VELOCITY

Wavelink Velocity
User Guide

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Installation and Licensing

The Velocity Client must be configured and installed on a mobile device before you can use it. It also needs to be licensed before you can use it with full functionality.

The Velocity Client is configured to automatically re-install in the event of a cold boot. The cold boot recovery process ensures that both the Velocity Client application and configuration survive the cold boot.

ℹ The Generic Velocity Client will not survive a cold boot.

To allow the Velocity Client to survive a cold boot, a backup copy of the Client is stored in the non-volatile Flash memory of the device. A copy of any configuration files for the Client are also stored in this location.

The following topics offer additional information:

- System Requirements

- Configuring and Deploying the Velocity Client

- Licensing the Velocity Client

- Installing and Configuring the Velocity Server

System Requirements

The Velocity Server must be installed on a computer meeting the following requirements:

- 64-bit OS (Windows Server 2008 R2 is recommended)

- 16 GB RAM

- Xeon CPU based on the Nehalem micro-architecture with at least 4 cores and hyper-threading

The Velocity Client is supported on the following operating systems: PocketPC 2003, Windows Mobile 5.0, Windows 2000/XP, and Windows CE .NET 4.2/5.0.

Configuring and Deploying the Velocity Client

The Velocity Client is configured and installed using one of the following methods:

- **Wavelink Avalanche.** If your mobile device is running the Avalanche Enabler, you can use Avalanche to deploy the Velocity Client and Client configurations to a mobile device.

- **Microsoft ActiveSync.** You can install the Velocity Client configuration utility on a host

PC. The configuration utility uses an ActiveSync connection between the host PC and the mobile device to deploy the Client and configurations to the mobile device.

- **Third-Party Applications.** Wavelink supports some third-party deployment applications. For more information about supported deployments for your device, please see the Wavelink Web site. If you choose to use a third-party application to configure and install the Velocity Client, please see the documentation for that application for details on this process.

Depending on the Velocity Client installation and configuration utility that you are using, some tools that allow you to configure Velocity Client features may not be available. Tools for configuration may include the following:

Host Profiles A host profile contains all of the required information for a mobile device to connect to a host system, including an alias, IP address, TCP port, and other connection-specific parameters. The Velocity Client supports multiple host profiles to allow a user at the device to easily create sessions with various hosts. For information on the options available for a host profile, see Configuring the Velocity Host Profile on page 12.

Configuration Settings Configuration settings provide control over many aspects of a session, including key macros, text and screen display, and barcode scanning. You may control the settings on a global level or on a per-host level. For information on changing configuration settings, see Configuring Velocity Settings from the Configuration Manager on page 20.

Script Editor You can automate actions for the Velocity Client using scripting. For example, you might create a login script for users. You may record scripts, or you may use the Script Editor to create new scripts or modify existing scripts. Velocity uses the same scripting language as Wavelink Terminal Emulation. For information on creating scripts for the Velocity Client, see the *Terminal Emulation Scripting Reference Guide*.

Keyboard Creator Use the Velocity Keyboard Creator to modify the standard Velocity Client virtual keyboards to meet the needs of your production environment. The Keyboard Creator allows you to completely modify the layout of the virtual keyboard. Additionally, import your own graphic files (bitmaps) to create your own unique buttons for the keyboard. For information on using the keyboard creator, see Keyboard Creator on page 25.

Resource Editor The Resource Editor allows you to deploy graphic and sound files to your mobile devices. You may add, modify and deploy any `.bmp` or `.wav` file using the Resource Editor. For information, see Resource Editor on page 31.

Import/Export If you have already configured a Velocity Client and you want to use that
Settings   configuration for other Clients, you can import or export settings.

The following topics offer additional information:

- Using ActiveSync to Configure and Deploy the Velocity Client

Using ActiveSync to Configure and Deploy the Velocity Client

Use the Microsoft ActiveSync installation and configuration utility to configure host profiles,
Client settings, and localization. After you have created the configuration, push the
configuration files to the mobile device over a Microsoft ActiveSync connection.

To configure the Velocity Client using Microsoft ActiveSync:

1   Create an ActiveSync connection between the system you are using to install and the
    device you are deploying to. This can be a Guest or a Standard partnership.

2   Download and run the ActiveSync Velocity Client installation and configuration utility on
    the host system.

    The *Wavelink Product Configuration* dialog box appears.
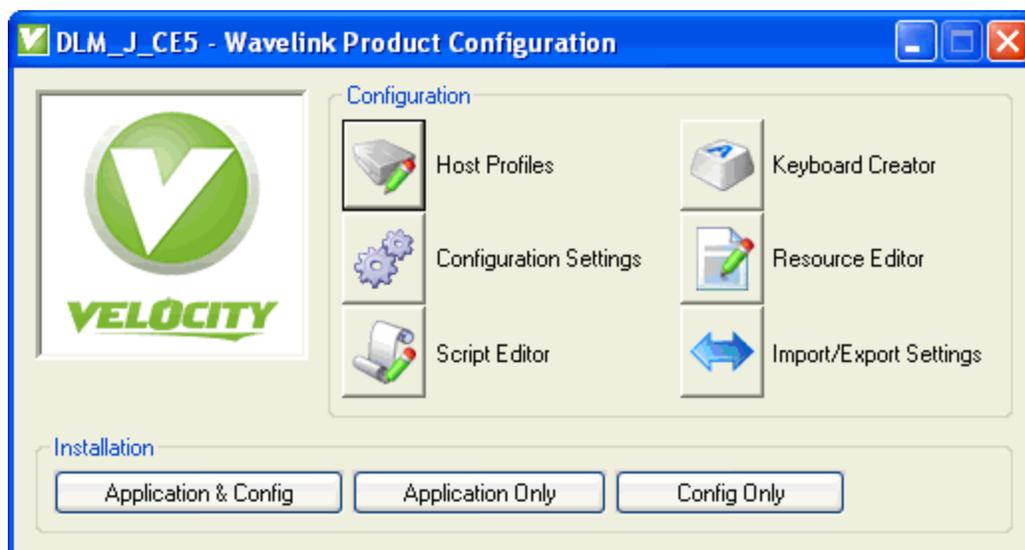
ActiveSync Installation and Configuration Utility

3   Click the icon buttons to open the Velocity Client configuration tools and configure the
    Client as desired.

4   Use the buttons **Application & Config**, **Application Only**, and **Config Only** to deploy the
    Client and/or its configuration to the device.

Licensing the Velocity Client

The Velocity Client requires a license for full functionality. You can use the Client without a license, but you will be limited to the demo version without full functionality.

Velocity Client licensing is on a per-client basis, not on a per-connection basis. This means that a single license allows the Velocity Client to engage in the maximum number of sessions that the Velocity Client is configured to support (up to four concurrent sessions).

When the Velocity Client does not have a valid license, it operates in demo mode. When the Velocity Client is operating in demo mode, it will behave as follows:

- When you attempt to initiate a Velocity session, the Velocity Client will begin broadcasting in an attempt to locate a license server. At that point, you are prompted to either enter a license or to initiate the session in demo mode.

- While in demo mode, you may initiate Velocity sessions with hosts. However, each Velocity session that you initiate will automatically disconnect after one hour.

The following topics offer additional information:

- Types of Licenses

- Licensing Methods

- Configuring the License Server Address

Types of Licenses

There are two types of Velocity Client licenses: platform licenses and maintenance licenses.

- **Platform licenses**. A platform (or base) license authorizes you to use a version of the Velocity Client and any builds associated with that version. For example, if you purchased a 1.0 Velocity Client license, then you are entitled to use 1.00-xx builds. If you want to upgrade beyond a version 1.0 Velocity Client, then you must either buy a new platform license or purchase a maintenance license. Platform licenses do not expire, but they do not allow you to upgrade to a newer version of the Velocity Client.

- **Maintenance licenses**. A maintenance license allows you to upgrade your Velocity Client when new major versions of the Velocity Client become available. For example, a maintenance license allows you to upgrade from Velocity Client 1.x to Velocity Client 2.x.

  Maintenance licenses are valid only through a specific date. After the expiration date, if you upgrade the Velocity Client, it will revert to operating in demo mode.

Licensing Methods

There are two ways to license the Velocity Client:

- **Manual licensing**. You may use the Velocity Client interface on the mobile device to manually input licensing information.

- **License Server**. You may use a Wavelink Terminal Emulation License Server to automatically provide Velocity Client licenses to the mobile devices on your network.

> ⓘ To obtain Velocity licenses, please contact Wavelink customer service.

