TELNET CLIENT 5.11 SSH SUPPORT

This document provides information on the SSH support available in Telnet Client 5.11

OVERVIEW

- Overview of SSH Support
- Installing Windows SSH Support
- Configuring the host profile for SSH support
- Deploying Windows SSH Support
- Revision History

This document describes how to install and configure SSH support in Wavelink Telnet Client 5.11.

OVERVIEW OF SSH SUPPORT

Secure Shell (SSH) is a protocol developed for transmitting private information over the Internet. SSH encrypts data that is transferred over the Telnet session.

The Telnet Client supports SSH version 1 and 2 and will automatically select the most secure protocol that the SSH server supports.

This document describes the following:

- Installing Windows SSH support utility
- Configuring the host profile for SSH support
- Deploying Windows SSH support to the device through Avalanche or ActiveSync

INSTALLING WINDOWS SSH SUPPORT

Installing SSH support is a two-step process. First, install SSH support on the PC from which you will deploy Telnet. Once you install SSH support on the PC, use Avalanche or ActiveSync to deploy the utility to the device.

To install SSH support on your PC:

1. Obtain the installation executable for SSH support.

NOTE: To obtain the Wavelink SSH support utility install, go to http://www.wavelink.com/downloads/files/sshagreement.aspx.

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2. Install SSH support on the PC from which you will deploy the Telnet Client.

CONFIGURING THE HOST PROFILE FOR SSH SUPPORT

SSH support is configured from the Host Profiles window of the configuration utility.

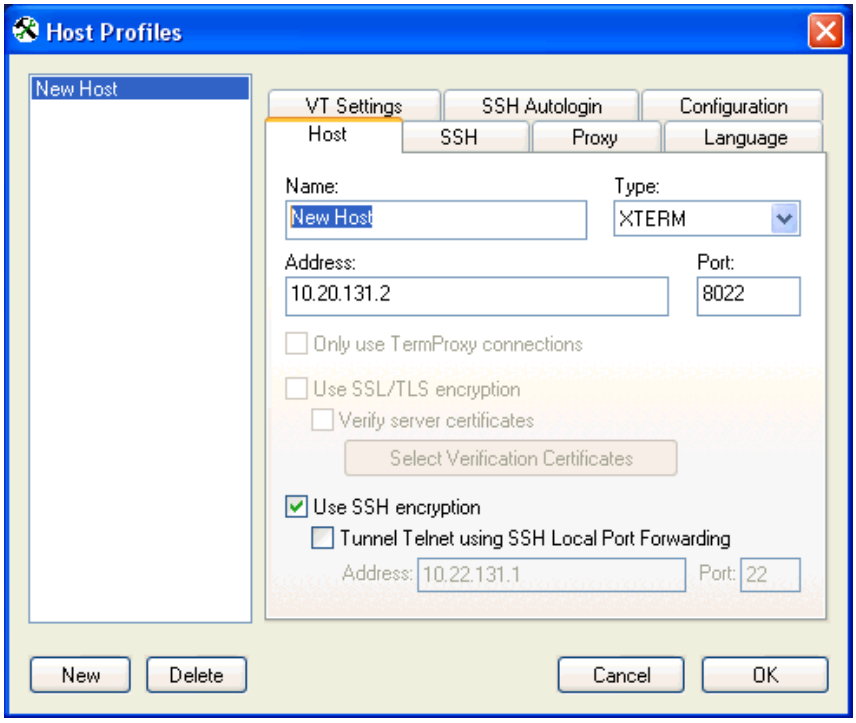
NOTE: SSH is only an active option if SSH support has been installed on the PC running the Telnet Client configuration utility.

To configure SSH:

