

Avaya Solution & Interoperability Test Lab

Application Notes for Ascom i62 Handsets with Avaya Aura[®] Communication Manager and Avaya Aura[®] Session Manager – Issue 1.0

Abstract

These Application Notes describe the compliance testing of Ascom i62 handsets with Avaya Aura[®] Communication Manager and Avaya Aura[®] Session Manager. The Ascom handsets communicate with Session Manager via wireless LAN using the SIP protocol to provide access to Communication Manager. The compliance testing tested the major functions of the Ascom i62 product.

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.

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1. Introduction

These Application Notes describe the configuration steps required for the Ascom i62 wireless handset to successfully interoperate with Avaya Aura[®] Communication Manager and Avaya Aura[®] Session Manager.

2. General Test Approach and Test Results

The compliance testing of Ascom i62 interoperating with Communication Manager was performed manually. The tests were functional in nature, and no performance testing was done.

2.1. Interoperability Compliance Testing

The compliance testing included the test scenarios shown below. Note that when applicable, all tests were performed with Avaya SIP phones, Avaya H.323 phones, Ascom i62 endpoints, and PSTN endpoints.

- Basic call
- DTMF
- Hold, retrieve, enquiry, and brokering
- Attended, blind transfer
- Call forwarding unconditional, no reply, busy
- Call waiting
- Call park/pickup
- EC500
- Conference
- Do not disturb
- Calling line/name identification
- Connected line/name identification
- Codec support

Note that the MWI feature was not tested due to lack of testing facilities.

2.2. Test Results

The following issues were encountered during testing:

- 1. If a call is made from an Ascom i62 handset to an Ascom i62 handset, the display of the caller is not updated with the called party name after the called party has answered. This issue has been escalated to the development group within Avaya.
- 2. If a blind transfer is made to an Ascom i62 handset, the number of the transferring party is shown at the Ascom i62 handset instead of the original caller while the call is alerting. After the call is answered, the Ascom i62 handset display is updated correctly. This is due to a design philosophy difference between Ascom and Avaya products.
- 3. If an Ascom i62 handset transfers a call from another phone (Ascom or Avaya) to the PSTN, the display of the caller is not updated after the transfer. This issue has been escalated to the development group within Avaya.
- 4. It is not possible to park a call from an Ascom i62 handset. However, parked calls can be retrieved from Ascom i62 handsets.
- 5. It is not possible to initiate Do Not Disturb from an Ascom i62 handset via Communication Manager Feature Access Code.

With the exception of the above-described problems, all tests produced the expected result. **Section 2.1** contains a list of tests which were performed.

2.3. Support

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

Technical support for the Ascom wireless i62 VoWiFi handset can be obtained through a local Ascom supplier.

Ascom global technical support:

- Email: <u>support@ascom.se</u>
- Help desk: +46 31 559450

3. Reference Configuration

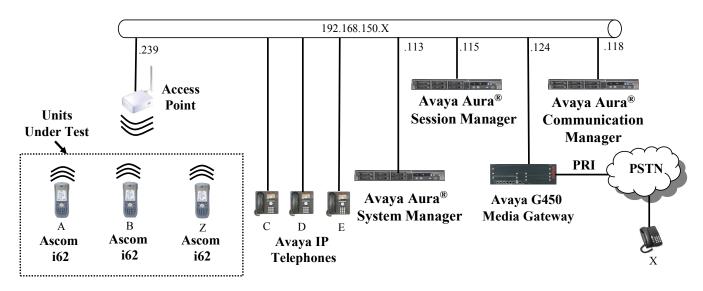


Figure 1: Reference Configuration

| Phone | Ext | Endpoint |
|-------|------------|-------------------|
| А | 4003 | Ascom i62 |
| В | 4005 | Ascom i62 |
| Ζ | 4006 | Ascom i62 |
| С | 2370 | Avaya 9640G SIP |
| D | 2371 | Avaya 9640G SIP |
| Е | 2372 | Avaya 9640G H.323 |
| Х | 0692222222 | ISDN |

The following table contains additional information about how each of the telephones contained in the above diagram are configured in Communication Manager:

Table 1: Extensions Used for Testing

4. Equipment and Software Validated

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

| Equipment | Software Version | | | |
|-----------------------------------------------|-------------------------|--|--|--|
| | R016x.00.1.510.1 | | | |
| Avaya Aura [®] Communication Manager | Patch: 00.1.510.1-18857 | | | |
| Avaya Aura [®] Session Manager | 6.1.0.0.610023 | | | |
| Avaya G450 Media Gateway | 31.18.1 | | | |
| Avaya MM710AP PRI interface | HW05 / FW021 | | | |
| Avaya 9600 H.323 Phones | 2.6.4 | | | |
| Avaya 9600 H.323 Phones | 3.1.1 | | | |
| Device Manager Platform | MS XP Professional SP3 | | | |
| Ascom Device Manager | 3.8.1 | | | |
| Ascom i62 Telephone | v. 2.2.22 | | | |

 Table 2: Equipment and Versions Validated

5. Configure Avaya Aura[®] Communication Manager

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

Note that the configuration of the interface to the PSTN is out of the scope of these Application Notes.

