: 6
        Video 802.1p Priority: 5      AUDIO RESOURCE RESERVATION PARAMETERS
H.323 IP ENDPOINTS                                     RSVP Enabled? n
  H.323 Link Bounce Recovery? y
 Idle Traffic Interval (sec): 20
   Keep-Alive Interval (sec): 5
            Keep-Alive Count: 5
```

Figure 6: IP Network Region Form

5.6. Configure IP-Codec

Use the **change ip-codec-set 1** command to designate that the G.711A codec set used to communicate with Session Manager, as this is only codec which Open Trade and Communication Manager have in common.

```
change ip-codec-set 1                                         Page   1 of   2

                         IP Codec Set

    Codec Set: 1

    Audio        Silence      Frames   Packet
    Codec        Suppression  Per Pkt  Size(ms)
 1: G.711A            n         2        20
 2:
```

Figure 7: IP-Codec-Set Form

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5.7. Configure Avaya Stations

Use the **add station** command to create each of the Avaya IP stations listed in **Table 1**, using the values shown in the following table.

Parameter	Usage
Extension	Use an unused extension which is compatible with the dial plan.
Type	Use a type value which corresponds to the physical station to be used.
Name	Any alphanumeric string can be assigned as an extension name, which is used for identification purposes.

Table 7: Configuration IP Stations

```
add station 6004                                          Page   1 of   6
                                   STATION

Extension: 6004                        Lock Messages? n              BCC: 0
     Type: 9640SIP                     Security Code:                 TN: 1
     Port: S00006                    Coverage Path 1:                COR: 1
     Name: Avaya4                    Coverage Path 2:                COS: 1
                                     Hunt-to Station:
STATION OPTIONS
                                        Time of Day Lock Table:
             Loss Group: 19
                                              Message Lamp Ext: 6004

        Display Language: english               Button Modules: 0

          Survivable COR: internal
   Survivable Trunk Dest? y                       IP SoftPhone? n

                                                      IP Video? y
```

Figure 8: Station Form

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5.8. Configure SIP Interface to Session Manager

Use the **add signaling-group** command to configure the Signaling Group parameters for the SIP trunk group. Assign values for this command as shown in the following table.

Parameter	Usage
Group Type	Enter the Group Type as "sip".
Near-end Node Name	Enter "procr" to designate the Processor Ethernet interface.
Near-end Listen Port	Enter "5061".
Far-end Node Name	Enter the name assigned to the SIP trunk to Session Manager configured in **Figure 4**.
Far-end Listen Port	Enter "5061".
Far-end Domain Name	Enter the domain name assigned to the network region in **Figure 6**.
Direct IP-IP Connections	Enter "n" to turn off "shuffling" as this is not supported by the Open Trade system.

Table 8: Signaling-Group Parameters for SIP Interface

```
add signaling-group 1
                               SIGNALING GROUP

 Group Number: 1              Group Type: sip
  IMS Enabled? n        Transport Method: tls
       Q-SIP? n                                          SIP Enabled LSP? n
    IP Video? n                                  Enforce SIPS URI for SRTP? y
  Peer Detection Enabled? y  Peer Server: SM



   Near-end Node Name: procr                  Far-end Node Name: SM01
 Near-end Listen Port: 5061                Far-end Listen Port: 5061
                                        Far-end Network Region: 1

Far-end Domain: avayasip.com
                                             Bypass If IP Threshold Exceeded? n
Incoming Dialog Loopbacks: eliminate                  RFC 3389 Comfort Noise? n
         DTMF over IP: rtp-payload             Direct IP-IP Audio Connections? n
Session Establishment Timer(min): 3                     IP Audio Hairpinning? n
         Enable Layer 3 Test? y
                                                  Alternate Route Timer(sec): 6
```

Figure 9: Signaling Group Form

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Use the **add trunk-group** command to configure the SIP interface to Session Manager. Assign values for this command as shown in the following table.

Parameter	Usage
Group Type (page 1)	Specify the Group Type as "sip".
Group Name (page 1)	Select an appropriate name to identify the device.
TAC (page 1)	Specify a trunk access code that can be used to provide dial access to the trunk group.
Service Type (page 1)	Designate the trunk as a "tie" line to a peer system.
Signaling Group (page 1)	Enter the number assigned to the SIP signaling group shown in **Figure 9**.
Number of Members (page 1)	Specify sufficient number of members to support the maximum simultaneous connections required.
Numbering Format (page 3)	Enter "private".

Table 9: Trunk-Group Parameters for the SIP Interface

```
add trunk-group 1                                          Page   1 of  21
                                TRUNK GROUP

Group Number: 1                    Group Type: sip           CDR Reports: y
  Group Name: Trunk-SM01                    COR: 1        TN: 1        TAC: *801
   Direction: two-way        Outgoing Display? n
 Dial Access? n                                    Night Service:
Queue Length: 0
Service Type: tie                    Auth Code? n
                                              Member Assignment Method: auto
                                                       Signaling Group: 1
                                                     Number of Members: 10
```

Figure 10: Trunk Group Form, page 1

```
add display trunk-group 1                                          Page   3 of  21
      Group Type: sip

TRUNK FEATURES
          ACA Assignment? n            Measured: none
                                                          Maintenance Tests? y

                     Numbering Format: private
                                                UUI Treatment: service-provider

                                                 Replace Restricted Numbers? n
                                                Replace Unavailable Numbers? n

                                Modify Tandem Calling Number: no

 Show ANSWERED BY on Display? n
```

Figure 11: Trunk Group Form, page 3

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5.9. Call Routing

Use the **change uniform-dialplan 0** command. Assign values for this command as shown in the following table.

Parameter	Usage
Matching Pattern	Enter the leading digit of the extensions assigned to the Open Trade extensions.
Len	Enter the length of the extensions assigned to the Open Trade extensions.
Net	Enter "aar".

Table 10: Uniform-Dialplan Parameters

```
change uniform-dialplan 0                                        Page   1 of   2
                      UNIFORM DIAL PLAN TABLE
                                                                 Percent Full: 0

  Matching                    Insert              Node
  Pattern       Len Del       Digits     Net Conv Num
 2               4   0                    aar  n
```

Figure 12: Uniform-Dialplan Form

Use the **change aar analysis 0** command. Assign values for this command as shown in the following table.

Parameter	Usage
Dialed String	Enter the leading digit of the extensions assigned to the Open Trade extensions.
Min / Max	Enter the length of the extensions assigned to the Open Trade extensions.
Route Pattern	Enter the number of the route pattern described in **Figure 14**.
Call Type	Enter "lev0".

Table 11: AAR Analysis Parameters

```
change aar analysis 0                                            Page   1 of   2
                            AAR DIGIT ANALYSIS TABLE
                                  Location: all            Percent Full: 2

          Dialed           Total     Route    Call    Node  ANI
          String          Min  Max  Pattern   Type    Num   Reqd
    2                     4    4    1         lev0          n
    3                     4    4    3         aar           n
    6                     4    4    1         lev0          n
```

Figure 13: AAR Analysis Form

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Use the **change route-pattern <n>** command, where <n> is the route pattern to route calls for Orange Open Trade extensions from Communication Manager to Session Manager. Assign values for this command as shown in the following table.

Parameter	Usage
Pattern Name	Enter a descriptive name to identify the route pattern.
Grp No	Enter the number of the SIP trunk which connects to Session Manager, which is defined in **Figure 10**.

Table 12: Route-Pattern Parameters

```
change route-pattern 1                                          Page   1 of   3
                     Pattern Number: 1   Pattern Name: SIP-SM
                               SCCAN? n     Secure SIP? n
    Grp FRL NPA Pfx Hop Toll No.  Inserted                        DCS/ IXC
    No          Mrk Lmt List Del  Digits                        QSIG
                               Dgts                             Intw
 1: 1    0                                                       n   user
 2:                                                              n   user
 3:                                                              n   user
 4:                                                              n   user
 5:                                                              n   user
 6:                                                              n   user

