Avaya Solution & Interoperability Test Lab

Application Notes for VoSKY Technologies Exchange 9040 and VoSKY Technologies Exchange Server with Avaya PARTNER ACS - Issue 1.0

Abstract

These Application Notes describe the configuration required for VoSKY Technologies Exchange 9040 to successfully interoperate with Avaya PARTNER ACS. Exchange 9040 is a 4-port Voice over IP (VoIP) gateway that connects to Avaya PARTNER ACS analog trunk ports and is used to route calls to/from a 3rd party VoIP Service Provider such as Skype.

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 required for VoSKY Technologies Exchange 9040 to successfully interoperate with Avaya PARTNER ACS. Exchange 9040 is a 4-port Voice over IP (VoIP) gateway that connects to Avaya PARTNER ACS analog trunk ports and is used to route calls to/from a 3rd party VoIP Service Provider such as Skype.

Figure 1 illustrates the network configuration used to verify VoSKY Technologies Exchange 9040 with Avaya PARTNER ACS. The configuration consisted of Avaya PARTNER ACS with Avaya PARTNER 18D and analog telephones, VoSKY Technologies Exchange 9040, VoSKY Technologies Exchange Server, and an Internet VoIP user (Skype user). Analog trunk ports on Avaya PARTNER ACS were connected to the Exchange 9040. The Exchange 9040 had a USB connection to the Exchange Server, which was connected to the Internet. The test configuration also included an analog trunk port connection to the Public Switched Telephone Network (PSTN).

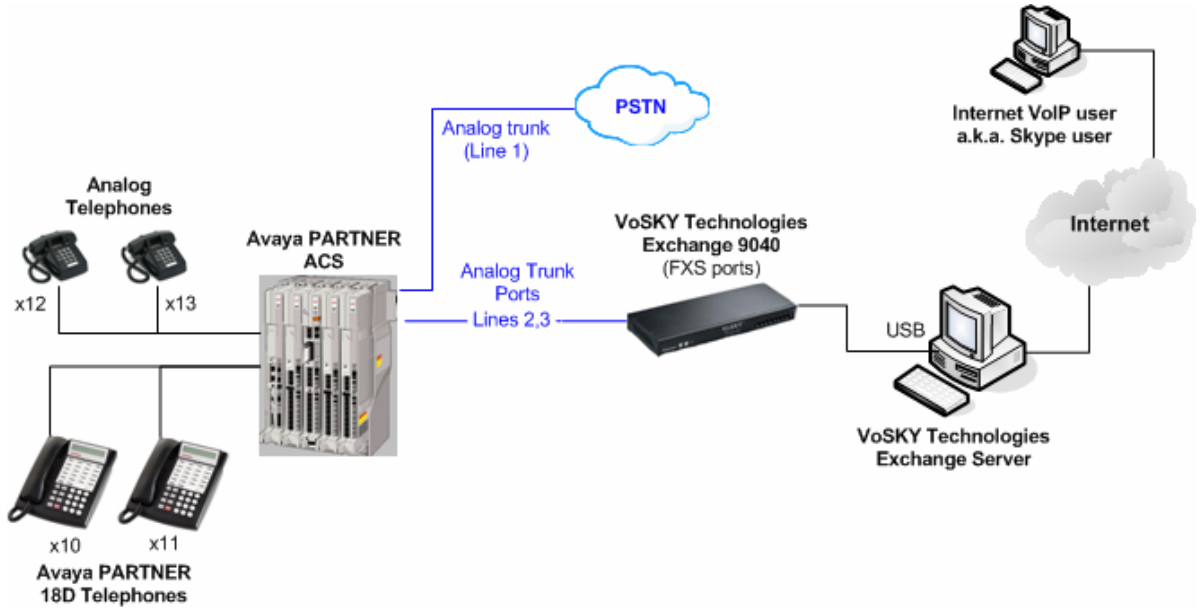

Figure 1: Network Configuration

Avaya DevConnect compliance testing focused on VoSKY Exchange 9040 product interoperability with Avaya PARTNER ACS. Although a 3rd party VoIP Internet Service Provider such as Skype was used to complete the compliance test, Skype was not certified as part of this compliance test.

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2. Equipment and Software Validated

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

Equipment	Software
Avaya PARTNER ACS	R6 (89.T)
Avaya PARTNER Voice Messaging	3.0
Avaya PARTNER 18D Telephones	-
Analog Telephones	-
VoSKY Technologies Exchange 9040	2.1.0.13
VoSKY Technologies Exchange Server	2.1.0.13

3. Configure Avaya PARTNER ACS

The configuration information provided in this section describes the steps required to configure Avaya PARTNER ACS to interoperate with VoSKY Technologies Exchange 9040. For all other configuration information, please refer to the Avaya PARTNER ACS product documentation in **Section 10**.

1. Physically connect an available analog trunk (line) port on Avaya PARTNER ACS to an available FXS port on the Exchange 9040.
2. Repeat **Step 1** for each analog trunk (line) port to be connected to Exchange 9040.

Note:
Two forms of dialing are available with this solution:

- Dialing via PSTN: When a user selects a line connected to a PSTN trunk, they will dial the call using the standard PSTN numbering convention.
- Dialing via Exchange 9040: When a user selects a line connected to the Exchange 9040, they may only dial phonebook entries defined in the Exchange Server phonebook.

Care should be taken when configuring Automatic Line Selection for users to provide them with the trunk they are most likely to use frequently.

4. Configure VoSKY Technologies Exchange 9040

There was no special configuration required for the Exchange 9040 to interoperate with Avaya PARTNER ACS besides physically connecting its FXS ports to trunk (line) ports on Avaya PARTNER ACS as described in **Section 3**. For all other configuration information, please refer to the VoSKY Technologies product documentation in **Section 10**.

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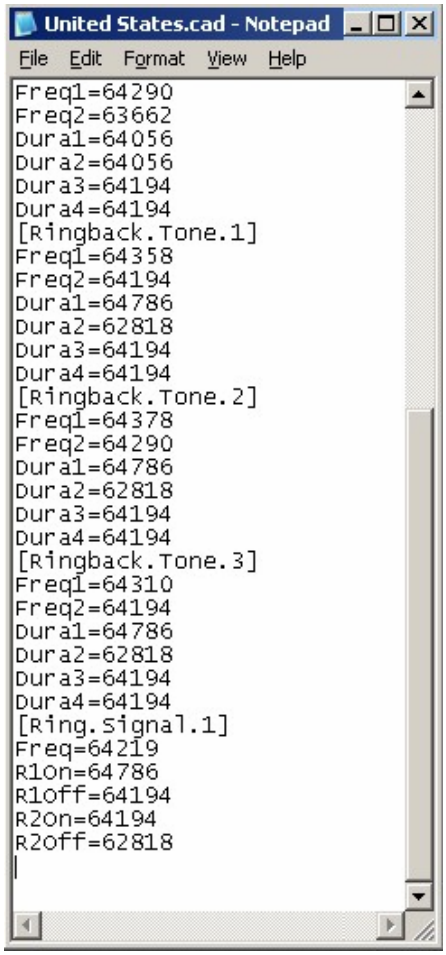
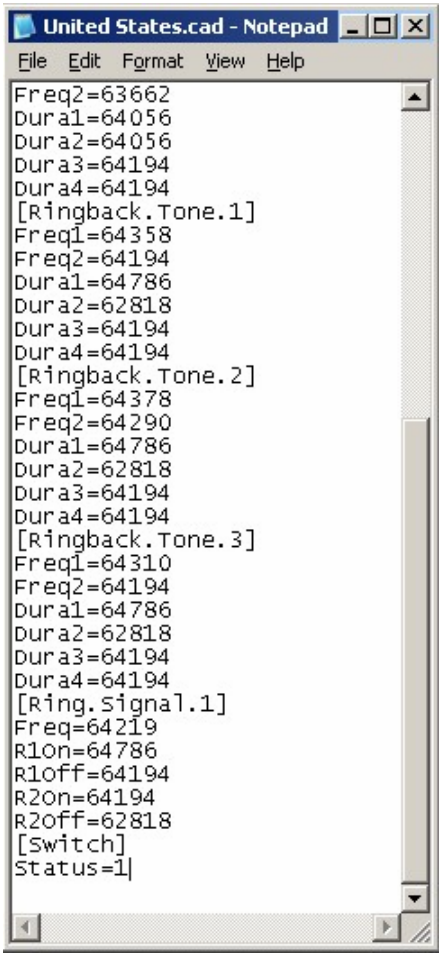
5. Configure VoSKY Technologies Exchange Server

The configuration information provided in this section describes the steps required to configure VoSKY Technologies Exchange Server to interoperate with Avaya PARTNER ACS. For all other configuration information, please refer to the VoSKY Technologies product documentation in **Section 10**. **Note**: Screens demonstrating the installation and configuration of Exchange Server for this test configuration have been provided in **Section 10** as a reference.

