



Application Notes for Configuring Phoneware Ltd PhoneMaster with Avaya Communication Server 1000E R7.5 with using a Serial connection. - Issue 1.0

Abstract

These Application Notes describe the configuration steps for provisioning Avaya Communication Server 1000E Release 7.5 and Phoneware Ltd. PhoneMaster. PhoneMaster will connect to the Avaya Communication Server 1000E using a RS232 Serial connection.

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

PhoneMaster is a Windows-based administration tool which enables programming changes on the Avaya Communication Server 1000E without requiring the complex command-line programming language of the PBX. PhoneMaster may be installed on both Virtual and Physical Machines. With Point-and-Click operations PhoneMaster can carry out functions on the main features of PhoneMaster which include:

- Telephone Administration
- Telephone Group Changes
- New Telephone Wizard
- Undo Changes
- Recover Deleted Telephone
- Number Plan Upgrade Utility

2. General Test Approach and Test Results

The general test approach was to configure PhoneMaster to communicate with Avaya Communication Server 1000E (CS1000E) as implemented on a customer's premises. Testing focused on verifying Moves, Add, Changes (MAC) after PhoneMaster connected and synchronised to the CS1000E.

DevConnect Compliance Testing is conducted jointly by Avaya and DevConnect members. The jointly-defined test plan focuses on exercising APIs and/or standards-based interfaces pertinent to the interoperability of the tested products and their functionalities. DevConnect Compliance Testing is not intended to substitute full product performance or feature testing performed by DevConnect members, nor is it to be construed as an endorsement by Avaya of the suitability or completeness of a DevConnect member's solution.

2.1. Interoperability Compliance Testing

The testing included:

- Verification of connectivity between PhoneMaster and CS1000E using a RS232 serial connection
- Synchronization of PhoneMaster and CS1000E
- Move, Add Change Telephones
- Add, Change Groups
- Undo changes
- Recover Deleted Telephones
- Database searches

2.2. Test Results

Tests were performed to insure full interoperability between PhoneMaster and the CS1000E. The tests were all functional in nature and performance testing was not included. All the test cases passed successfully.

2.3. Support

Technical support can be obtained for Phoneware Ltd. products as follows:

- E-mail: *support@phoneware.ie*
- Ireland: 0404 68711
- UK Freephone: 0800 169 8618
- USA\Canada Toll Free: 1800 660 9248
- International: +353 404 68711

3. Reference Configuration

Figure 1 illustrates the network diagram configuration used during compliance testing. The CS1000E Release 7.5 runs on the Common Processor Pentium Mobile (CPPM) server as a co-resident configuration. The connection method is a RS232 serial cable connecting the CS1000E TTY port to the PhoneMaster PC comm. port.

Note: During compliance testing PhoneMaster was installed on a Microsoft Windows Vista operating system but may also be installed on Windows XP, Windows 2003 and Windows 2008. PhoneMaster may also connect to the CS1000E using a modem (including Dial Back).