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 support the configuration used for these tests, as shown by the parameter values in **Table 3**. If these are not met in the configuration, please contact an Avaya representative for further assistance.

| Parameter | Usage | | | | |
|------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|--|--|
| Maximum Administered SIP Trunks Stations (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 9 . | | | | |

Table 3: Configuration Values for System-Parameters Customer-Options

| display system-parameters customer-options OPTIONAL FEATURES | | Page | 2 of | 11 |
|-----------------------------------------------------------------|-------|------|------|----|
| OFIIONAL FEAIORES | | | | |
| IP PORT CAPACITIES | | USED | | |
| Maximum Administered H.323 Trunks: | 12000 | 50 | | |
| Maximum Concurrently Registered IP Stations: | 18000 | 2 | | |
| Maximum Administered Remote Office Trunks: | 12000 | 0 | | |
| Maximum Concurrently Registered Remote Office Stations: | 18000 | 0 | | |
| Maximum Concurrently Registered IP eCons: | 414 | 0 | | |
| Max Concur Registered Unauthenticated H.323 Stations: | 100 | 0 | | |
| Maximum Video Capable Stations: | 18000 | 0 | | |
| Maximum Video Capable IP Softphones: | 1000 | 0 | | |
| Maximum Administered SIP Trunks: | 24000 | 10 | | |
| Maximum Administered Ad-hoc Video Conferencing Ports: | 24000 | 0 | | |
| Maximum Number of DS1 Boards with Echo Cancellation: | 522 | 0 | | |
| Maximum TN2501 VAL Boards: | 128 | 0 | | |
| Maximum Media Gateway VAL Sources: | 250 | 1 | | |
| 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: | 300 | 0 | | |

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

5.2. 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 Avaya terminal extensions. |
| 4 | Make an entry for Ascom terminal extensions. |
| *2 | Make an entry feature access codes shown in Figure 4 . |
| *8 | Make an entry for the Trunk Access Code used in the SIP trunk group defined in Figure 9 . |

Table 4: Dialplan Analysis Parameters

| change dialplan analysis | Page 1 of 12 DIAL PLAN ANALYSIS TABLE |
|---------------------------------------------------------------------------------------|------------------------------------------------------------------------------|
| | Location: all Percent Full: 4 |
| Dialed Total Call String Length Type 2 4 ext 4 4 ext *2 4 fac *8 4 dac | Dialed Total Call Dialed Total Call String Length Type String Length Type |

Figure 3: Dialplan Analysis Form

5.3. Feature Access Codes

Use the **change feature-access-codes** command to configure access codes which can be entered from Ascom handsets to initiate Communication Manager call features. These access codes must be compatible with the dial plan described in **Figure 3**.

| Dialed String | Usage |
|--------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Announcement Access Code | Enter an access code if announcements need to be created for the operation of the Meet-me conferencing features described in Section Error! Reference source not found. |
| Call Forwarding Activation Busy/DA All Deactivation | Enter access codes for the operation of the call forwarding features. |

Table 5: Feature Access Codes Parameters

| change feature-access-codes | Page 1 of 10 |
|-------------------------------------------------|-------------------------|
| FEATURE ACCESS C | |
| Abbreviated Dialing List1 Access Code: | |
| Abbreviated Dialing List2 Access Code: | |
| Abbreviated Dialing List3 Access Code: | |
| Abbreviated Dial - Prgm Group List Access Code: | |
| Announcement Access Code: | *200 |
| Answer Back Access Code: | *206 |
| Attendant Access Code: | |
| Auto Alternate Routing (AAR) Access Code: | |
| Auto Route Selection (ARS) - Access Code 1: | 0 Access Code 2: |
| Automatic Callback Activation: | Deactivation: |
| Call Forwarding Activation Busy/DA: *203 All: | *201 Deactivation: *202 |
| Call Forwarding Enhanced Status: Act: | Deactivation: |
| Call Park Access Code: | *205 |
| Call Pickup Access Code: | |
| CAS Remote Hold/Answer Hold-Unhold Access Code: | |
| CDR Account Code Access Code: | |
| Change COR Access Code: | |
| Change Coverage Access Code: | |
| Conditional Call Extend Activation: | Deactivation: |
| Contact Closure Open Code: | Close Code: |

Figure 4: Feature Access Codes Screen

5.4. Configure IP Interfaces

Use the change node-names ip command to configure the IP address of Session Manager.

```
    change node-names ip
    Page
    1 of
    2

    IP NODE NAMES
    Page
    1 of
    2

    Name
    IP Address

    asset
    192.168.150.115

    default
    0.0.0.0

    procr
    192.168.150.118

    procr6
    ::
```