The following topics offer additional information:

- Manually Licensing the Velocity Client

- Using the License Server to License the Velocity Client

- Using Demo Mode

Manually Licensing the Velocity Client

You may key in your authorization information manually through the Velocity Client interface on the mobile device.

To manually license a Velocity Client:

1   On the mobile device, launch the Velocity Client.

2   Add a license by tapping **Options > Authorization** or by attempting to establish a connection to a host. When you attempt to connect, the *Authorizing Terminal* dialog box appears. Tap **Add License**.

The *Authorization* dialog box appears.

3   In the **Licensee Name** text box, type the name of the person or company for which the Client is licensed.

4   In the **Serial** # text box, type the serial number for the license.

5   In the **Exp. Date** text box, type the expiration date of the license, in the format of MMDDYYYY.

6   In the **Auth. Code** text box, type the authorization code for the license.

7   In the **User** # text box, enter a user number.

Each Velocity Client should have a unique user number. The user number can be any number between 1 and the maximum number of users for which the license provides.

8   In the **Limit** text box, enter the maximum number of users for the license.

9   Tap **Authorize**.

The license type appears in the *Platform* text box.

Using the License Server to License the Velocity Client

The Terminal Emulation license server is a Wavelink application that is responsible for supplying licenses to mobile devices that are using the Velocity Client.

The TE license server should not be confused with the Avalanche license server. They are separate Wavelink applications.

For information about installing and configuring the client license server, see the *TE License Server Reference Guide* on the Wavelink Web site.

When you attempt to initiate a session with a host, if the Velocity Client is not already licensed, it will automatically attempt to obtain a license from a license server.

To use the license server to obtain a license:

1   When you attempt to connect to a host using the Velocity Client, it broadcasts a request for a license on the local IP network. Or, if you have configured the license server address, the Client sends a request to the specified license server.

If the license server is not on the local network you must configure the license server IP address in order for the device to obtain a license. For more information, see Configuring the License Server Address on page 9.

The *Authorizing Terminal* dialog box displays on the mobile device while the Velocity Client attempts to locate a license server. License servers with an available license respond by offering a license.

2   The Velocity Client accepts the first license that it receives and sends a reply to the license server. The *Authorizing Terminal* dialog box on the mobile device indicates that a license has been obtained.

If no license server responds to the request for a license, then the *Authorizing Terminal* dialog box continues to display until you close the dialog box, run the Client in demo mode, or choose to manually add a license.

Using Demo Mode

If you want to use the Velocity Client for demonstration purposes, you can run the Client in demo mode. The demonstration license automatically disconnects a session after one hour.

To use the Velocity Client demo license:

1   Launch the Velocity Client.

2   Use the Velocity Client to connect to a host.

3   In the *Authorizing Terminal* dialog box, tap **Start Demo**.

The Velocity Client uses the demonstration license and attempts to connect to the host that you selected. Before displaying the host screen, the Velocity Client displays a screen that indicates that you are using a demonstration license.

Configuring the License Server Address

A mobile device will automatically find the license server on the local subnet. However, if your license server is located on another subnet, you will need to configure the mobile device with the IP address of the license server.

To configure the IP address of a remote license server:

1   Access the Configuration Manager. For instructions on how to access the Configuration Manager, see Configuring Velocity Settings from the Configuration Manager on page 20.

2   In the Configuration Manager, locate the **Licensing > License Server Addresses** parameter.

3   Double-click the current property and then use the *License Server Addresses* dialog box to configure the IP address of the license server.

4   Click **OK**.

5   Save the new configuration.

6   Close the Configuration Manager and download the new configuration to the mobile device.

Installing and Configuring the Velocity Server

Wavelink recommends that the Velocity server be installed at a different location than the host server (that serves the web pages). Install the Velocity server in a location on your network where the devices can contact it and where it can connect to the desired hosts.

If you upgrade from a previous version of Velocity, the installer will implement all new features without resetting your current configuration.

To install the server:

1   Double-click the installation file to begin the installation.

2   A Welcome screen appears. Click **Next**.

3   The License Agreement screen appears. Click **I Agree** if you agree to the terms of the license.

4   The Choose Install Location screen appears. Click **Browse** to browse to the directory where you want to install, or click **Install** to use the default location.

5   The server is installed and begins running as a service. When the Completing the Setup screen appears, if desired, enable the **Show Readme** check box to view it and click **Finish**. The Readme has information about server command line options and logging.

Generally speaking, the Velocity server default settings will provide the best working environment. However, you can configure encryption, client and session timeout settings, and logging settings through a file named `velocity.cfg`. This file can be accessed by clicking **Start > All Programs > Wavelink Velocity Server > Configuration**.

Details on these settings and how to change them are included in the configuration file. To change settings for the server, open the configuration file and follow the instructions included in the file. Save your changes and restart the server (Wavelink Velocity Server in the list of Windows Services).

Wavelink recommends not changing the server logging settings unless directed by Customer Service. Changing the server logging setting to EVERYTHING may severely impact server performance.

Configuring the Velocity Client

In order to use the Velocity Client to access web-based applications, you must configure the client with the correct connection information and operating parameters.

The following topics offer additional information:

- Using SSL/TLS

- Configuring the Velocity Host Profile

- Configuring Velocity Settings from the Configuration Manager

- Client-Side Scripting

- Keyboard Creator

- Resource Editor

- Importing and Exporting Settings

Using SSL/TLS

The Velocity Client supports SSL- or TLS-encrypted sessions between the Client and Velocity Server. The Velocity client also supports certificate validation for SSL/TLS connections. For specific instructions on how to install and configure the SSL/TLS utility, see *Using SSL/TLS with Terminal Emulation* on the Wavelink Web site.

To configure SSL or TLS, you will need the self-extracting support utility and either the Avalanche, ActiveSync, or AirBeam SSL/TLS package for the Client. The Avalanche packages are device-specific; the ActiveSync and AirBeam packages are not device-specific.

When you enable SSL/TLS on the Velocity Server, it will only accept connections from Clients that are also using SSL/TLS.

To enable and use SSL/TLS for the Velocity Client, perform the following steps:

- **Install the SSL/TLS Support Utility on the host system**. The SSL/TLS support utility is a self-extracting executable that installs the required files that will allow you to configure SSL/TLS and certificates. You can obtain the SSL/TLS support package from the Wavelink Web site. (This does not need to be installed at the same location as the Velocity Server.)

- **Install the SSL/TLS Support Package on the Client**. The Velocity Client will not be able to initiate SSL/TLS connections with hosts until you install the SSL/TLS support package on the mobile device. Use one of the following methods to deploy the SSL/TLS support package to the mobile device: the Avalanche Console, Microsoft ActiveSync, or a third-

party application.

- **Enable SSL/TLS on the Server**. For information on enabling SSL/TLS for the Velocity Server, see Installing and Configuring the Velocity Server on page 9.

- **Enable SSL/TLS in the host profile**. This option is set on the Velocity Server tab of the *Host Profiles* dialog box. You can use existing certificates or create new certificates.

Configuring the Velocity Host Profile

Before you can use Velocity to view web pages, you must create a host profile. A host profile defines the parameters that the Client should use when it attempts to initiate a session with the host.

To create a host profile:

1   Access the *Edit Host Profiles* dialog box.

2   Enter the host **Name** and **Address** in the appropriate text boxes and click **OK**.

The host profile is created. When you configure the host profile, tabs appear offering different options for Web settings. Configure the **Host** tab with a name for the host profile, the host address, and whether the Client is allowed to connect to the host directly or only through a Velocity Server.

Configuring the Host Profile

The following topics offer additional information:

- Velocity Server Tab

- Access List Tab

- Insert Tab

- Proxy Tab

- Configuration Tab

- AutoLaunch Tab

Velocity Server Tab

The **Velocity Server** tab configures the device with the server version number, address, port, options for server and client disconnect, and encryption options.

Velocity Server tab

The following list describes the options and configurable parameters in the **Velocity Server** tab.

Velocity Server   The version number of the Velocity server.

Address   The address of the Velocity server.

Port   The port the Velocity server is using.