1. Install and configure Skype software on the VoSKY Exchange Server as instructed in the VoSKY Technologies product documentation referenced in **Section 10**.
2. Install and configure Exchange Server on the VoSKY Exchange Server PC as instructed in the VoSKY Technologies product documentation referenced in **Section 10**.
3. Browse to the Cadence subdirectory where Exchange Server was installed, e.g., C:\Program Files\VoSKY Exchange 9040\Exchange Server\Cadence, and open the file named **United States.cad** using a text editor.
4. In the Notepad window that appears, scroll to the bottom of the file, add **[Switch] Status=1** as shown below, save the file, and then exit from Notepad.





5. Repeat **Step 4** on the file called **Custom.cad** located in the same directory.

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6. Interoperability Compliance Testing

Interoperability compliance testing included feature/functionality and serviceability testing. Feature and functionality testing examined Exchange 9040 and Exchange Server's ability to place inbound and outbound VoIP calls. Serviceability testing introduced failure scenarios to verify Exchange 9040 and Exchange Server could resume placing and receiving calls after failure recovery.

6.1. General Test Approach

Feature and functionality testing was performed manually on Avaya PARTNER ACS configured in Key mode with all inbound analog trunks ringing at all extensions. The general test approach was to manually place calls from Avaya PARTNER ACS telephone extensions to a Skype user defined in the Exchange Server phonebook. Inbound calls from a Skype user were placed to Skype user accounts associated with the Exchange 9040. These calls rang and were answered at telephone extensions on Avaya PARTNER ACS. Calling features such as hold, transfer, and conference were exercised on Avaya PARTNER ACS telephone extensions involved in calls to a Skype user. Testing also included verifying successfully leaving and retrieving voicemail from inbound calls placed by a Skype user to the Exchange 9040. For serviceability testing, failures such as power failures affecting Avaya PARTNER ACS, Exchange 9040 and Exchange Server were introduced.

6.2. Test Results

Barring the Exchange 9040 serviceability test described below, all remaining feature and serviceability tests passed. Exchange 9040 and Exchange Server properly routed inbound Skype calls to Avaya PARTNER ACS and outbound calls from Avaya PARTNER ACS to Skype users.

For serviceability testing, Exchange 9040 and Exchange Server successfully resumed operations when both Avaya PARTNER ACS and Exchange Server were subjected to power failure and restored to power. However, when the Exchange 9040 was subjected to a power failure, the Exchange Server required a reboot after power was restored.

7. Verification Steps

The following steps may be used to verify the configuration.

- From an Avaya PARTNER 18D telephone extension, dial the phonebook entry of a Skype user added to the Exchange Server phonebook using a line connected to the Exchange 9040. Verify the Skype user receives and answers the call. Verify the call clears when the Skype user hangs up.

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- Place a call from a Skype user to the Skype account associated with the Exchange 9040 and verify it rings at the extensions configured to ring on incoming calls on that Avaya PARTNER ACS line. Answer the call at a ringing extension. Verify the call connects properly and the call clears when the Skype user hangs up.

8. Support

Technical support for VoSKY Technologies Exchange 9040 and VoSKY Technologies Exchange Server can be obtained by calling (719) 884-7417 or sending email to support@vosky.com or online via http://www.vosky.com/index/support.php.

9. Conclusion

These Application Notes describe the configuration required for VoSKY Technologies Exchange 9040 and VoSKY Technologies Exchange Server to successfully interoperate with Avaya PARTNER ACS. VoSKY Technologies Exchange 9040 and VoSKY Technologies Exchange Server successfully passed compliance testing.

10. Additional References

Product documentation for Avaya products may be found at http://support.avaya.com.

[1] *Avaya PARTNER Advanced Communications System Installation, Programming, and Use*, 518-456-803, Issue 6, July 2004

Product documentation for the Exchange 9040 may be found as follows.

[2] *Exchange 90XX Quick Start Guide*, May 2007 may be found at http://www.actiontecsupport.com/files/vosky/90XX_QSG.pdf.

[3] *Exchange 90XX User Manual*, May 2007 may be found at http://www.actiontecsupport.com/files/vosky/90XX_UserManual.pdf.

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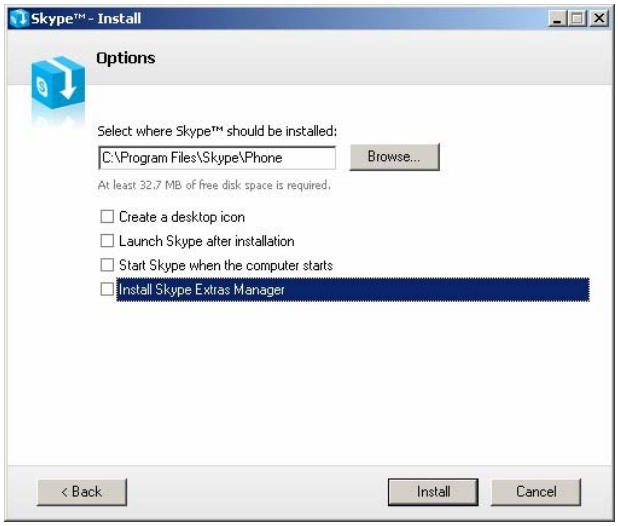
11. Appendix A – VoSKY Exchange Server test configuration screens

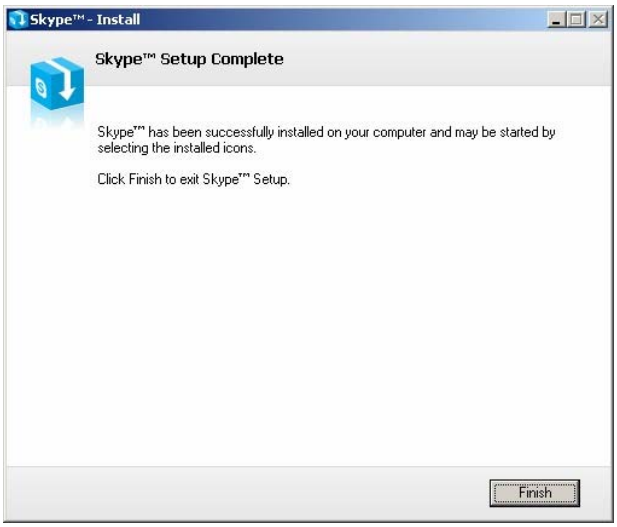
This section is provided as a reference on how the VoSKY Exchange Server was configured in the compliance test configuration.

Note:

- **aevis1** was the Skype ID associated with the Exchange 9040 Port 1
- **aevis2** was the Skype ID associated with the Exchange 9040 Port 2
- **aetempx** was the Skype ID associated with the Internet VoIP (Skype) user

Install Skype application:





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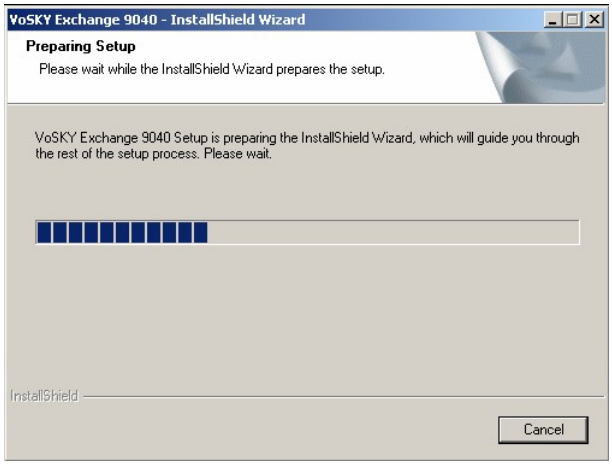
Install VoSKY Exchange 9040 Server software:



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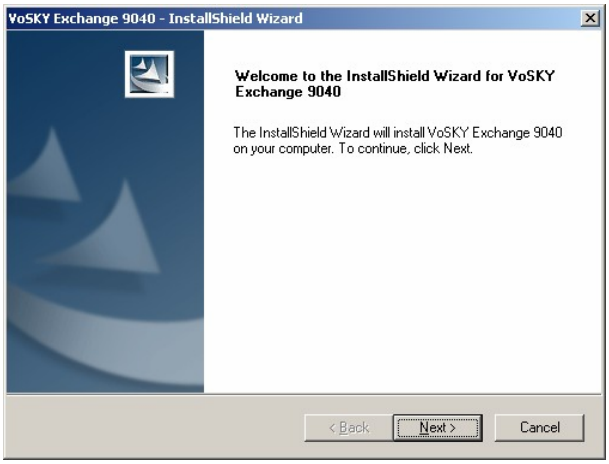