Figure 5: Node-Names IP Form

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 15**.

```
change ip-network-region 1
                                                               Page 1 of 20
                              IP NETWORK REGION
 Region: 1
Location: 1
                Authoritative Domain: aura.dcffm
   Name: local
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 a codec set compatible with the Ascom Handsets, which support both G.711A and G.729A.

change change ip-codec-set 1 Page IP Codec Set Codec Set: 1 Audio Silence Frames Packet Codec Suppression Per Pkt Size(ms) 1: G.711A n 2 20 2: G.729A n 2 20

Figure 7: IP-Codec-Set Form

1 of

2

5.7. 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 "5060". |
| Far-end Node Name | Enter the name assigned to the SIP trunk to Session Manager configured in Figure 5 . |
| Far-end Listen Port | Enter "5060". |
| Far-end Domain Name | Enter the domain name assigned to the network region in Figure 6 . |
| Direct IP-IP Audio Connections | Enter "y" to turn on "shuffling". |

Table 6: Signaling-Group Parameters for SIP Interface

Page 1 of add signaling-group 1 1 SIGNALING GROUP Group Number: 1 Group Type: sip IMS Enabled? n Transport Method: tcp 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: asset Near-end Listen Port: 5060 Far-end Listen Port: 5060 Far-end Network Region: 1 Far-end Domain: aura.dcffm Bypass If IP Threshold Exceeded? n Incoming Dialog Loopbacks: eliminate RFC 3389 Comfort Noise? n DIALOG LOOPDACKS: ELIMINALE DTMF over IP: rtp-payload Establishment Timer(min): 3 Direct IP-IP Audio Connections? y Session Establishment Timer(min): 3 IP Audio Hairpinning? n Enable Layer 3 Test? y Initial IP-IP Direct Media? n H.323 Station Outgoing Direct Media? n Alternate Route Timer(sec): 6

Figure 8: Signaling Group Form

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 "public-ntwrk" line to a peer system. |
| Signaling Group | Enter the number assigned to the SIP signaling group shown in Figure 8. |
| (page 1) | |
| Number of Members | Specify sufficient number of members to support the maximum |
| (page 1) | simultaneous connections required. |
| Preferred Minimum | Enter "900". |
| Session Refresh | |
| Interval (page 2) | |
| Numbering Format | Enter "private". |
| (page 3) | |
| Support Request | Enter "y". |
| History (page 4) | |

Table 7: Trunk-Group Parameters for the SIP Interface

| add change tru | | | | | Page | 1 of | 21 | |
|----------------|--------------|----------------|------|-----------|---------|-------------|------|--|
| | , <u>,</u> | TRUNK GROUP | 2 | | | 5 | | |
| Group Number: | 1 | Group Ty | /pe: | sip | С | DR Reports: | У | |
| Group Name: | Local-to-CM | C | COR: | 1 | TN: 1 | TAC: | *801 | |
| Direction: | two-way | Outgoing Displ | Lay? | n | | | | |
| Dial Access? | n | | | Night | Servic | e: | | |
| Queue Length: | 0 | | | | | | | |
| Service Type: | public-ntwrk | Auth Co | ode? | n | | | | |
| | | | M | lember As | signmen | t Method: a | uto | |
| | | | | | Signali | ng Group: 1 | | |
| | | | | Nu | mber of | Members: 1 | .0 | |
| | | | | | | | | |

Figure 9: Trunk Group Form, page 1

add trunk-group 1 Group Type: sip TRUNK PARAMETERS Unicode Name: auto Redirect On OPTIM Failure: 9000 SCCAN? n Digital Loss Group: 18 Preferred Minimum Session Refresh Interval(sec): 900 Disconnect Supervision - In? y Out? y XOIP Treatment: auto Delay Call Setup When Accessed Via IGAR? n

Figure 10: Trunk Group Form, page 2

| add trunk-group 1 | Page 3 of 21 |
|--------------------------------|---------------------------------|
| TRUNK FEATURES | |
| ACA Assignment? n | Measured: none |
| | Maintenance Tests? y |
| | |
| | |
| | |
| Numbering Format: | - |
| | UUI Treatment: service-provider |
| | Replace Restricted Numbers? n |
| | Replace Unavailable Numbers? n |
| | Replace onavailable nambers. n |
| | |
| Modify | Tandem Calling Number: no |
| | |
| | |
| | |
| | |
| Show ANSWERED BY on Display? y | |

Figure 11: Trunk Group Form, page 3

add trunk-group 1 Page 4 of 21 PROTOCOL VARIATIONS Mark Users as Phone? n
Prepend '+' to Calling Number? n
Send Transferring Party Information? y
Network Call Redirection? n
Send Diversion Header? n
Support Request History? y
Telephone Event Payload Type: 101 Convert 180 to 183 for Early Media? n
Always Use re-INVITE for Display Updates? n
Identity for Calling Party Display: From
Enable Q-SIP? n

Figure 12: Trunk Group Form, page 4

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 Username and Password and press the Log On button (not shown).

| AVAYA | Avaya Aura™ System Manager 6.1 | | |
|---------------|--------------------------------|------------|--|
| Home / Log On | | | |
| Log On | | | |
| | | | |
| | | | |
| | User ID: | | |
| | P dasa voi di | | |
| | | g On Clear | |

Figure 13: System Manager Login Screen

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

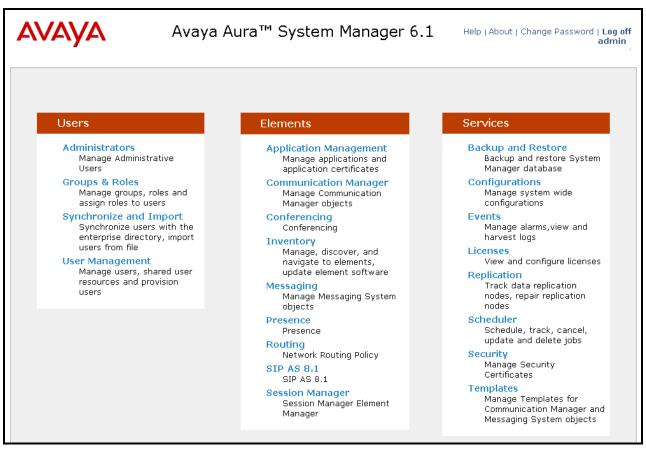


Figure 14: System Manager Home Screen

6.1. Domains

Navigate to **Routing** \rightarrow **Domains** and click **New** to add a domain, enter the domain name, and click the **Commit** button after changes are completed. The domain name should be the same as was configured in **Figure 6**.

| AVAYA | Avaya Aura™ System I | Manage | er 6.1 | | Change Passwol | admin |
|-----------------------------|---------------------------------------|------------|----------|---------|----------------|------------|
| | | | | Routing | × Routing × | Home |
| Routing | Home / Elements / Routing / Domains - | Domain Mai | nagement | | | |