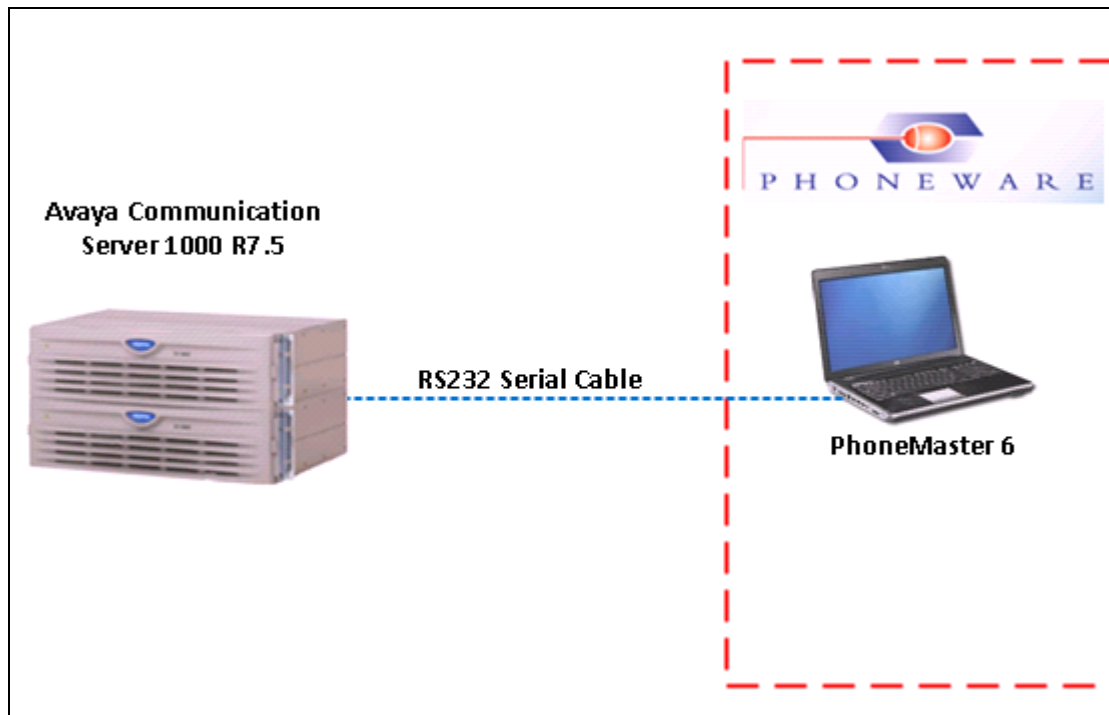


Figure 1: Avaya CS1000E Release R7.5 with Phoneware Ltd. PhoneMaster 6 Reference Configuration

4. Equipment and Software Validated

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

Avaya Equipment	Software Version
Avaya Communication Server 1000E CPPM	Avaya Communication Server 1000E R7.5 Version 7.50.17 Service Update: 7.50_16Jul12 Deplist: X21 07.50Q
Avaya Media Gateway	H/W NTDW60 S/W FPGA AA18
Phoneware Ltd. Equipment	Software Version
Dell Latitude running Microsoft Windows Vista	PhoneMaster 6

Table 1: Hardware and Software Version Number

5. Configure Avaya Communication Server 1000E

Configuration and verification operations on the CS1000E illustrated in this section were all performed using terminal access over a serial link to a Talk To You (TTY) port on the CS1000E using Telnet. The information provided in this section describes the configuration of the CS1000E for this solution. It is implied a working system is already in place. For all other provisioning information such as initial installation and configuration, please refer to the product documentation in **Section 9**.

Note: In the Telnet screenshots below only the unique prompt inputs are shown. Carriage Return all other prompts to set default values.

5.1. Configure a TTY port to connect to PhoneMaster

The communication between the CS1000E and PhoneMaster uses a RS232 serial port. A TTY port needs to be configured on the CS1000E to connect to the PhoneMaster PC. In order to configure a new TTY port **LD 17** is used. Subsets of these commands are illustrated below.

LD 17

Prompt	Response	Description
>	LD 17	Enter Overlay 17
REQ	CHG	Change Data
TYPE	ADAN	Action Device and Number
ADAN	NEW TTY 12	New I/O device and number
CTYP	MGC	Card type
IPMG	4 0	loop and Card
PORT	2	Port number
DNUM	13	Device number for I/O ports
DES	PhoneMaster	Designator
BPS	9600	Bits per Second
BITL	8	Data Bit Length
STOP	1	Number of Stop bits
PARY	NONE	Parity type
FLOW	NO	Flow Control
USER	MTC	Output message type

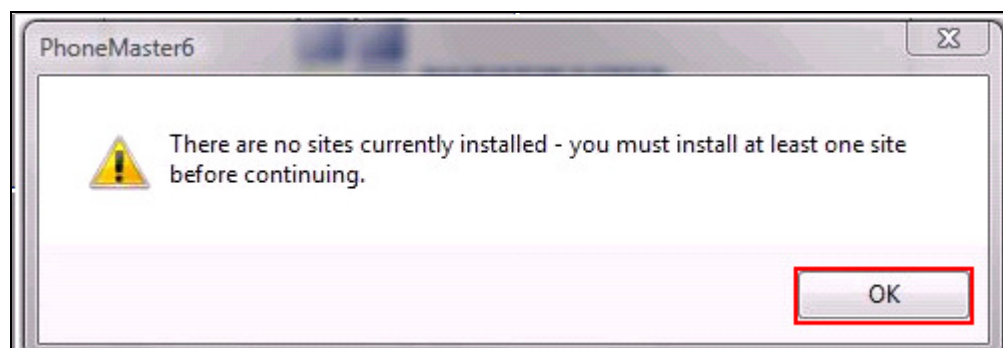
6. Configure Phoneware PhoneMaster

A number of steps are required to Configure PhoneMaster to interoperate with CS1000E. It is implied that PhoneMaster software is already installed. The configuration operations described in this section can be summarized as follows:

- Configure New Site
- Log in to Telephone System
- Synchronise PhoneMaster Database

6.1. Configure New Site

To configure a new site, click on **Start → All Programs → PhoneMaster 6** and select **PhoneMaster 6** and Log in with the appropriate credentials (not shown). As there is no site installed the window below will appear. Click on the **OK** button.