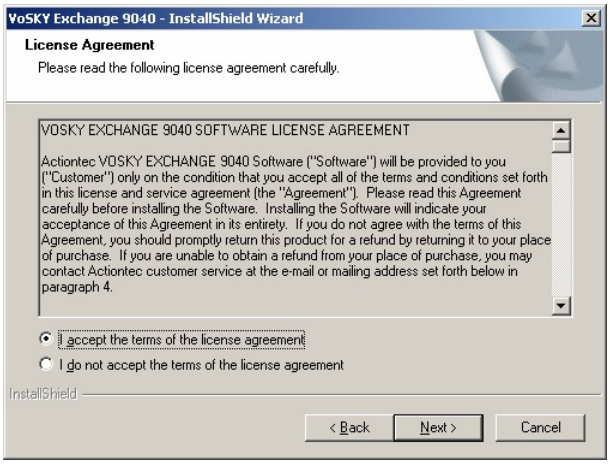

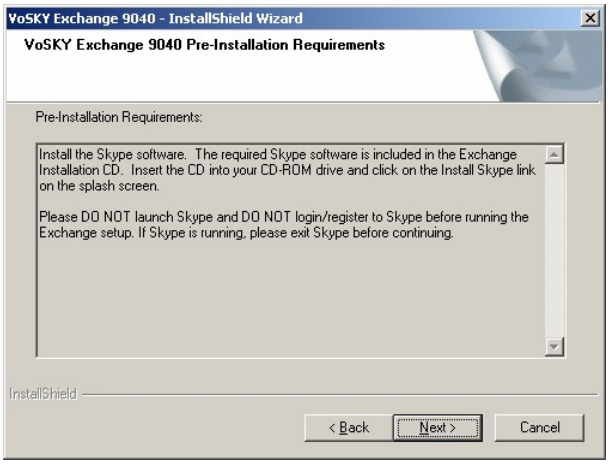

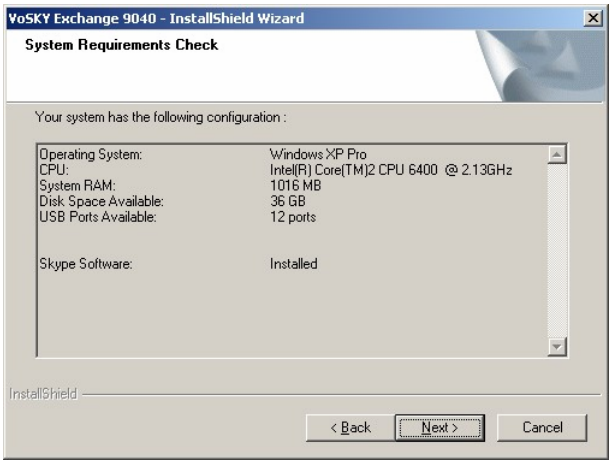

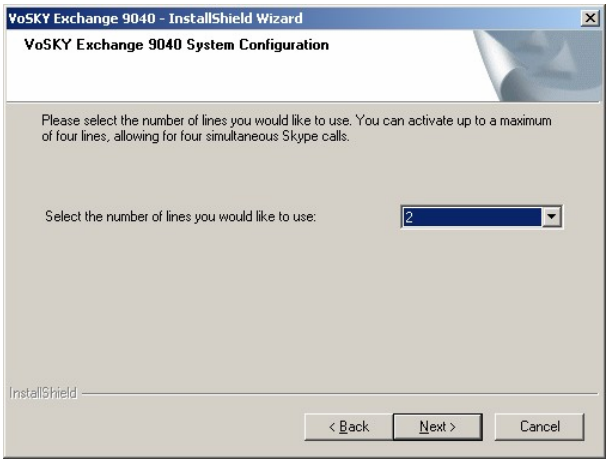

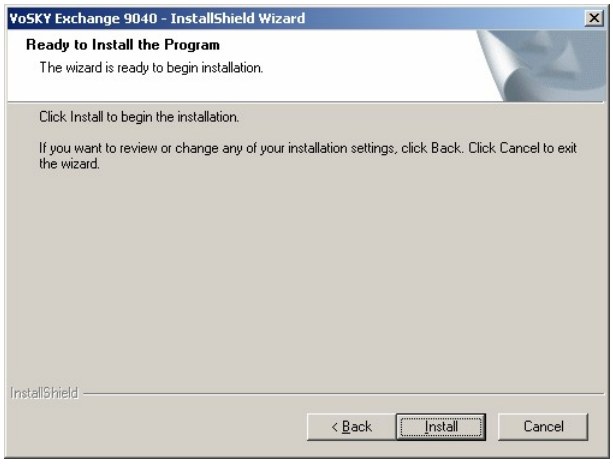

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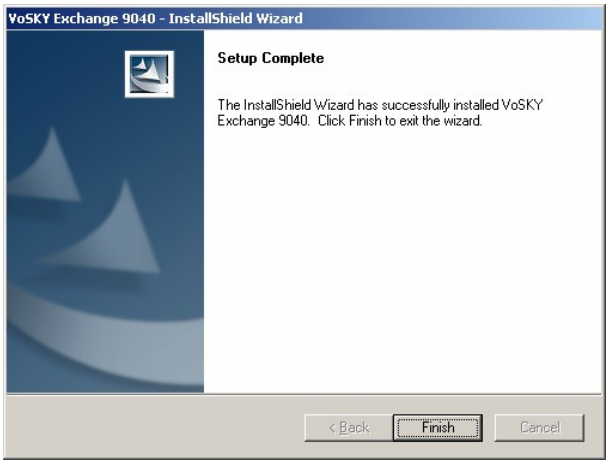