| Domains Locations | Domain Management | | | | | Help ? |
| Adaptations SIP Entities | Edit New Duplicate Delete More Ac | tions 🔹 | | | | |
| Entity Links | 1 Item Refresh | | | | Filt | er: Enable |
| Time Ranges | Name | Туре | Default | Notes | | |
| Routing Policies | aura.dcffm | sip | | | | |
| Dial Patterns | Select : All, None | | | | | |
| Regular Expressions | | | | | | |
| Defaults | | | | | | |

Figure 15: Domain Screen

6.2. Locations

To view or change locations, select **Routing** \rightarrow **Locations**. Click the **New** button to add a location, and enter a location identifier. 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.

| AVAYA | Avaya Aura™ System Manager 6.1 | Help About Change Password Log off admin |
|---------------------|--------------------------------------------------|---------------------------------------------------|
| | | Routing × Home |
| - Routing | Home / Elements / Routing / Locations - Location | |
| Domains | | Help ? |
| Locations | Location | |
| Adaptations | Edit New Duplicate Delete More Actions - | |
| SIP Entities | | |
| Entity Links | 1 Item Refresh | Filter: Enable |
| Time Ranges | Name Notes | |
| Routing Policies | Frankfurt | |
| Dial Patterns | Select : All, None | |
| Regular Expressions | | |
| Defaults | | |

Figure 16: Locations Screen

6.3. SIP Entities

To view or change SIP elements, select **Routing** \rightarrow **SIP Entities**. To create a SIP Entity for the Session Manager, click **New**, enter the parameters shown in the following table, and click **Commit**.

| Parameter | Usage |
|--------------------|------------------------------------------------------------------------------------------|
| Name | Enter an identifier to be assigned to the Session Manager interface |
| FQDN or IP Address | Enter the address value to be assigned to the Session Manager interface |
| Туре | Select "Session Manager" from the drop-down menu. |
| Location | Select the value assigned to the Session Manager in Section 6.2 |
| Time Zone | Select the appropriate Time Zone for the Session Manager from the drop-down menu. |

Table 8: Session Manager SIP Entity Parameters

| AVAYA | Avaya Aura™ System | n Manager 6.1 | Help About | Change Password | d Log o admin |
|---------------------|--------------------------------------------------------------------------|-----------------------------------|--------------|-----------------|--------------------|
| - | | | | Routing * | Home |
| Routing | Home / Elements / Routing / SIP Entit | ties - SIP Entity Details | | | |
| Domains | | | | | Help |
| Locations | SIP Entity Details | | | Commit | t] Cance |
| Adaptations | General | | | | |
| SIP Entities | * Name: | entity-SM100 | | | |
| Entity Links | * FQDN or IP Address: | 192.168.150.115 | | | |
| Time Ranges | | Session Manager | | | |
| Routing Policies | | | | | |
| Dial Patterns | Notes: | asset.aura.dcffm | | | |
| Regular Expressions | | | | | |
| Defaults | | Frankfurt 💌 | | | |
| | Outbound Proxy: | ¥ | | | |
| | Time Zone: | Europe/Berlin | ~ | | |
| | Credential name: | | | | |
| | SIP Link Monitoring | | | | |
| | SIP Link Monitoring: | Use Session Manager Configuration | * | | |
| | Entity Links Entity Links can be modified after Port Add Remove | SIP Entity is committed. | | | |
| | 0 Items Refresh | | | Filte | er: Enat |
| | Port Protocol D | efault Domain | | Notes | |

Figure 17: Session Manager SIP Entity Screen

Return to the **Routing** \rightarrow **SIP Entities** menu to create a SIP Entity for the Communication Manager. Click **New**, enter the parameters shown in the following table, and click **Commit**.

| Parameter | Usage |
|--------------------|-----------------------------------------------------------------|
| Name | Enter an identifier to be assigned to the Communication Manager |
| | interface |
| FQDN or IP Address | Enter the FQDN or IP address value to be assigned to the |
| FQDN OF IF Address | Communication Manager processor Ethernet interface. |
| Туре | Select "CM" from the drop-down menu. |
| Location | Select the value assigned in Section 6.2 |
| Time Zene | Select the appropriate Time Zone for the Communication |
| Time Zone | Manager from the drop-down menu. |

Table 9: Session Manager SIP Entity Parameters

| AVAYA | Avaya Aura™ Syste | em Manager 6.1 | Help About Change Passv | word Log off admin |
|---------------------|--------------------------------------------|-------------------------------|-----------------------------|-------------------------|
| _ | | | Routing | * Home |
| Routing | Home / Elements / Routing / SIP E | ntities - SIP Entity Details | | |
| Domains | | | _ | Help ? |
| Locations | SIP Entity Details | | Cor | mmit Cancel |
| Adaptations | General | | | |
| SIP Entities | * Name: | entity-CM1 | | |
| Entity Links | * FQDN or IP Address: | cm1.aura.dcffm | | |
| Time Ranges | - | | | |
| Routing Policies | Туре: | | | |
| Dial Patterns | Notes: | 192.168.150.118 | | |
| Regular Expressions | | | | |
| Defaults | Adaptation: | ~ | | |
| | Location: | Frankfurt 💌 | | |
| | Time Zone: | Europe/Berlin | * | |
| | Override Port & Transport with DNS SRV: | | | |
| | * SIP Timer B/F (in seconds): | 4 | | |
| | Credential name: | | | |
| | Call Detail Recording: | none 💌 | | |
| | SIP Link Monitoring | | | |
| | SIP Link Monitoring: | Use Session Manager Configura | ation 💌 | |

Figure 18: Communication Manager SIP Entity Screen

6.4. Applications