     BCC VALUE  TSC CA-TSC    ITC BCIE Service/Feature PARM  No. Numbering LAR
    0 1 2 M 4 W     Request                                 Dgts Format
                                                         Subaddress
 1: y y y y y n  n            rest                                     none
 2: y y y y y n  n            rest                                     none
 3: y y y y y n  n            rest                                     none
 4: y y y y y n  n            rest                                     none
 5: y y y y y n  n            rest                                     none
 6: y y y y y n  n            rest                                     none
```

Figure 14: Route-Pattern Form

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6. Configure Avaya Aura® Session Manager

This section illustrates relevant aspects of the Avaya Aura® Session Manager configuration used in the verification of these Application Notes.

Session Manager is managed via Avaya Aura® System Manager. Using a web browser, access "https://<ip-addr of System Manager>/SMGR". In the **Log On** screen, enter appropriate **User ID** and **Password** and press the **Log On** button

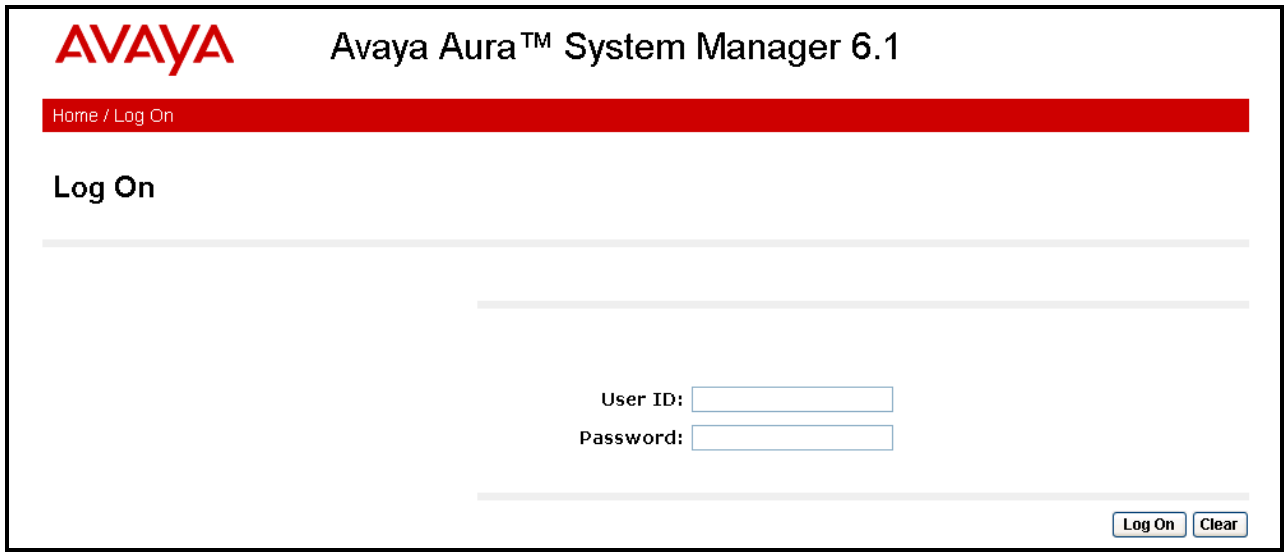

Figure 15: System Manager Login Screen

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Once logged in, a **Home Screen** is displayed.

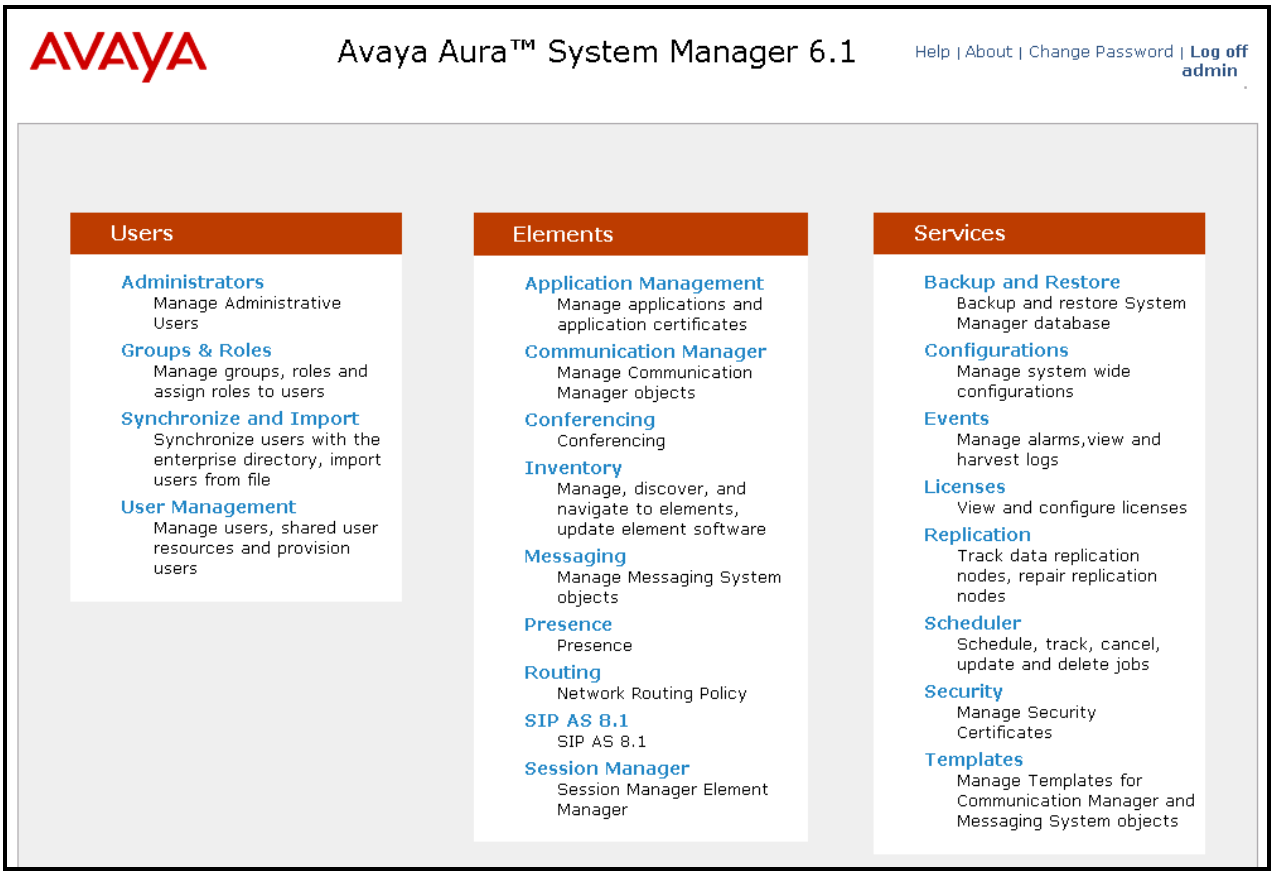

Figure 16: System Manager Home Screen

When **Elements → Routing** is selected, the left side outlines a series of steps.

Figure 17: System Manager Call Routing Menu

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The sub-sections that follow are in the same order as the steps outlined under **Introduction to Network Routing Policy (NRP)** in the abridged screen shown below. In these Application Notes, all these steps are illustrated with the exception of Step 9, since "Regular Expressions" were not used.

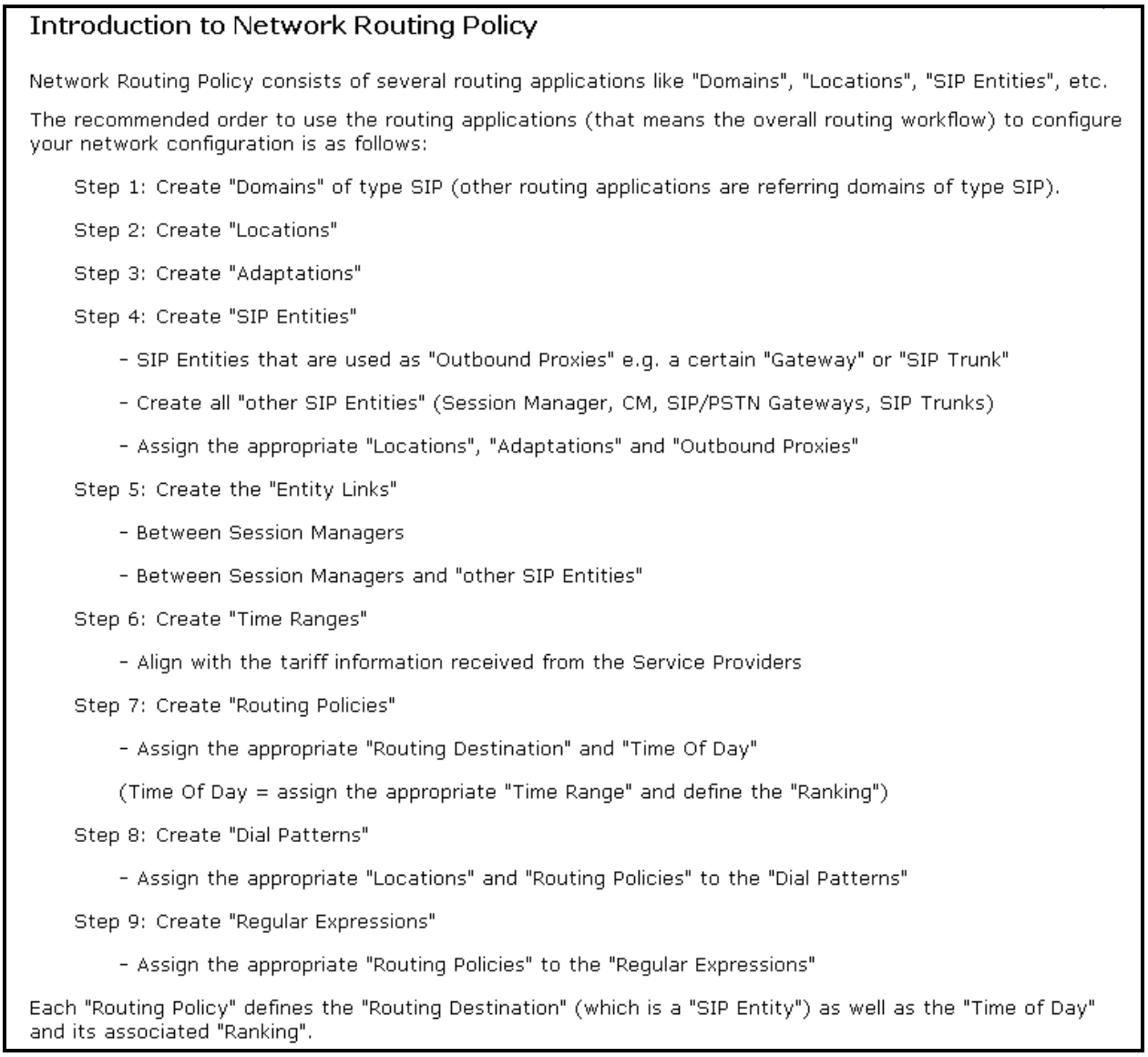

Figure 18: System Manager Introduction to Routing Policy

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6.1. Domains

To view or change SIP domains, select **Routing → Domains**. Click on the checkbox next to the name of the SIP domain and **Edit** to edit an existing domain, or the **New** button to add a domain. Click the **Commit** button after changes are completed. The domain name to be configured should be the same as was configured for the Communication Manager network region in **Figure 6**.

The following screen shows the list of configured SIP domains.

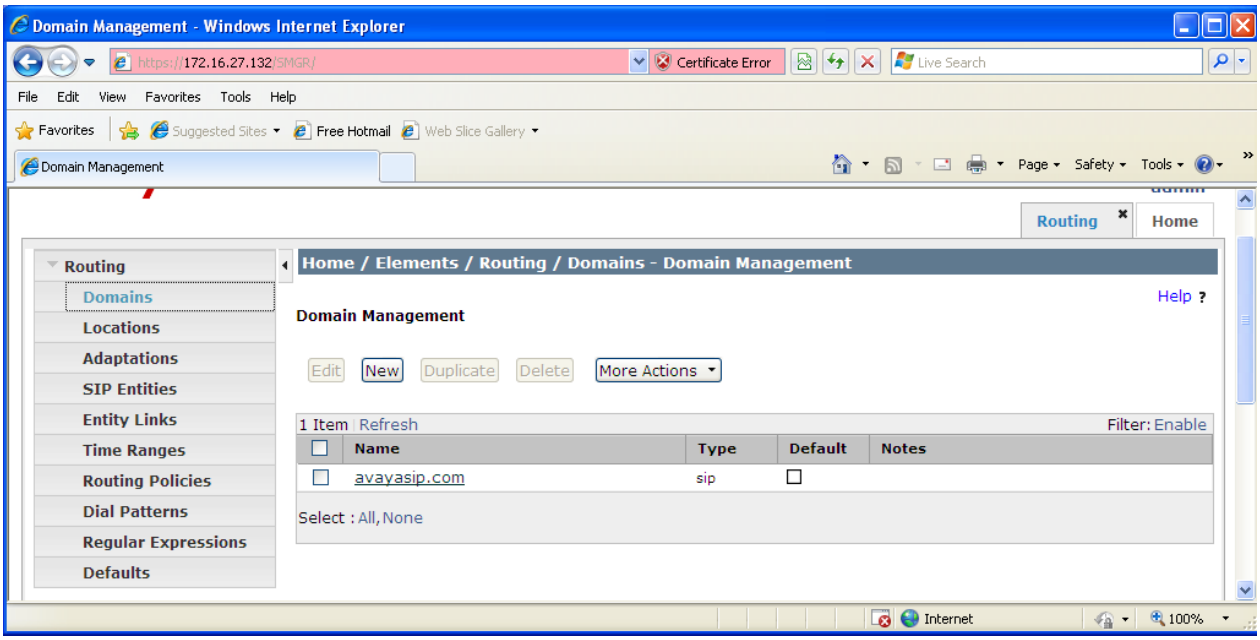

Figure 19: Session Manager Domains

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6.2. Locations