1. Access the host profiles configuration utility for the Telnet Client.

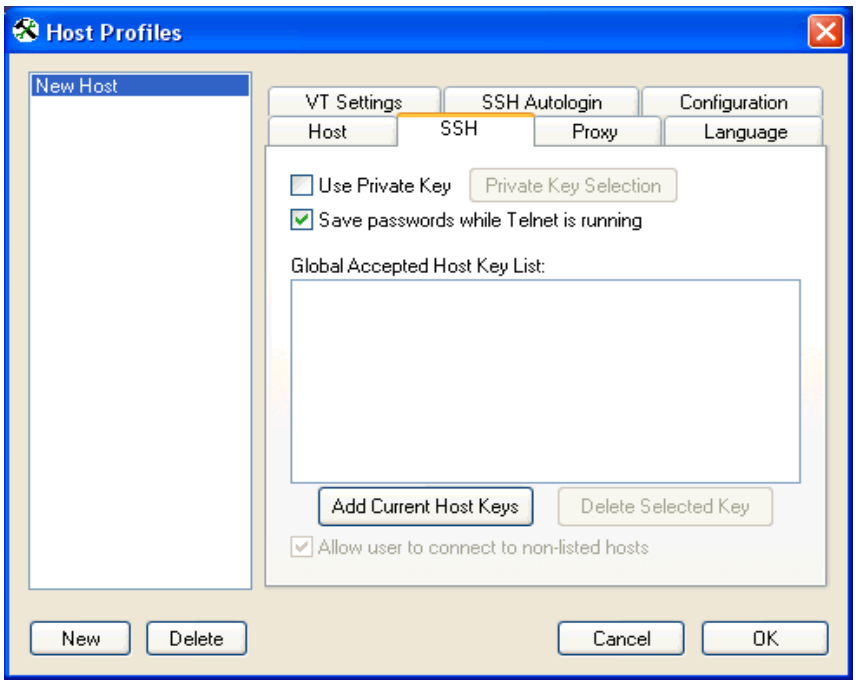
2. Select a host profile from the list or click `New` to create a new host profile.
3. Enter the information of the Telnet host to connect to.
4. Enable the `Use SSH encryption` option.

NOTE: Telnet must be tunneled using SSH local port forwarding if an IBM emulation type is selected.



Enabling SSH

5. Click the **`SSH`** tab to configure private keys and security options.



SSH Tab

Use of private keys is optional. For more information on private keys, refer to Configuring Private Keys on page 8.

You can verify that the client will connect with the correct SSH server by using the **`Global Accepted Host Key List`** options. For more information, refer to Security Options on page 10.

6. To save your passwords in the current Telnet session, check the **`Save Passwords while Telnet is running`** option.

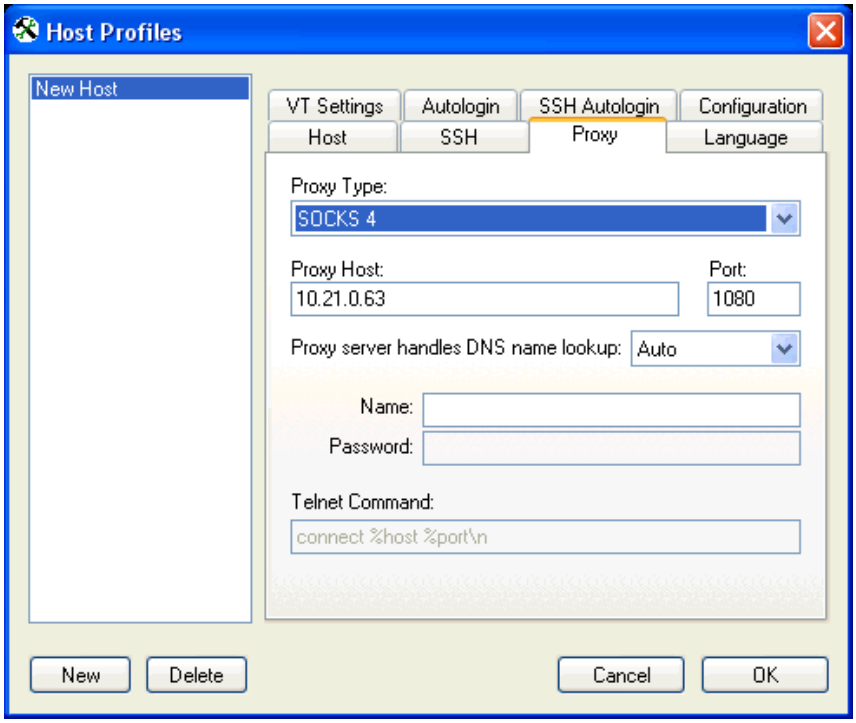
NOTE: The passwords will be erased each time you exit Telnet.

CONFIGURING PROXY SETTINGS IN SSH

You may need to go through a proxy server in order to connect to the SSH server. Proxy settings allow you to get your data through a firewall, if one is present.