Navigate to Session Manager→Application Configuration→ Applications, click New, and enter the parameters shown in the following table, and click View/Add CM Systems followed by New.

| Parameter | Usage |
|------------|-----------------------------------------------------------------------------------------------------|
| Name | Enter an identifier to be assigned to the Communication Manager Application. |
| SIP Entity | Select the Communication Manager SIP Entity configured in Figure 18 from the drop-down menu. |

 Table 10:
 Session Manager SIP Entity Parameters

| AVAYA | Avaya Au | ra™ Sy | stem Ma | nager | 6.1 | Help Abou | it Chani | ge Passwor | rd Log off admin |
|-----------------------|---------------------|--------------|----------------|-----------|-------------|-----------------|------------|------------|-----------------------|
| | Communication | n Manager | Session Ma | nager × | Applicati | ion Management | t × R | Routing × | Home |
| Session Manager | ∢ Home / Elements / | ' Session Ma | anager / Appli | cation Co | onfiguratio | n / Application | ns - App | lications | |
| Dashboard | | | | | | | | | Help ? |
| Session Manager | Application | Editor | | | | | | Commit | Cancel |
| Administration | Application | Eurice. | | | | | | | |
| Communication Profile | | | | | | | | | |
| Editor | Application | | | | | | | | |
| Network Configuration | | | | - | | | | | |
| > Device and Location | *Name CM-1 | EV | | J | | | | | |
| Configuration | *SIP Entity entit | y-CM1 | * | | | | | | |
| Application | *CM System | Refresh | View/Add CN | 1 | | | | | |
| Configuration | for SIP Entity | | Systems | - | | | | | |
| Applications | Description | | | J | | | | | |

Figure 19: Session Manager Application Screen

Enter the parameters shown in the following table.

| Parameter | Usage |
|-----------|------------------------------------------------------------------------------------|
| Name | Enter an identifier to be assigned to the Communication Manager instance. |
| Node | Enter the IP address of the Communication Manager processor Ethernet interface. |

 Table 11: CM Instance Application Parameters

| Help : New CM Instance Commit Cancel | | | |
|-----------------------------------------|-----------------|--|--|
| Application * Attributes * | | | |
| Application 💌 | | | |
| * Name | cm1 | | |
| * Туре | CM | | |
| Description | | | |
| * Node | 192.168.150.118 | | |

Figure 20: CM Instance Application Screen

Enter the parameters shown in the following table and click **Commit**.

| Parameter | Usage |
|-------------------|-------------------------------------------------------------|
| Login | Enter the Communication Manager login id to be used to make |
| 8 | configuration changes to Communication Manager. |
| Password | Enter the password associated with the above Login. |
| Is SSH Connection | Check this box. |
| Port | Enter 5022 . |

Table 12: CM Instance Attributes Parameters

| New CM Instance | Help ? Commit Cancel |
|--------------------------------------|-------------------------|
| Application * Attributes * | |
| SNMP Attributes 🖪 | |
| Attributes 💌 | |
| * Login | init |
| Password | ••••• |
| Confirm Password | ••••• |
| Is SSH Connection | |
| * Port | 5022 |
| Alternate IP Address | |
| RSA SSH Fingerprint (Primary IP) | |
| RSA SSH Fingerprin (Alternate IP) | t |
| Is ASG Enabled | |
| ASG Key | |
| Confirm ASG Key | |
| Location | |

Figure 21: CM Instance Attributes Screen

6.5. Application Sequences

Use the menu hierarchy at the left of the screen to navigate to Session Manager \rightarrow Application Configuration \rightarrow Sequences, click New. Click the "+" icon at the bottom of the screen to add the application which was created in section 6.4, and click Commit

| Parameter | Usage |
|-----------|-----------------------------------------------------------------|
| Name | Enter an identifier to be assigned to the Application Sequence. |

AVAYA Avaya Aura™ System Manager 6.1 Help | About | Change Password | Log off admin Communication Manager * Application Management * Routing Home Home / Elements / Session Manager / Application Configuration / Application Sequences - Application Session Manager 4 Sequences Dashboard Help ? Session Manager Administration **Application Sequence Editor** Commit Cancel **Communication Profile** Editor Application Sequence Network Configuration Device and Location *Name CM-1 EV 1 Configuration Description Application Configuration Applications in this Sequence Applications Move First Move Last Remove Application Sequences 0 Items Sequence Order (first to last) Implicit Users SIP Entity Description Name Mandatory NRS Proxy Users No Applications Have Been Added System Status System Tools **Available Applications** 1 Item | Refresh Filter: Enable SIP Entity Name Description \oplus CM-1 EV entity-CM1

 Table 13: Application Sequences Parameters

Figure 22: Application Sequences Screen

6.6. Users

Use the menu hierarchy at the left of the screen to navigate to User Management→Manage Uses, and click New.

| AVAYA | Avaya | Aura™ System I | Manager 6.1 | Help About Chang | je Password Log off admin |
|----------------------|--------------------|-------------------------|-----------------------|----------------------|---------------------------------------|
| | | User Management | * Routing * User | Management * R | outing × Home |
| v User Management | Home / Users | / User Management / Maı | nage Users - User Mar | nagement | |
| Manage Users | _ | | | | Help ? |
| Public Contacts | 📤 Status | | | | |
| Shared Addresses | User Man | agement | | | |