To view or change locations, select **Routing → Locations**. The following screen shows an abridged list of configured locations. Click on the checkbox corresponding to the name of a location and **Edit** to edit an existing location, or the **New** button to add a location. Click the **Commit** button after changes are completed. Assigning unique locations can allow Session Manager to perform location-based routing, bandwidth management, and call admission control.

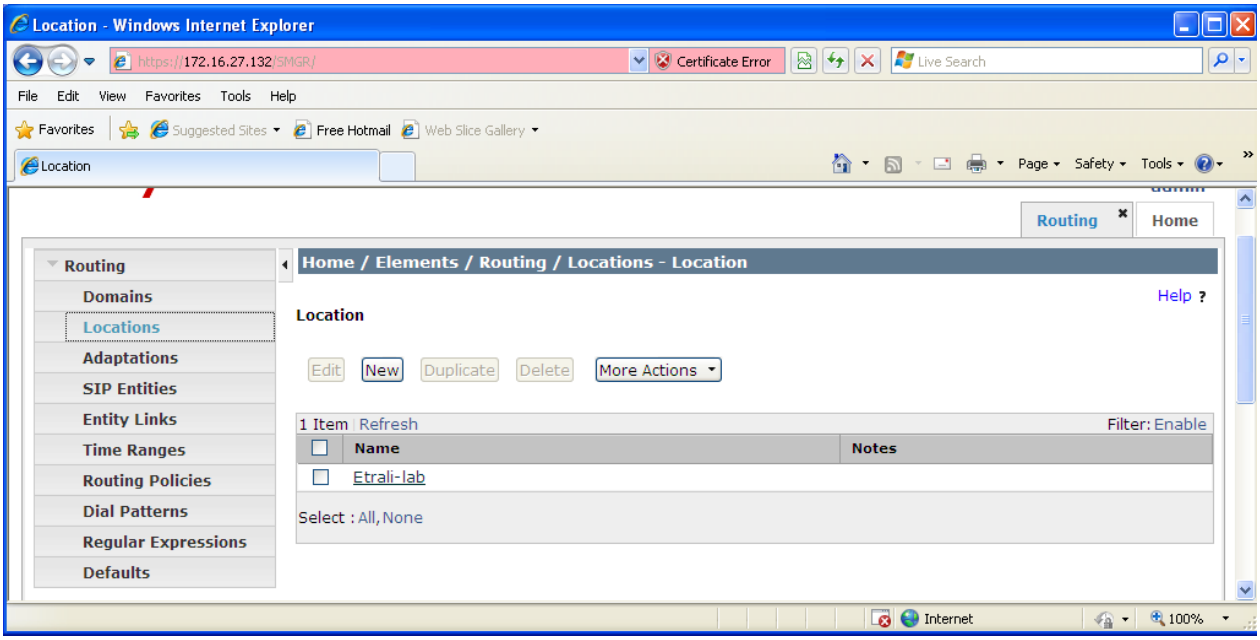

Figure 20: Session Manager Locations

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6.3. Adaptations

To view or change adaptations, select **Routing → Adaptations**. Click on the checkbox corresponding to the name of an adaptation and **Edit** to edit an existing adaptation, or the **New** button to add an adaptation. Assign values for this command as shown in the following table.

Parameter	Usage
Adaptation Name	Enter an appropriate name to identify the adapter.
Module Name	Select "DigitConversionAdapater" from the drop-down menu.
Module Parameter	Enter odstd=<Open Trade Server pair address> osrcd=<SM SIP trunk address> fromto=true

Table 13: Route-Pattern Parameters

Click the **Commit** button after changes are completed. The following screen the list of adaptations.

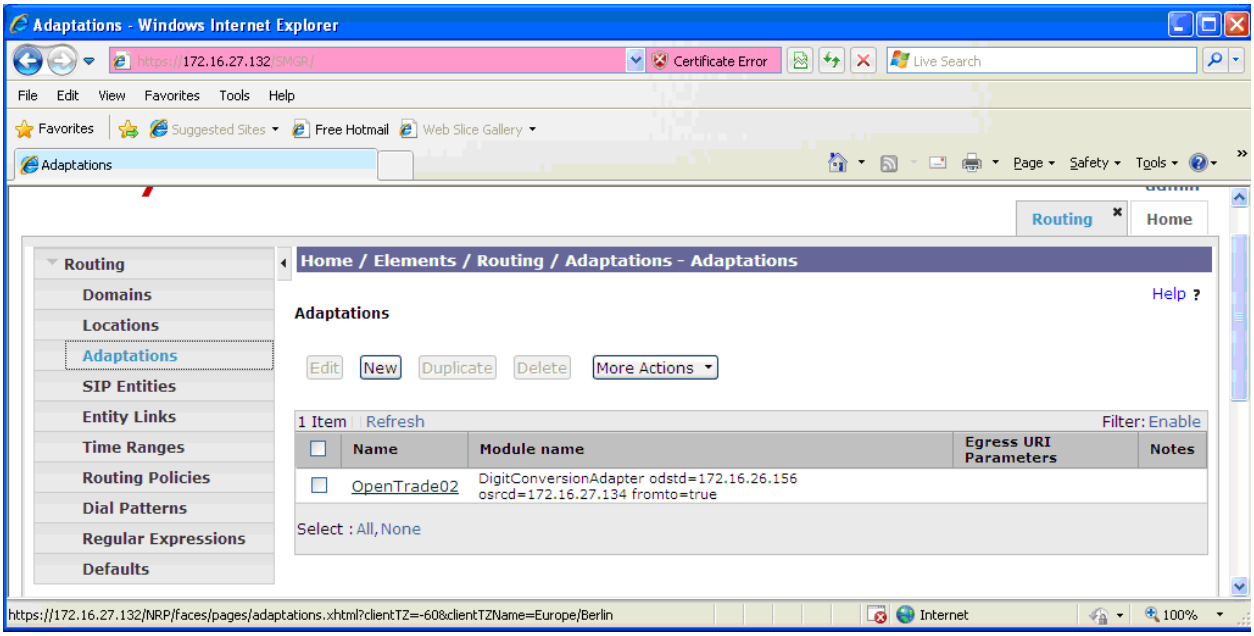

Figure 21: Session Manager Adaptations

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6.4. SIP Entities

To view or change SIP elements, select **Routing → SIP Entities**. Click the checkbox corresponding to the name of an element and **Edit** to edit an existing element, or the **New** button to add an element. Assign values for this command as shown in the following table.

Parameter	Usage
Name	Enter an appropriate name to identify the SIP entity.
FQDN or IP Address	Enter the Open Trade Server pair address.
Adaption	Select the adaptation created in **Figure 21** from the drop-down menu.
Location	Select the location defined in **Figure 20** from the drop-down menu.
Time Zone	Select the proper time zone from the drop-down menu.

Table 14: Route-Pattern Parameters

Click the **Commit** button after changes are completed.

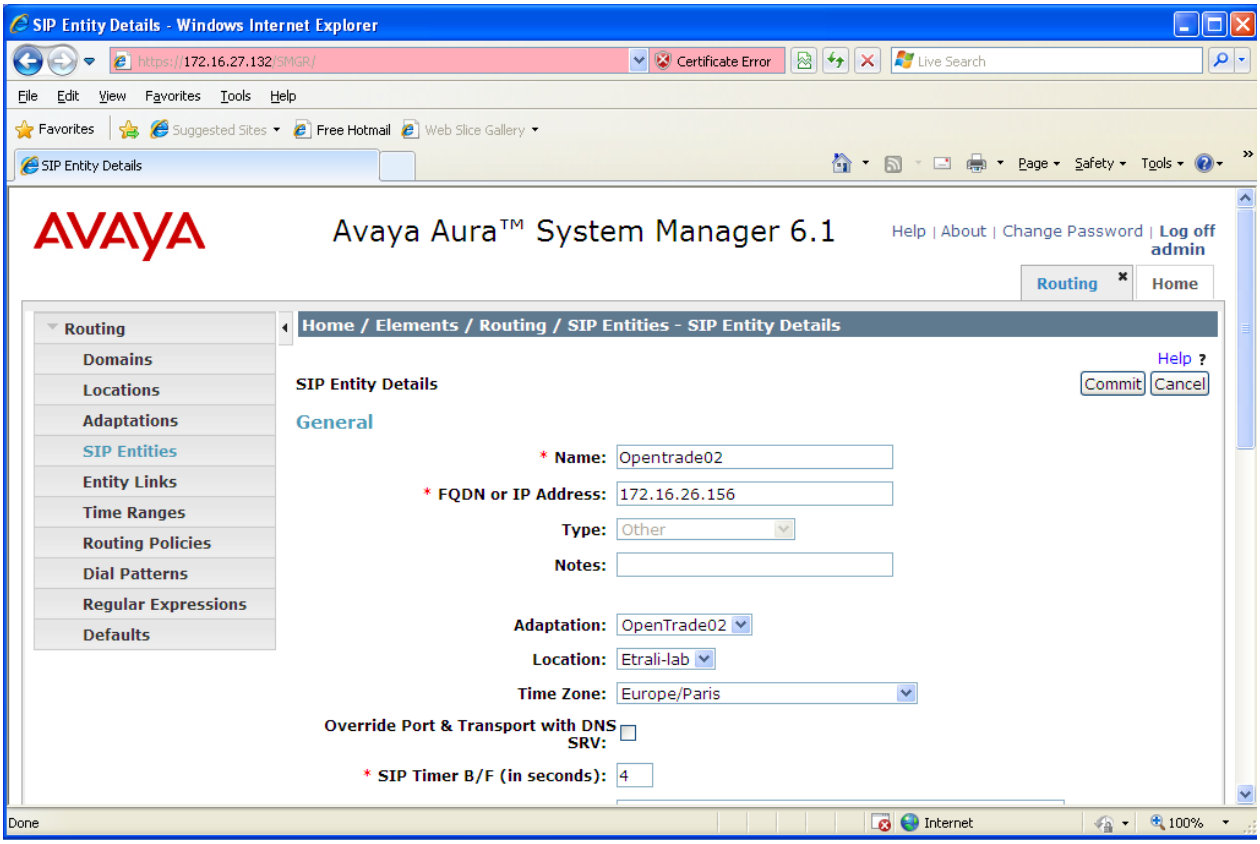

Figure 22: Session Manager SIP Entity for Open Trade SIP Trunk

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6.5. Entity Links

To view or change Entity Links, select **Routing → Entity Links**. Click on the checkbox corresponding to the name of a link and **Edit** to edit an existing link, or the **New** button to add a link. Assign values for this command as shown in the following table.

Parameter	Usage
Name	Enter an appropriate name to identify the Entity Link.
SIP Entity 1 / Protocol / Port	Select the SIP entity for Session Manager, with the appropriate protocol and port.
