ADTRAN

Interoperability Guide

NetVanta ECS Interoperability with Incendonet SpeechBridge

This guide describes an example configuration used in testing the interoperability of an ADTRAN NetVanta Enterprise Communications Server (ECS) and the SpeechBridge appliance. This guide includes the description of the network application, verification summary, and individual device configurations for NetVanta ECS and SpeechBridge.

For additional information on configuration of the ADTRAN products, please visit the ADTRAN Support Community at https://supportforums.adtran.com

This guide consists of the following sections:

Application Overview

A small to medium sized business with the need for speech recognition with a PBX auto attendant was the requirement for this interoperability verification. The Incendonet SpeechBridge application provides the speech recognition and commands that are used by the NetVanta ECS. Various tasks were performed to validate this solution and are described in *Verification Performed on page 8*.

The application tested included the Incendonet SpeechBridge application and NetVanta ECS installed on a VMware server. SIP trunks provided connectivity between the NetVanta ECS and SpeechBridge, and the NetVanta ECS and Internet Telephony service provider (ITSP). This application is illustrated in *Figure 2*.

> **NOTE** *SpeechBridge is not supported on VMware for production environments. It will run on VMware for internal testing and was used in this interoperability test.*
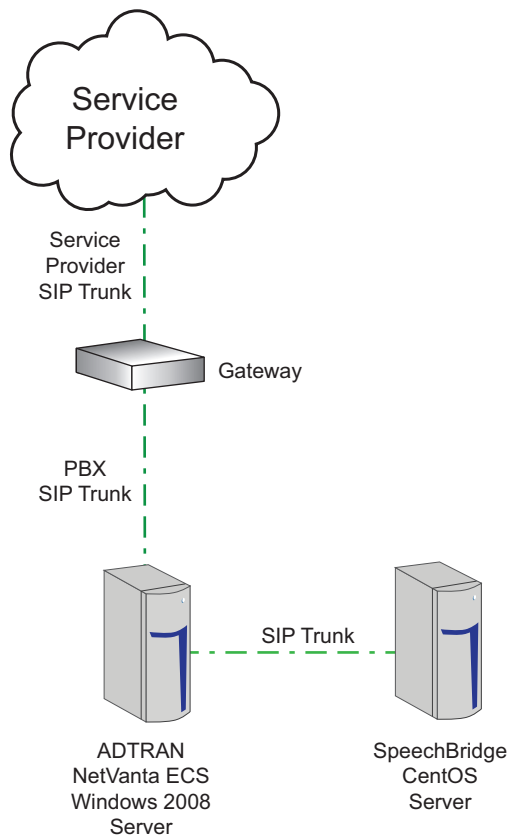
Figure 1. Network Example for Verification

NetVanta ECS Introduction

The NetVanta ECS is a software-only package designed for Microsoft Windows platforms that provides a complete IP-based voice system supporting 75 to 2000 users on a single server. This feature-rich, SIP-based platform offers a complete voice solution with advanced unified communications services such as:

- Unified Messaging
- Voicemail
- Integrated Messaging
- Fax Server
- Graphical Drag and Drop Service Creation
- Personal Assistants
- One Number Services
- Call Redirection Services
- Notifications
- Auto Attendant
- Audio Conferencing
- Through-the-Set and Overhead Paging

Incendonet SpeechBridge Introduction

The Incendonet SpeechBridge appliances provide a comprehensive speech application platform with the ability to retrieve information and process repetitive tasks with simple spoken commands. SpeechBridge connects customers to core enterprise systems from any phone. SpeechBridge is offered in three versions: SpeechBridge SMB, PRO, and HA-PRO. SpeechBridge SMB is designed for small to medium sized businesses and available as a software appliance to be deployed on customer preferred hardware. The SpeechBridge SMB version was used for this interoperability test because it provided the best fit for the customer requirements.

SpeechBridge SMB includes speech driven applications such as:

- Auto Attendant: Enables customers to speak the name of the individual or department they wish to reach instead of dialing by name.
- Email Access: Enables customers to pick up any phone (internal or external) and speak simple voice commands to access enterprise email.
- Calendaring: Enables customers to speak simple voice commands to access calendars to review, accept, or reject meeting requests from any phone.

