



Avaya Solution & Interoperability Test Lab

Application Notes for Configuring PAETEC-Iperia Mobile Gateway and BlackBerry Visual Messaging Application with Avaya Aura® Messaging – Issue 1.0

Abstract

These Application Notes describe the configuration steps required for the PAETEC-Iperia Mobile Gateway and BlackBerry Visual Messaging application to interoperate of Avaya Aura® Messaging.

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

1. Introduction

These Application Notes describe the configuration steps required for the PAETEC-Iperia Mobile Gateway and BlackBerry Visual Messaging application to interoperate with Avaya Aura® Messaging. The PAETEC-Iperia Visual Messaging application is designed for deployment on Android, BlackBerry, and BlackBerry devices; however, this document only covers deployment on a BlackBerry device.

When a subscriber connects to the PAETEC-Iperia Visual Messaging application, a list of messages is retrieved from Avaya Aura® Messaging, via the PAETEC-Iperia Mobile Gateway, and is shown in the mobile application. The Mobile Gateway interfaces with Avaya Aura® messaging using Internet Message Access Protocol (IMAP). Once the list of messages has been shown, the subscriber can play, pause, fast forward, and rewind messages through either the handset or a hands-free device. The subscriber can also see message details, including: caller/phone number, date/time of the message, message duration, and a transcription of the message. Subscribers can perform various functions via the Visual Messaging application, including: adding a new contact to their address book, marking messages as read/unread, and deleting messages.

2. General Test Approach and Test Results

This compliance testing tested the ability of the PAETEC-Iperia Mobile Gateway and the Visual Messaging application running on a BlackBerry device to interoperate with an Avaya telephony environment comprised of Avaya Aura® Messaging, Avaya Aura® Session Manager, Avaya Aura® Communication Manager, and Avaya telephones.

2.1. Interoperability Compliance Testing

The interoperability compliance testing included feature and serviceability test cases.

The feature test cases focused on verifying the following:

- Authorization (credential checking)
- Message retrieval
- Message playback (play, pause, fast forward, rewind, etc.)
- Message deletion
- Message status (read/unread)
- MWI updates

The serviceability testing focused on verifying the ability of the PAETEC-Iperia Visual Messaging solution to recover from adverse conditions, such as network and server outages.

2.2. Test Results

All test cases were executed and passed.

2.3. Support

For technical support on the PAETEC-Iperia Mobile Gateway and Visual Messaging application, contact PAETEC-Iperia at:

PAETEC:

- Web: <http://www.paetec.com/customer-care/contact-customer-care>
- Phone: 877-340-2600
- Email: customercare@paetec.com

Iperia:

- Web: <http://www.iperia.com/contact.php>
- Phone: 781-839-3885
- Email: support@iperia.com

3. Reference Configuration

Figure 1 illustrates a configuration used during compliance testing. The Enterprise, represented in the middle of the figure, is comprised of the following Avaya Aura® products:

Communication Manager, System Manager, Session Manager, and Messaging. Also at the enterprise are various Avaya telephones (analog, digital, H.323, and SIP), and equipment for Wi-Fi connectivity. There are two data paths for the PAETEC-Iperia solution:

1. The PAETEC-Iperia Mobile Gateway connects to the Avaya Aura® Messaging server via IMAP.
2. The mobile devices running the PAETEC-Iperia Visual Messaging application connect to the PAETEC-Iperia Mobile Gateway (via the cellular network path).

For the first data path referenced above, since the Avaya Aura® Messaging server has a private IP address within the Enterprise network, a NAT was set up to map the Messaging server's private IP address to a public IP address (to allow connectivity from the PAETEC-Iperia Mobile Gateway).