SIP Entity 2 / Port	Select the SIP entity for Open Trade server pair created in **Figure 22** from the drop-down menu and enter the appropriate port.
Trusted	Check this box.

Table 15: Entity Link Parameters

Click the **Commit** button after changes are completed.

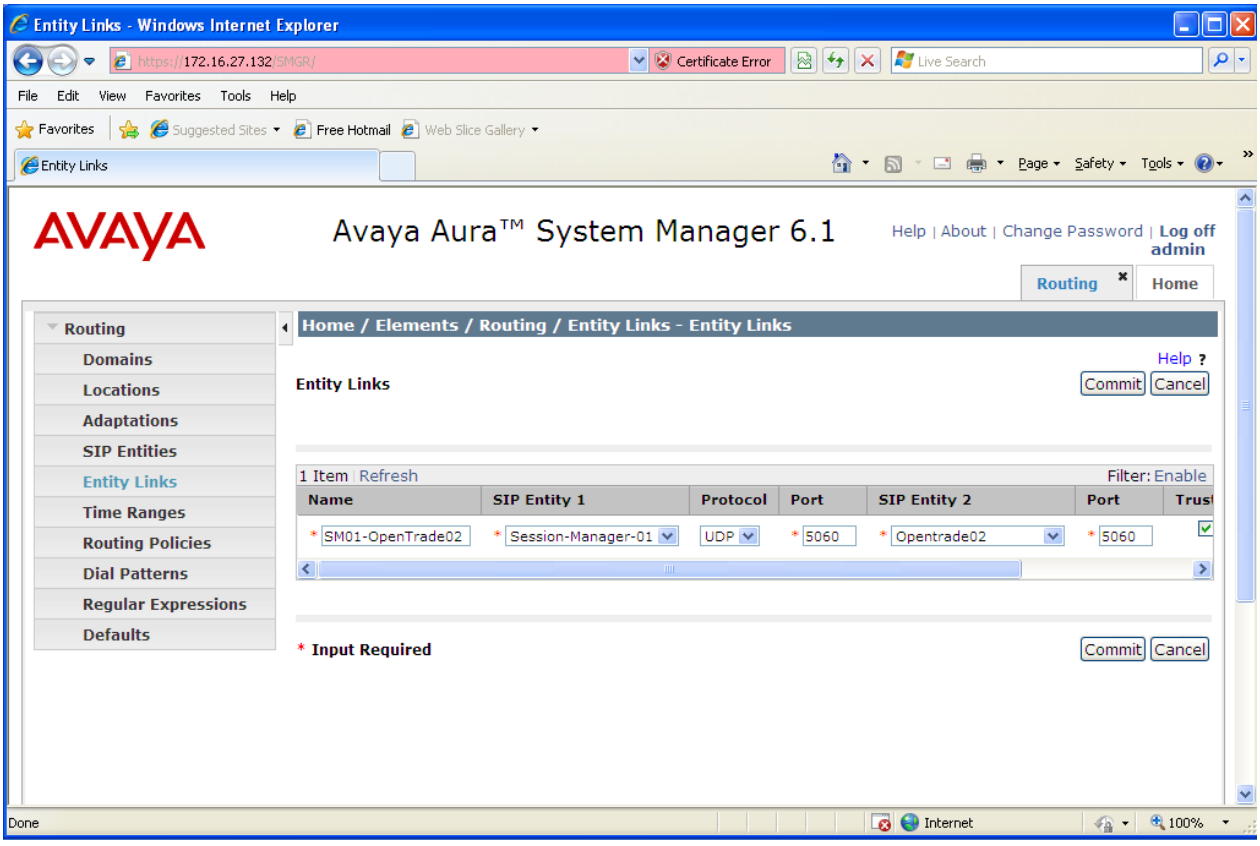

Figure 23: Session Manager Entity Link for Open Trade SIP Trunk

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6.6. Time Ranges

To view or change Time Ranges, select **Routing → Time Ranges**. The Routing Policies shown subsequently will use the "24/7" range since time-based routing was not the focus of these Application Notes.

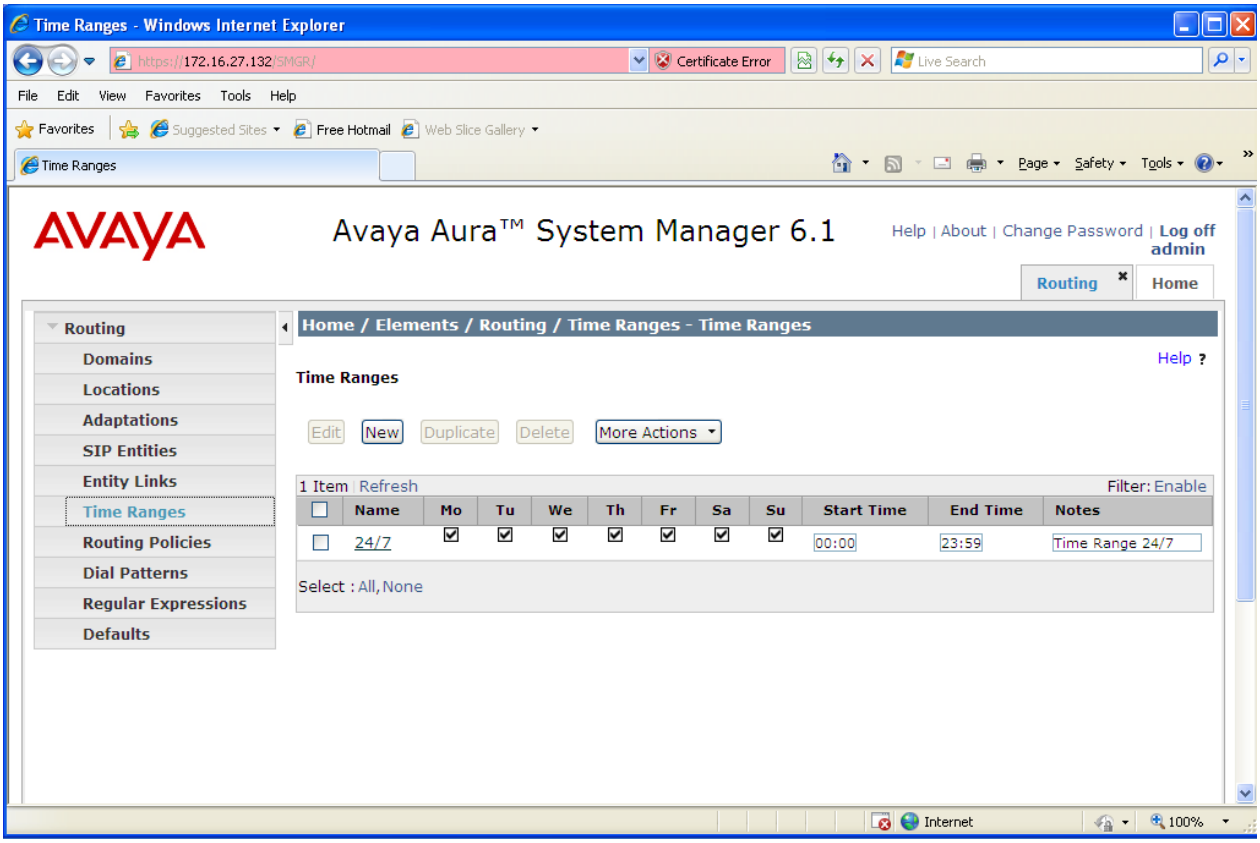

Figure 24: Session Manager Time Ranges

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6.7. Routing Policies

To view or change routing policies, select **Routing → Routing Policies**. Click on the checkbox corresponding to the name of a policy and **Edit** to edit an existing policy, or **New** to add a policy. Enter a descriptive name for the routing policy, and select the Open Trade server pair as the route destination by clicking "Select".

Click the **Commit** button after changes are completed.

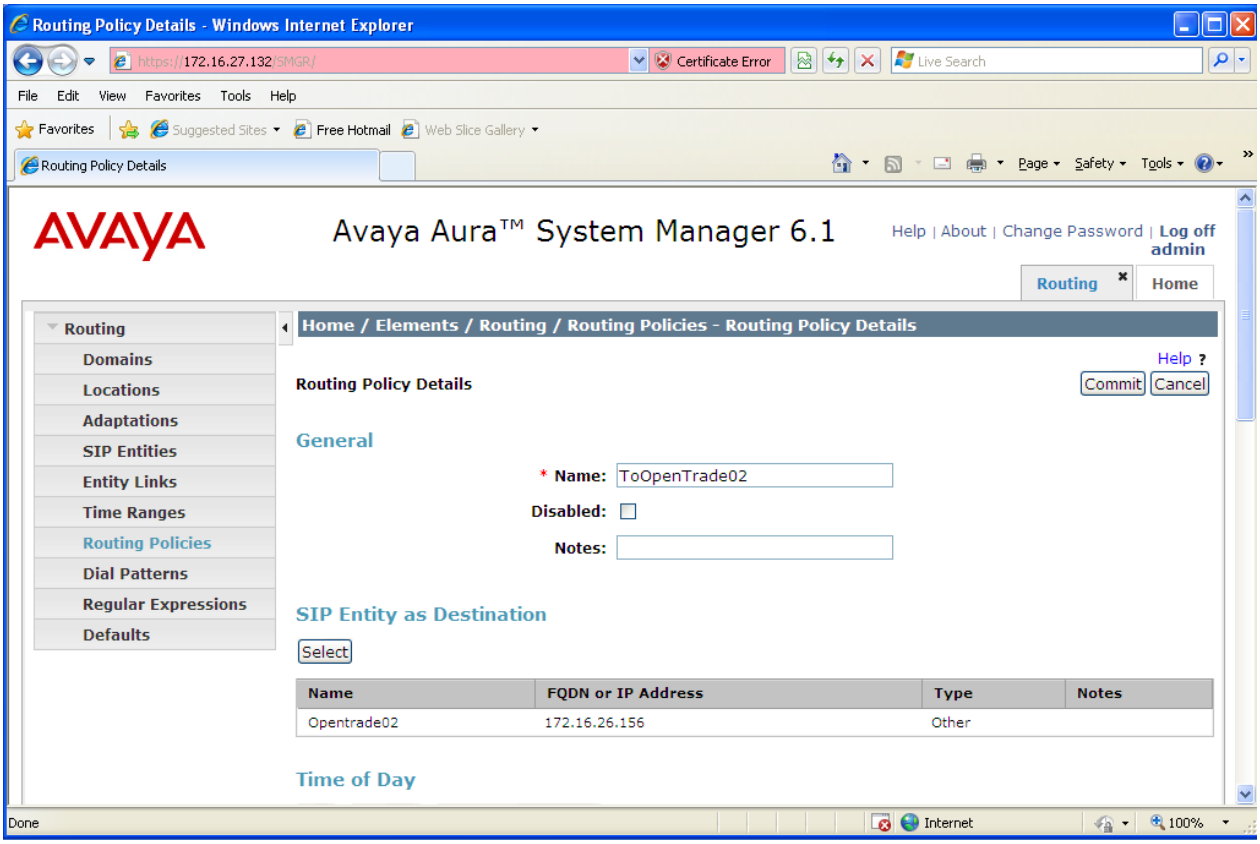

Figure 25: Session Manager Routing Policy for Calls to Open Trade Endpoints

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6.8. Dial Patterns

To view or change dial patterns, select **Routing → Dial Patterns**. Click on the checkbox corresponding to the name of a pattern and **Edit** to edit an existing pattern, or **New** to add a pattern. Assign values for this command as shown in the following table.

Parameter	Usage
Pattern	Enter the leading digits of the Open Trade endpoint extensions.
Min	Enter the minimum length of the Open Trade endpoint extensions.
Max	Enter the maximum length of the Open Trade endpoint extensions.
SIP Domain	Select "All" from the drop-down menu.

Table 16: Dial Pattern Parameters

Click the **Add** button, select the originating location of "ALL", and the routing policy defined in **Figure 25**, and click the **Commit** button.

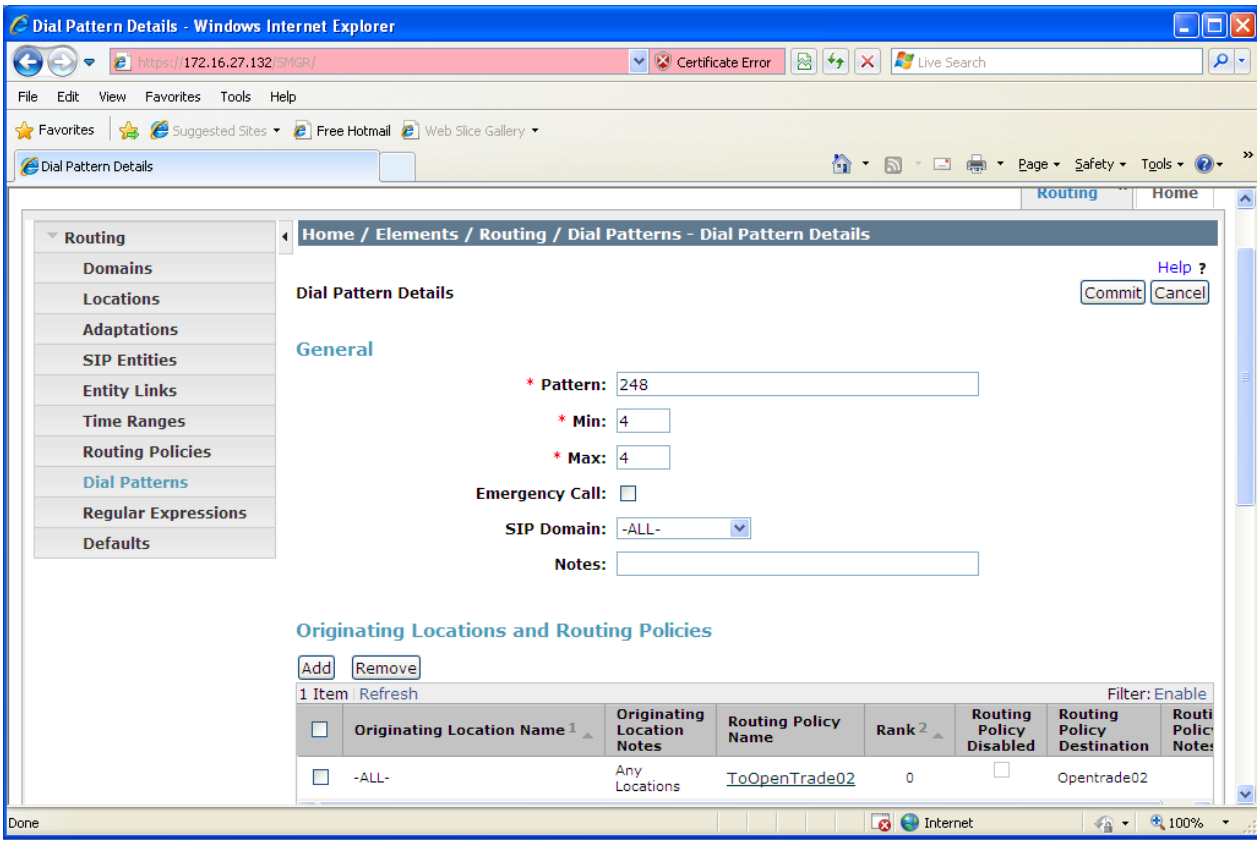

Figure 26: Session Manager Dial Pattern for Calls To Open Trade Extensions

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The following screen illustrates an example dial pattern used to verify calls to the Open Trade extensions.

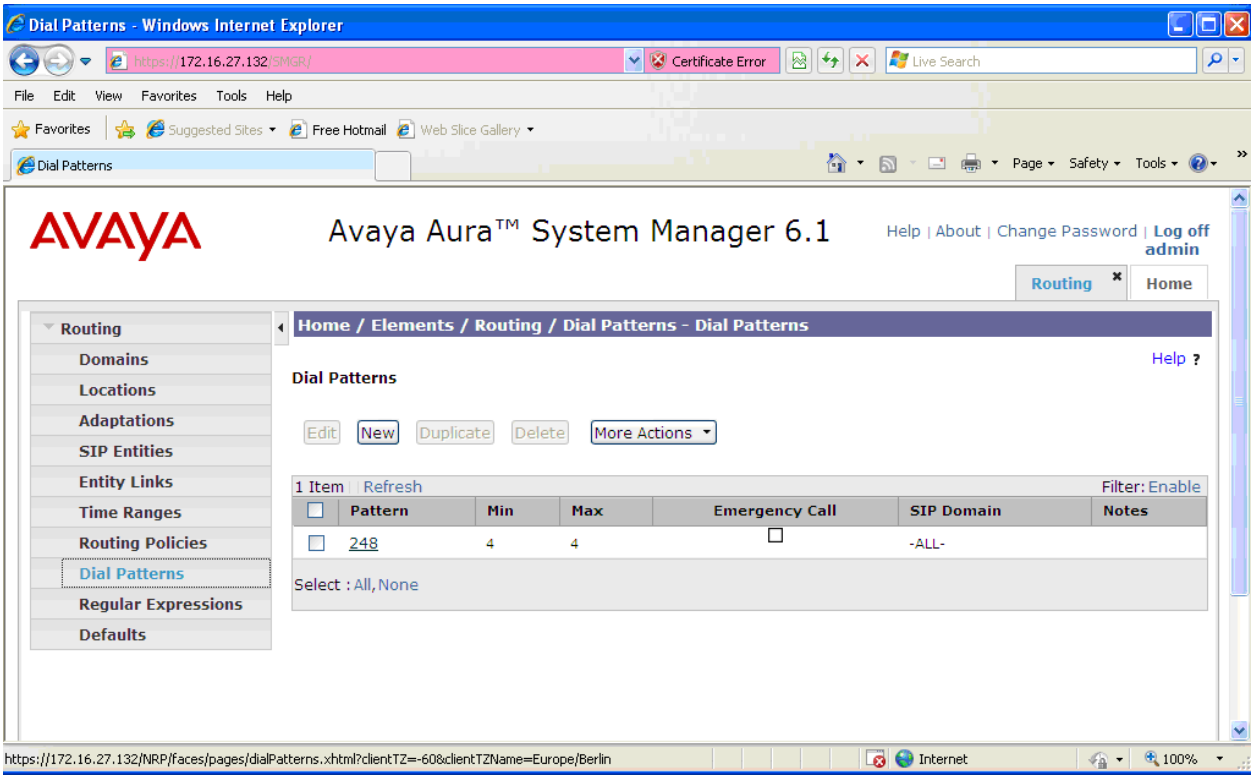

Figure 27: Session Manager Dial Pattern List

7. Configure Avaya Extensions

The 46xxsettings.txt file used to configure the Avaya SIP terminals used for testing was modified from its default content by changing the parameter shown below to change the DTMF payload type used by the Avaya IP phones from 120 to 101. Note that only that portion of the file which was changed is shown.