Terminate Velocity Server Session	Indicates when the Velocity server should terminate the connection to the host. Possible Values: • **Never.** The server never terminates the session established with the host. The Client is responsible for terminating the session. • **On Network Error.** The server terminates the session with the host when a network error occurs, such as a loss of network connectivity. • **On Session Exit.** The server terminates the session with the host when the session is terminated by the Client. • **Always.** The server will terminate the session with the host on a network error or when the session is terminated.
Client Reconnects if Unexpectedly Disconnected	If the Client is disconnected without receiving a message from the server that it was disconnecting, the Client will try to reconnect to the server.
Use SSL/TLS Encryption	Uses SSL or TLS to encrypt the information sent between the Client and the server. For more information on configuring SSL/TLS encryption, see Using SSL/TLS on page 11.
Verify Server Certificates	Uses server certificates to authenticate the server. Click **Select Verification Certificates** to create certificates or select existing certificates.
Use Custom Encryption	The Client will use a custom encryption algorithm. The Client and server must be configured with the same passkey.

Access List Tab

Use the **Access List** tab to configure which web addresses can be accessed by the Velocity Client.
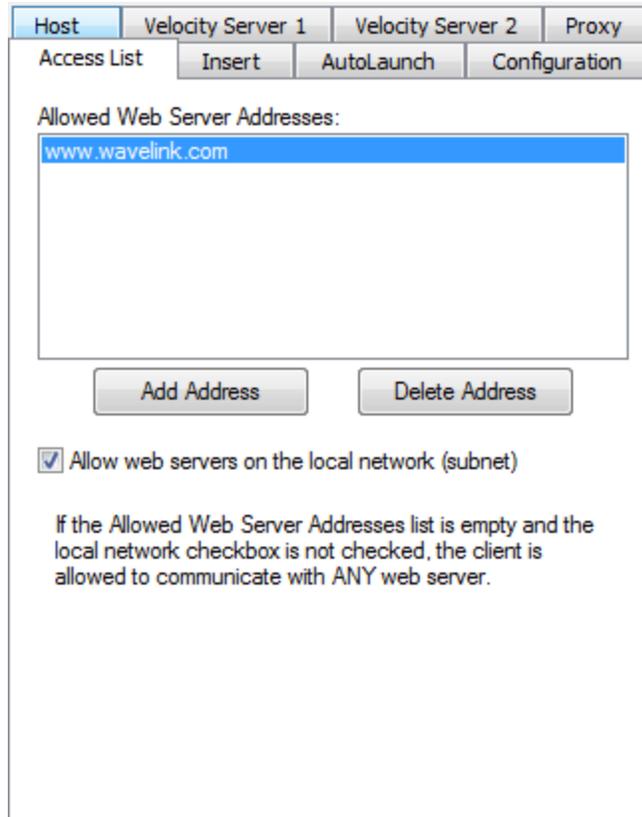
Configuring the Access List Tab

The following list describes the options and configurable parameters in the **Access List** tab.

Allowed Web Server Addresses	Lists the web addresses that the Velocity client is permitted to connect to. **Possible Values:** Any valid IP address, host name, or web address
Allow web servers on the local network (subnet)	Indicates whether the Velocity Client can connect with any web server or only with servers on the local network.
Add Address	Click this button to add a new IP or web address to the list of addresses that Velocity client is permitted to connect to.
Delete Address	After selecting an address in the list, click this button to delete the address.

Insert Tab

Use a host profile to add elements to HTML pages when you don't have access to the pages on the web host. Create the HTML in a text file, then select the position it should be inserted on the page and the files to add it to. The following options are available when you insert a text file:

Description   A description of the element to be inserted.

Position to   Where in the existing page the text should be inserted. Options include the
insert the text beginning of the <head> element, the end of the <head> element, the
into the web   beginning of the <body> element, or the end of the <body> element.
page

URL Fragment   Part of the target pages' URL that must be matched in order for the text to
                    be inserted.

Search Text   Text on the target pages that must be matched in order for the text to be
                    inserted.

To insert information to an existing page using a host profile:

1   Create a text file (`.txt`) with the HTML you want to insert.

2   Open the *Host Profiles* dialog box and select the host profile to apply your changes to.

3   Click the **Insert** tab.

4   Click **Add Item**.

5   Browse to the `.txt` file, select it and click **Open**.

    The *Web Page Data Insert* dialog box appears.

Web Page Data Insert dialog box

6 Configure the options and click **OK**.

7 Save the configuration and deploy it to the device.

Proxy Tab

Use the **Proxy** tab to configure proxy connections for Velocity.

Configuring the HTTP Proxy Tab

The following list describes the options and configurable parameters in the **Proxy** tab.

Connection Type   Indicates the type of connection for the host profile to use.

Possible Values: <Direct Connection> <Use Explorer Default> <Use Proxy Server>

Default Value: <Direct Connection>

Proxy Server   Indicates the location of the proxy server.

Possible Values: Any valid IP address, host name, or web address.

Port   Indicates the network port for the proxy server.

Possible Values: Any valid port number.

Default Value: <8080>

Autologin Name   Credential for logging in to the proxy server.

Autologin Password	Credential for logging in to the proxy server.
Do not use the proxy server when contacting local hosts	Indicates whether the Velocity client should use the proxy server when contacting hosts that reside on the same network.

Configuration Tab

Use the **Configuration** tab to modify configuration settings for the host profile. Settings that are configured from this tab will override the general device settings when the selected host profile is used.

Click **Modify** to access the Configuration Manager or **Reset** to restore default settings.

For more information about configuration settings, see Configuring Velocity Settings from the Configuration Manager on page 20.

AutoLaunch Tab

Use the **AutoLaunch** tab to associate a host profile with a session. When the user switches to the session, the Client automatically begins a session using the host profile settings. You can configure autolaunch for one host profile for each session.

Each host profile is automatically launched only once each time the Client runs.

Configuring Velocity Settings from the Configuration Manager

Change how the Client interacts with the host using the Configuration Manager utility, which provides an organized list of parameters that you can modify. These may include display, logging, or scanner options.

Use the product configuration utility or the Velocity Avalanche software package to access the Configuration Manager. Use the Configuration Manager to modify the settings and save it to a new configuration file. When you download the new configuration file to the mobile device, the existing configuration file is overwritten. To configure Velocity through an Avalanche software package, see Using Avalanche to Configure the Client.

Client settings can be applied globally for all host connections, or set on a per-host basis:

- **Global Client Settings**. Global client settings apply to all of the host profiles with which you have configured a Client. Configuration Manager displays the name of the file that it is modifying in the title bar.

- **Per-host Client Settings**. Per-host client settings apply only to a specific host profile. Any

parameters changed on a per-host basis will override global parameters. You can access the client settings for a specific host profile through the *Host Profiles* dialog box.

ℹ Per-host settings are a subset of parameters. Not all Client settings are available for modification on a per-host basis.

The left pane of the Configuration Manager displays the client settings that you can modify. The client settings are grouped by category. When you select a setting in the left pane, information about the setting displays in the right pane.
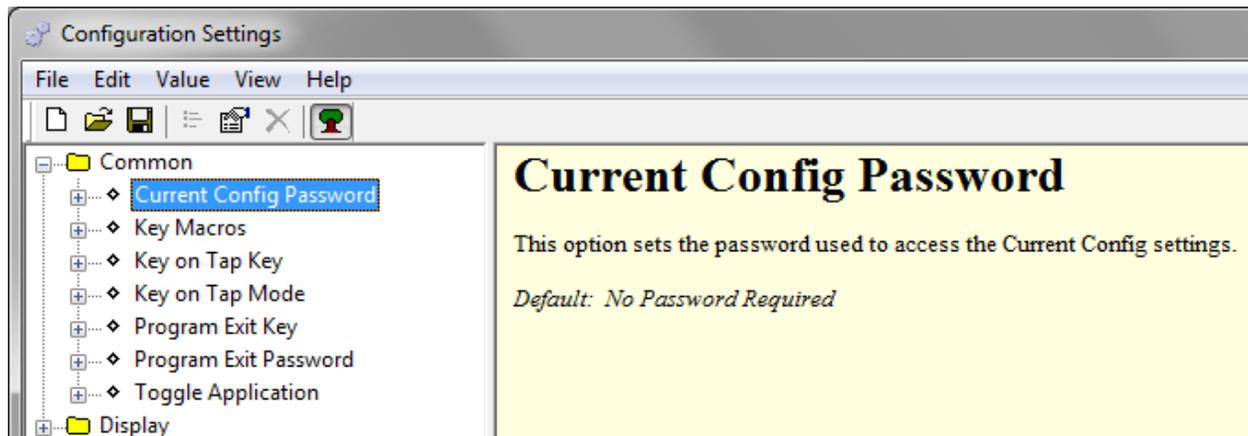
Client Settings

Access the Configuration Manager either through Avalanche or ActiveSync, depending on the method you use to install the Client.