Once the **Site** window opens, enter an informative name in the **Name** field. Select the **Keycode** tab and enter the 16-digit hexadecimal keycode provided by your PhoneMaster distributor in the 4 Keycode textboxes.

Click on the **Save** button. A dialog box confirming the Site ID and licensing for which the keycode has been issued is displayed (not shown). Click the **YES** button if correct (not shown).

The screenshot shows a 'Site' configuration window. On the left is a 'Sites' list. The main area is 'Site Details' with fields for Name (containing 'Galway Lab'), Address, Contact, and Number. There are checkboxes for 'Multi-Tenant' and 'Default Tenant'. On the right are buttons: OK, Cancel, Save, Reset, New Site, and Default. Below this is a tabbed interface with tabs: Connection Mode, Comms Settings, Timers, Keycode (selected), Security, Comments, and CDR. The 'Keycode' tab contains four textboxes for the keycode (each with 'xxxx' as a placeholder), an 'Upgrade' button, a 'Site ID' field (containing '46379'), a 'Save' button, a 'Maximum Number of TNs' field, and a 'Mail Administration' checkbox.

Select the **Connection Mode** tab and click the **Direct** radio button.

The screenshot shows a 'Site' configuration window. On the left, a list of sites includes 'Galway Lab'. The 'Site Details' section on the right contains fields for Name, Address, Contact, Number, and a checkbox for Multi-Tenant. Below this is a tabbed interface with 'Connection Mode' selected. In this tab, the 'Direct' radio button is selected, and there are input fields for IP Address, Port, User Name, Password, Login Script, and Logout Script. A red box highlights the 'Direct' radio button and the 'Connection Mode' tab label.

Site

Sites

- Galway Lab

Site Details

Name: Galway Lab

Address:

Contact:

Number:

☐ Multi-Tenant Default Tenant:

OK

Cancel

Save

Reset

New Site

Default

Connection Mode Comms Settings Timers Keycode Security Comments CDR

☒ Direct

☐ Ethernet

☐ Telnet

☐ Secure Shell (SSH) / (SFTP)

☐ Dial-Up (Tone)

☐ Dial-Up (Pulse)

☐ Use Terminal

☐ Secure Dial Back

IP Address:

Port:

User Name:

Password:

Login Script: <None>

Logout Script: <None>

Select the **Comms Settings** tab and enter the following:

- **Comm Port** Select the COM used by the PhoneMaster PC

The following settings are as configured in **Section 5.1**:

- **Baud Rate** **9600**
- **Parity** **None**
- **Data Bits** **8**
- **Stop Bits** **1**