```
## DTMF Payload Type
##   Specifies the RTP payload type to be used for RFC
##   2833 signaling. (96-127).
##   Note : This setting is applicable for 1603 SIP phones also.
## SET  DTMF_PAYLOAD_TYPE 120
SET  DTMF_PAYLOAD_TYPE 101
```

Figure 28: 46xxsettings.txt File

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8. Configure Orange Open Trade Server

Start the Open Trade Administration program, and log in with the appropriate credentials.

Figure 29: Open Trade Administration Program Login Screen

Expand the "Facilities Management" icon and select the "Carriers" menu element. Place the cursor under the "Name" column header, and right-click the mouse.

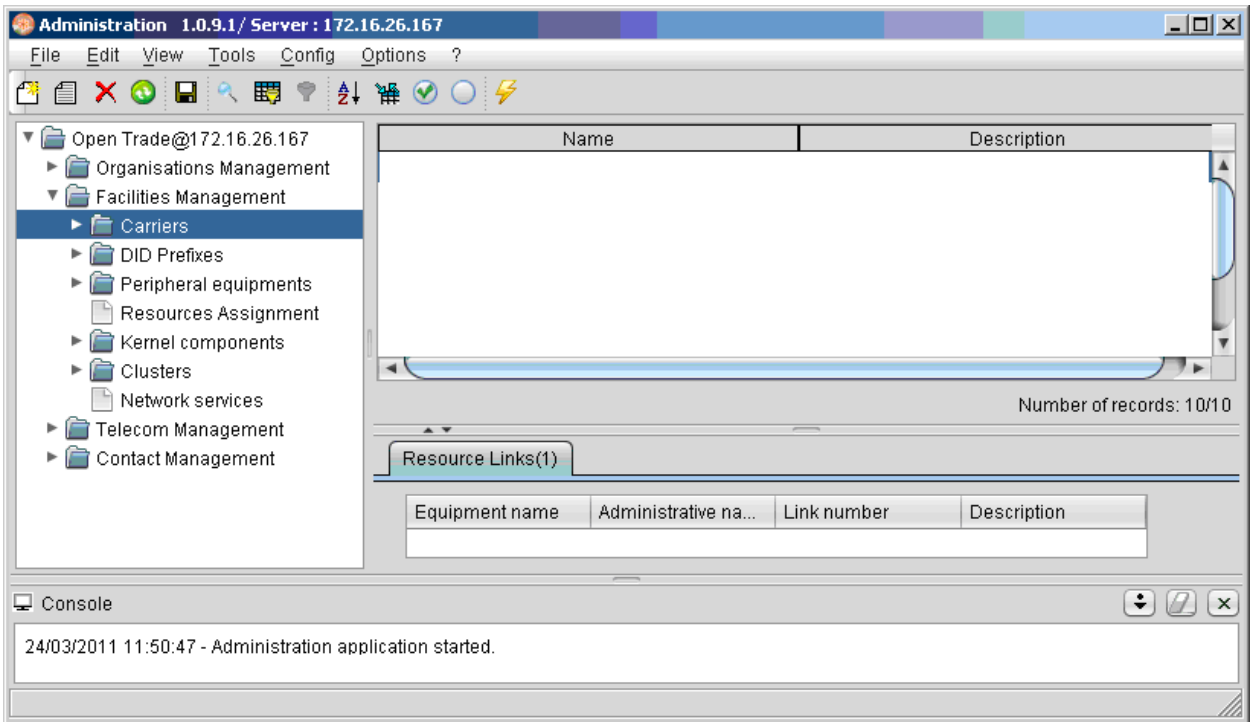

Figure 30: Open Trade Administration Carriers Screen

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Select “Create” from the menu which appears.

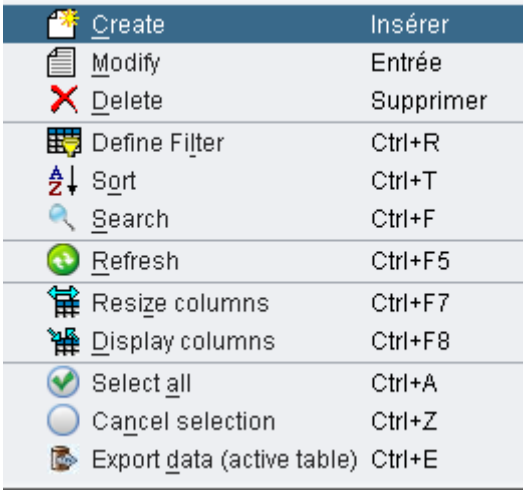

Figure 31: Carrier Creation Menu

Enter an appropriate name and carrier description, and description and click “Add”.

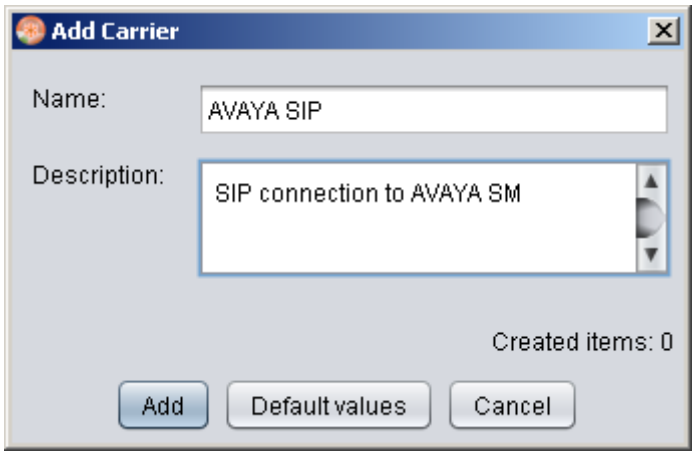

Figure 32: New Carrier Dialog

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Expand the “DID Prefixes” menu item. Place the cursor under the first blank under the “DID prefix” column, and right-click the mouse.

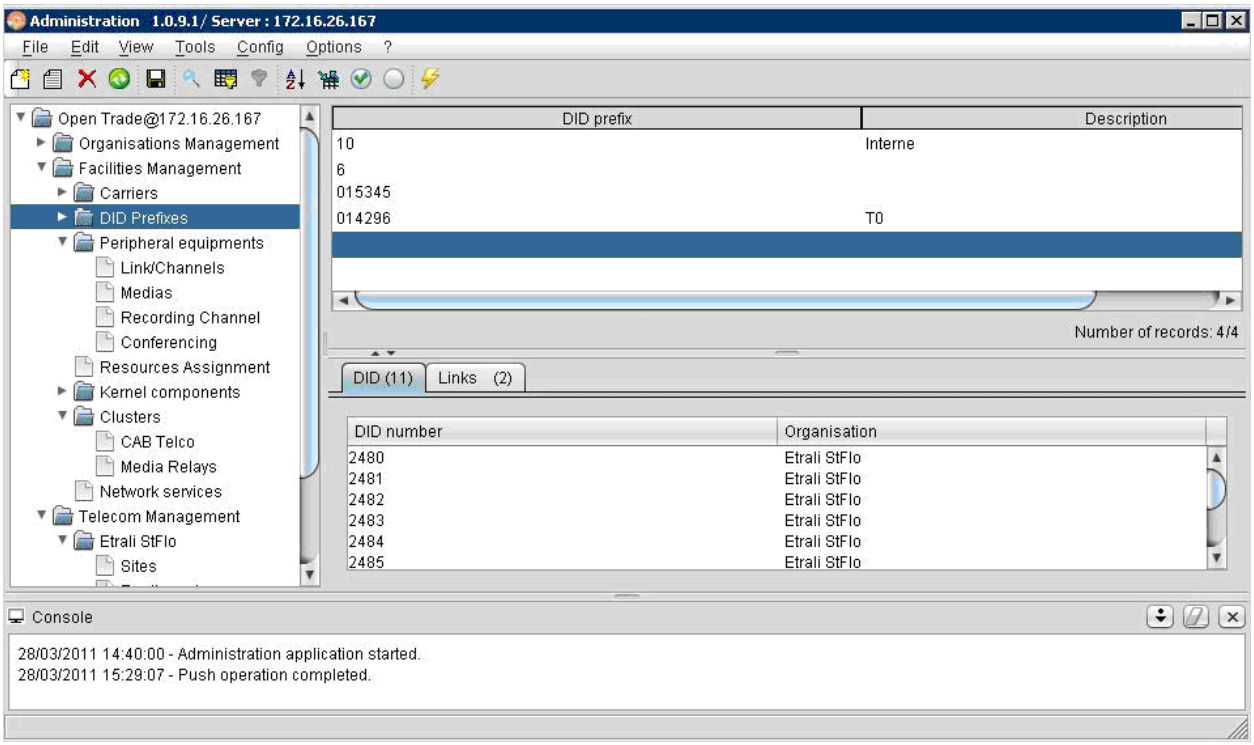

Figure 33: DID prefixes menu

Select “Create” from the menu which appears.

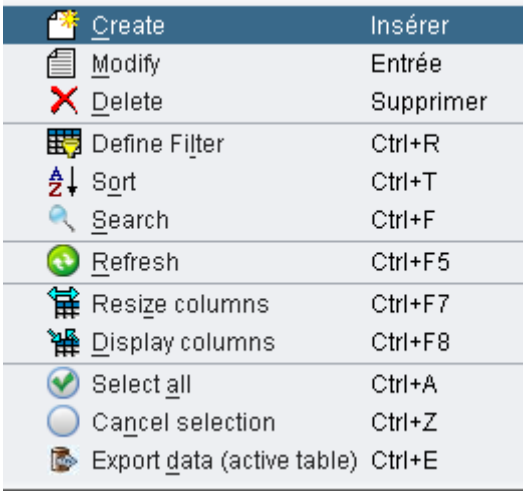

Figure 34: DID Creation Menu

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Enter the values shown in the following table and click “Ok”.

Item	Value
DID prefix	Enter a name or a number. ‘SIP Trunk’ for this configuration

Figure 35: New DID prefix

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Expand the “DID declaration” menu item. Place the cursor under the first blank entry, and right-click the mouse.

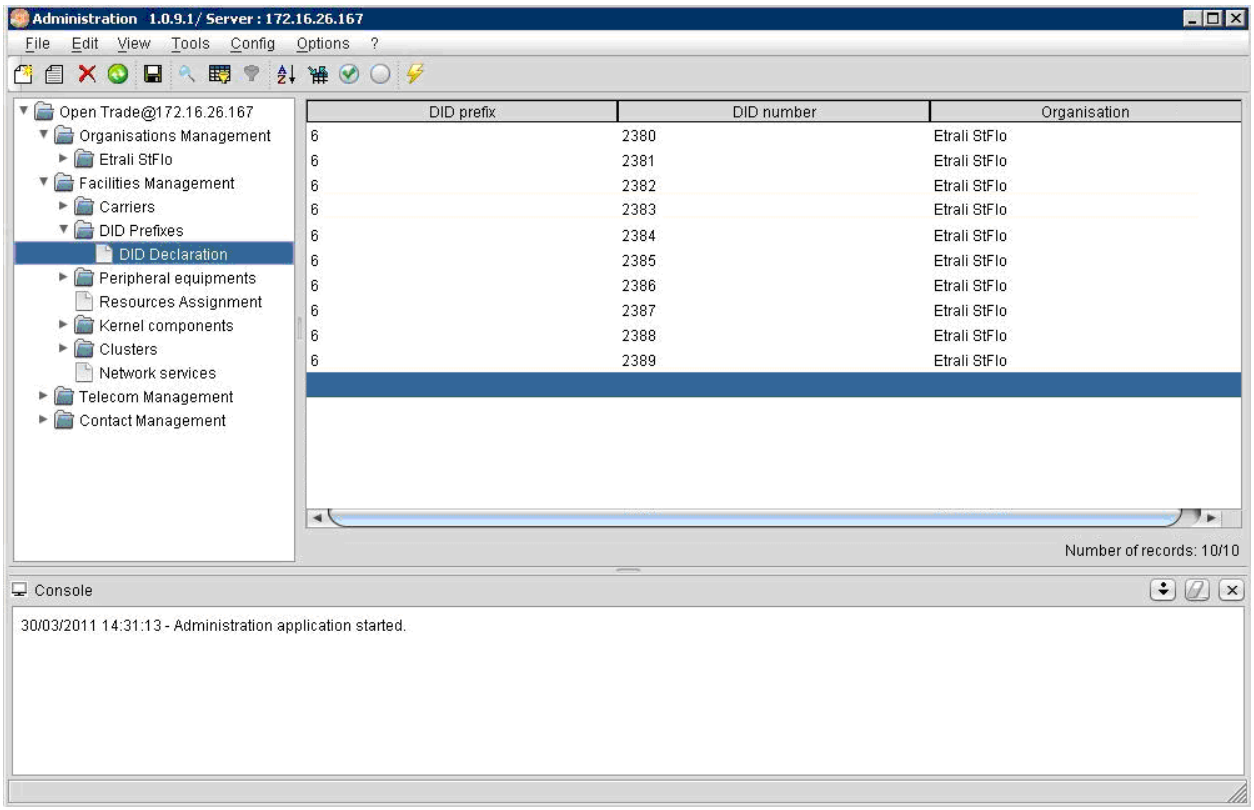

Figure 36: DID Declaration menu

Select “Create” from the menu which appears.

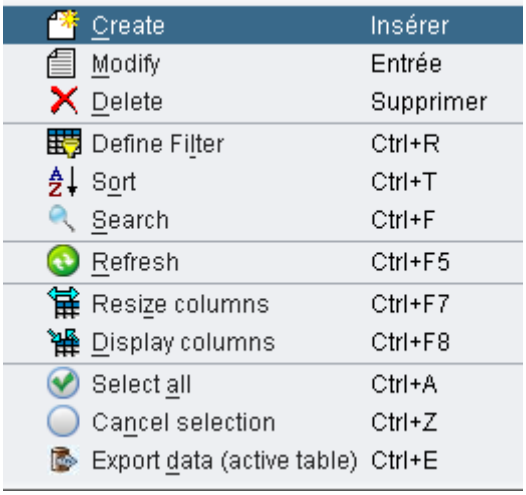

Figure 37: DID Declaration Creation menu