Using Avalanche to Configure the Client

Velocity can be configured through Avalanche for a more controlled and consistent user experience.

For example, you can use an Avalanche payload to configure host profiles or client settings for Android devices with the Velocity application already installed. You can configure multiple host profile payloads for each device, but only one client settings payload.

You can configure Velocity using any of the following methods:

- **Deliver touchless configuration payloads.** If your devices are managed in Avalanche, you can use the Velocity Client Settings and Velocity Host Profile Configuration payloads to deliver changes directly to your devices for hands-free installation. For more information, see Configuring Client from Avalanche Licensed on page 22.

- **Scan a QR code.** If your devices are not managed by Avalanche, you can create

configuration payloads and print a QR code for devices to scan and install the changes. For more information, see Configuring Client from Avalanche Unlicensed on page 23.

- **Download a configuration file.** If your devices are managed by another service like Avalanche, you can create configuration payloads in the Wavelink Configurator Console, download the configuration changes, and deploy the configuration file through an alternate service. For more information, see Configuring Client for an Alternate MDM on page 24.

Configuring Client from Avalanche Licensed

If you have your devices licensed through Avalanche, you can use the Velocity Client Settings and Velocity Host Profile Configuration payloads to deliver hands-free app configuration to multiple devices at once.

You can configure multiple host profile payloads for each device, but only one client settings payload. These payloads can only be deployed to devices managed in Avalanche.

To configure the Velocity Client when the device has an Avalanche license:

1   Log in to the Avalanche Console.

2   Navigate to the folder where you want the payload created.

3   From the Profiles tab, click **Add Payload** in the Available Payloads panel.

4   The *Payload* dialog box appears. Select the **iOS and Android** option, and then the type of Studio payload you want to create.

5   Configure the options as desired and click **Save**.

6   From the Profiles tab, click **Add Profile** in the Available Profiles panel.

7   The *New Profile* dialog box appears. Click **Application Configuration**.

8   Create a name for the profile, then select the payload or payloads you want to associate with the profile. Save your changes.

9   Select the checkbox next to the name of the profile and click **Apply** in the Available Profiles panel.

10 Deploy your changes. The next time the device checks in, the payload is automatically downloaded. When the Velocity Client is launched, the new settings are applied and the host profiles are available.

When the Velocity Client is launched, the new settings are applied and the host profiles are available.

Configuring Client from Avalanche Unlicensed

Through Avalanche, you can use the Velocity Client Settings and Velocity Host Profile Configuration payloads to create app configurations that devices locate, download, and install through a scanned QR code.

You can configure multiple host profile payloads for each device, but only one client settings payload. For devices not managed by Avalanche, you must print these configuration changes as QR codes for devices to scan.

To configure the Studio Client when the device does not have an Avalanche license:

1   Log in to the Avalanche Console.

2   Navigate to the folder where you want the payload created.

In the Avalanche navigation tree, there is a Default device folder. If all of your devices are using the same configuration, you may want to use the Default folder. However, if you have devices using different configurations, create a separate folder for each configuration.

3   From the Profiles tab, click **Add Payload** in the Available Payloads panel.

4   The *Payload* dialog box appears. Select the **iOS and Android** option, and then the type of Studio payload you want to create.

5   Configure the options as desired and click **Save**.

6   From the Profiles tab, click **Add Profile** in the Available Profiles panel.

7   The *New Profile* dialog box appears. Click **Application Configuration**.

8   Create a name for the profile, then select the payload or payloads you want to associate with the profile. Save your changes.

9   Select the checkbox next to the name of the profile and click **Apply** in the Available Profiles panel.

10   Deploy your changes.

11   In the Navigation Tree, click the **View** button to view the folder details.

12   On the Folder Details page, click **Print QR Code**.

13   The QR code for the payloads applied to the folder appears in the browser. Print or email the QR code as needed.

14   On the device, launch the Velocity Client.

15   If the Velocity Client prompts you to scan the QR code, click **OK** and scan the QR code.

Otherwise, press the **Menu** button. When the main menu appears, tap **Server Configuration > Scan Server Address** and then scan the QR code.

The device connects to the Avalanche server and pulls the configuration information associated with the folder. The device is not enrolled in Avalanche and does not appear in the Avalanche inventory.

Configuring Client for an Alternate MDM

If you manage your devices through a mobile device management service other than Avalanche, you can configure your Velocity Client settings through the Wavelink Configurator and download the configurations as a file for mass distribution. Using this tool, you can create the configuration in the Configurator Console, export it, and then use your mobile device management service to send the file to managed devices.

You can configure multiple host profile payloads for each device, but only one client settings payload to a configuration file.

To configure the Velocity Client when the device does not have an Avalanche license and is managed by another service:

1 Go to `https://configurator.wavelink.com`.

2 Log in to the Wavelink Configurator Console.

3 Navigate to the folder where you want the payload created.

4 From the Profiles tab, click **Add Payload** in the Available Payloads panel.

5 The *Payload* dialog box appears. Select the **iOS and Android** option, and then the type of Velocity configuration payload you want to create.

6 Configure the options as desired and click **Save**.

7 From the Profiles tab, click **Add Profile** in the Available Profiles panel.

8 The *Smart Device Profile* dialog box appears. Click **Application Configuration**.

9 Create a name for the profile, then select the Studio payload or payloads you want to associate with the profile. Save your changes.

10 Select the profile you created and click **Apply** in the Available Profiles panel.

11 Click the profile name.

12 On the Application Configuration Profile page, click **Export Config**.

Your browser downloads the `Configuration.json` file. This file can be renamed as needed.

Client-Side Scripting

The Script Editor provides the ability to create and execute scripts that automate processes on the Velocity Client. The actions and settings you use to create Velocity scripts are located in a separate document called *Wavelink Terminal Emulation Scripting Reference Guide*. The document explains the usage of each action in detail and provides examples. The *Scripting Reference Guide* is located on the Wavelink web site.

The following steps outline the process of creating scripts using the Script Editor:

1 **Launch the Script Editor.** Launch the script editor from the Avalanche Console or the ActiveSync configuration utility.

2 **Create a script using the Script Editor.** Use the Script Editor to manually create the script code.

3 **Configure an execution method for your script.** Select from the available options the way you want to execute your script.

4 **Deploy the script to the Client**. Use Avalanche or ActiveSync to deploy the script to the Client.

5 **During an emulation session, execute your script from the Client.** Using the activation method you selected for the script, activate and execute your script.

Velocity allows one active script per session. While one script is running, other scripts are not allowed to run. Scripts should be designed to perform their function and then immediately exit so that next script can run.

Scripts can only be run while a session is connected to a host. When a connection is dropped, the script is terminated. If you switch between sessions, the script running in the first session will be suspended until that session is active again.

Keyboard Creator

The keyboard creator allows you to modify or create custom virtual keyboards to use during a session. You can also import graphics files (bitmaps) to create unique buttons for the keyboard. The following table shows the name of the default keyboard files.

File Name	Keyboard Type
EMWEB.KB	Displayed when a session is connected
EMNONE.KB	Displayed when a session is not connected

File Name	Keyboard Type
EMNUM.KB	Displayed for numeric keyboard

To launch the keyboard creator from Avalanche:

1 From the Avalanche Console, navigate to the **Profiles** tab, and select the profile that contains the Velocity client package.

2 In the Software Packages area, select the Velocity client software package and click **Configure**.

The *Configure Software Package* dialog box appears.

3 Select **Keyboard Creator** and click **OK**.

The Keyboard Creator opens.

To launch the keyboard creator from the ActiveSync configuration utility:

1 On the host system, launch the ActiveSync utility.

The *Wavelink Product Configuration* dialog box appears.

2 Click the **Keyboard Creator** button.

The Keyboard Creator appears.

Once you have completed the keyboard and keys, save your changes and deploy the changes to the device.

The following topics offer additional information:

- Creating Keyboards

- Creating and Configuring Keys

- Importing Keyboard Graphics

Creating Keyboards

There are two default keyboards: the default alpha keyboard and the default numeric keyboard. The default alpha keyboard is displayed by default. Multiple keyboards can be included in each keyboard file. The keyboards are linked together by shift keys (special keys which display another keyboard).

When you delete a keyboard that has keys associated with it, an option will be presented for dealing with any connections to the keyboard. Keys that reference the keyboard can be deleted, set to an empty value or redirected to another keyboard.