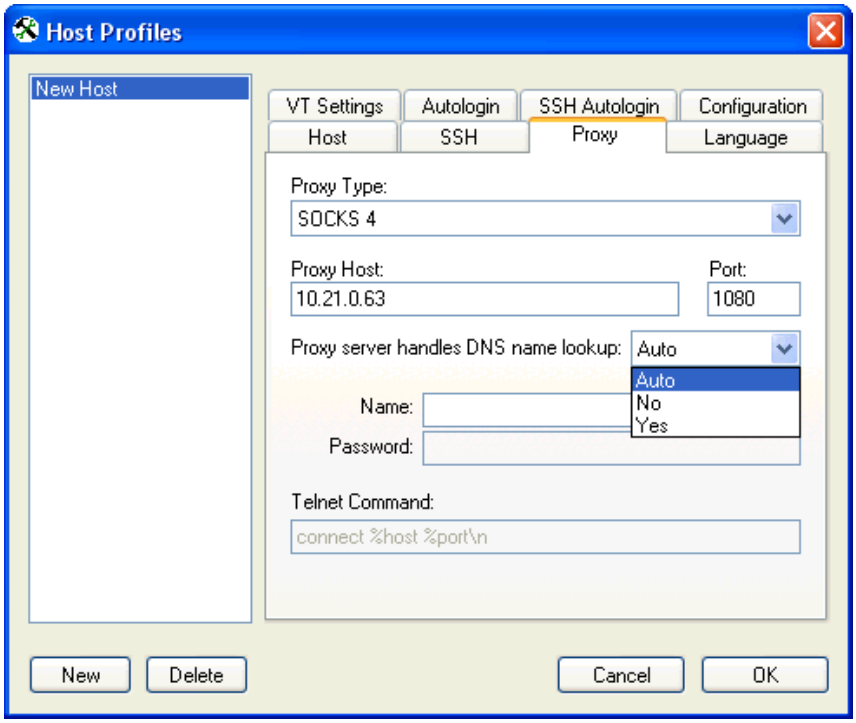
To configure proxy settings:

1. From the Host Profile window select the **`Proxy`** tab.



Proxy Settings

2. In the **`Proxy Type`** drop-down list, select the proxy type.
   - Selecting `HTTP` allows you to proxy your connections through a web server
   - Selecting `SOCKS 4` or `SOCKS 5` allows you to proxy your connections through a SOCKS server.
   - Selecting `Telnet` allows you to make a Telnet connection directly to the firewall machine in order to connect through to an external host.
3. Enter the proxy host address and port number.
4. From the drop-down list, select the method by which want the proxy server to perform the DNS name look-up if your host name is a string instead of an IP address.



DNS Name Lookup

- If you select `No`, the SSH client will always do its own DNS, and will always pass an IP address to the proxy.
- If you select `Yes`, the SSH client will always pass host names straight to the proxy without trying to look them up first.
- If you select `Auto` (default), the SSH client will handle the proxy based on the type: telnet and HTTP proxies will have the host names passed straight to them; SOCKS proxies will not.

5. Enter a name and password if your proxy requires authentication.

   Username and password authentication is supported for HTTP proxies, SOCKS 5 and Telnet proxies. SOCKS 4 proxies support the username but not passwords.

6. Enter the Telnet command the proxy will use, if using Telnet proxy.

   If you are using the Telnet proxy type, the usual command required by the firewall's Telnet server is `connect` followed by a host name and a port number. If your proxy needs a different command, you can enter an alternative here.

   In this string, you can use `\n` to represent a new-line, `\r` to represent a carriage return, `\t` to represent a tab character, and `\x` followed by two hex digits to represent any other character. `\\` is used to encode the `\` character itself. Also, the special strings `%host` and `%port` will be replaced by the host name and port number you want to connect to. The strings `%user` and `%pass` will be replaced by the proxy username and password you specify in step 5. To get a literal `%` sign, enter `%%`.