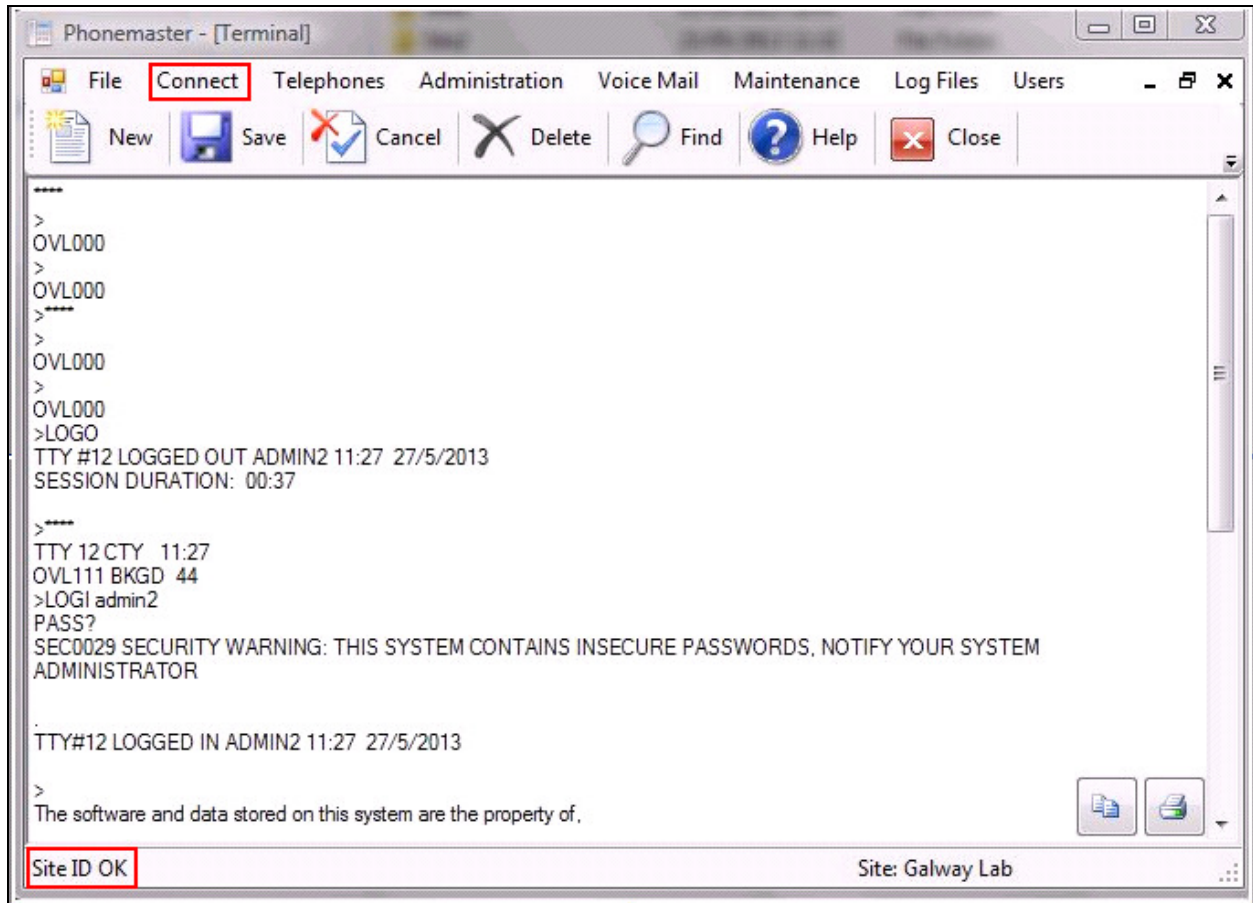
The screenshot shows a 'Site' configuration window. On the left, a list of sites includes 'Galway Lab'. The 'Site Details' section on the right contains fields for Name, Address, Contact, Number, and a checkbox for Multi-Tenant. Below this is a tabbed interface with 'Comms Settings' selected. This tab contains two columns of settings: 'Comm Port' (COM4), 'Baud Rate' (9600), 'Parity' (None), 'Data Bits' (8), and 'Stop Bits' (1) on the left; and 'Telephone Number', 'Modem Initialization', 'Modem Hang Up', 'Dialback Username', and 'Dialback Password' on the right. The 'Comms Settings' tab and its contents are highlighted with a red rectangle. On the far right, there are buttons for OK, Cancel, Save, Reset, New Site, and Default.

Select the **Security Settings** tab and enter the **System User ID** and **System Password** of the CS1000E. Click the **Save** button to save the new site settings and click on the OK button to close the Site window.

The screenshot shows a 'Site' configuration window. On the left is a 'Sites' list box. The main area is 'Site Details' with fields for Name (Galway Lab), Address, Contact, Number, and a checkbox for Multi-Tenant. A 'Default Tenant' field is also present. On the right are buttons: OK, Cancel, Save, Reset, New Site, and Default. At the bottom is a tabbed interface with tabs: Connection Mode, Comms Settings, Timers, Keycode, Security, Comments, and CDR. The 'Security' tab is selected and highlighted with a red box. Inside the Security tab, there are fields for 'System User ID' (containing 'xxxxxx') and 'System Password' (containing '*****'), both highlighted with a red box. Below these are fields for 'Advanced Security User Name' and 'Advanced Security Password'.