The diagram shown in *Figure 2 on page 4* shows the SpeechBridge application deployed in a typical network environment.
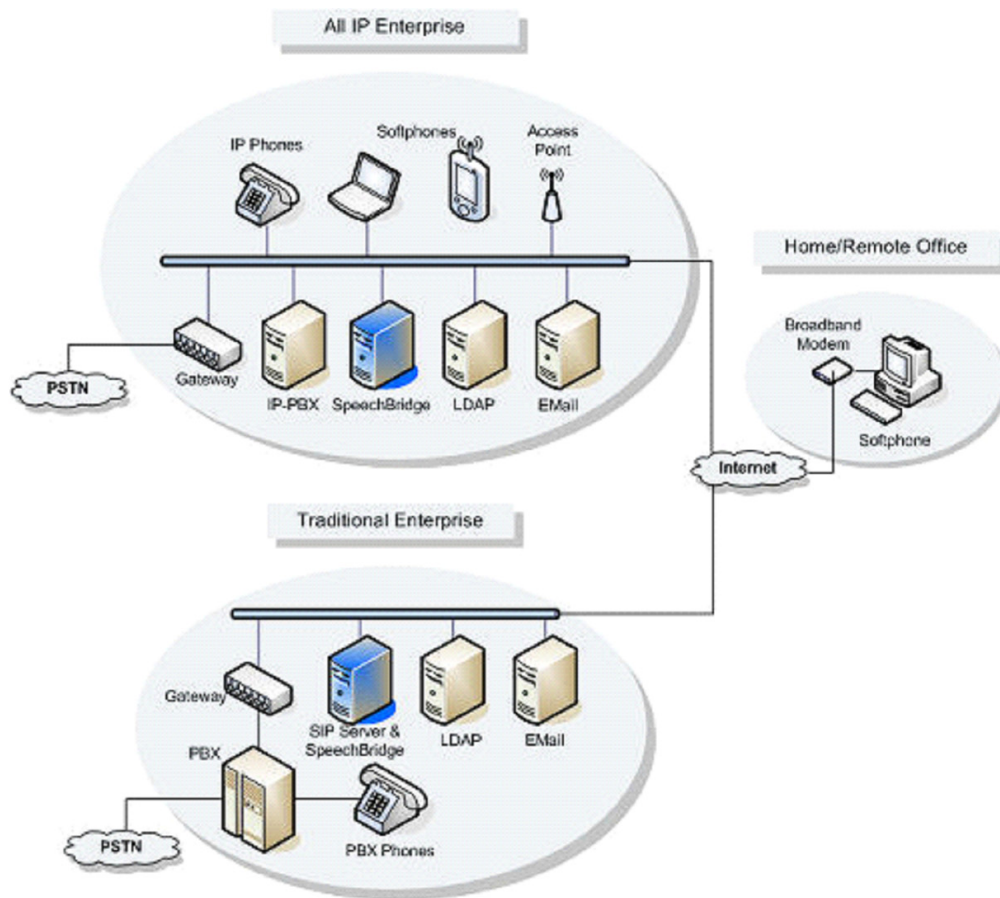
Figure 2. Typical Network Deployment of SpeechBridge

Hardware and Software Requirements and Limitations

SpeechBridge must connect to NetVanta ECS through a SIP trunk.

> **NOTE**
>
> *SpeechBridge does not affect the 911 features or behavior of NetVanta IP PBX implementation. Please review your ADTRAN specific documentation for questions related to 911 settings.*

Equipment

The following equipment was used during the interoperability testing described within this document:

- Windows Server 2003 (or later)
- NetVanta ECS 5.1 (or later)
- SpeechBridge version 4.0.1.157 (or later)

