



**Wavelink Telnet Client
Voice-Enabled Emulation
Demo Kit**

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Chapter 1: Introduction

This document provides information about the Voice-Enabled Emulation demo kit.

This chapter contains the following information:

- About the Demo Kit
- About Voice-Enabled Emulation

About the Demo Kit

The Voice-Enabled Emulation Demo Kit provides two applications that allow you to demonstrate Voice-Enabled Emulation capabilities.

Required Components

To operate the Demo Kit, you will need the following:

- Telnet Client version 7.0
- Avalanche Manager version 3.6 or later, or Avalanche MC
- Avalanche Enabler version 4.02 or later
- Voice-Enabled Emulation packages:
 - TESPchRg
 - TS_BASE.ava
 - TS_ENU_T.ava
 - ST_BASE.ava
 - ST_ENU_F.ava
 - TS_SPM_J.ava
 - ST_SPM_F.ava
- Demo application files:

- wib_demoapp.zip
- VTDemoSvr.exe
- Demo application scripts:
 - pickbin.wls
 - pickquantity.wls
 - VT_Demo_English.wls
 - VT_Demo_Spanish.wls
- VT-based demo application grammar files:
 - vtdemo.bnf (English)
 - number.bnf (English)
 - vtdemo_s.bnf (Spanish)
 - number_s.bnf (Spanish)

The preceding components can be obtained from the Demo Kit CD or from <https://www.wavelink.com/partnerportal>.

NOTE You need a password to access the Partner Portal. If you do not already have a password, you will need to register to receive one.

About Voice-Enabled Emulation

Voice-Enabled Emulation is a verbal communication system that facilitates real-time voice communication between the host computer and the mobile device user. Voice-Enabled Emulation provides the ability to translate data from the host computer into spoken directions that the user is able to hear. The user's response can then be translated into data and transmitted back to the host computer.

NOTE Voice-Enabled Emulation is included in Telnet Client 7.0 and later versions.

Historically, implementing mobile emulation-based voice applications has required customers to write a new server-side application, add a new hardware server, and replace existing mobile devices with specialized voice-capable mobile devices. This represents a large investment of time and money and is cost-prohibitive to many customers.

With Wavelink Voice-Enabled Emulation, customers can add voice support to existing applications without adding a new server or replacing mobile devices. This software-only solution does not require any voice training and supports multiple languages off the shelf.

Voice-Enabled Emulation functions primarily through the Telnet Client Script Editor. The user creates scripts to translate text into speech, or speech into text. The scripts are then deployed to and run on each mobile device, adding no additional communication overhead to the existing application.

Voice-Enabled Emulation consists of multiple Speech-to-Text and Text-to-Speech packages that must be deployed to the mobile device. Depending on the individual organization's needs, you may choose to install only Speech-to-Text, or only Text-to-Speech packages.

The Speech-to-Text packages determine the language that will be used when converting speech to text, and contain standard Grammar Files that enable the device to vocalize various words, letters, and numbers. The Text-to-Speech packages are language-specific and determine whether a male or female voice will be used when converting text to speech. The Text-to-Speech packages also include standard Dictionary Files that provide voice recognition for specific words.

Language Support

The Voice-Enabled Emulation Demo Kit provides support for the following languages:

- US English
- Spanish

Licensing

Voice-Enabled Emulation requires a separate license in addition to the standard Telnet Client licenses. You can use Voice-Enabled Emulation without a license, but you will be limited to the demo version. Voice-Enabled Emulation is not included in any Telnet Client maintenance licenses.

Chapter 2: Installation

This chapter provides Voice-Enabled Emulation installation information, including the following:

- Installation Requirements
- Installing Voice-Enabled Emulation
- Installing the Demo Applications

Installation Requirements

This section lists the hardware, software, and memory requirements that Voice-Enabled Emulation requires for best performance.

Hardware Requirements

Voice-Enabled Emulation requires the following hardware components to operate effectively:

- Mobile device with headset jack
- Microphone with a signal-to-noise ratio (SNR) better than 20 dBA

NOTE A headset microphone is recommended.

- Headphones or speakers

Memory Requirements

Voice-Enabled Emulation requires the following available memory to run effectively:

- 128 MB RAM
- Or-
- 64 MB RAM with an SD card
- Or-

- 128 MB Flash Memory

NOTE For best performance, it is suggested that you use a mobile device with 128 MB RAM.

Installing Voice-Enabled Emulation

Voice-Enabled Emulation consists of multiple packages (in addition to the Telnet 7.0 package) that must be deployed to the mobile device using Wavelink Avalanche Manager or Avalanche MC.