6.2. Log in to Telephone System

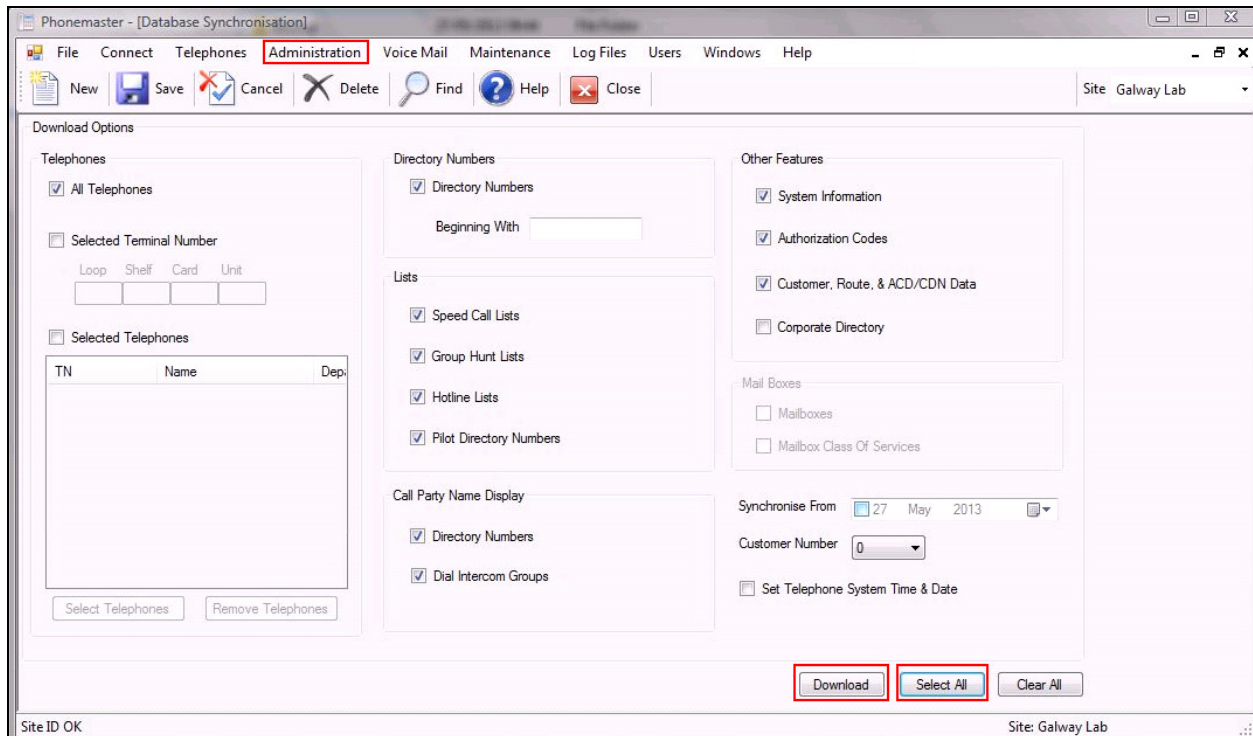
After clicking on the **OK** button in the previous screen shot the **PhoneMaster [Terminal]** window opens. Click **Connect** from the top Toolbar and select **Log in** (not shown). Once the Log in is complete, **Site ID OK** is displayed on the bottom left of the window.