1 Launch the Keyboard Creator.

2 Select **Keyboard > New Keyboard** from the menu.

3 Enter a new name for the keyboard.

Creating a New Keyboard

ⓘ Keyboard names must start with a letter, may only contain numbers or letters, and can only be 11 characters long.

---

4 Use the Key configuration options to configure each key of the keyboard. To resize a keyboard, mouse over the top border, right-side border, or the upper-right corner of the keyboard. When the double-sided arrows appear, click and drag the keyboard to the desired size.

1 Select **Keyboard > Delete Keyboard** from the menu.

2 Select what action to take for the keys used by the keyboard.

Deleting a Keyboard

Creating and Configuring Keys

There are three types of keys that can be on a keyboard:

- **Normal keys** represent letters, numbers, or other characters in the emulation and can also represent special emulation specific function keys.

- **Shift keys** can point to any other keyboard in the current keyboard file.

- **Hide keys** hide the keyboard and allow an unobstructed view of the emulation screen.

The following topics offer additional information:

- Adding or Deleting a Key

- Sizing and Positioning Keys and Rows

Adding or Deleting a Key

You can add new keys to a keyboard and configure the key values and configure the following options:

- **Label**. Enter the text that will appear on the virtual key when it is displayed.

- **Reverse.** Enable this option for a key that indicates the active keyboard type.

- **Key Value**. Select from Key, Normal, Keyboard (shift), or Hide. Key values allow you to select emulation-specific actions to be assigned to the keys. The list of keys available will vary depending on the emulation type selected.

Normal key values can be displayed or entered as a character value (the actual character created by the keystroke is shown), a decimal value (for characters which cannot be shown), or a hexadecimal value (for scan codes of special function keys).

To add a new key:

1 Select **Keyboard > Add Key**.

The new key will appear in the top left corner of the keyboard, or directly to the right of a selected key (if it will fit).

2 Modify the values for the key using the key configuration options.
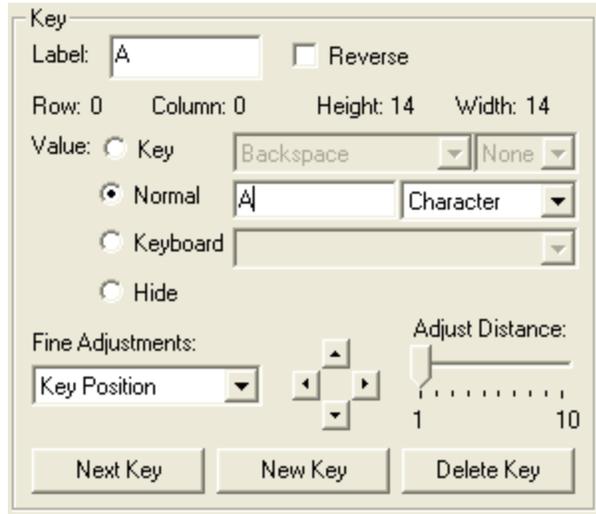
Configuring a New Key

3   Repeat to create additional keys for the keyboard.

To delete a key:

1   Select the key you want to delete.

2   Select **Keyboard > Remove Key**.

Sizing and Positioning Keys and Rows

You can use the configuration options in the Key region of the Keyboard Creator to modify the size and position of the keys on the keyboard.

The **Fine Adjustments** drop-down menu allows you to select what object you want to modify:

*   **Key Position.** Select this option to move a selected key on the keyboard. You can also adjust the key position by clicking on the key and dragging it to the desired position.

*   **Row Position.** Select this option to move an entire row.

*   **Keyboard Position.** Select this option to move all the keys on the keyboard.

*   **Key Size.** Select this option to adjust the size of the key.

    Once you select the object you want to modify, you can use the arrow buttons to move or size the keys and rows. The **Adjust Distance** slider determines how much of an effect each click of an arrow button will have. This is set on a scale of 1-10 pixels.

To position a key:

1   Select an existing key or click **New Key**.

2   From the **Fine Adjustments** drop-down menu, select **Key Position**.

3 Use one of the following methods to move the key:

- Use the arrow buttons to position the key in the desired location.

- Drag and drop the key to the desired location.

1 Click a key in the row you want to position.

2 From the **Fine Adjustments** drop-down menu, select **Row Position**.

3 Use the arrow buttons to position the row in the desired location.

1 Select an existing key or click **New Key**.

2 From the **Fine Adjustments** drop-down menu, select **Key Size**.

3 Use the arrows to adjust the size.

Importing Keyboard Graphics

The default keyboard draws the keys on the computer screen. However, you can import a graphic to be displayed instead of the created keys. An imported graphic will be embedded in the `.KB` and `.KBB` files, so you will not need to save the imported graphic file on the device separately.

When you import a graphic to use as a key or set of keys, you will still need to create and position key values. Use the slider bar to change how dark the graphic and keys are while editing so that you can size and position the keys correctly.

Be sure to label the buttons you create. If the mobile device is unable to display the bitmap image, the labels will still appear.

To import a graphic:

1 In the Keyboard Creator, click **Import**.

2 Navigate to the location of the bitmap image you want to import.

3 Click **Open**.

4 Click the **Size Keyboard to Graphic** button to make the keyboard the same size as the imported graphic.

5 Use the slider bar to adjust the how dark and how light the graphics and buttons appear when editing.

Resource Editor

The Resource Editor allows you to import sound and picture (`.wav` and `.bmp` format) files that can be deployed to your mobile devices. Launch the Resource Editor, add the bitmap and sound files, then update the device.

To launch from the ActiveSync configuration utility:

1   On the host system, launch the ActiveSync utility.

    The *Wavelink Product Configuration* dialog box appears.

2   Click the **Resource Editor** button.

    The Resource Editor appears.

To launch from Avalanche:

1   From the Avalanche Console, navigate to the **Profiles** tab, and select the profile that contains the Velocity Client package.

2   In the Software Packages area, select the TE Client software package and click **Configure**.

    The *Configure Software Package* dialog box appears.

3   From the menu list, select **Resource Editor** and click **OK**.

    The Resource Editor opens.
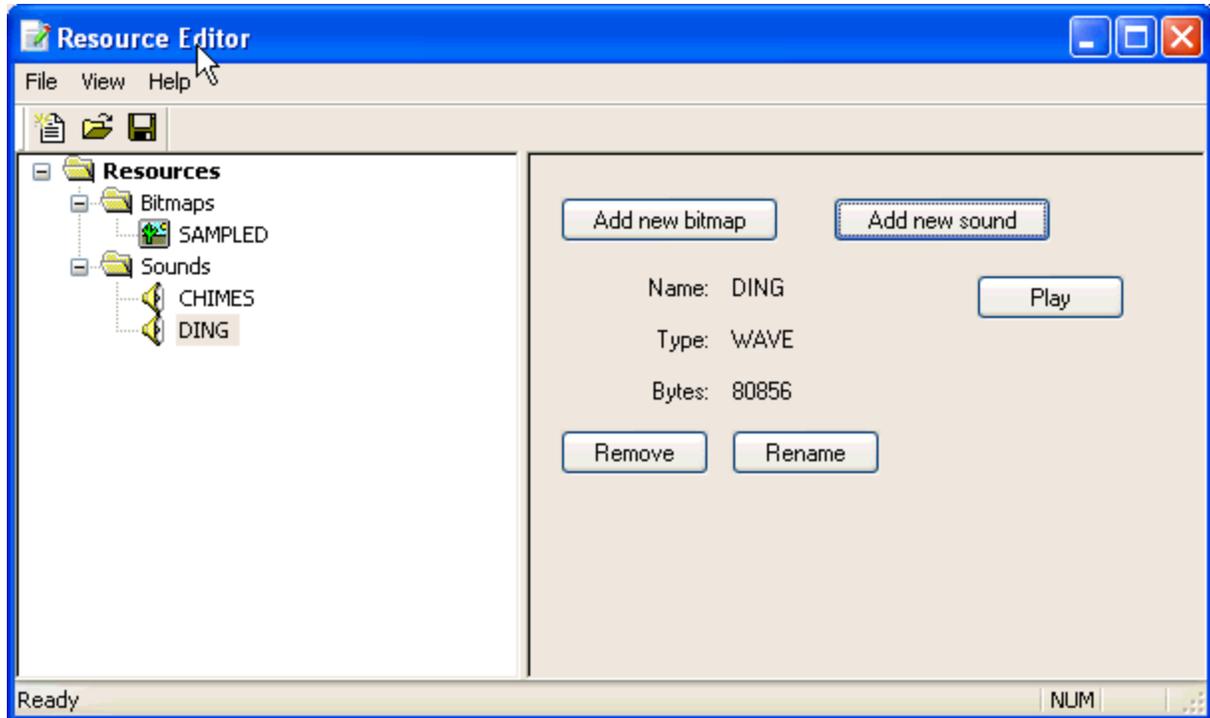
Launching the Resource Editor

The following topics offer additional information:

- Adding a Bitmap

- Adding a Sound

- Editing Files

Adding a Bitmap

Any graphic file with a `.bmp` extension can be added to the Resource Editor.