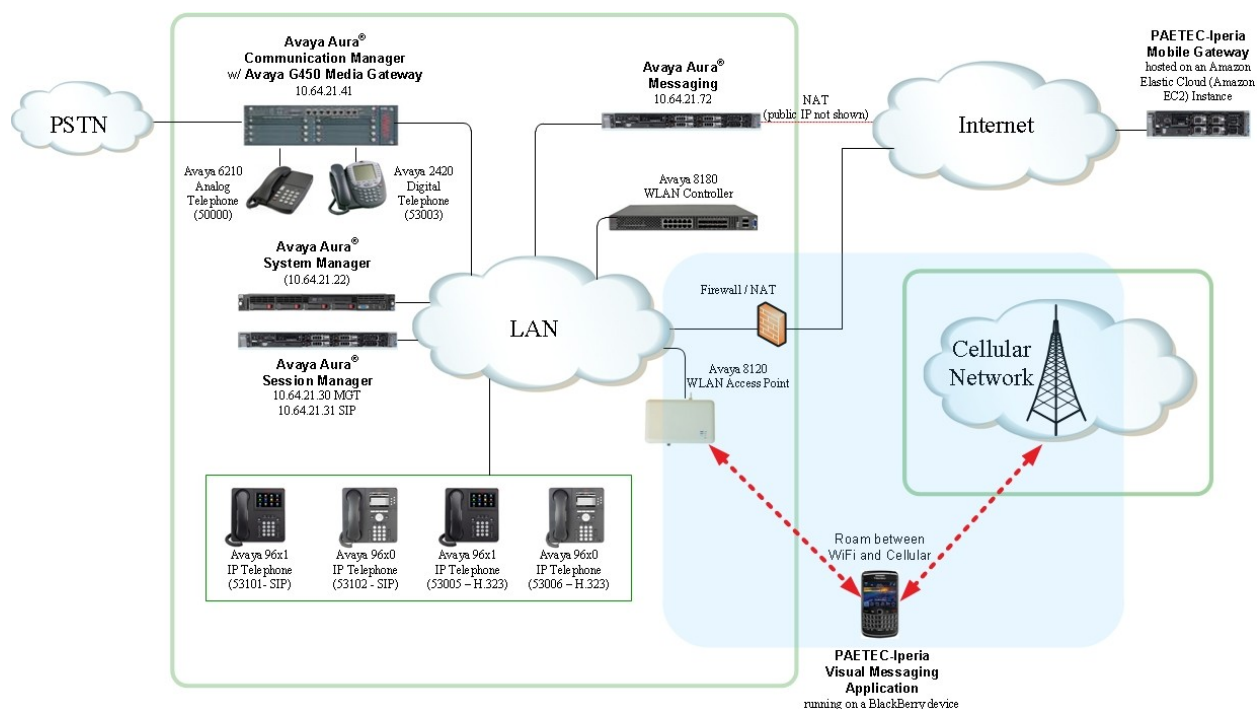


Figure 1: PAETEC-Iperia Mobile Gateway & Visual Messaging Application

4. Equipment and Software Validated

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

Equipment	Software
Dell™ PowerEdge™ R610 Server	Avaya Aura® Messaging 6.1 SP1 (Avaya Aura® System Platform: 6.0.3.4.3)
Avaya S8300D Server with a Avaya G450 Media Gateway	Avaya Aura® Communication Manager 6.0.1, R016x.00.1.510.1, Patch 19303 (Avaya Aura® System Platform: 6.0.3.4.3)
Dell™ PowerEdge™ R610 Server	Avaya Aura® System Manager: 6.1.0 (Build No. – 6.1.0.0.7345-6.1.5.502), Software Update Revision No : 6.1.9.1.1634 (Avaya Aura® System Platform: 6.0.3.4.3)
HP ProLiant DL360 G7 Server	Avaya Aura® Session Manager 6.1.5.0.615006
Avaya 9600 Series IP Deskphones (H.323)	Release 3.1 Service Pack 3 (96x0) Release 6 Service Pack 5 (96x1G)
Avaya 9600 Series IP Deskphones (SIP)	Release 2.6 Service Pack 5 (96x0) Release 6 Service Pack 2 (96x1G)
PAETEC-Iperia Mobile Gateway	2.3.0
PAETEC-Iperia Visual Messaging application running on an BlackBerry device	3.2.0

5. Configure Avaya Aura® Messaging

This section provides the procedures for configuring Avaya Aura® Messaging to interoperate with the PAETEC-Iperia Mobile Gateway and Visual Messaging application. Basic configuration of Avaya Aura® Messaging is outside the scope of this document. These instructions assume basic administration activities have already been completed, such as: configuring the Message Storage Server and Messaging Application Server, defining the system mailbox, configuring system level parameters, and connecting Avaya Aura® Messaging to Avaya Aura® Session Manager over a SIP trunk. For more information on administering Avaya Aura® Messaging, see **References [8] through [10] in Section 9**.