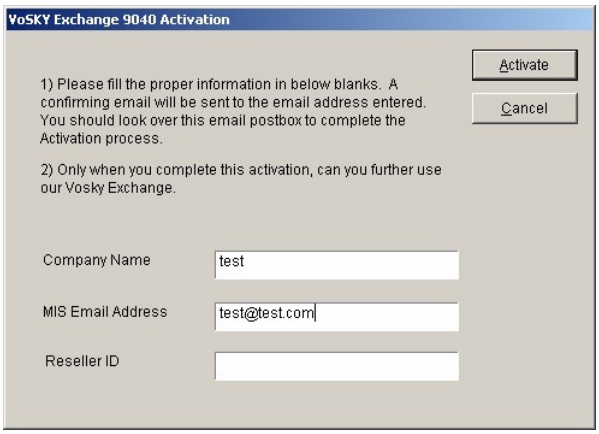

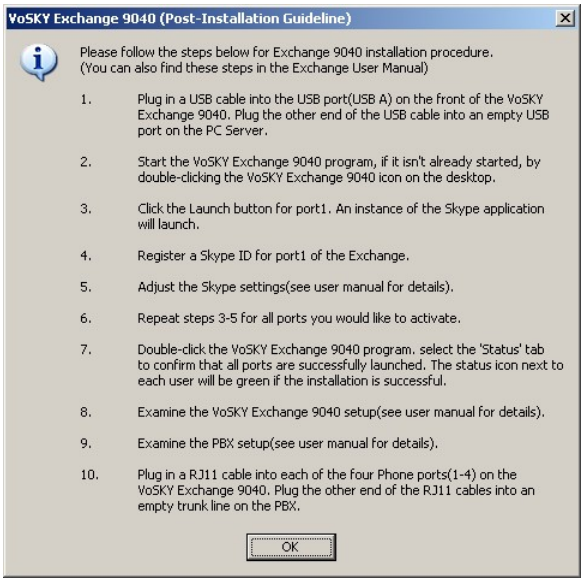

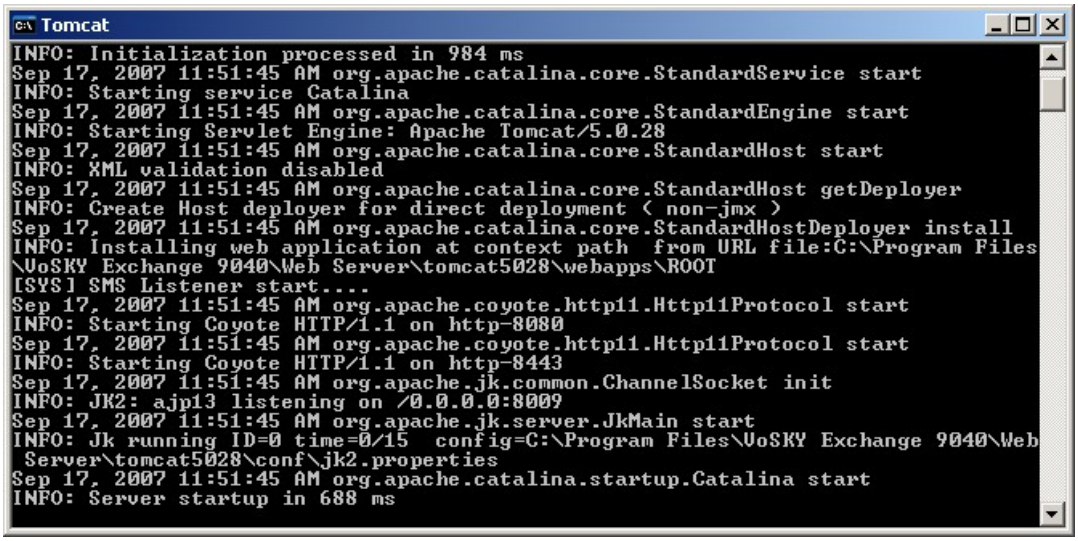

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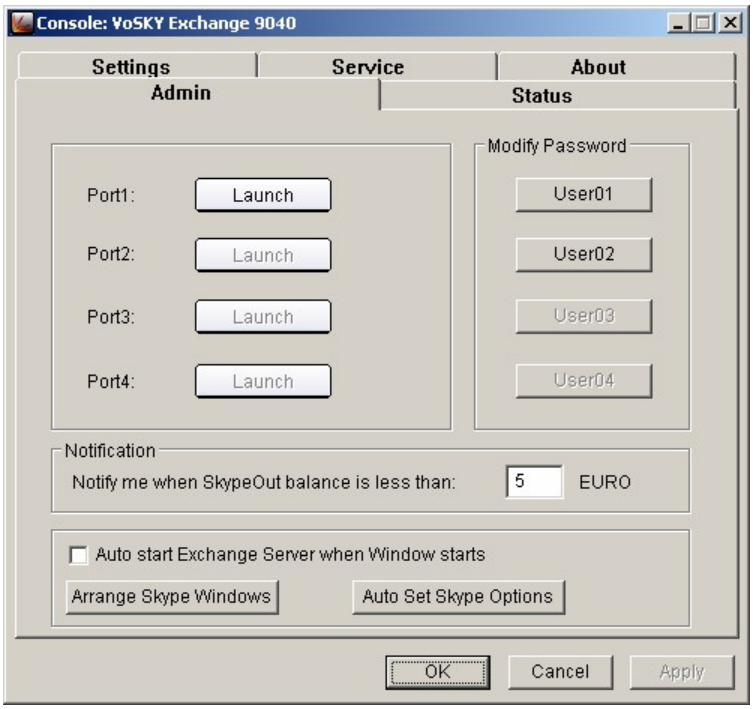
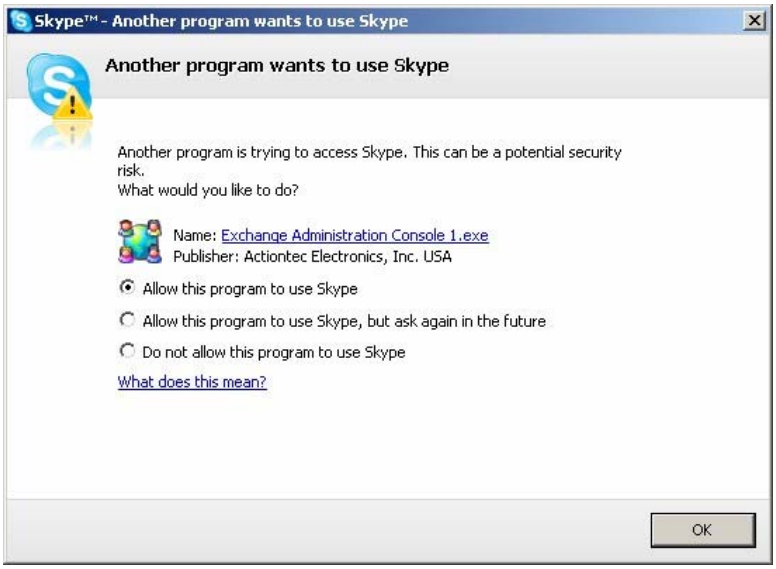
Configure VoSKY Exchange 9040 Server and Skype:





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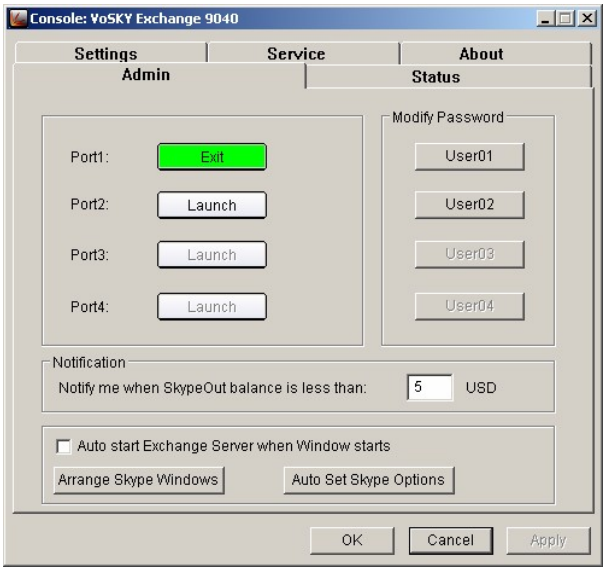

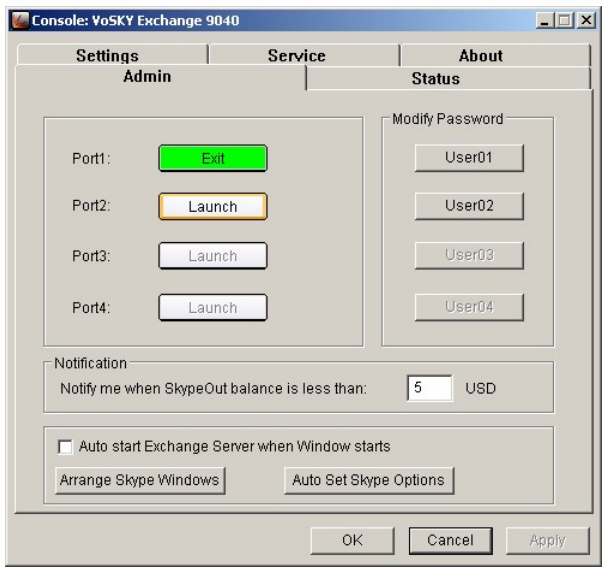

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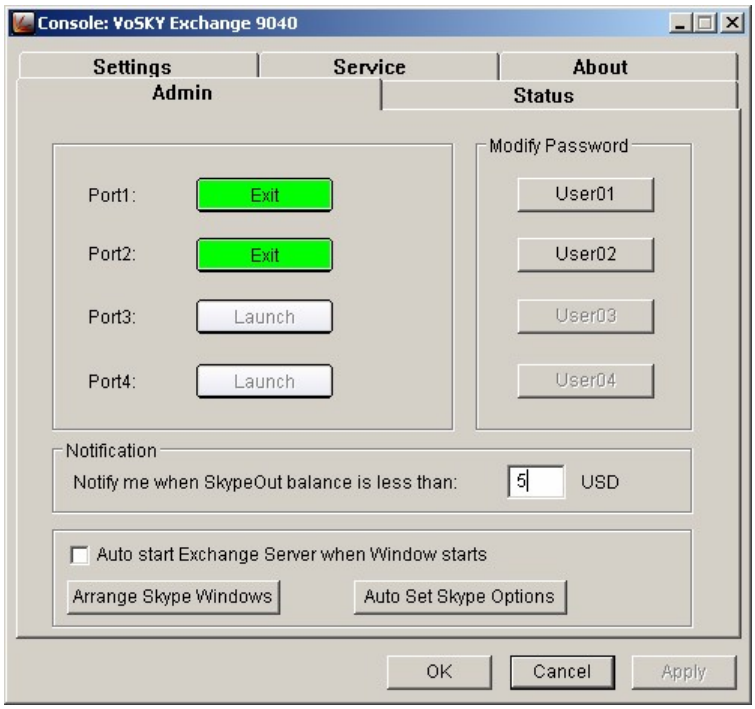