Software Versions

Software versions used during solution design verification

- NetVanta ECS - 5.1.0.7931
- Incendonet SpeechBridge - 4.0.1.157
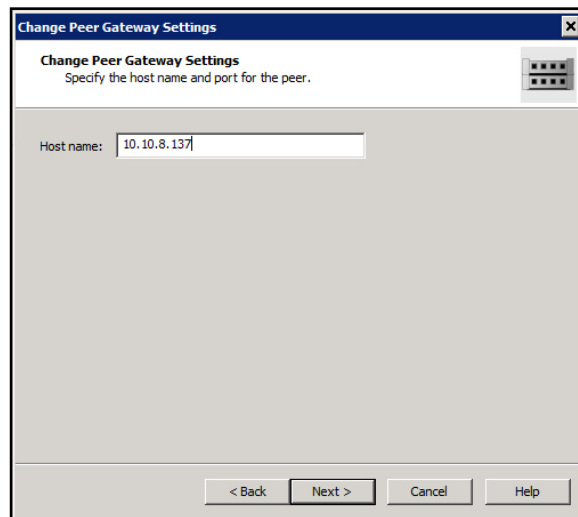
Configuring the NetVanta ECS for SpeechBridge

The following configuration steps assume the NetVanta ECS has been successfully installed and deployed using instructions provided by ADTRAN. The following instructions are specific settings necessary to enable SpeechBridge to function properly for this interoperability test.
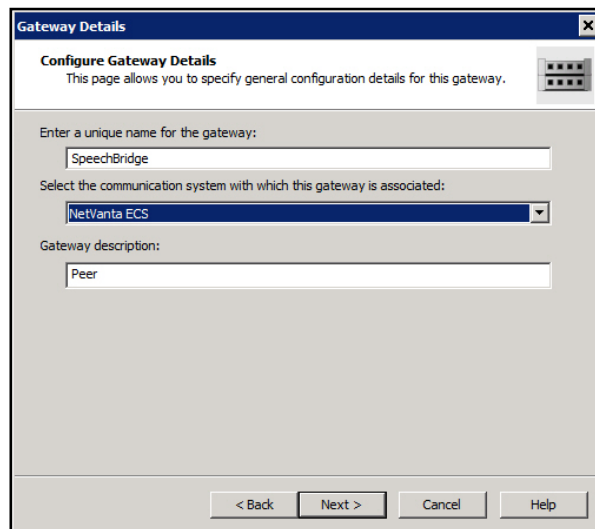
Create a Gateway in NetVanta ECS

1. Launch NetVanta UC Client and log in as **Admin**.
2. In the **Administration** navigation pane, select the **Gateways** topic to create a gateway object.
3. Right-click in the Gateway pane and choose **New Gateway**.
4. Once the **Add Gateway Wizard** launches, select **Next**.
5. Choose **SIP Peer** as the gateway type. Select **Next**.
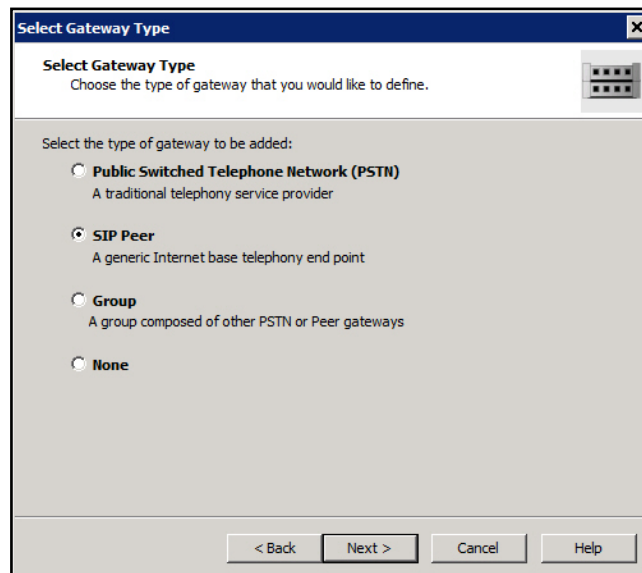
6.   For host name, enter the IPv4 address or domain naming system (DNS) name of the SpeechBridge server. Select **Next**.

7.   In the **Configure Gateway Details** menu, enter a unique name (for example, **SpeechBridge**) and, optionally, a description for the gateway. Select **Next**.


8.   From the resulting **Summary** menu, select **Submit** to add the new gateway. This may take a few minutes to complete. Select **Next** and **Finish** once the task has completed.

Create a Dial Plan for SpeechBridge

1.   From the **Administration** navigation pane, select the **Communication Systems**. Select **Routing** under the **NetVanta ECS** system.