The following administration activities will be described:

- Administer System Ports and Access
- Administer Class of Service to enable Message Waiting
- Administer Subscribers

Configuration is accomplished by accessing the browser-based System Management Interface of Avaya Aura® Messaging, using the URL “**http://<ip-address>/**”, where **<ip-address>** is the IP address of Avaya Aura® Messaging. Log in using appropriate credentials.

5.1. Administer System Ports and Access

Verify IMAP ports.

Navigate to the **Administration → Messaging** menu and select **System Ports and Access** under **Messaging System (Storage)**.

Verify the correct IMAP port(s) to be used are configured and enabled. Click the **Save** button to save changes.

AVAYA

Help Log Off Administration / Messaging

Messaging System (Storage)

User Management

Class of Service

Sites

Topology

Storage Destinations

System Policies

Enhanced List Management

System Mailboxes

System Ports and Access

User Activity Log Configuration

Reports (Storage)

Users

Info Mailboxes

Remote Users

Uninitialized Mailboxes

Login Failures

Locked Out Users

Server Information

System Status (Storage)

System Status (Application)

Alarm Summary

Voice Channels (Application)

Cache Statistics (Application)

Server Settings (Storage)

External Hosts

Trusted Servers

Networked Servers

Request Remote Update

IMAP/SMTP Settings (Storage)

General Options

Mail Options

IMAP/SMTP Status

Telephony Settings (Application)

Telephony Integration

Server Settings (Application)

Dial Rules

Cluster

System Parameters

Languages

Log Configuration

Advanced (Application)

System Operations

Timeouts

AxC Address

Miscellaneous

Core Files

Utilities

Messaging DB Audits (Storage)

Start Messaging

Stop Messaging

LDAP Status/Restart (Storage)

Change LDAP Password (Storage)

Logs

Administration History

Administrator

Alarm

Software Management

Avaya Aura® Messaging
System Management Interface (SMI)

This Server: AAM2172

System Ports and Access

The System Ports and Access page allows the administration of ports and access parameters used by the messaging storage server.

SYSTEM ATTRIBUTES

System Prime Time Start

08 : 00

System Prime Time End

17 : 00

Maximum Simultaneous LDAP Directory Update Sessions

100

IMAP4 TUI Password

Confirm IMAP4 TUI Password

Default Internet Subscriber Community

1

Privacy Enforcement Level

Voice

Automatic Mail Forwarding

no

RESCHEDULING INCREMENTS FOR FULL MAILBOX DELIVERY

Increment 1

00 days 00 hrs 05 mins

Increment 6

00 days 02 hrs 00 mins

Increment 2

00 days 00 hrs 55 mins

Increment 7

00 days 03 hrs 00 mins

Increment 3

00 days 01 hrs 00 mins

Increment 8

00 days 03 hrs 00 mins

Increment 4

00 days 01 hrs 00 mins

Increment 9

00 days 05 hrs 00 mins

Increment 5

00 days 02 hrs 00 mins

Increment 10

00 days 06 hrs 00 mins

SYSTEM TCP/IP PORTS

LDAP Port

389

Authenticated or Anonymous

LDAP SSL Port

636

Enabled

LDAP Front End Alternate Port

Disabled

LDAP Directory Update Port

56389

Disabled

IMAP4 TUI Port

55143

Enabled

IMAP4 Port

143

Enabled

IMAP4 SSL Port

993

Enabled

POP3 Port

110

Disabled

POP3 SSL Port

995

Disabled

SMTP Port

25

Enabled

SMTP Alternate Port

Disabled

SMTP SSL Port

465

Enabled

Allow TLS for Outgoing SMTP

25

Enabled

MCAPI Port

55000

Enabled

Save

Help

5.2. Configure Class of Service

Verify Messaging Waiting Indicator (MWI) is enabled for all subscribers.

Navigate to the **Administration → Messaging** menu and select **Class of Service** under **Messaging System (Storage)**.