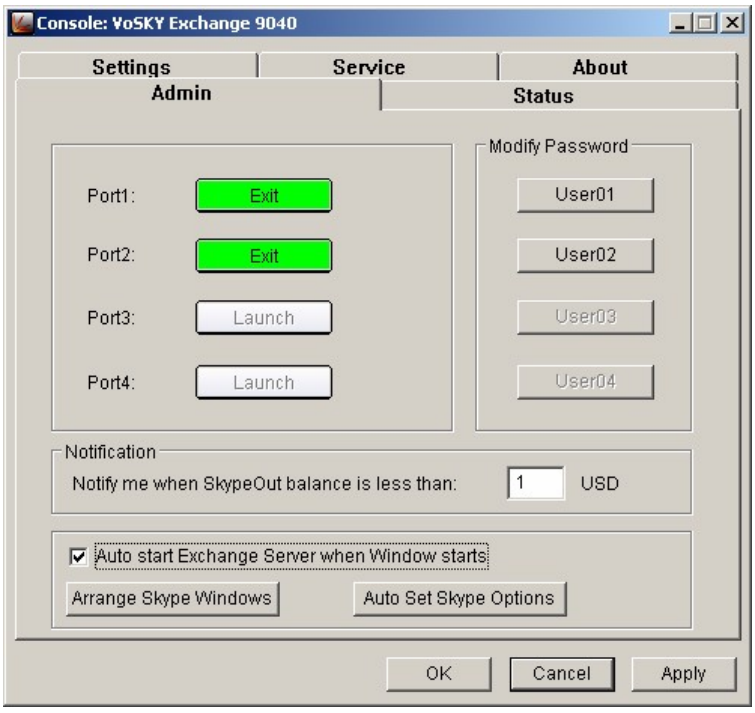

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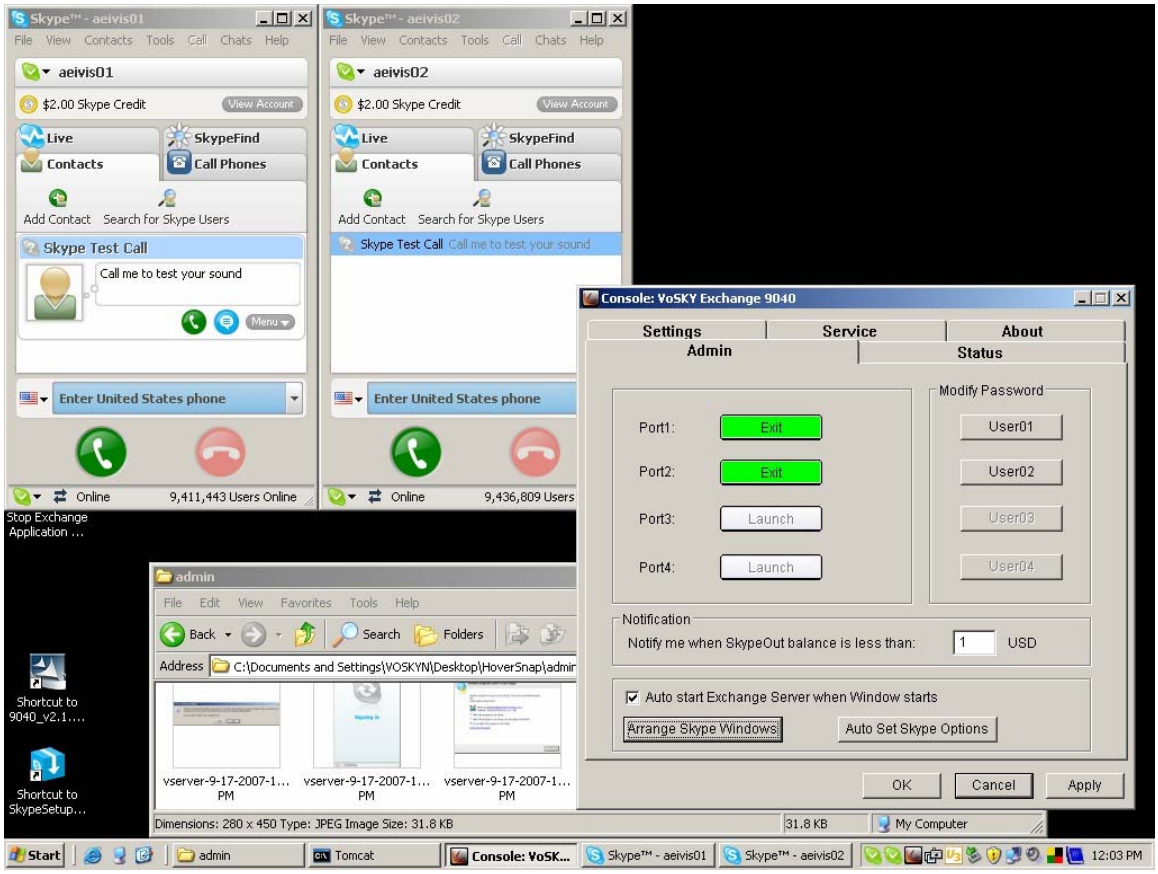

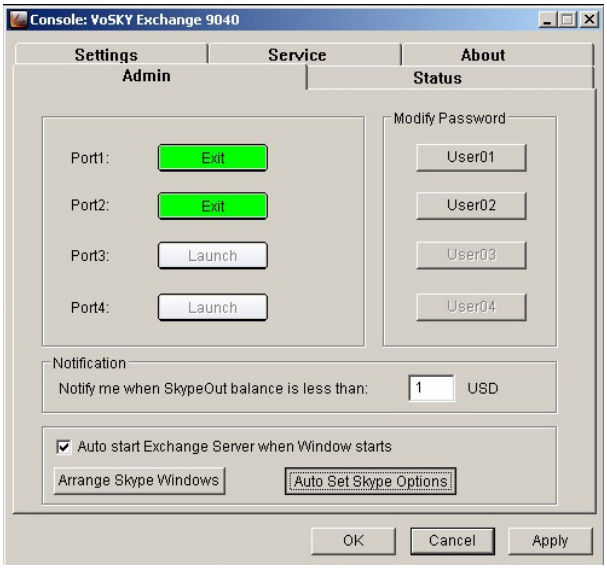

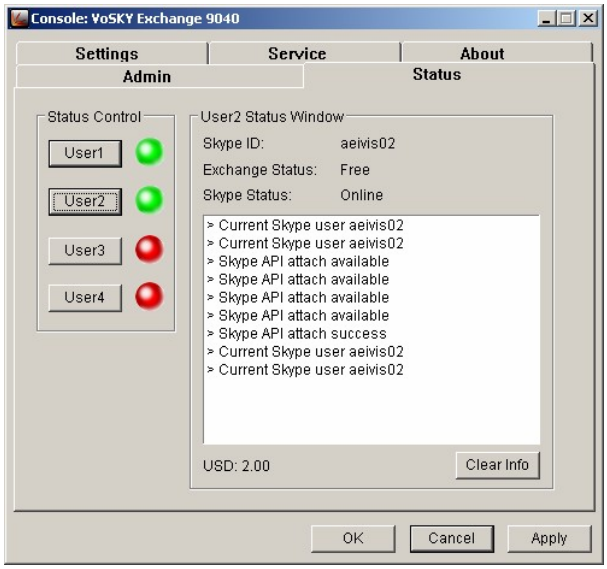

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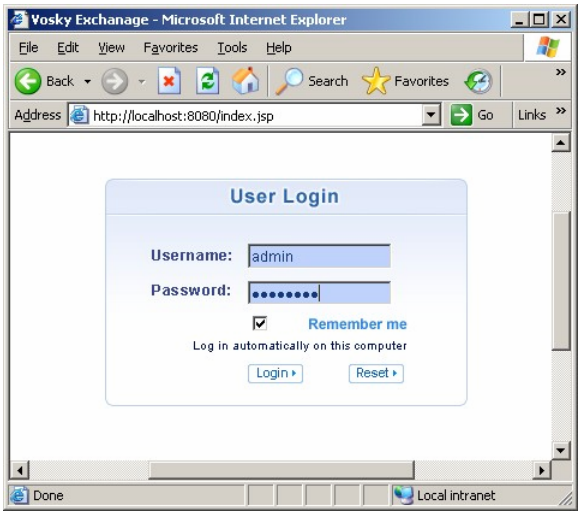