2. Select the + button located in the upper right corner of the summary pane to create a new dial plan entry.

Select the **+** button to create a new dial plan.
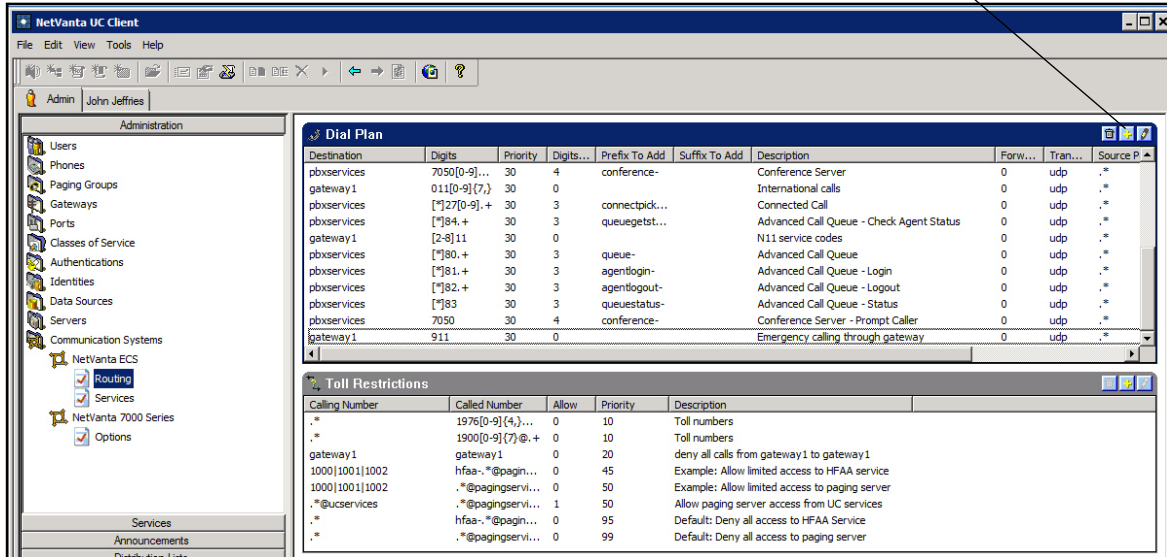
3. From the **Dial Plan Entry** menu, enter the desired extension on the SpeechBridge server in the **Original digits** field (for example, **2100**) as shown in *Figure 7 on page 7*.
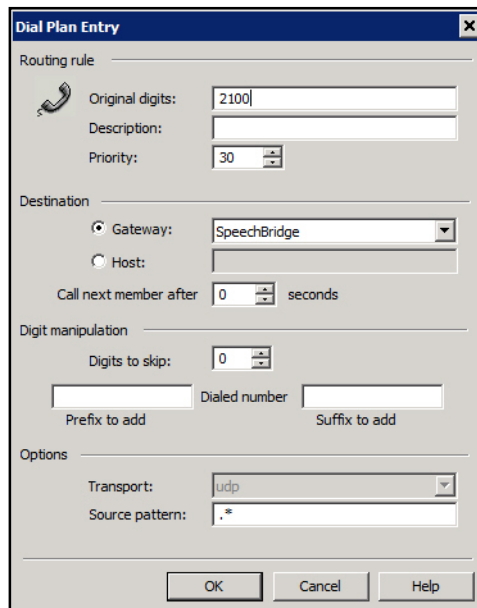

4. For **Destination**, choose the gateway created previously (**SpeechBridge**) from the drop-down menu.

5. Select **OK** to accept the changes and complete this task.

Configuring SpeechBridge for the NetVanta ECS

Install and configure the SpeechBridge appliance according the instructions provided by Incendonet. Additional configuration steps specific to interoperability with NetVanta ECS are provided in this section. You will need to log into the SpeechBridge administration website with sufficient privileges to accomplish these tasks.