Select “**Standard**” from the **Class of Service** drop-down menu. Under the **General** section, enable **Set Message Waiting Indicator (MWI) on user’s desk phone**, and use default values for remaining fields.

Click the **Save** button (not shown) to save changes.

The following screen shows the settings defined for the “**Standard**” Class of Service in the sample configuration.

The screenshot displays the Avaya Aura® Messaging System Management Interface (SMI) for server AAM2172. The left sidebar shows a navigation tree with categories like Messaging System (Storage), Reports (Storage), Server Information, Server Settings (Storage), IMAP/SMTP Settings (Storage), and Telephony Settings (Application). The main content area is titled 'Class of Service' and shows the configuration for the 'Standard' class. The 'Class of Service' dropdown is set to 'Standard'. Under the 'General' section, the 'Set Message Waiting Indicator (MWI) on user's desk phone' checkbox is checked and highlighted with a red box. Other settings include Name: Standard, ID: 0, Required seat license: Mainstream, Telephone User Interface: Aria, and various user permissions.

AVAYA Avaya Aura® Messaging System Management Interface (SMI)

Help Log Off Administration This Server: AAM2172

Administration / Messaging

Messaging System (Storage)

- User Management
- Class of Service
- Sites
- Topology
- Storage Destinations
- System Policies
- Enhanced List Management
- System Mailboxes
- System Ports and Access
- User Activity Log Configuration

Reports (Storage)

- Users
- Info Mailboxes
- Remote Users
- Uninitialized Mailboxes
- Login Failures
- Locked Out Users

Server Information

- System Status (Storage)
- System Status (Application)
- Alarm Summary
- Voice Channels (Application)
- Cache Statistics (Application)

Server Settings (Storage)

- External Hosts
- Trusted Servers
- Networked Servers
- Request Remote Update

IMAP/SMTP Settings (Storage)

- General Options
- Mail Options
- IMAP/SMTP Status

Telephony Settings (Application)

Class of Service

Class of Service: Standard [v] [Add New] [Delete]

General

Name: Standard

ID: 0

Required seat license: Mainstream (VALUE_MSG_SEAT_MAINSTREAM)

Telephone User Interface: Aria [v]

☒ User can send to system distribution lists (ELAs)

Fax support: None [v]

Dial-out privilege: LongDistance [v]

☒ User can use Reach Me

☒ Allow voice recognition for addressing (user can select recipients by saying their name)

IMAP4/POP3 access: Full [v] (for Avaya Message Store users)

☒ Set Message Waiting Indicator (MWI) on user's desk phone

☐ Enable password aging

☐ User can send system broadcast messages

5.3. Administer Subscribers

Define a subscriber mailbox for each Communication Manager station.

Use **Administration → Messaging** menu and select **User Management** under **Messaging System (Storage)**. Under **Add User/Info Mailbox** section, click **Add** (not shown).

Under **User Properties**, enter the following values and use default values for remaining fields.

- **First name:** Enter first name of the user
- **Last name:** Enter last name of the user
- **Display name:** Enter display name of the user
- **Mailbox number:** Enter mailbox number corresponding to a station
- **Extension:** Enter dialed number of station
- **Class of Service:** Select Class of Service defined in **Section 5.2**
- **MWI enabled:** Select “Yes”
- **Password:** Enter numeric password

Click the **Save** button to save changes.

The screen on the following page shows a new subscriber defined in sample configuration.

[Help](#)
[Log Off](#)

Administration

Administration / Messaging

This Server: **AAM2172**

Messaging System (Storage)

User Management

Class of Service

Sites

Topology

Storage Destinations

System Policies

Enhanced List Management

System Mailboxes

System Ports and Access

User Activity Log Configuration

Reports (Storage)

Users

Info Mailboxes

Remote Users

Uninitialized Mailboxes

Login Failures

Locked Out Users

Server Information

System Status (Storage)

System Status (Application)

Alarm Summary

Voice Channels (Application)

Cache Statistics (Application)

Server Settings (Storage)

External Hosts

Trusted Servers

Networked Servers

Request Remote Update

IMAP/SMTP Settings (Storage)