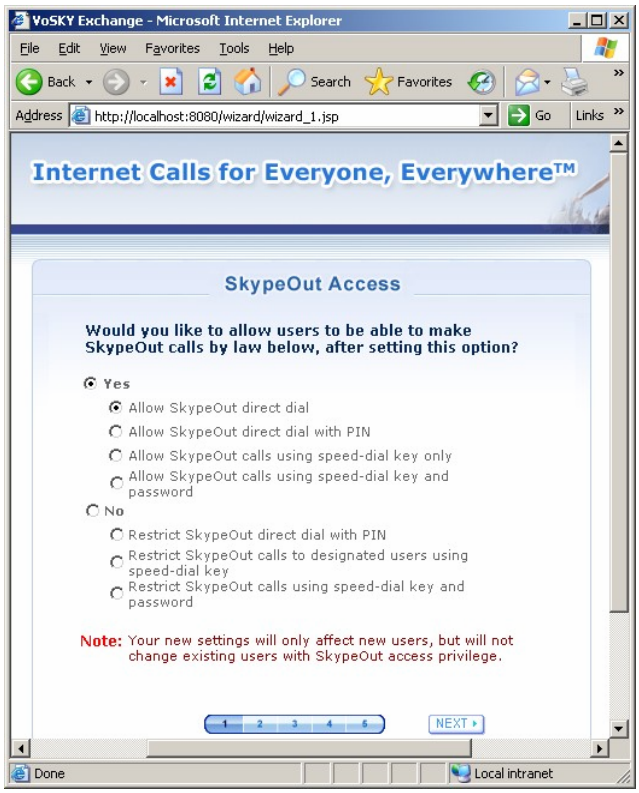

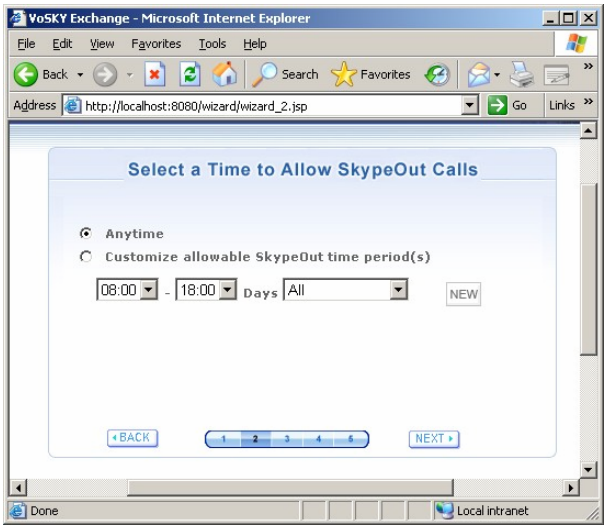

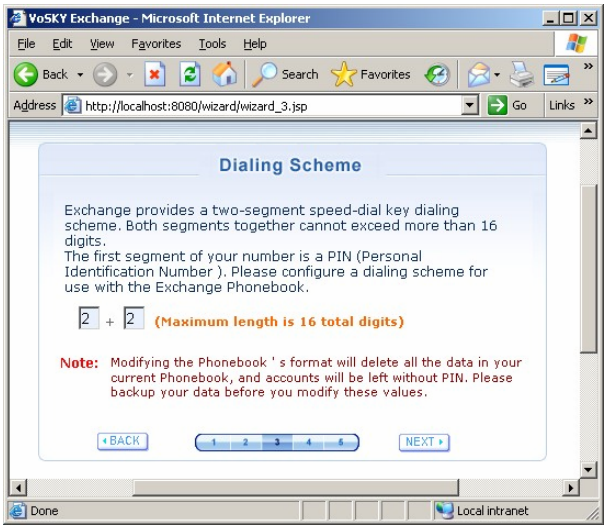

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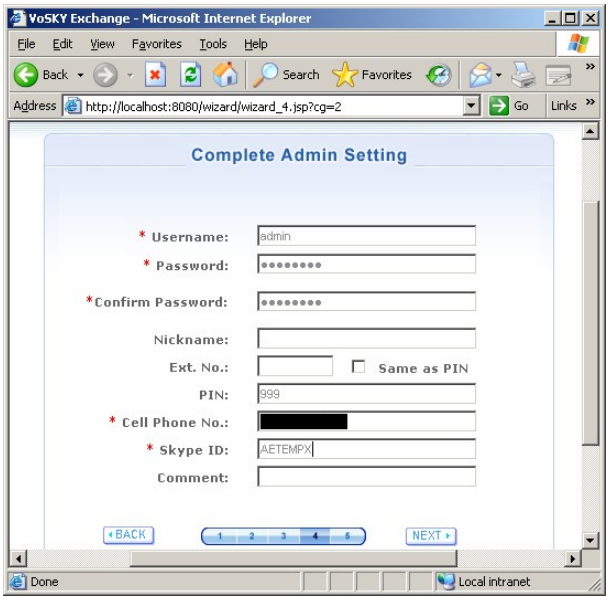