To add a bitmap:

1 From the right pane of the Resource Editor, click **Add new bitmap**.

The *Open* dialog box appears.

2 Navigate to the desired file and click **Open**.

The file appears beneath the **Bitmaps** folder in the left pane of the Resource Editor.

Adding a Sound

Any sound file with a `.wav` extension can be added to the Resource Editor.

1 From the right pane of the Resource Editor, click **Add new sound**.

The *Open* dialog box appears.

2 Navigate to the desired file and click **Open**.

The file appears beneath the **Sounds** folder in the left pane of the Resource Editor. Play the sound by selecting it and clicking **Play** in the right pane of the editor.

Editing Files

You can use the Resource Editor to rename or remove files.

1 In the left pane of the Resource Editor, expand the appropriate folder and select the desired file.

2 In the right pane of the Resource Editor, click **Rename**.

The *Rename Resource* dialog box appears.

3 Enter the new file name in the available text box.

4 Click **OK**.

The new file name appears in the left pane of the Resource Editor.

1 In the left pane of the Resource Editor, expand the appropriate folder and select the desired file.

2 In the right pane of the Resource Editor, click **Remove**.

The *Resource Editor* dialog box appears.

3 Click **Yes**.

The file is removed from the Resource Editor.

Importing and Exporting Settings

You can import and export settings for Velocity Clients. This may be useful if you plan to install from more than one computer or if you have different models of devices that require the same configuration. When you export, you can export all settings or choose which items to export.

To export settings:

1 If you are using ActiveSync to install, open the *Product Configuration* dialog box and click **Import/Export Settings**.

-Or-

If you are using Avalanche to install, configure the software package, select **Import/Export Settings** from the list and click **Launch**.

The *Import/Export* dialog box appears.

2 Select **Export (save) all the current settings to a file** to export all the settings and click **OK**. Or, to save only specific settings, select **Export (save) selected settings to a file**. If you choose to export selected settings, the *Select Export Settings* dialog box will appear, allowing you to choose the settings you want to export. Choose the desired options and click **OK**.

The *Save As* dialog box appears.

3 Navigate to the location you want to save the export file, provide a name for the file, and click **Save**.

4 The *Success* dialog box appears, informing you that the export file saved successfully. Move the file to the desired location so it can be imported for other devices.

To import settings:

1 If you are using ActiveSync to install, open the *Product Configuration* dialog box and click **Import/Export Settings**.

-Or-

If you are using Avalanche to install, configure the software package, select **Import/Export Settings** from the list and click **Launch**.

The *Import/Export* dialog box appears.

2 Select **Import (load) settings saved in a file** and click **OK**.

3 The *Open* dialog box appears. Navigate to the location where the export file is, select it, and click **Open**.

4 The *Success* dialog box appears, informing you that the file imported successfully.

Using the Velocity Client

This section provides information about using the Velocity Client.

The following topics offer additional information:

- Basic Navigation

- Using the Virtual Keyboard

Basic Navigation

The Velocity Client interface provides basic commands for navigating web pages.

To navigate within the Velocity client:

1   Connect to a host.

2   Tap and hold on the screen.

A menu appears.

3   From this menu, you can select from the following options:

Back   Go back one page.

Forward   Go forward one page.

Stop   Stops the current web page from loading.

Refresh   Reloads the current web page.

Home   Returns the browser to the specified home page. The home page is the first page users will see when connecting to the Velocity Client. The home page will be the location you set up in the host profile. For more information, see Configuring the Velocity Host Profile on page 12.

Text Size   Displays a menu with the following text size options: Largest, Larger, Medium, Smaller, Smallest.

Using the Virtual Keyboard

The Velocity client contains a default keyboard. You can access the keyboard through **Options > View**. The different modes of the Web keyboard include alpha, numeric, function, punctuation, and config. The options for the config keyboard are listed below.

Virtual Keyboard

The following list describes the function of the keys in the Web virtual keyboard.

Back   Goes back one page.

Fwd   Goes forward one page.

Stop   Stops the web page from loading.

Refresh   Reloads the current web page.

Home   Returns the browser to the specified home page.

Prev Sess   Cycles to the previous Velocity client session.

Next Sess   Cycles to the next Velocity client session.

Close   Disconnects the session. (Only available when the session is connected.)

Key Clicks   Turns key clicks on/off

Quiet   Turns quiet mode on/off.

Info   Shows/hides the following information about the mobile device: Velocity client version information, MAC address, IP address, ESSID.

Diags   Opens or closes the Velocity client diagnostic tools.

Alpha   Displays the alpha keys, including a-z, Shift, Ctl, Alt, Esc, Tab, Caps, Enter, Space.

Num   Displays the numeric keys, including 0-9, Shift, Esc, Tab, Ins, Enter, Space.

Func   Displays the function keys, including F1-F24.

Punc   Displays the punctuation keys, including: punctuation keys, Enter, Space.

Cfg   Displays the configuration keys.

Off   Hides the virtual keyboard.

Arrow Keys   Moves the web page up and down or from side to side.

Modifying Web Pages for Velocity

This section provides information about the custom META tags, IDA commands, and element-specific actions supported by Velocity. If desired, use these to customize web pages to enable specific functionality in the Velocity client.

The following topics offer additional information:

- META Tags

- IDA Commands

- Element-Specific Actions

META Tags

META tags are included at the top of a web page inside the <head> tags. They are evaluated in the order they appear in the web page (from top to bottom). The Velocity client ignores tags it does not recognize. If a META tag starts with the `iBrowse_` prefix, that prefix will be ignored. For example, `iBrowse_ScannerNavigate` is treated the same as `ScannerNavigate`.

Each META tag has the following format:

```
<meta http-equiv="[action_name]" content="[action_type]">
```

The `action_type` can be a URL, an IDA action, a JavaScript function, or a Wavelink script. For example:

```
<meta http-equiv="OnStartup" content="wls:WebAuto">
```

Some actions allow the action type to include replacement values; for example, a `'%s'` or `'%d'` or `'%ld'` string can be used to indicate where each replacement item belongs. These strings are interchangeable and can be used in any format that you prefer.

The following topics offer additional information:

- OnAllKeys, OnKey, OnKey0x

- OnStartup, OnLoaded, PowerOn

- Navigate Tags

- Printer Tags

- Scanner Tags

- Speakeasy Tags

OnAllKeys, OnKey, OnKey0x

The `OnKey` and `OnKey0x` META tags describe an action that will occur if a particular key is pressed. The key values that are evaluated are the same key values used by Keyboard Creator. The `OnKey0x` format requires a hexadecimal number and the `OnKey` format requires a decimal format. The key value is case sensitive.

For example:

`OnKey50` and `OnKey0x32` respond when the user presses 2.

`OnKey65` and `OnKey97` respond to both the upper and lowercase A.

The `OnAllKeys` tag will perform the specified action each time any key is pressed. The action type can include one argument, which is the string representing the decimal value of the key.

OnStartup, OnLoaded, PowerOn

The `OnStartup` or `OnLoaded` META tags allow you to specify actions that will be taken when the web page is first loaded. `OnLoaded` will not be called until the page has completely loaded. There are situations where `OnStartup` will be called before the page is completely loaded, so images, stylesheets or JavaScript files may not be available. So, for example, if `OnStartup` is calling a JavaScript function referenced by the web page, the call may fail. In that case, use `OnLoaded` to make sure that the `.js` file functions are available.

The `PowerOn` META tag specifies an action for when the device changes from a suspended state to an active state.

Navigate Tags

The Navigate META tags are used to perform a task when the Client detects specific actions, such as signal strength changes, battery status changes, or scanned data. Use JavaScript or other functions to process the arguments that the Navigate tags use.

SignalNavigate

The `SignalNavigate` META tag is used to handle changes in the signal strength of the wireless network connection. The action occurs when the signal strength changes or when the device disconnects from the wireless network.

The three arguments (from left to right) are: signal strength, ESSID, and device MAC address. The signal strength ranges from 0-100. A signal strength result of -1 means "unknown." A signal strength of -2 means "disconnected from the wireless network." ESSID and MAC addresses may be "<unknown>".