General Options

Mail Options

IMAP/SMTP Status

Telephony Settings (Application)

Telephony Integration

Server Settings (Application)

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Start Messaging

Stop Messaging

LDAP Status/Restart (Storage)

Change LDAP Password (Storage)

Logs

Administration History

Administrator

Alarm

Software Management

Maintenance

IMAP/SMTP Messaging

ELA Delivery Failures

User Activity

System Log Filter

Collect System Log Files

Call Records

Audit/Ports Usage

Diagnostics Results (Application)

Server Reports

System Evaluation (Storage)

IMAP/SMTP Traffic (Storage)

TCP/IP Snapshot

Measurements (Storage)

Diagnostics

Alarm Origination

User Management > Properties for Station 53004

User Properties

First name:

Station

Last name:

53004

Display name:

Station 53004

ASCII name:

53004, Station

Site:

Site 21

Mailbox number:

53004

Internal identifier:

Station.53004

@AAM2172

Numeric address:

53004

Extension:

53004

☒ Include in Auto Attendant directory

Additional extensions:

Class of Service:

Standard

Pronounceable name:

MWI enabled:

Yes

Miscellaneous 1:

Miscellaneous 2:

New password:

••••••

Confirm password:

••••••

☐ User must change voice messaging password at next logon

☐ Voice messaging password expired

☐ Locked out from voice messaging

Save

Delete

Advanced Tasks

Reset the message waiting indicator for extension: 53004

Reset

User Preferences

Open User Preferences for Station 53004

6. Configure PAETEC-Iperia Visual Messaging

6.1. Configure Mobile Gateway Platform Configuration

The Mobile Gateway has two types of configurations: platform and account configuration. Platform configuration is stored in multiple files (in *<instance root>/conf* directory), with each file representing a specific sub component.

The configuration files and descriptions are shown below:

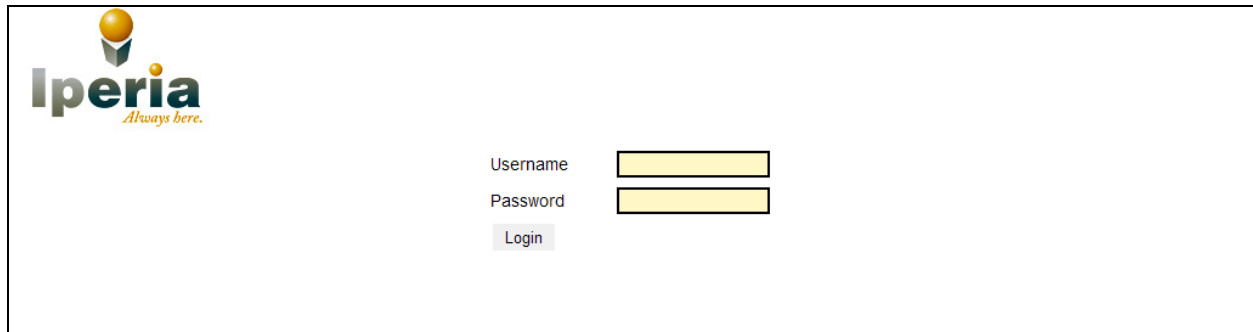
File	Description
mg-db.config	Database configuration
mg-imap.config	IMAP storage access configuration
mg-license.config	Configuration holding licensing information, seat numbers and license signature
mg-push.config	Configuration for Apple push notification and TCP Push notifications
mg-transcription.config	Transcription engine configuration
mg-xsi.config	Settings for integrating with Broadsoft XSI Events and XSI Action protocols
mg-smtp.config	Settings for connecting to the SMTP server for sending emails
mobile-gateway.config	General settings
version.inc	Version name and build number of the application. This configuration file should not be modified.
license.cer	X.509 certificate that is used to verify validity of the license. This certificate is embedded into the code and if changed or replaced will make the system non-operational.
schema/*	Files used to set integration between sub components of the system. May not be changed.