| System Presence ACLs | | | | | |
| | Users | | | | |
| | View Edit N | ew Duplicate Delete M | ore Actions 🔹 | | Advanced Search 💌 |
| | 2 Items Refresh | Show ALL 💌 | | | Filter: Enable |
| | Status | Name | Login Name | E164 Handle | Last Login |
| | <u> </u> | extn 2370 | 2370@aura.dcffm | 2370 | |
| | <u> 오</u> | extn 2371 | 2371@aura.dcffm | 2371 | |
| | Select : All, None | | | | |

Figure 23: User Management Screen

Enter the values shown in the following table for Ascom handset A shown in **Table 1**, and click **Communication Profile**. This procedure must be repeated for each of the remaining Ascom handsets shown in **Table 1**.

| Parameter | Usage |
|---------------------|---------------------------------------------------------------------------|
| Last Name | Enter a "last" name to identify the endpoint. |
| First Name | Enter a "first" name to identify the endpoint. |
| Login Name | Enter a login name of the form <extension>.<domain>.</domain></extension> |
| Authentication Type | Select "Basic" from the drop-down menu. |

Table 14: User Identity Parameters

| Αναγα | Avaya Aura™ Syst 6.1 | em Manager | User Management × Home |
|-----------------------------------------------------------|------------------------------------------------------------------------------|------------------------------|-------------------------------------|
| User Management Manage Users | Home / Users / User Managemen User Profile Edit | it / Manage Users - | |
| Public Contacts | \Lambda Status | | Help |
| Shared Addresses | | aura daffm | |
| System Presence ACLs | User Profile Edit: 4003 | waura.uciiiii | Commit Cancel |
| | Identity * Communication F | Profile * Membership | Contacts |
| | Identity 💌 | | |
| | * Last Name: | 4003 | |
| | * First Name: | Extn | |
| | Middle Name: | | |
| | Description: | | |
| | Status: | Offline | |
| | Update Time : | May 2, 2011 9:59:24 A | |
| | * Login Name: | 4003@aura.dcffm | |
| | * Authentication Type: | Basic 💌 | |
| | Change Password | <u>±</u> | |
| | Source: local | | |
| | Localized Display Name: | WIFI 4003 | |
| | Endpoint Display Name: | WIFI 4003 | |
| | Honorific: | | |
| | Language Preference: | • | |
| | Time Zone: (+2:0)A | msterdam. Berlin. Rome. Belo | irade. Praque. Brussels. Saraievo 💌 |

Figure 24: User Identity Screen

Enter the **Communication Profile** values shown in the following table for Ascom handset A. Click **Edit** and enter the password to be assigned to the endpoint. Note that the **Communication Address, Session Manager Profile**, and **Endpoint Profile** menu points shown at the bottom of the screen can be expanded and configured individually, as shown by subsequent screens.

| AVAYA | Avaya Aura™ System Manager 6.1 User Management * Home |
|------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Viser Management | Home / Users / User Management / Manage Users - User Profile Edit |
| Manage Users Public Contacts | Help ? |
| Shared Addresses | |
| System Presence ACLs | User Profile Edit: 4003@aura.dcffm |
| | Identity * Communication Profile * Membership Contacts Communication Profile • • • • • • • • • • • • • • • • • • • • • • • • • • • • • • • • • • • • • • • • • • • • • • • • • • • • • • • • • • • • • • • • • • • • • • • • • • • • • • • • • • • • • • • • • • • • • • • • • • • • • • • • • • • • • • |
| | Name |
| | Primary |
| | Select : None |
| | * Name: Primary Default : ☑ |
| | Communication Address |
| | Session Manager Profile 🕑 |
| | 🗹 Endpoint Profile 🔹 |

Figure 25: Communication Profile Screen

Expand the **Communication Address** menu. Click New and allocate a communication address for the endpoint with the format <extension>.<domain>.

| New Delet | e Done Cancel | | |
|---------------|-----------------------|--------|------------|
| Name | | | |
| OPrimary | | | |
| Select : None | | | |
| | * Name: Primary | | |
| | Default : 🗹 | | |
| | Communication Address | | |
| | New Edit Delete | | |
| | 🗌 Туре | Handle | Domain |
| | Avaya SIP | 4003 | aura.dcffm |
| | Select : All, None | | |
| | | | |

Figure 26: Communications Address Screen

Expand the Session Manager Profile menu, and enter the parameters shown in the following table.

| Parameter | Usage |
|-------------------------|---------------------------------------------------------------------|
| Primary Session Manager | Select the Session Manager which was configured in Figure 17. |
| Origination Application | Select the same Session Manager which was assigned above. |
| Sequence | |
| Origination Application | Select the Application Sequence which was assigned in Figure |
| Sequence | 22. |
| Home Location | Select the same Application Manager which was assigned above. |

Table 15: Session Manager Profile Parameters

| Session Manager Pro | ofile 💌 | | | |
|-------------------------------------|----------------|---------|-----------|---------|
| * Primary Session | entity-SM100 💙 | Primary | Secondary | Maximum |
| Manager | | 8 | 0 | 8 |
| Secondary Session Manager | (None) | Primary | Secondary | Maximum |
| - | | | | |
| Origination Application Sequence | CM-1 EV 1 💌 | | | |
| Termination Application Sequence | CM-1 EV 1 💌 | | | |
| Survivability Server | (None) | ۷ | | |
| * Home Location | Frankfurt 🚩 | | | |
| | | | | |
| | | | | |

Figure 27: Session Manager Profile Screen

Expand the **Communication Address** menu. Click New and allocate a communication address for the endpoint with the format <extension>.<domain>.

| Parameter | Usage |
|-----------|----------------------------------------------------------------------------|