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Enter the values shown in the following table and click “Add”.

Item	Value
DID prefix	Select “SIP Trunk” from the drop-down menu.
From	The beginning of Open Trade extension for SIP Trunk.
To	The ending of Open Trade extension for SIP Trunk.
Organisation	Select the name of the appropriate Organization from the drop-down menu.

Figure 38: Add DID window

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Expand the “Peripheral equipments” menu item, place the cursor under the first blank entry, and right-click the mouse..

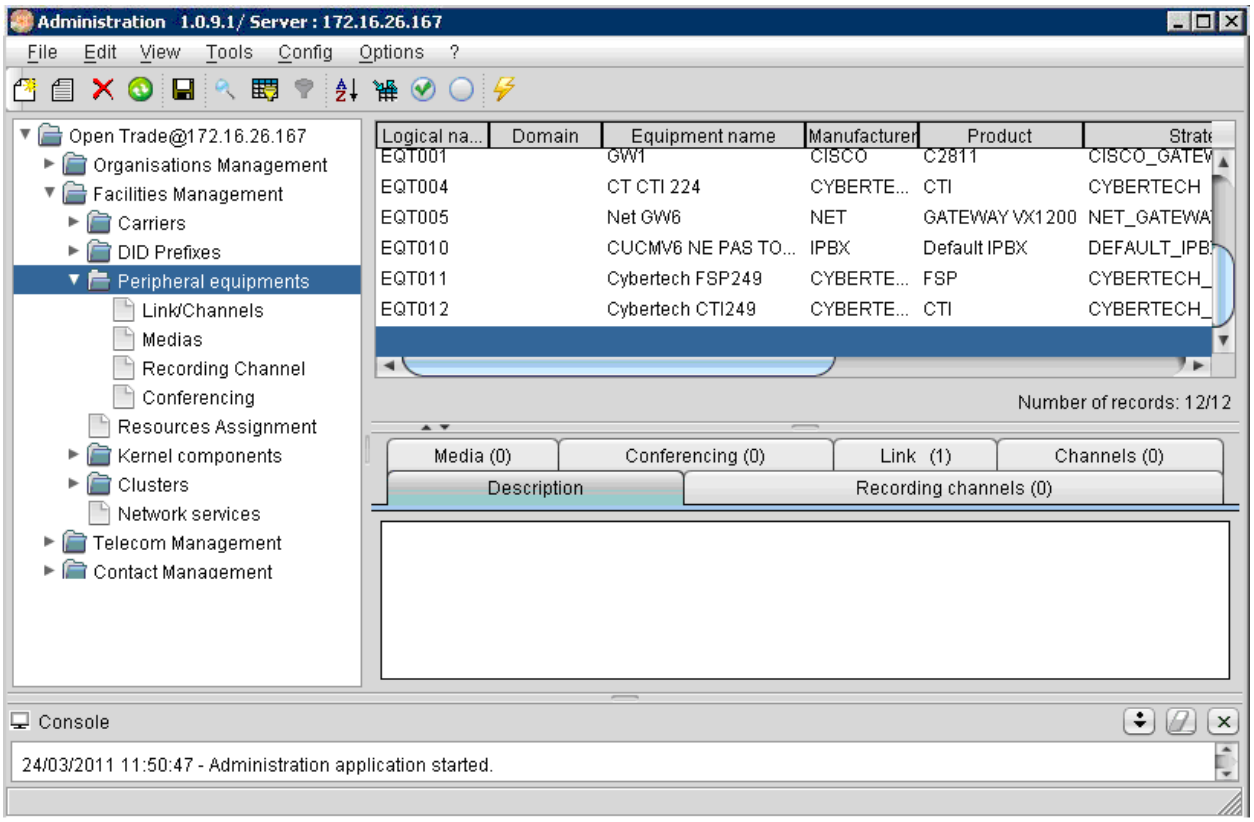

Figure 39: Peripheral Equipment Menu

Select “Create” from the menu which appears.

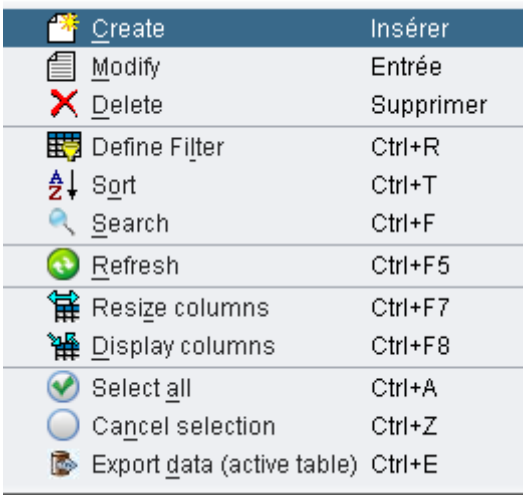

Figure 40: Peripheral Equipment Creation menu

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Enter the values shown in the following table and click “Ok”.

Item	Value
Manufacture	Select “IPBX” from the drop-down menu.
Product name	Select “Default IPBX” from the drop-down menu.
SIP strategy	Select “DEFAULT_IPBX” from the drop-down menu.
IP Address or Hostname	Enter the IP address of the Avaya Session Manager.
Telco links	Enter “1”.

Table 17: SIP Trunk Parameters

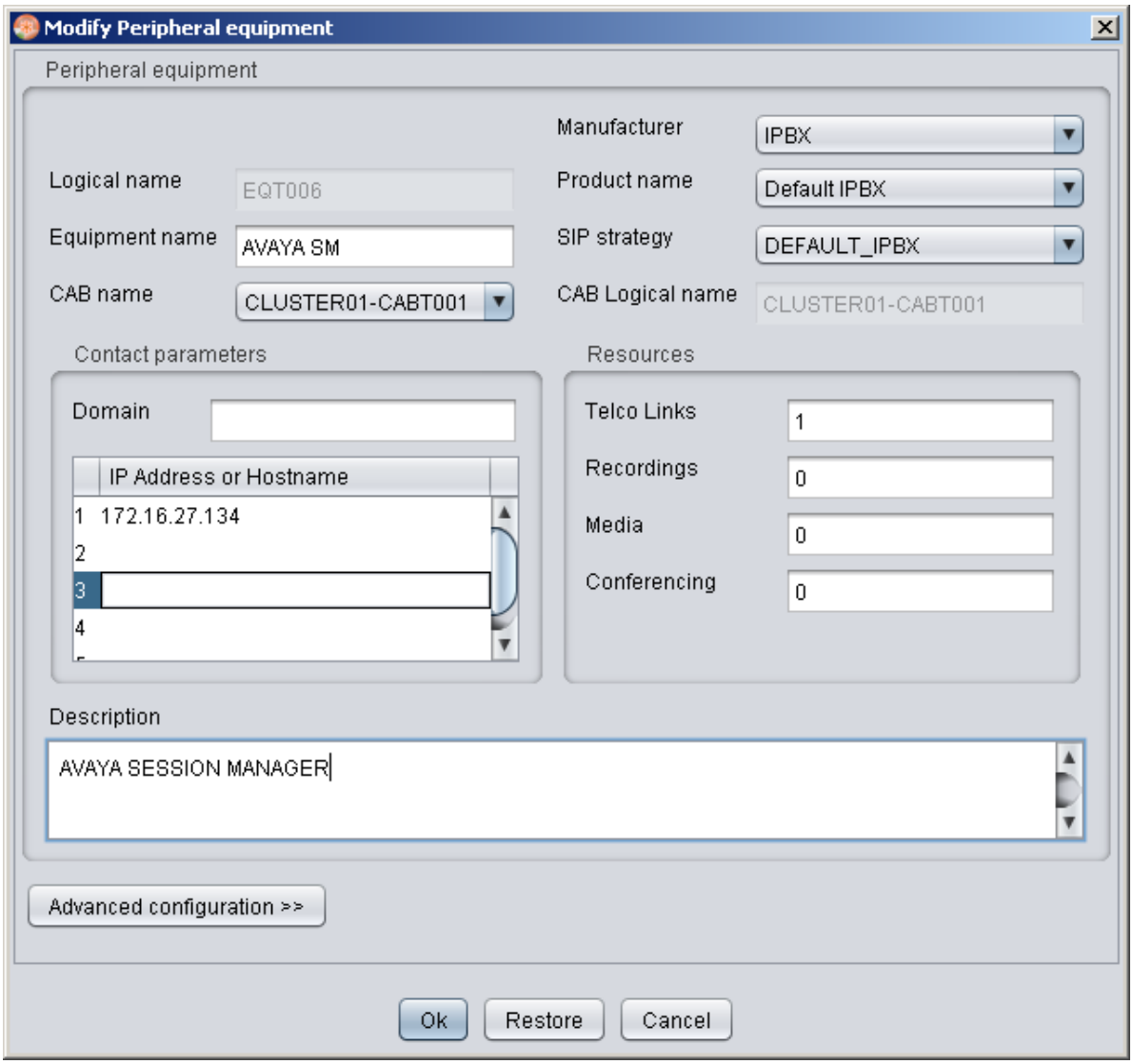

Figure 41: SIP Trunk Parameter Menu

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Expand the “Link/Channels” menu item and double click the newly created entry for the Avaya SIP trunk:

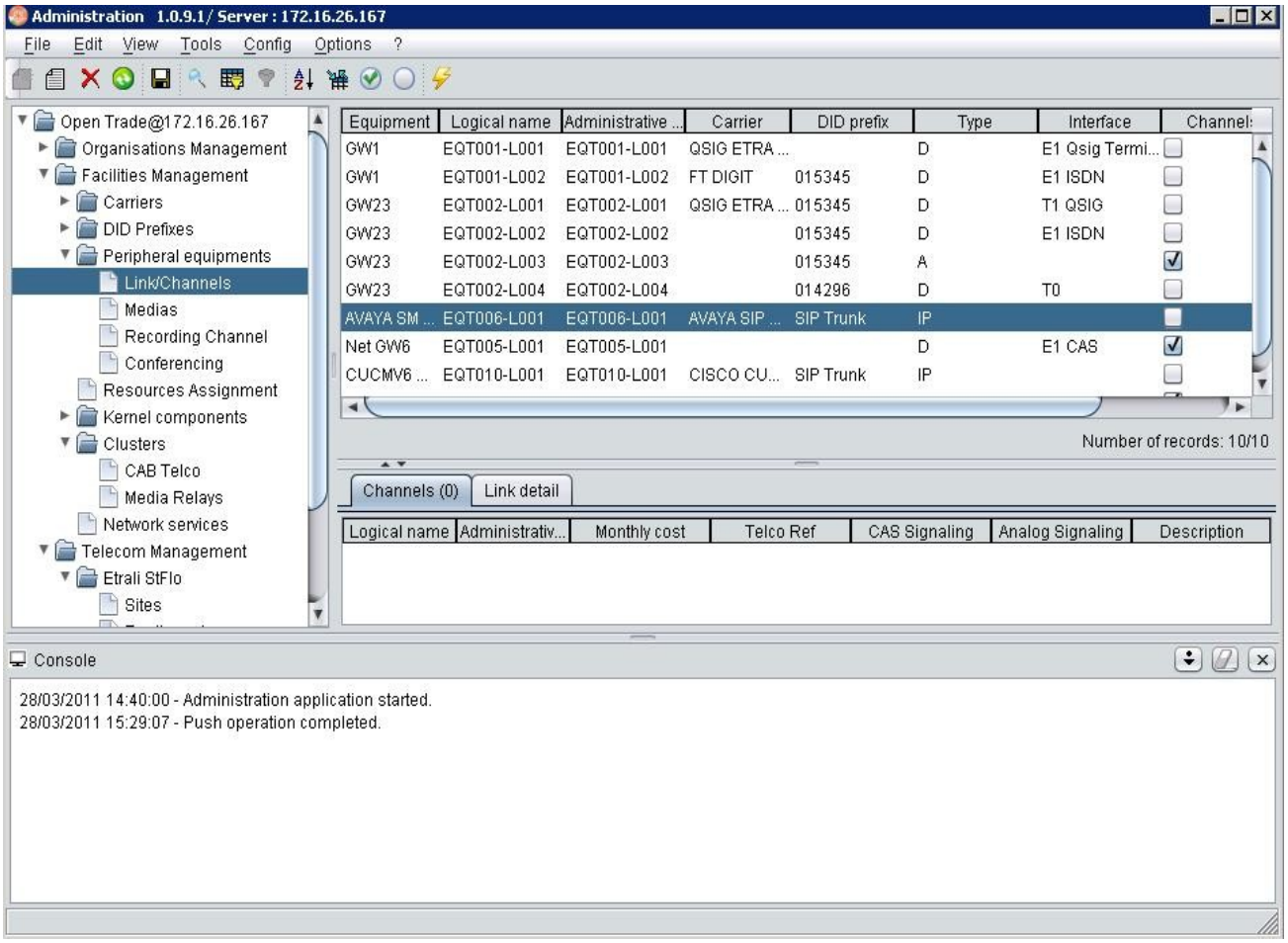

Figure 42: Link/Channels menu

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Enter the values shown in the following table and click “Ok”.

Item	Value
Carrier	Select “AVAYA SIP” from the drop-down menu.
DID prefix	Select “SIP Trunk” from the drop-down menu.
Type	Select “IP” from the drop-down menu.
Number of channels	Enter “30”.

Table 18: SIP Telco link Parameters

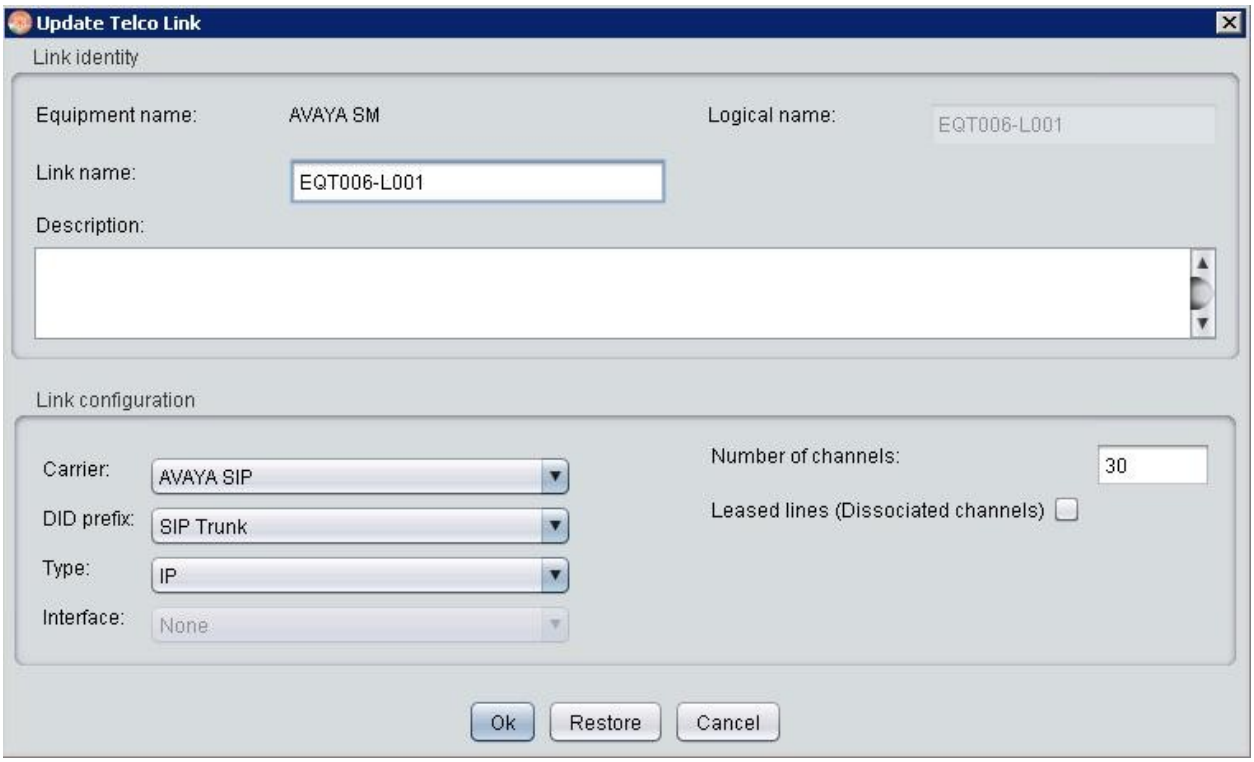

Figure 43: Telco link configuration

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Expand the “Telcom Management” icon and select the “Routing rules” menu element. Place the cursor under the blank, and right-click the mouse to create a new routing rule to Avaya Platform.