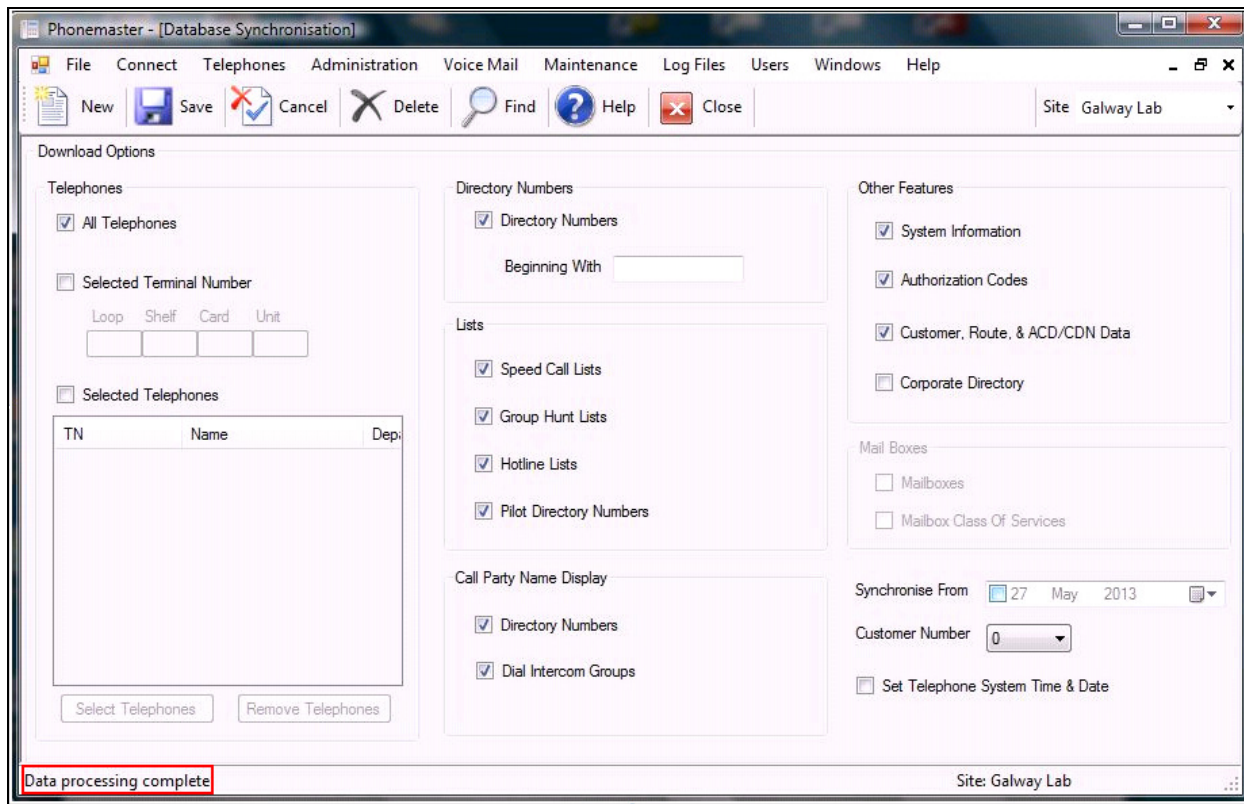
6.3. Synchronise PhoneMaster Database

To synchronise PhoneMaster with the CS1000E click **Administration** on the top Toolbar and select **Synchronise Databases** (not shown). Click the **Select All** button followed by the **Download** button.

Note: Depending on the size of the database it may take some time to complete.



Once the synchronisation is completed, **Data processing complete** is displayed on the bottom left of the window. PhoneMaster is now ready to administer the CS1000E.



7. Verification Steps

This section provides the tests that can be performed to verify correct configuration of CS1000E and PhoneMaster.

7.1. Verify Avaya Communication Server 1000E TTY

The following step can ensure the TTY is enabled for PhoneMaster that was setup in **Section 5.1**. Use the **stat** command in **LD 37**.

LD 37

Prompt	Response	Description
>LD 37		Enter Overlay 37
REQ	STAT TTY 12	Stat TTY number

Example:

REQ: stat TTY 12
TTY 12 : ENBL (MGC 4 0) DES PhoneMaster

7.2. Verify PhoneMaster

To verify that the PhoneMaster is logged in correctly see **Section 6.2** and to verify that the Database is synchronised see **Section 6.3**.

8. Conclusion

These Application Notes describe the configuration steps required for Avaya Communication Server 1000E 7.5 to successfully interoperate with Phoneware Ltd. PhoneMaster 6 using a RS232 Serial connection. All test cases have passed and met the objectives outlined in **Section 2.2**.

9. Additional References

This section references the Avaya and Phoneware Ltd. documentation that is relevant to these Application Notes. Product documentation for Avaya products may be found at:

<http://support.avaya.com>

[1] *Software Input Output Reference - Administration Avaya Communication Server 1000 7.5 NN43001-611, 05.13 September 2012*

Technical documentation for Phoneware Ltd can be found at <http://www.phoneware.ie>.

©2013 Avaya Inc. All Rights Reserved.

Avaya and the Avaya Logo are trademarks of Avaya Inc. All trademarks identified by ® and ™ are registered trademarks or trademarks, respectively, of Avaya Inc. All other trademarks are the property of their respective owners. The information provided in these Application Notes is subject to change without notice. The configurations, technical data, and recommendations provided in these Application Notes are believed to be accurate and dependable, but are presented without express or implied warranty. Users are responsible for their application of any products specified in these Application Notes.

Please e-mail any questions or comments pertaining to these Application Notes along with the full title name and filename, located in the lower right corner, directly to the Avaya DevConnect Program at devconnect@avaya.com.