| Extension | Enter the extension which is to be assigned to the endpoint. |
| Template | Select the DEFAULT_9600SIP_CM_6_0 template from the drop-down menu. |
| Port | Select the IP port from the drop-down menu. |

| Table 16: Endpoint Profile Parameters |
|----------------------------------------------|
|----------------------------------------------|

| 🗹 Endpoint Profile 💌 | |
|------------------------------------------------------------------------------|------------------------|
| * System | cm1 💙 |
| * Profile Type | Endpoint 💙 |
| Use Existing Endpoints | |
| * Extension | Q 4003 Endpoint Editor |
| Template | DEFAULT_9600SIP_CM_6_0 |
| Set Type | 9600SIP |
| Security Code | ••••• |
| * Port | Q S00001 |
| Voice Mail Number | |
| Delete Endpoint of Unassign of Endpoin from User or on Delete User. | t 🗌 |

Figure 28: Endpoint Profile Screen

Upon completion, click the Commit button shown in Figure 25.

7. Configure Ascom Handsets

Attach the Ascom DP1 USB Cradle to a PC on which the Ascom Device Manager has been installed. Insert the handset to be configured in the DP1 USB cradle, start the Ascom Device Manager, and select the "Numbers" tab.

| 🗿 Avaya - Ascor | m WinPDM | | | | | | | | × |
|---------------------------------|-----------------------------|----------------|------------------|--------------|--------------|--------------|--------------|-------------|----|
| <u>File D</u> evice <u>N</u> um | ber <u>⊺</u> emplate | License Option | n <u>s H</u> elp | | | | | | |
| Devices Numbers | Templates Li | censes | | | | | | | |
| New Edit Delete | | | | | | | | | |
| D <u>e</u> vice types: | Se <u>a</u> rch for: | | in: | Number | Shoy | <u>v</u> all | | | |
| (All) | Number 🔺 | Device type | Parameter | Device ID | Online | Status | Saved | Last run te | |
| i62 Talker | 4005 | i62 Talker | 13.16 | 00013E1218E2 | | Synchronized | \checkmark | | ~ |
| | 4006 | i62 Talker | 13.16 | 00013E121938 | \checkmark | Synchronized | \checkmark | | |
| | | | | | | | | | |
| | | | | | | | | | ~ |
| 1 item selected | | | | | | | | | 11 |

Figure 29: Ascom Device Manager Numbers Tab

Double click the entry for the handset which is to be configured, select the VoIP \rightarrow General menu point, and enter the values shown in the following table.

| Parameter | Usage |
|-----------------------------|------------------------------------------------------------------|
| Replace Call Rejected with | Enable. |
| User Busy | |
| VoIP Protocol | Enter SIP. |
| Codec configuration | Enter a codec which is contained in the codec list specified in |
| Codec configuration | Figure 7. |
| Codec packetization time | Enter 20. |
| Internal call number length | Enter the length of the local extension assigned to the handset. |
| Endpoint number | Enter the extension assigned to the handset. |
| Endpoint ID | Enter the extension assigned to the handset. |

Table 17: i62 Numbers Tab, VoIP→General Parameters

| 🛿 Edit parameters for | 4006 | |
|-----------------------------------|--------------------------------|---------------|
| Device type: i62 Talke | r | |
| Parameter version: 13.16 | | |
| 🕀 🛅 Network | Name | Value |
| 🗄 🧰 Device | Replace Call Rejected with Us | Enable 📀 |
| 🕀 🧰 Audio | VoIP protocol | SIP 📀 |
| 🗄 🧰 Presence | Codec configuration | G.711 A-law 📀 |
| 🗄 🧰 Location | Codec packetization time confi | |
| | Internal call number length | 4 😢 |
| General | Endpoint number | 4006 🔹 😢 |
| • H.323 | Endpoint ID | 4006 😨 |
| SIP | | |
| 😟 🦳 Customization | | |
| ⊕ ·· 🛅 Headset ⊕ ·· 🛅 Profiles | | |
| | | |
| | | |
| | | |
| | | OK Cancel |

Figure 30: i62 Numbers Tab, VoIP→General Screen

| Parameter | Usage |
|-------------------------|-----------------------------------------------------------|
| SIP proxy IP address | Enter the IP address of Session Manager. |
| SIP proxy password | Enter the password assigned to the endpoint in Figure 25. |
| Registration identity | Enter Endpoint ID. |
| Authentication identity | Enter Endpoint ID. |
| Call forwarding locally | Enter Enabled. |
| SIP Register Expiration | Enter 120 . |

Select the **VoIP** \rightarrow **SIP** menu point, and enter the values shown in the following table.



| 💈 Edit parameters for 4 | 1006 | | × |
|--------------------------|--------------------------------|-----------------|--------|
| Device type: i62 Talker | r | | |
| Parameter version: 13.16 | | | |
| 🕀 🛅 Network | Name | Value | |
| 🗈 🛅 Device | SIP proxy IP address | 192.168.150.115 | 0 |
| 🕀 🛅 Audio | Secondary SIP proxy IP address | 0.0.0.0 | 0 |
| 🖅 🛅 Presence | SIP proxy listening port | 5060 | 0 |
| 🕀 📛 Location | SIP proxy ID | | 0 |
| 📮 🗁 VoIP | SIP proxy password | **** | 0 |
| 🔹 🏶 General | Send DTMF using RFC 2833 or | RFC2833 | 0 |
| • H.323 | Hold type | Inactive | 0 |
| + 51P | Registration identity | Endpoint ID | 0 |
| 🗄 🧰 Customization | Authentication identity | Endpoint ID | 0 |
| 🗄 🛅 Headset | Call forward locally | Enabled | 0 |
| 🗈 🧰 Profiles | MOH locally | Enabled | 0 |
| 🗄 🛅 Shortcuts | Hold on Transfer | Disabled | 0 |
| | Direct signaling | Disabled | 0 |
| | SIP Register Expiration | 120 | 2 |
| | | | |
| | | ОК | Cancel |

Figure 31: i62 Numbers Tab, VoIP→SIP Screen

8. Verification Steps

Correct installation and configuration can be verified by performing the steps shown below.

8.1. Verify Avaya Aura[®] Configuration

Enter the "status signaling-group" command from the Communication Manager SAT terminal and verify that the signaling group is in the "in-service" state.