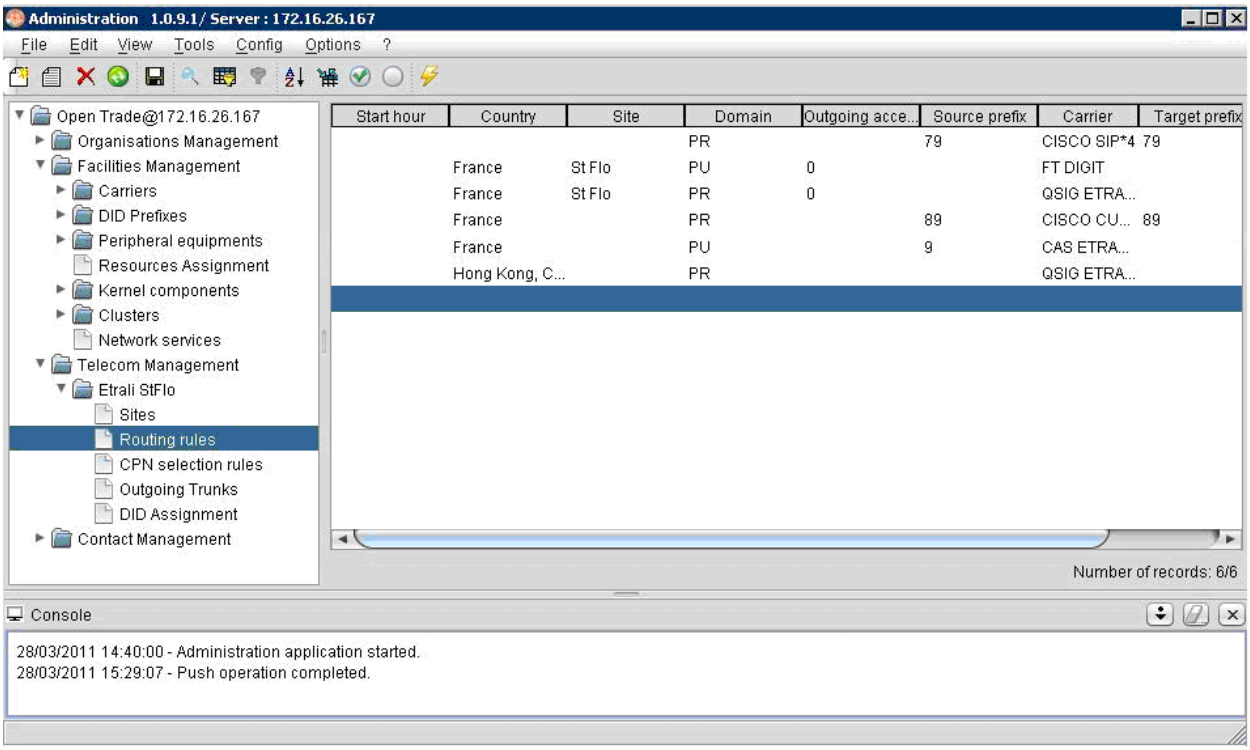

Figure 44: Routing rules menu

Select “Create” from the menu which appears.

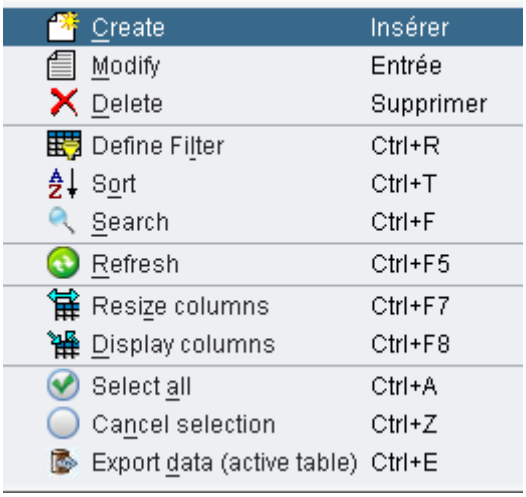

Figure 45: Routing rule creation menu

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Enter the values shown in the following table and click “Ok”.

Item	Value
Domain	Select “Private” from the drop-down menu.
Source prefix	Enter “60” (The 2 first digits of Avaya extension).
Carrier	Select “AVAYA SIP” from the drop-down menu.
Target prefix	Enter “60” (The 2 first digits of Avaya extension).

Table 19: Routing rule Parameters

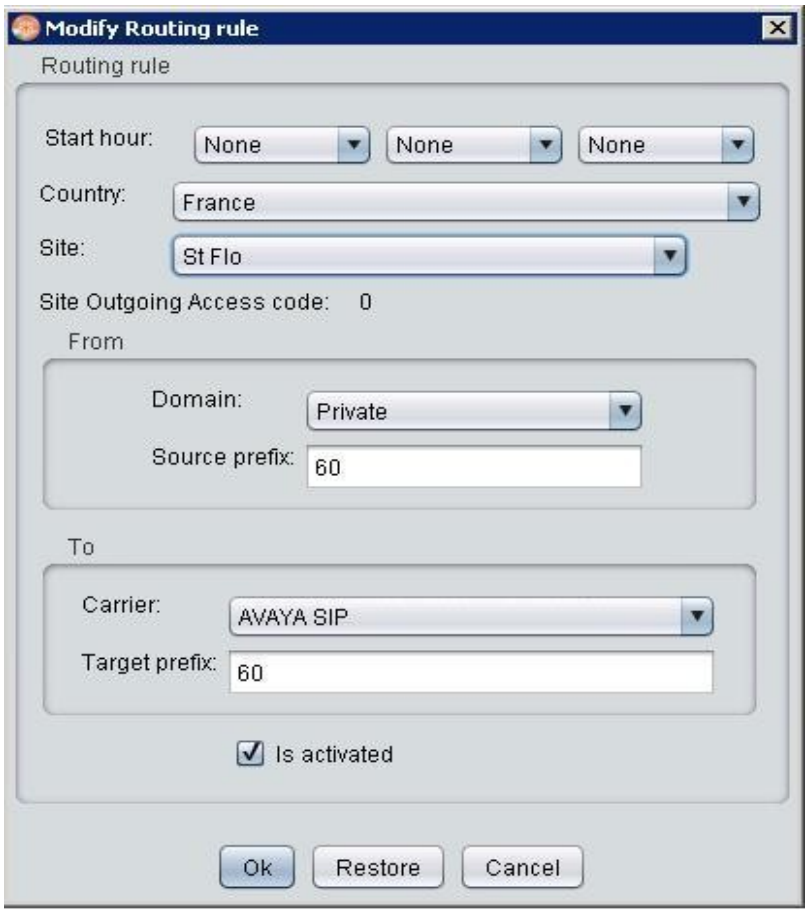

Figure 46: Routing rule Configuration

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Expand the “Telcom Management” icon and select the “Outgoing Trunks” menu element. Place the cursor under the blank, and right-click the mouse to create a new outgoing trunk to Avaya Platform.

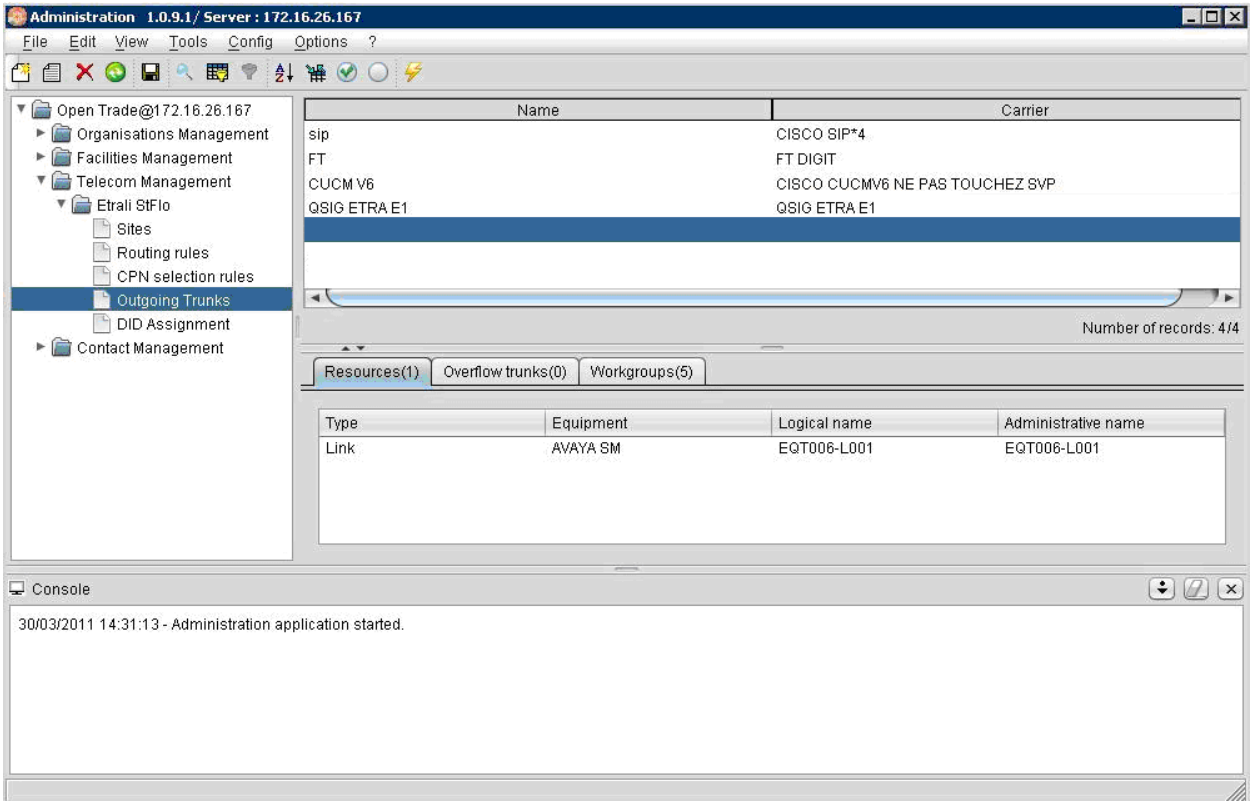

Figure 47: Outgoing Trunks menu

Select “Create” from the menu which appears.

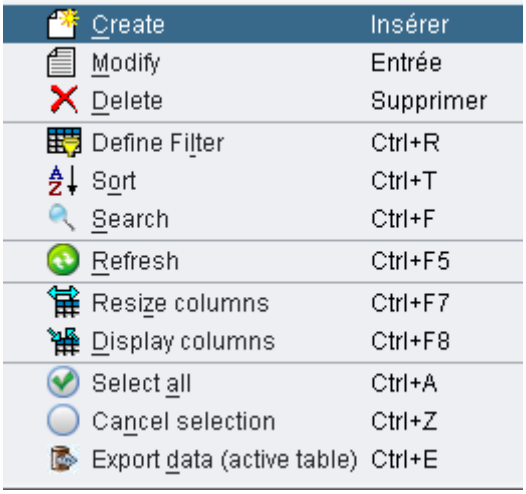

Figure 48: Outgoing Trunk creation menu

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Enter the values shown in the following table and click “Ok”.

Item	Value
Carrier	Select “AVAYA SIP” from the drop-down menu.
Resources	Add “AVAYA SM”.
Workgroups	Add the workgroups of Open Trade system who are allowed to use this trunk.

Table 20: Outgoing Trunk Parameters

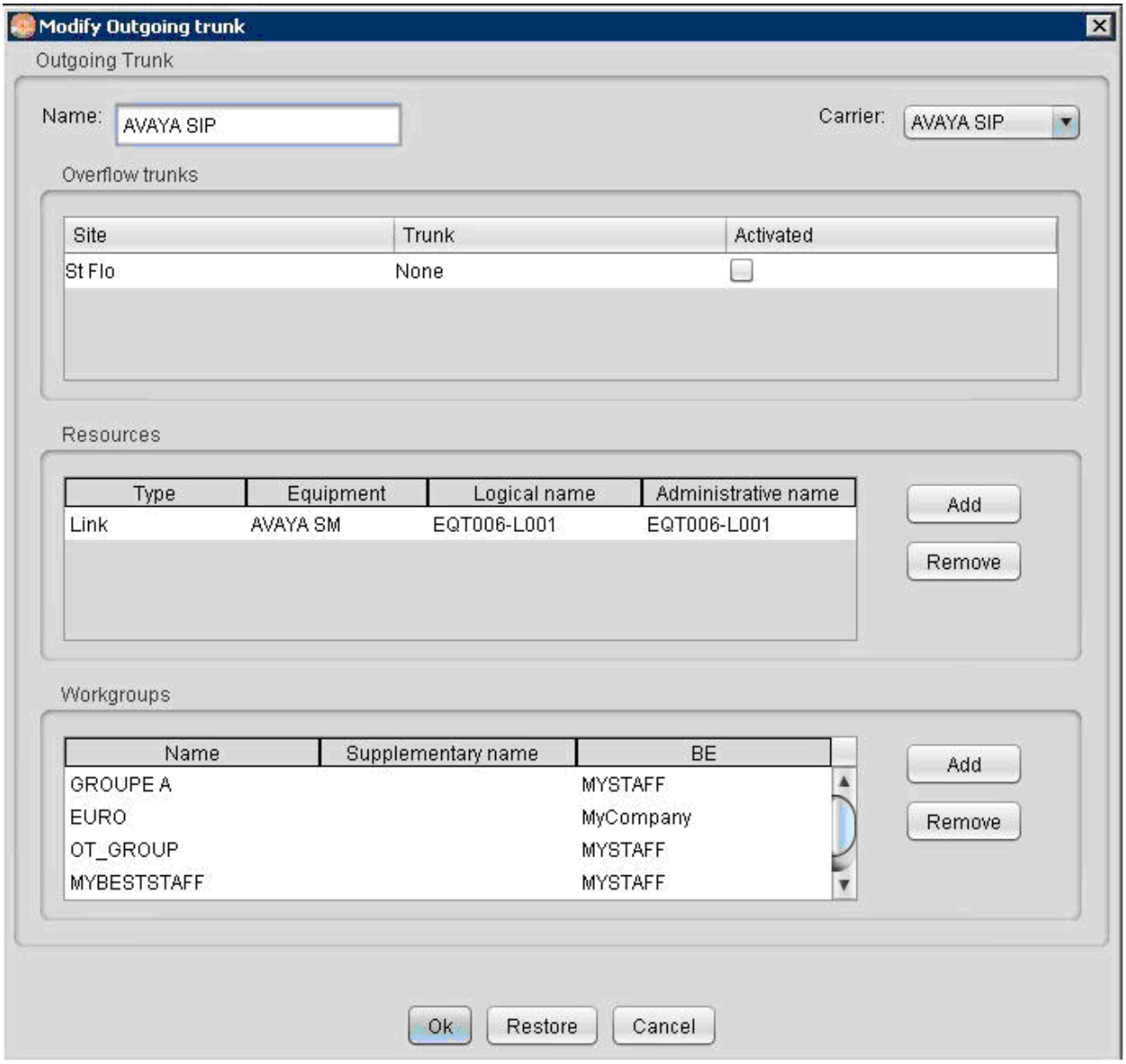

Figure 49: Outgoing trunk configuration

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9. Verification Steps

The correct installation and configuration of Orange Open Trade trading solution can be verified by performing the following steps shown below. Using the SAT terminal, enter the **status signaling-group <n>** command, where <n> is the number of the SIP signaling group which connects to Session Manager. Verify that the signaling group status is "in-service".