Configure the PBX Type

1. Navigate to **Telephony** > **SIP Network Settings**.

2. Choose **Adtran** from the **IP PBX Type** drop-down menu. Select **Save** to save the setting.
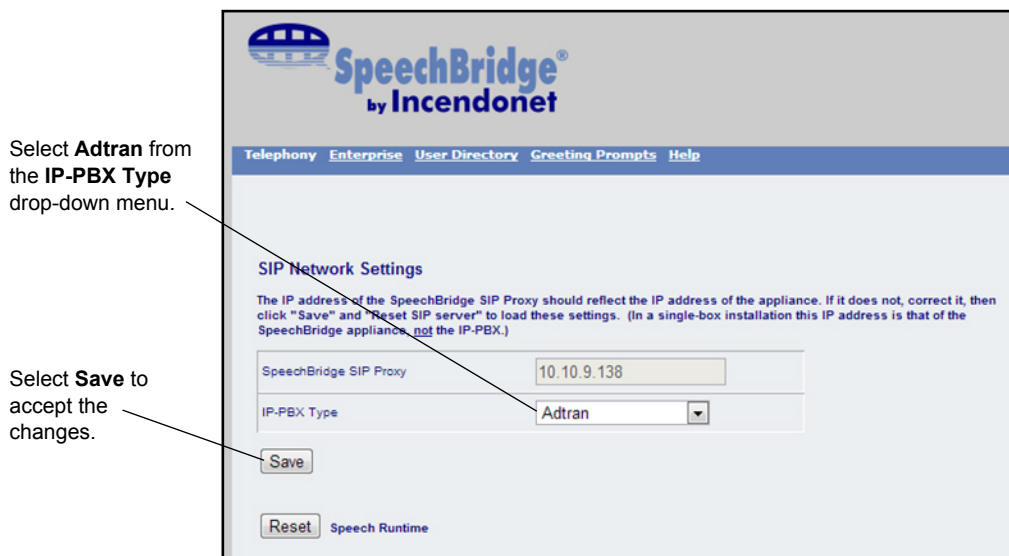
Verification Performed

The NetVanta ECS successfully completed interoperability testing with SpeechBridge. Verification testing included the following areas:

1. Installation of products

   a. NetVanta ECS on Windows 2008 on VMware server

   b. Incendonet SpeechBridge on CentOS on VMware server

2. Configuration

   a. SIP trunk between ECS and SpeechBridge

   b. Auto attendant on SpeechBridge

   c. User name directory

   d. All Inbound calls routed to the SpeechBridge auto attendant for voice recognition

   e. Extensions on ECS

3. SIP connectivity to SpeechBridge and ECS

4. Voice auto attendant operation

5. Local and external calling

6. Call transfers to extensions

7. Call transfers to extensions that then forward to voicemail

8. Call transfers to invalid extensions or invalid destinations

Test Results Summary

The summary of the certification and verification testing is provided in *Table 1*.

Table 1. SpeechBridge Connectivity to NetVanta ECS

Verification Test	Description	Results
SIP connectivity	Call SpeechBridge extension or address: a. Does the call connect properly? b. Are the systems communicating properly?	Passed
Real-time Transport Protocol (RTP) Test 1	Listen to the headset: a. Does the initial prompt play? b. Is the volume level of the playback correct?	Passed
RTP Test 2	Say "*cancel*": a. Does hold music briefly play? b. Does the system respond with "*Ok, cancelled.*"?	Passed
Dual-tone multi-frequency (DTMF): RFC 2833, SIP info	Dial a valid extension: a. Does the system respond with "*One moment please.*"?	Passed
Refer Test 1	Listen to the headset, dial a valid extension: a. Do you hear ringing in the headset? b. Does the dialed phone ring?	Passed
Refer Test 2	Answer the dialed phone and speak into both headsets: a. Does audio flow properly in both directions?	Passed
Refer Test 3	End the call	Passed

Additional Resources

There are additional resources available to assist you in configuring NetVanta ECS. This guide does not fully cover all configuration steps required to install and successfully deploy the NetVanta ECS application. Additional instruction and understanding is required. The ADTRAN documents listed in *Table 2* are available online at ADTRAN's Support Forum at https://supportforums.adtran.com.

Table 2. Additional ADTRAN Documentation

Topic	Document Title
Installation Instructions	*NetVanta Unified Communications Software Installation Guide*
Configuration Guide	*NetVanta Enterprise Communications and Business Application Servers 5.1 Configuration Guide*
Administration Guide	*NetVanta Enterprise Communications Server 5.1 Administrator Manual*