```
status signaling-group 8

STATUS SIGNALING GROUP

Group ID: 8

Group Type: h.323

Signaling Type: facility associated signaling

Group State: in-service
```

Figure 32: Signaling Group Status

Enter the "status trunk" command from the Communication Manager SAT terminal and verify that the all of the trunk members are in the "in-service/idle" state.

| status trunk 8 | | | |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------|--|--|
| TRUNK GROUP STATUS | | | |
| Member Port Service State | Mtce Connected Ports Busy | | |
| 0008/001 T00019 in-service/idle 0008/002 T00020 in-service/idle 0008/003 T00021 in-service/idle 0008/004 T00022 in-service/idle 0008/005 T00023 in-service/idle 0008/006 T00024 in-service/idle 0008/007 T00025 in-service/idle 0008/008 T00026 in-service/idle 0008/009 T00027 in-service/idle | no no no no no no no no no | | |
| 0008/010 T00028 in-service/idle | no | | |

Figure 33: Trunk Status

8.2. Verify Ascom i62 Handset

The i62 handset connection to Session Manager can be verified by an absence of an error message on the handset display just above the red line at the bottom of the display, as shown in the following illustration.



Figure 34: i62 Display Screen

9. Conclusion

These Application Notes contain instructions for configuring a solution with Avaya Aura[®] Communication Manager, Avaya Aura[®] Session Manager, and Ascom i62 handsets. A list of instructions is provided to enable the user to verify that the various components have been correctly configured.

10. Additional References

This section references documentation relevant to these Application Notes. The Avaya product documentation is available at <u>http://support.avaya.com</u>.

- Installing and Configuring Avaya Aura[®] Communication Manager, Doc ID 03-603558, Release 6.0 June, 2010 available at <u>http://support.avaya.com/css/P8/documents/100089133</u>
- [2] *Administering Avaya Aura*[®] *Communication Manager*, Doc ID 03-300509, Issue 6.0 June 2010 available at <u>http://support.avaya.com/css/P8/documents/100089333</u>
- [3] Administering Avaya Aura[®] Session Manager, Doc ID 03-603324, Release 6.0, June 2010 available at <u>http://support.avaya.com/css/P8/documents/100082630</u>
- [4] *Installing and Configuring Avaya Aura*[®] Session Manager, Doc ID 03-603473 Release 6.0, June 2010 available at <u>http://support.avaya.com/css/P8/documents/100089152</u>
- [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
- [6] <u>User Manual Ascom i62 VoWiFi Handset (TD 92</u>599GB)
- [7] Configuration Manual Ascom i62 VoWiFi Handset (TD 92675GB)
- [8] System Description Ascom VoWiFi System (TD 92313GB)
- [9] System Planning Ascom VoWiFi System (TD 92408GB)

Ascom's technical documentation is available through a local supplier.

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