```
status signaling-group 1
                         STATUS SIGNALING GROUP

        Group ID: 1
      Group Type: sip

     Group State: in-service
```

Figure 50: Signaling Group Status

10. Conclusion

These Application Notes describe the compliance testing of the Orange Open Trade trading solution with Avaya Aura® Communication Manager and Avaya Aura® Session Manager. The Open Trade passed all of the tests performed, which included both functional and robustness tests.

11. References

This section references documentation relevant to these Applications. Avaya product documentation, including the following, is available at http://support.avaya.com

[1] *Installing and Configuring Avaya Aura® Communication Manager*, Doc ID 03-603558, Release 6.0 June, 2010 available at http://support.avaya.com/css/P8/documents/100089133

[2] *Administering Avaya Aura® Communication Manager*, Doc ID 03-300509, Issue 6.0 June 2010 available at http://support.avaya.com/css/P8/documents/100089333

[3] *Administering Avaya Aura® Session Manager*, Doc ID 03-603324, Release 6.0, June 2010 available at http://support.avaya.com/css/P8/documents/100082630

[4] *Installing and Configuring Avaya Aura® Session Manager,* Doc ID 03-603473 Release 6.0, June 2010 available at http://support.avaya.com/css/P8/documents/100089152

[5] *Maintaining and Troubleshooting Avaya Aura® Session Manager,* Doc ID 03-603325, Release 6.0, June 2010 available at http://support.avaya.com/css/P8/documents/100089154

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