This section provides the following information:

- Installing the Speech Registry Package
- Installing Speech-to-Text Packages
- Installing Text-to-Speech Packages

Installing the Speech Registry Package

The Speech Registry package allows you to choose where Voice-Enabled Emulation files are stored on the mobile device.

To install the Speech Registry package:

- 1 Install the `TESpChRg` package in Avalanche Manager or Avalanche MC.
- 1 Right-click on the Speech Registry package in Avalanche Manager or Avalanche MC.
- 2 Select `Configure Package > TE Speech Configuration`.

The *Telnet Speech Install Config* dialog box appears.

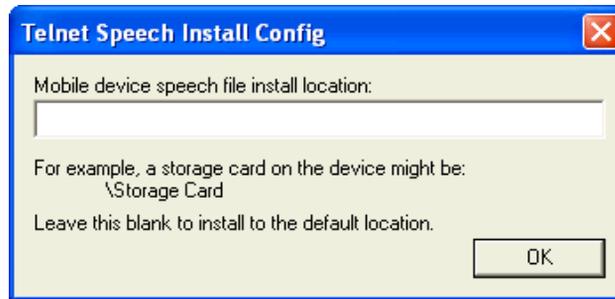


Figure 2-1. *Telnet Speech Install Config Dialog Box*

- 3 If you want to install Voice-Enabled Emulation files on an SD card, enter the location of the card on the mobile device in the available text box.

Example: `\Storage Card`

-Or-

Leave the text box empty to install Voice-Enabled Emulation files to the default location on the mobile device.

- 4 Click `OK`.

Your changes are saved.

- 5 Deploy the package to the mobile device.

Installing Speech-to-Text Packages

To utilize speech-to-text functionality, you need the following software packages:

- Base Package
- Language Packages

The Language package determines the language that will be used when converting speech to text. For a list of available languages, refer to *Language Support* on page 5.

To install speech-to-text:

- 1 Install the Base and Language packages in Avalanche Manager or Avalanche MC.

2 Right-click on the Base package in Avalanche Manager or Avalanche MC.

3 Select `Configure Package > Grammar File Manager`.

The *Grammar File Manager* appears.

4 Select `Import`.

The *Import Grammar* dialog box appears.

5 Navigate to and select the following files:

- `vtdemo.bnf` (English)
- `number.bnf` (English)
- `vtdemo_s.bnf` (Spanish)
- `number.bnf` (Spanish)

6 Click `Open`.

The grammar files are imported into the *Grammar File Manager*.

7 Close the *Grammar File Manager*.

8 Deploy the Base and Language packages to the mobile device.

Installing Text-to-Speech Packages

To utilize text-to-speech functionality, you need the following software packages:

- Base Package
- Voice Package

The Voice packages are language-specific and determine whether a male or female voice will be used when converting text to speech.

To install text-to-speech:

1 Install the Base and Voice packages in Avalanche Manager or Avalanche MC.

2 Deploy the packages to the mobile device.

Installing the Demo Applications

After you have installed the necessary Voice-Enabled Emulation packages, you need to install the demo applications. This section provides the following information:

- Installing the Web-Based Demo Application
- Installing the VT-Based Demo Application

Installing the Web-Based Demo Application

The web-based demo application is comprised of multiple parts: the web sever application, and two scripts.

To install the web server application:

- 1 Install a web server (or use an existing web server).
- 2 Obtain `wib_demoapp.zip` from the Demo Kit CD or from <https://www.wavelink.com/partnerportal>.
- 3 Place the html files contained in `wib_demoapp.zip` on the web server.

To install the scripts:

- 1 Obtain `pickbin.wls` and `pickquantity.wls` from the Demo Kit CD or from www.wavelink.com.
- 2 Import the scripts into the Telnet Client Script Editor.
- 3 Deploy the scripts to your mobile device.

Installing the VT-Based Demo Application

The VT-based demo application is comprised of multiple parts: the VT server application, a script, and two grammar files.

To install the VT server application:

- 1 Obtain `VT_DemoSvr.exe` from the Demo Kit CD or from <https://www.wavelink.com/partnerportal>.
- 2 Double-click the executable to run the *Wavelink Demo VT Server*.

To install the script:

- 1** Obtain `VT_Demo_English.wls` from the Demo Kit CD or from <https://www.wavelink.com/partnerportal>.
- 2** Import the script into the Telnet Client Script Editor.
- 3** Deploy the script to your mobile device.