The IMAP access configuration sets IMAP storage connectivity. It is located in *<instance root>/conf/mg-imap.config*. The following settings should be set in the *mg-imap.config* file:

Setting	Value	Description
com.iperia.vx.mg.server.host	(public IP not shown)	IP Address where IMAP Service hosted
com.iperia.vx.mg.server.port	143	TCP Port IMAP Service is bound to
com.iperia.vx.mg.server.usessl	false	Flag indicating whether SSL connection should be used to operate with underlying IMAP server
com.iperia.vx.mg.server.ntlm-disable	true	Aura shows capability of NTLM auth but follows the process of normal plain text authentication, so disabling ntml auth as it fails to login to imap account
com.iperia.vx.mg.local-port.start	5000	Local socket port binding range start
com.iperia.vx.mg.local-port.end	6000	Local socket port binding range end. Allocate 2 x imap-connection-pool.size (not shown)
com.iperia.vx.mg.server.adapter	avayaAuraAdapter	Parameter indicating what type of IMAP Server is used
com.iperia.vx.mg.imap.idle.enabled	true	This flag enables IMAP IDLE feature used to fast notification about message deposit

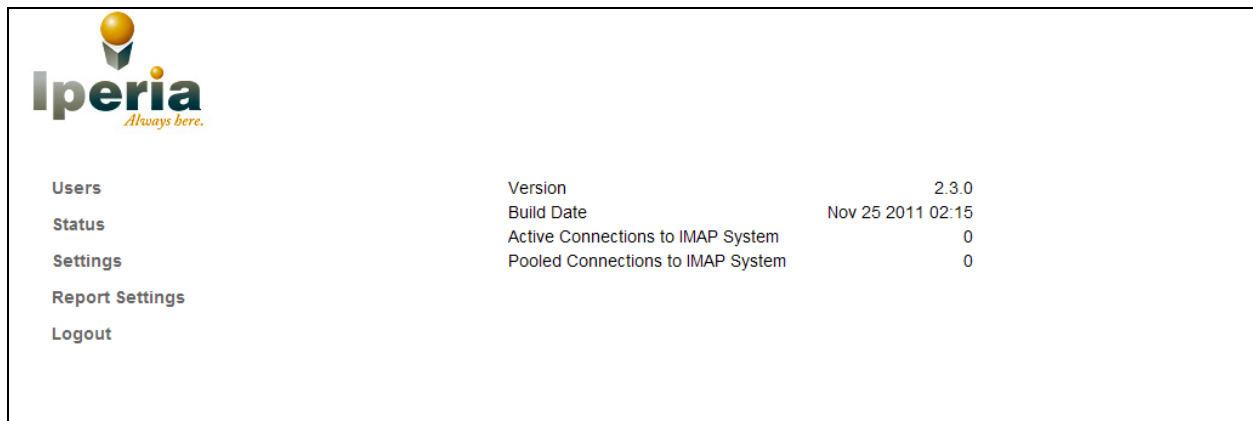
6.2. Configure Mobile Gateway Account Configuration

The Mobile Gateway console can be accessed by entering the following URL in a web browser http://<ip_address>:<port>/mg-console/ where <ip_address> is the Mobile Gateway host IP address, and <port> is the Mobile Gateway. Log in using the credentials set during installation.



The login screen for the Iperia Mobile Gateway console. It features the Iperia logo (a stylized orange and green icon above the word 'Iperia' with the tagline 'Always here.' below it) in the top left. In the center, there are two input fields: 'Username' and 'Password', each followed by a yellow rectangular box for text entry. Below the password field is a 'Login' button with a grey gradient.


After logging in, the **Status** screen will appear as shown below.



The Status screen of the Iperia Mobile Gateway console. It features the Iperia logo in the top left. On the left side, there is a vertical menu with the following items: 'Users', 'Status', 'Settings', 'Report Settings', and 'Logout'. On the right side, there is a table displaying system information:

Version	2.3.0
Build Date	Nov 25 2011 02:15
Active Connections to IMAP System	0
Pooled Connections to IMAP System	0

Click the **Users** link on the left to view the current list of administered users. To add a new user, click the **Add** button on the bottom of the page.



[Users](#)
[Status](#)
[Settings](#)
[Report Settings](#)
[Logout](#)

Search

Username
IMAP Account
Phone













Last Name
First Name
Email

Search
Reset

First
Previous
Page #: 1
Next
Last


Rows to display: 10

To create a new user, press the 'Add' button first.