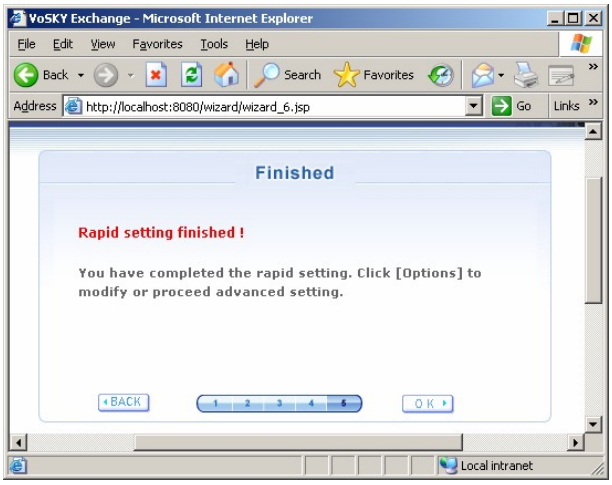

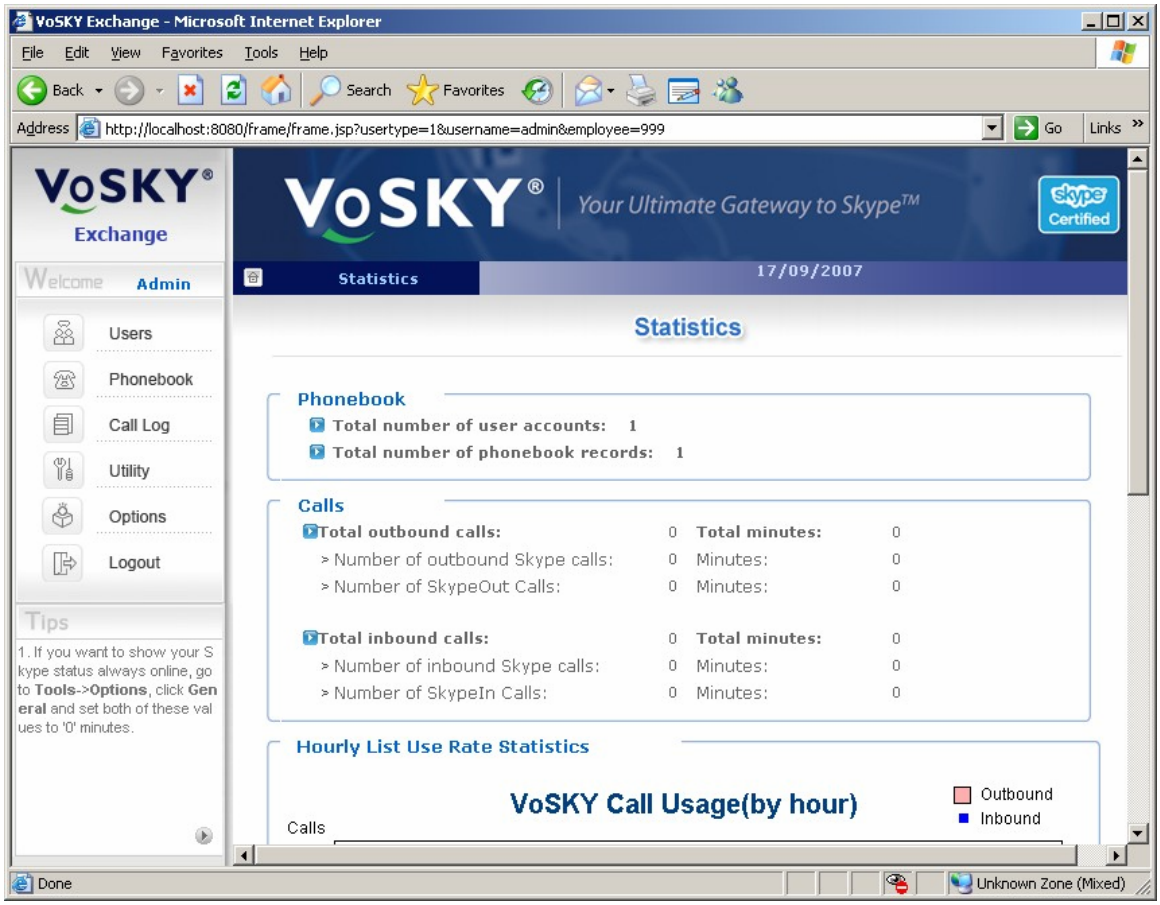

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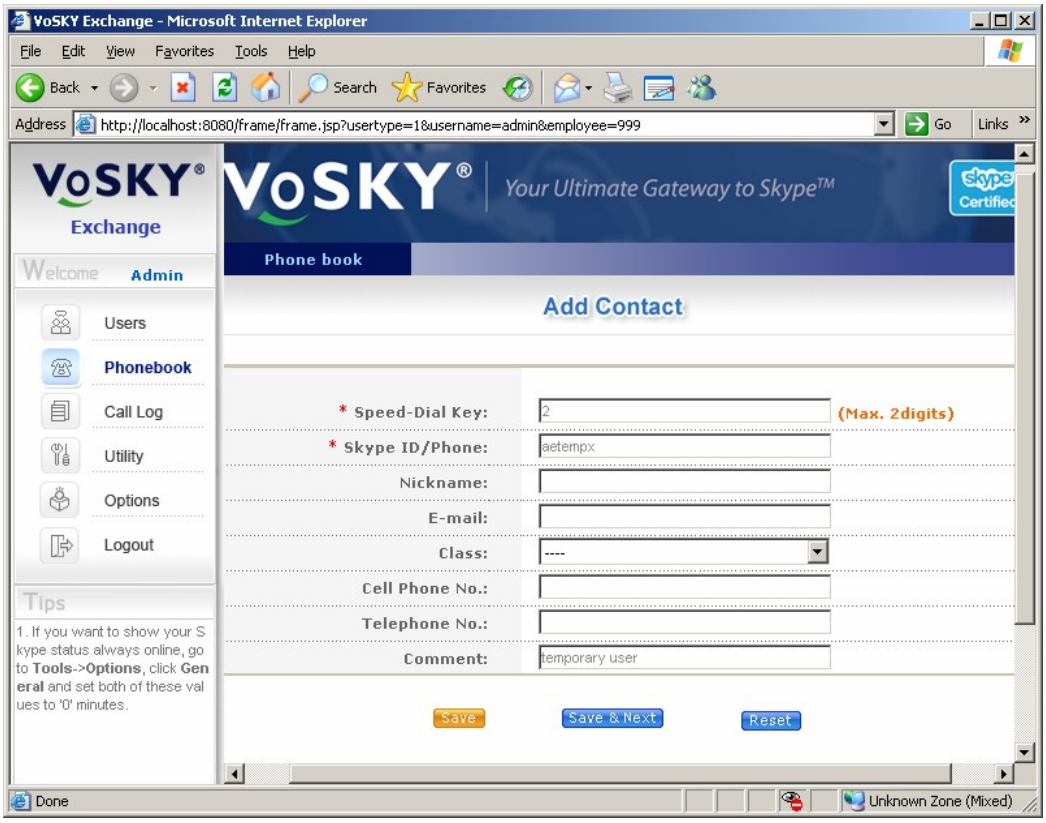

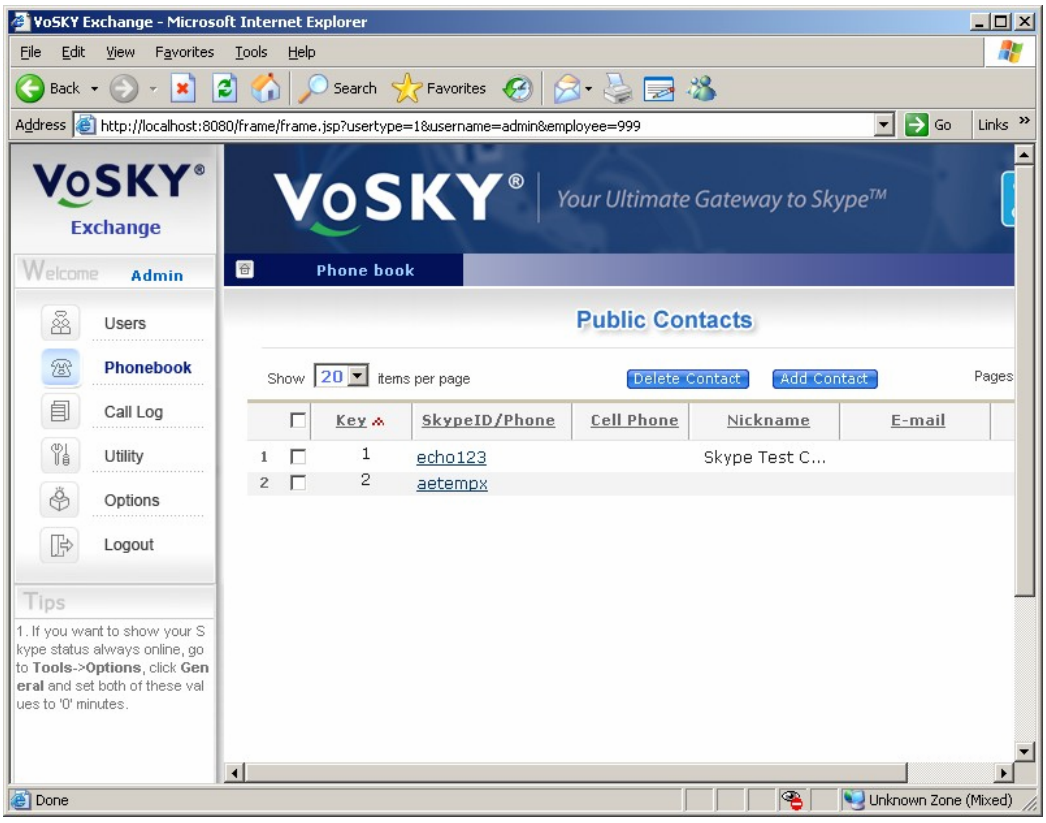

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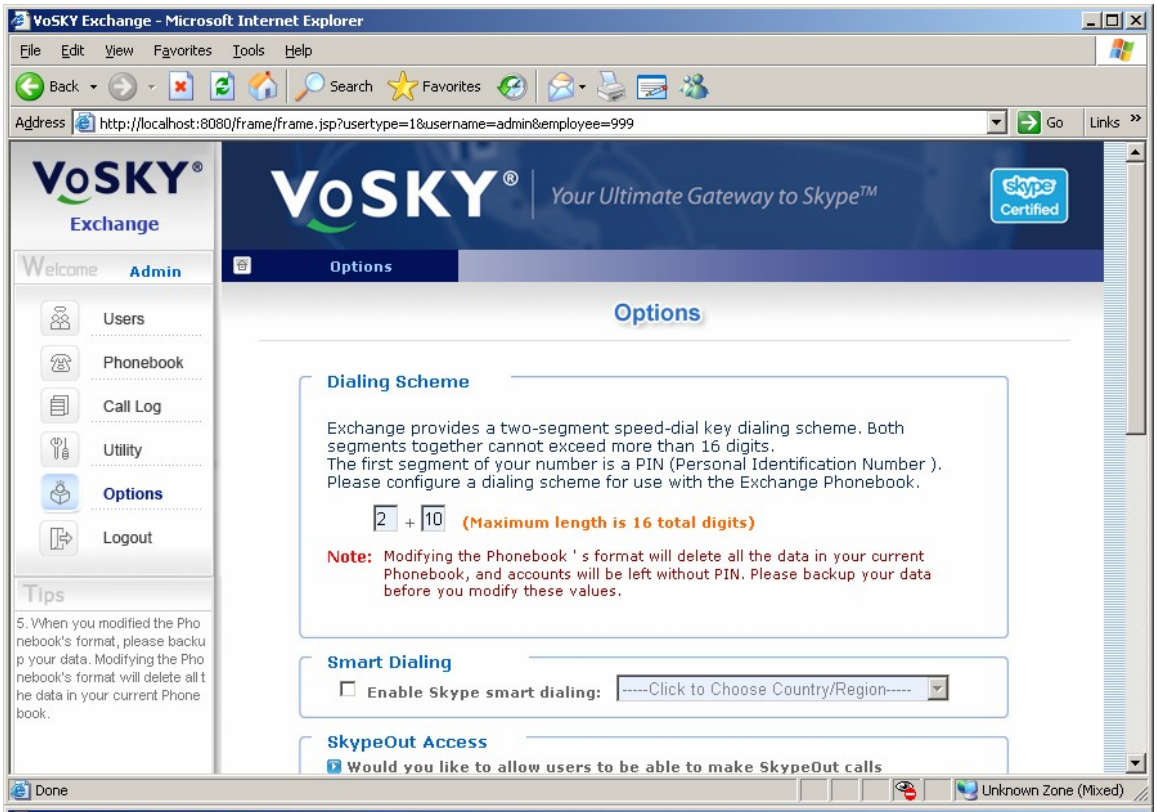