Chapter 3: Using Demo Applications

The Demo Kit contains two sample Voice-Enabled Emulation applications: a web-based application, and a VT-based application. This chapter provides information about the following:

- Using the Web-Based Demo Application
- Using the VT-Based Demo Application

Using the Web-Based Demo Application

This section provides information about the web-based demo application, including the following:

- Overview
- Using the Web-Based Demo Application

Overview

The web-based demo is a “picking” application that simulates steps commonly utilized by any warehouse employee. The application instructs the user to access a specific bin and retrieve a certain number of items from the bin.

For demonstration purposes, the application utilizes two barcodes to identify the bins. The barcodes are provided in a PDF format (*Speech Scan Demo Barcodes.pdf*) that can be obtained from the Demo Kit CD or from <https://www.wavelink.com/partnerportal>.

Using the Web-Based Demo Application

Use your mobile device to demonstrate the web-based application. It is recommended that you use a headset with the device, as the microphone on the mobile device may pick up sounds from its own speaker. This will cause the application to run incorrectly.

To use the web-based demo application:

- 1 Create a new WEB emulation host profile with the address of the `speech.html` file on your web server.
- 2 From your mobile device, connect to the WEB host profile.

- 3 The mobile device states, "Job started, bin five."
- 4 Scan the barcode that corresponds with bin five. If you scan the wrong barcode, the mobile device responds, "Wrong location. Correct location, bin five. Would you like a description?"

If you say "Description," the mobile device replies with a description of the specified bin

When the correct barcode is scanned, the mobile device states, "Pick three."

- 5 Say "Three." If you respond with an incorrect number, the device asks, "Are you sure you want (X) instead of three?" Respond with a "Yes" or "No" answer, and the application proceeds to the next step.

- 6 The mobile device states, "Next, bin 61."

- 7 Scan the barcode that corresponds with bin 61. If you scan the wrong barcode, the mobile device responds, "Wrong location. Correct location, bin 61. Would you like a description?"

If you say "Description," the mobile device replies with a description of the specified bin

When the correct barcode is scanned, the mobile device states, "Pick four."

- 8 Say "Four." If you respond with an incorrect number, the device asks, "Are you sure you want (X) instead of four?" Respond with a "Yes" or "No" answer, and the application proceeds to the next step

NOTE The demo application is programmed to continuously repeat the above process.

- 9 To exit the application, disconnect the session or close the Telnet Client.

Using the VT-Based Demo Application

This section provides information about the VT-based demo application, including the following:

- Overview

- Using the VT-Based Demo Application

Overview

The VT-based demo is a “picking” application that simulates steps commonly utilized by any warehouse employee. The application instructs the user to access a specific bin and retrieve a certain number of items from the bin. Once the user completes the task, the application proceeds to a new bin and repeats the process.

For demonstration purposes, the application utilizes six barcodes to identify the bins. The barcodes are provided in a PDF format (*VT Demo Test Barcodes.pdf*) that can be obtained from the Demo Kit CD or from <https://www.wavelink.com/partnerportal>.

Using the VT-Based Demo Application

Use your mobile device to demonstrate the VT-based application. It is recommended that you use a headset with the device, as the microphone on the mobile device may pick up sounds from its own speaker. This will cause the application to run incorrectly.

To use the VT-based demo application:

- 1 Create a new VT220 emulation host profile with the IP address of the machine running the Wavelink Demo VT Server.
- 1 From your mobile device, connect to the VT220 host profile.

The *Welcome* screen appears.

- 2 The device requests, “Press Enter.”
- 3 Press `Enter`.

The mobile device responds with the bin number.

- 4 Scan the barcode that corresponds with the bin number. If you scan the incorrect barcode, the mobile device responds, “Wrong location,” and waits for you to scan the correct barcode.

If you say “Description,” the mobile device replies with a description of the specified bin

When the correct barcode is scanned, the mobile device states the number of items to be retrieved.

- 5 Say the same number indicated by the mobile device.

For example: If the device requests "Pick 34," the user would say "34."

- 6 If you respond with an incorrect number, the device will ask, "Is this correct?" Respond with a "Yes" or "No" answer, and the application proceeds to the next step.

NOTE The demo application is programmed to randomly repeat the above process anywhere from two to six times.

- 7 To exit the application, press F3 or close the Telnet Client.

Appendix A: Documentation Reference

The following are Wavelink documents that provide information relevant to Voice-Enabled Emulation:

- *Wavelink Telnet Client Voice-Enabled Emulation Reference Guide*
- *Wavelink Telnet Client Scripting Reference Guide*
- *Wavelink Telnet Client User Guide*
- *Wavelink Telnet Client Industrial Browser Reference Guide*

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