For example:

```
<meta http-equiv="SignalNavigate" content="Javascript:onSignalStrength
('%s', '%s', '%s');">
```

ScannerNavigate and ScannerProcessed

The `ScannerNavigate` META tag is used to handle raw scan data. The `ScannerProcessed` tag uses the scan data after it has been modified by the Velocity or other scan handlers. (Velocity scan handlers are set in the Client configuration settings.) The action occurs when information is scanned in.

If the action has zero to three arguments, then the arguments are (from left to right): the barcode data, the symbology type, and the time stamp.

If the action has four or five arguments, then the arguments are (from left to right): the barcode data, source scanner name, symbology type, time stamp, and barcode length.

You can also use the Web Default Scanner Auto Keys configuration setting to configure the default scanner action on web pages without using META tags. For more information on configuration settings, see Configuring Velocity Settings from the Configuration Manager on page 20.

BatteryNavigate

The `BatteryNavigate` META tag is used to handle changes in the battery strength or the AC line status. The action occurs when the battery strength changes or when the device is plugged in or unplugged.

The four arguments (from left to right) are: the AC line status, the strength of the main battery from 0-100, the strength of the backup battery from 0-100, and the main battery chemistry. A battery strength of 255 means "unknown".

For example:

```
<meta http-equiv="BatteryNavigate" content="Javascript:onBattery('%s',
'%s', '%s', '%s');">
```

The following are the AC line status values:

Offline   00

Online   01

Backup Power 02

Unknown   255

The following are the battery chemistry values:

Alkaline	01
Nickel-cadmium	02
Nickel-metal hydride	03
Lithium-ion	04
Lithium-ion polymer	05
Zinc-air	06
Unknown	255

Printer Tags

Use Printer tags to specify the printer that should be used for printing or send data to the printer by including the data in Printer META tags.

Printer Setup

Printer setup tags specify the printer to use for printing. Use one of the following Print_Setup tags:

Print_Setup_TP	Selects the IP address and port of the printer for TCP printing. The format is `address:port`.
Print_Setup_SP	Selects the serial printer using the number in the content value.
Print_Setup_IP	Selects the IRDA printer using the number in the content value.
Print_Setup_BP	Selects the Bluetooth printer using the number in the content value.
Print_Setup_NP	Selects the integrated printer for devices that include one. The content value is not used.

Use the following content values to select the printer type for Serial, Bluetooth, or IRDA printers:

0 PS1000

1 PS1001

2 PS1004

3 LINEPRT (Generic 9600 bps serial)

4 PDDUMB (Used for Data South)

5 COMTEC (5022)

6 MONARCH (Monarch PathFinder)

7 RASCAL (Monarch 9450)

8 RENEGADE (Monarch 9490)

9 COMTECPS

10 CODECOUR

11 COMTEC RF

12 COMTEC RF 9600

50 User Defined Printer

For example:

```
<meta http-equiv="Print_Setup_TP" content="192.168.1.59:7429">
```

Printing Data

Use the `Print_Continue` and `Print_Finish` action names to specify print data. The print data is in the action type of these META tags. The print data in the tag should all be on the same line in the HTML code and should not be more than 1024 characters in length. If you want additional characters, use a new Printer tag. In addition to standard characters, you can use the following:

- `\r` to specify a return character

- `\n` to specify a newline character

- `\t` to specify a tab character

- `\\` to specify a backslash character

- `\##` or `\x##` to specify any other character, where `##` is replaced with a two-digit hexadecimal number

`Print_Continue` should be used for all but the last section of print data, and `Print_Finish` should be used for the last section of print data. The following tags are alternatives to `Print_Finish`: `Print_Done`, `Print_Final`, `PLSeriesLabel_Print` and `ZebraLabel_Print`.

The META tag `Print_Callback` can be used to check if the printing completed successfully. The argument will be 0 if the printing was successful, or a non-zero number if the printing failed. The following tags are alternatives to `Print_Callback:Print_Complete`, `ZebraLabel_Complete` and `PLSeriesLabel_Complete`.

For example:

```
<meta http-equiv="Print_Continue" content="\22First Line\22\r\n">

<meta http-equiv="Print_Continue" content="\22Middle\22\r\n">

<meta http-equiv="Print_Finish" content="\22Last Line\22\r\n">

<meta http-equiv="Print_Callback" content="printresult.htm&status=%s"
```

Scanner Tags

This section includes tags that enable or disable the scanner or specific symbologies.

If the action name is `Scanner` and the action type is `Enable` or `Resume`, the scanner will be enabled when the page is first loaded. If the action type is `Disable` or `Suspend`, the scanner will be disabled when the page is first loaded.

The additional scanner action types supported by the Velocity client:

- `AutoTab`

- `AutoEnter`

- `AutoEnterAndTab`

- `AutoTabAndEnter`

- `NoAuto`

The `AutoTab`, `AutoEnter`, and `AutoEnterAndTab` action types will enable the scanner and will cause the scan data to be followed by an enter or tab key (or both). The `NoAuto` action type will enable the scanner and will clear the scanner key value (if a value is specified by the configuration settings).

When the scanner state is changed (using `Enable`, `Resume`, `Disable` or `Suspend`), the scanner will stay in that state until some other action (such as a META tag or IDA action) changes the state or until the user changes sessions.

Enable and disable different scanner symbologies by using the symbology as the action name, and `Enabled` or `Disabled` as the action type. The symbologies supported by the Velocity client are:

AUSTRALIA_POSTAL	CUECODE	PLANET
AZTEC	D2OF1ATA	PLESSY
AZTECMESA	D2OF5	POSICODE
BOOKLAND	DATAMATRIX	POSTNET
BRITISH_POSTAL	DUTCH_POSTAL	QRCODE
CANADA_POSTAL	EAN8	RSS14
CHINA_POSTAL	EAN13	RSSEXPANDED
CODABAR	I2OF5	RSSLIMITED
CODABLOCK	JAPAN_POSTAL	SIGNATURE
CODE11	KOREA_POSTAL	TELEPEN
CODE16K	MACROPDF	TLC39
CODE32	MACROMICROPDF	TRIOPTIC39
CODE39	MAXICODE	UCC128
CODE49	MATRIX2OF5	UPCA
CODE93	MICROPDF	UPCE
CODE128	MSI	UPCE0
COMPOSITE	OCR	UPCE1
COUPONCODE	PDF417	WEBCODE

In addition to the listed symbologies, the value `ALL_DECODERS` can be used to enable or disable all the symbologies.

For example, to enable only UPCA use the META tags in this order:

```
<meta http-equiv="ALL_DECODERS" content="Disabled">
```

```
<meta http-equiv="UPCA" content="Enabled">
```

The prefix `Scanner_` can also be used with all symbologies.

ⓘ For information on Scanner_Navigate or Scanner_Processed, see

Speakeasy Tags

Some META tags allow you to include Speakeasy functionality into a page. You must have the Speakeasy packages installed in order for the Client to use Speakeasy tags. If no Speakeasy package is installed, the Velocity Client will ignore Speakeasy tags.

The `SpeechFromText` or `TextToSpeech` META tags play the string specified in the "content" attribute. For example:

```
<meta http-equiv="SpeechFromText" content="I will speak this sentence.">
```

The `SpeechSetting` META tag changes one or more values for Speakeasy. For example, the following META tag will change the Text-to-Speech settings for language and voice:

```
<meta http-equiv="SpeechSetting" content="tts_language=American English, tts_voice=Tom">
```

IDA Commands

IDA commands are used to invoke a device action or program action by the Velocity client. These values can be specified in many of the special META tags described above, as URLs for the user to click on, or called inside JavaScript functions.

For example:

```
<a href="ida:IDA_SESSION_DISCONNECT">Close the session</a>
```

-Or-

```
<script language=javascript>function OnError( ){

Disconnect the Session location.href = "ida:IDA_SESSION_DISCONNECT" ;

// Alternate Method document.location = "ida:IDA_SESSION_DISCONNECT" ;

// Another Alternate Method window.navigate ( "ida:IDA_SESSION_DISCONNECT" ) ;

}</script>
```

ⓘ It is recommended that each IDA command be preceded by the `IDA` prefix; however, the command will generally work without the prefix.