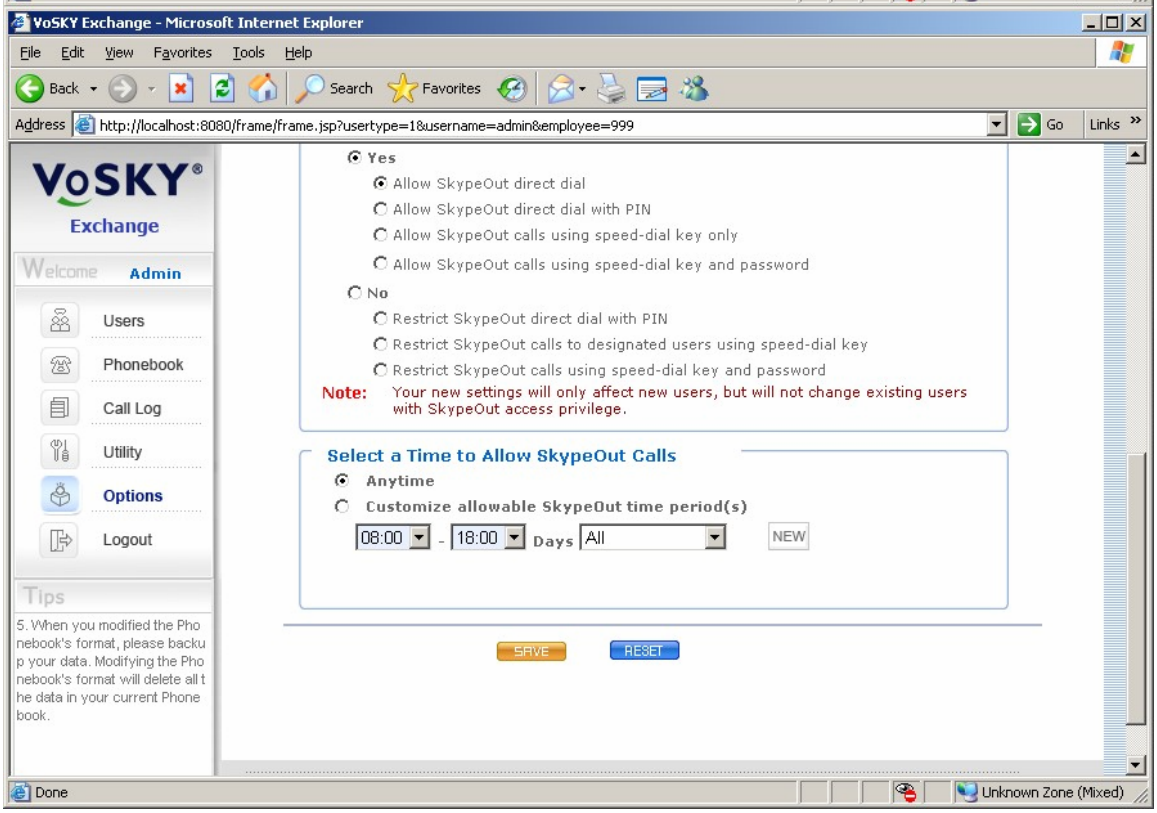

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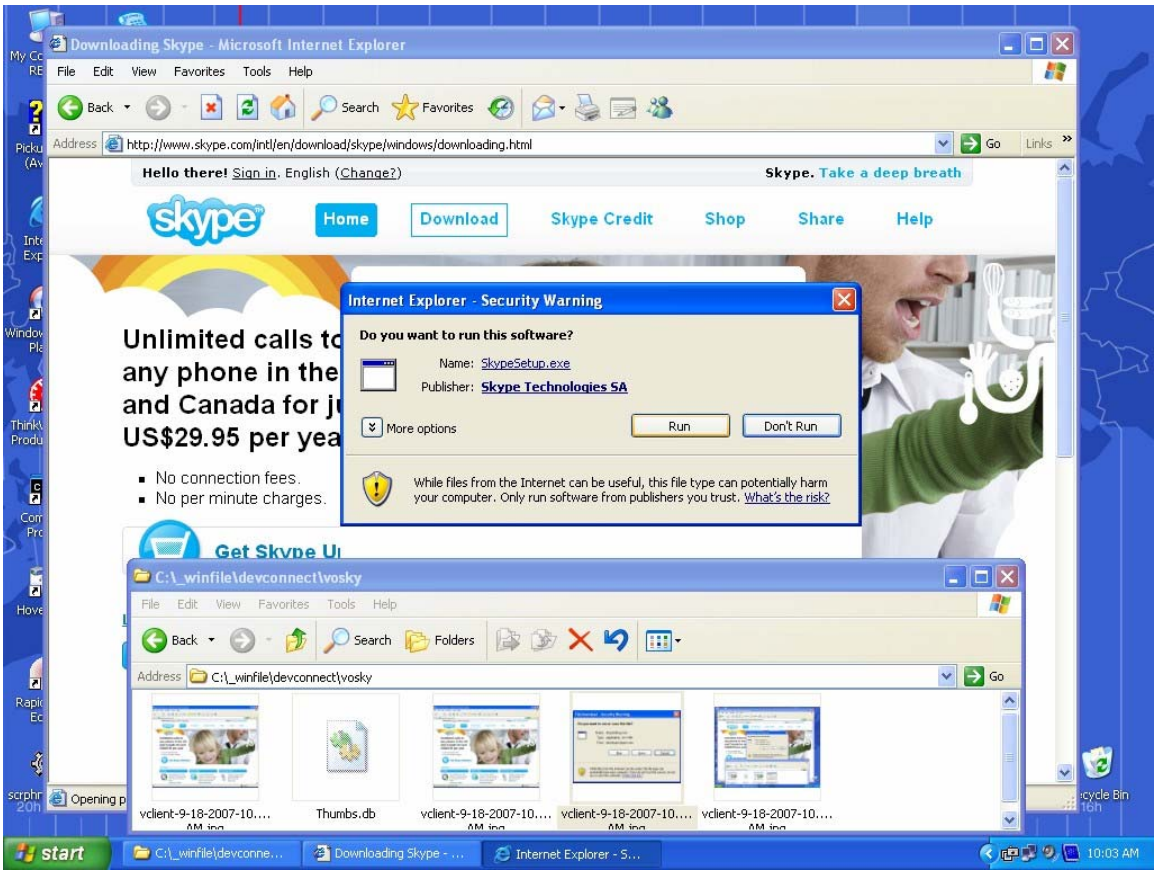
12. Appendix B – Internet VoIP (Skype) User Configuration Screens

This section is provided as a reference on how the Internet VoIP (Skype) user was configured on a desktop client in the compliance test configuration.

Note:

- **aevis1** was the Skype ID associated with the Exchange 9040 Port 1
- **aevis2** was the Skype ID associated with the Exchange 9040 Port 2
- **aetempx** was the Skype ID associated with the Internet VoIP (Skype) user



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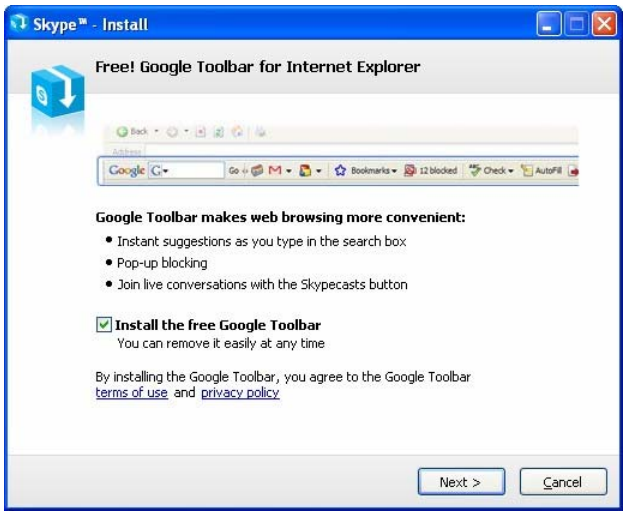

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