Username ↕	IMAP Account	Phone ↕	Last Name ↕	First Name ↕	Email ↕	Action
50000	50000		User-1	Test		  
53003	53003		User-2	Test		  
53004	53004		User-3	Test		  
53101	53101		User-4	Test		  

Import
Add

The example screen below shows a user being created for IMAP account 53004. Ensure the **IMAP Account** and **Password** field values match the subscriber **Mailbox Number** and **Password** field values configured in **Section 5.3**. After adding or modifying a user, click the **Save** button at the bottom of the screen.



Users
Status
Settings
Report Settings
Logout

General

Product Code: (20047811)Visual Messaging with Hybrid Transcription Charge

Account ID (used to login from mobile application): 53004

Second Account ID(optional):

Third Account ID(optional):

Company(optional):

Mobile Carrier (optional):

IMAP Storage

IMAP Account (without @domain): 53004

Password (optional): 2580456

Verify Connectivity

(Optional, entering the account password now will allow messages to be transcribed in advance of the user first connecting via the mobile application)

Personal Information

First Name: Test

Last Name: User-3

Phone (optional):

Email (optional):

SIP Notify Account (optional):

Active: ☒

Activated:

Deactivated:

Read Only Mode: ☐

Services

Mobile Voicemail: ☒

Web Voicemail: ☒

Transcription: ☒

Fax to PDF: ☐

Email Voicemail Transcriptions: ☐

Include voicemail as .wav attachments: ☐

Email FAX Messages: ☐

Broadsoft Integration(optional)

Comments

Save **Cancel**

6.3. Configure Visual Messaging Application

The PAETEC-Iperia BlackBerry Visual Messaging application can be downloaded from the Apple App Store. After downloading and installing the application, open the application and navigate to **Settings** → **Account**.

- Set **Organization** to *Iperia*
- Set **Account** to the account configured in **Section 6.2**
- Set **Password** to password configured in **Section 6.2**

7. Verification Steps

The following steps may be used to verify the configuration:

- Log into the PAETEC-Iperia Visual Messaging application using the appropriate user credentials. Leave several new messages in the subscriber's mailbox. Verify the Visual Messaging application indicates the user has new messages.
- Open the Visual Messaging application and verify the list of messages for that subscriber is displayed.
- Play one of the messages and perform various functions during the playback such as pause, fast forward, rewind, etc. Verify the playback.
- Delete one of the messages using the Visual Messaging application. Verify the message is deleted on the Avaya Aura® Server.
- Toggle the message status for each of the messages (read/unread). Verify the message status on the Avaya Aura® Messaging server and the MWI lamp on the user's desk phone are updated appropriately.

8. Conclusion

The PAETEC-Iperia Mobile Gateway and BlackBerry Visual Messaging application passed compliance testing. These Application Notes describe the configuration steps required for the PAETEC-Iperia Mobile Gateway and BlackBerry Visual Messaging application to interoperate of Avaya Aura® Messaging, to support the reference configuration shown in **Figure 1**.

9. Additional References

This section provides references to the product documentation relevant to these Application Notes. Avaya product documentation may be found at <http://support.avaya.com>.

Avaya Aura® Session Manager

- [1] Avaya Aura® Session Manager Overview, Doc ID 03-603323
- [2] Installing and Configuring Avaya Aura® Session Manager
- [3] Avaya Aura® Session Manager Case Studies
- [4] Maintaining and Troubleshooting Avaya Aura® Session Manager, Doc ID 03-603325
- [5] Administering Avaya Aura® Session Manager, Doc ID -3-603324

Avaya Aura® Communication Manager

- [6] Avaya Aura® Communication Manager Feature Description and Implementation, Doc ID: 555-245-205
- [7] Administering Avaya Aura® Communication Manager, Doc ID: 03-300509

Avaya Aura® Messaging

- [8] Administering Avaya Aura® Messaging
- [9] Using Avaya Aura® Messaging
- [10] Implementing Avaya Aura® Messaging

PATEC-Iperia documentation can be obtained from PAETEC-Iperia by using the contact information provided in **Section 2.3**.

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