The following are IDA commands supported by the Velocity client:

IDA_BEEP	Causes the device to emit a standard beep (single tone).
IDA_ERROR_BEEP	Causes the device to emit an error beep (two tones).
IDA_COLDBOOT	Causes the device to perform a cold boot.
IDA_COLDBOOT_PROMPT	Gives the user the option to perform a cold boot or cancel the action.
IDA_KEYBOARD_WEB, IDA_KEYBOARD_SHOW, or IDA_KEYBOARD_UP	Cause the on-screen keyboard to be displayed.
IDA_KEYBOARD_NUM or IDA_KEYBOARD_NUMERIC	Cause the numeric on-screen keyboard to be displayed.
IDA_KEYBOARD_NONE, IDA_KEYBOARD_HIDE, or IDA_KEYBOARD_DOWN	Cause the standard and numeric on-screen keyboards to be hidden.
IDA_PROGRAM_EXIT	Causes the device to exit the current program.
IDA_PROGRAM_EXIT_ PROMPT	Prompts the user to exit the program or cancel the action.
IDA_REPRINT	Causes the last data supplied to the printer to be sent again. The print data will remain available until something else is printed or until the session is disconnected.
IDA_SESSION_S1 IDA_SESSION_S2 IDA_SESSION_S3 IDA_SESSION_S4	Cause the device to switch to the specified session.
IDA_SCAN_DISABLE or IDA_SCAN_SUSPEND	Disable the bar code scanner. When the bar code scanner is disabled, pressing the mobile device trigger will have no effect.
IDA_SCAN_ENABLE or IDA_SCAN_RESUME	Enable the bar code scanner. The bar code scanner will not scan for bar codes unless the mobile device trigger is pulled. You can use the META tag OnStartup with an action of IDA_SCAN_ENABLE or IDA_SCAN_DISABLE to change the scanner state only when the page is first loaded.

IDA_SCAN_FORWARD	Disables the barcode scanner and processes a trigger press as a key press. This command only functions on scanners that support trigger-press forwarding; on all other scanners, the command performs the same action as IDA_SCAN_ DISABLE.
IDA_SESSION_ DISCONNECT	Disconnects the session and closes the Velocity client.
IDA_SESSION_ DISCONNECT_PROMPT	Prompts the user to disconnect the session and close the Velocity client, or cancel the action.
IDA_SESSION_NEXT	Opens a new session.
IDA_SESSION_PREVIOUS or IDA_SESSION_PREV	Causes the device to return to the previous session.
IDA_SIP_SHOW or IDA_SIP_UP	Cause the SIP on-screen keyboard to become visible.
IDA_SIP_HIDE or IDA_SIP_DOWN	Cause the SIP on-screen keyboard to become hidden.
IDA_SIP_TOGGLE or IDA_SIP_TOGGLEHIDE	Toggle the SIP on-screen keyboard between visible and hidden.
IDA_SUSPEND or IDA_SUSPEND_DEVICE	Cause the device to suspend itself. For CE devices, this is similar to pressing the power button.
IDA_SUSPEND_PROMPT	Prompts the user to suspend the device or cancel the action.
IDA_URL_BACK or IDA_BACK	Displays the screen previous to the current screen. If there are no previous screens, no action will be taken.
IDA_URL_BACK_DISABLE or IDA_BACK_DISABLE	Disable the Back menu option so it cannot be selected by the user. The IDA_URL_BACK or IDA_BACK commands are not affected and will still work.
IDA_URL_BACK_ENABLE or IDA_BACK_ENABLE	Enable the Back menu option so it can be selected by the user. The menu option could still be disabled if there is no page to go back to.

IDA_URL_FORWARD or IDA_FORWARD	Displays the screen that was being displayed before the last Back command. If there is no such screen, no action will be taken.
IDA_URL_FORWARD_ DISABLE or IDA_FORWARD_DISABLE	Disable the Forward menu option so it cannot be selected by the user. The IDA_URL_FORWARD or IDA_FORWARD commands are not affected and will still work.
IDA_URL_FORWARD_ ENABLE or IDA_FORWARD_ENABLE	Enable the Forward menu option so it can be selected by the user. The menu option could still be disabled if there is no page to return to.
IDA_URL_HOME or IDA_HOME	Cause the Velocity client to proceed to the location specified by the current host profile. This location is completely independent from any other web browsers on the device.
IDA_URL_HOME_DISABLE or IDA_HOME_DISABLE	Disable the Home menu option so it cannot be selected by the user. The IDA_URL_HOME or IDA_HOME commands are not affected and will still work.
IDA_URL_HOME_ENABLE or IDA_HOME_ENABLE	Enable the Home menu option so it can be selected by the user.
IDA_URL_REFRESH or IDA_REFRESH	Cause the web page to be reloaded. The server will be queried to verify that the page contents are up-to-date.
IDA_URL_STOP or IDA_STOP	Cause the web page to stop loading. If the web page is already fully loaded, this action has no effect.
IDA_WARMBOOT	Causes the device to perform a warm boot.
IDA_WARMBOOT_PROMPT	Prompts the user to perform a warm boot or cancel the action.
IDA_ZOOM_DISABLE or IDA_FONT_DISABLE or IDA_ZOOM_LEVEL_ DISABLE	Disable the Text Size menu so it cannot be selected by the user. The IDA options to set the zoom level (text size) are not affected and will still work.
IDA_ZOOM_ENABLE or IDA_FONT_ENABLE or IDA_ZOOM_LEVEL_ENABLE	Enable the Text Size menu so it can be selected by the user.

IDA_ZOOM_LARGER or IDA_FONT_LARGER or IDA_ZOOM_3 or IDA_ZOOM_LEVEL_3 or IDA_ZOOM_LEVEL_LARGER	Displays the text using a large text size. This setting is global and affect other browsers on the device.
IDA_ZOOM_LARGEST or IDA_FONT_LARGEST or IDA_ZOOM_4 or IDA_ZOOM_LEVEL_4 or IDA_ZOOM_LEVEL_ LARGEST	Displays the text using the largest text size supported by the browser. This setting is global and affects other browsers on the device.
IDA_ZOOM_MEDIUM or IDA_FONT_MEDIUM or IDA_ZOOM_2 or IDA_ZOOM_LEVEL_2 or IDA_ZOOM_LEVEL_ MEDIUM	Displays the text using a medium text size. This setting is global and affects other browsers on the device.
IDA_ZOOM_MINUS or IDA_FONT_MINUS or IDA_ZOOM_LEVEL_MINUS	Displays the text using the next-smaller text size than the current text size. This setting is global and affects other browsers on the device.
IDA_ZOOM_PLUS or IDA_FONT_PLUS or IDA_ZOOM_LEVEL_PLUS	Displays the text using the next-larger text size than the current text size. This setting is global and affects other browsers on the device.
IDA_ZOOM_SMALLER or IDA_FONT_SMALLER or IDA_ZOOM_1 or IDA_ZOOM_LEVEL_1 or IDA_ZOOM_LEVEL_ SMALLER	Displays the text using a small text size. This setting is global and affects other browsers on the device.
IDA_ZOOM_SMALLEST or IDA_FONT_SMALLEST or IDA_ZOOM_0 or IDA_ZOOM_LEVEL_0 or IDA_ZOOM_LEVEL_ SMALLEST	Displays the text using the smallest text size supported by the browser. This setting is global and affects other browsers on the device.

Element-Specific Actions

The following custom attributes are supported for individual elements on a page:

- OnAllKeys, OnKey, OnKey0x

- Scanner

- Symbologies

The attributes can be specified in the tag that creates the element on the web page. If the element is selected (active), then the option will be applied. When the element is not selected (inactive), then the settings will be those specified by the META tags for the web page.

To use these as attributes for an element, use the format: `action_name="action type"`

For example, the following tag will cause the scanner to be enabled when the input field is selected on the web page.

```
<input name="item1" id="item1" type="text" Scanner="Enable">
```

The following tag will enable the scanner only while the tag is selected. The scanner will otherwise be disabled.

```
<meta http-equiv="Scanner" content="Disable">
```

> ℹ You can use the META tag `OnStartup` with an action of `IDA_SCAN_ENABLE` or `IDA_SCAN_DISABLE` to change the scanner state only when the page is first loaded.

To use element-specific symbologies, you can either use the symbology name or prefix the symbology name with the string `"Scanner_"`.

For example, the following tag will enable the scanner, AutoTab after an item is scanned, and turn off all symbologies except `Code128`.

```
<textarea name="item2" Scanner=AutoTab Scanner_All_Decoders=Disable
Scanner_Code128=Enable>
```

Attributes are processed left to right, so in this example, `Code128=Enable` must come after `Scanner_All_Decoders=Disable`.

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