   If the Telnet proxy server prompts for a name and password before commands can be sent, you can use a command such as:

   ```
   %user\n%pass\nconnect %host %port\n
   ```

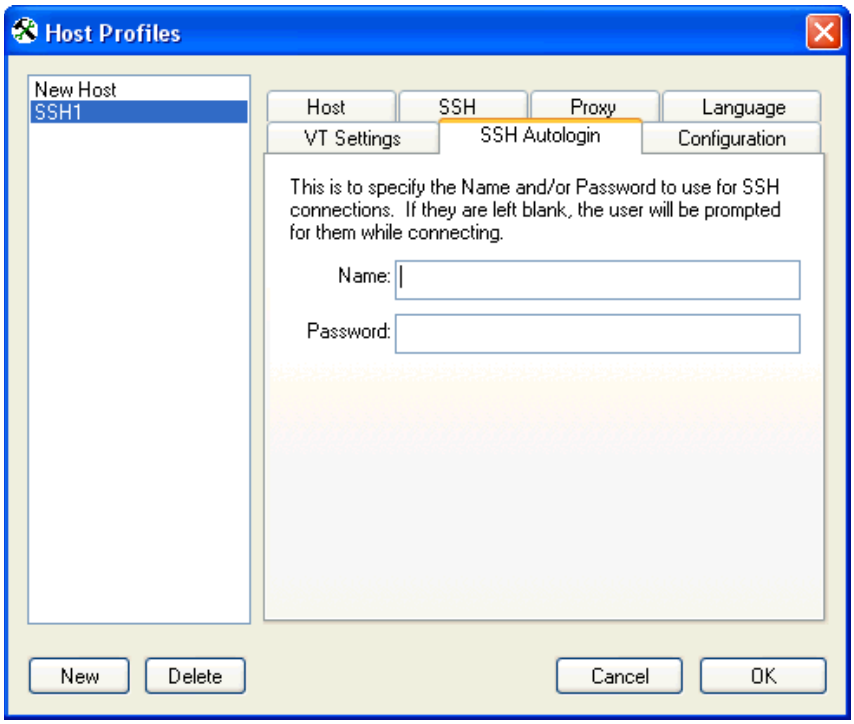
   This will send your username and password as the first two lines to the proxy, followed by a command to connect to the desired host and port.

NOTE: If you do not include the `%user` or `%pass` tokens in the Telnet command, then the **`Name`** and **`Password`** configuration fields will be ignored.

7. Click `OK` to save the proxy configurations.

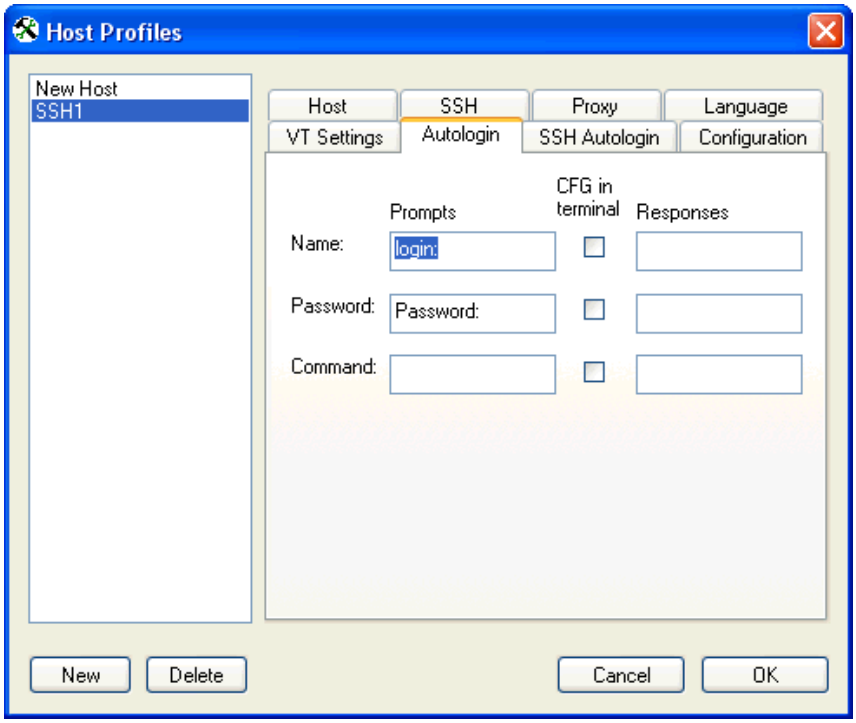
SSH AUTOLOGIN

SSH Autologin allows you to specify and save the username and/or password to use for SSH connections so that you won't be prompted for them each time you login. If the username or password fields are left blank, you will be prompted for them each time you connect.



SSH Autologin

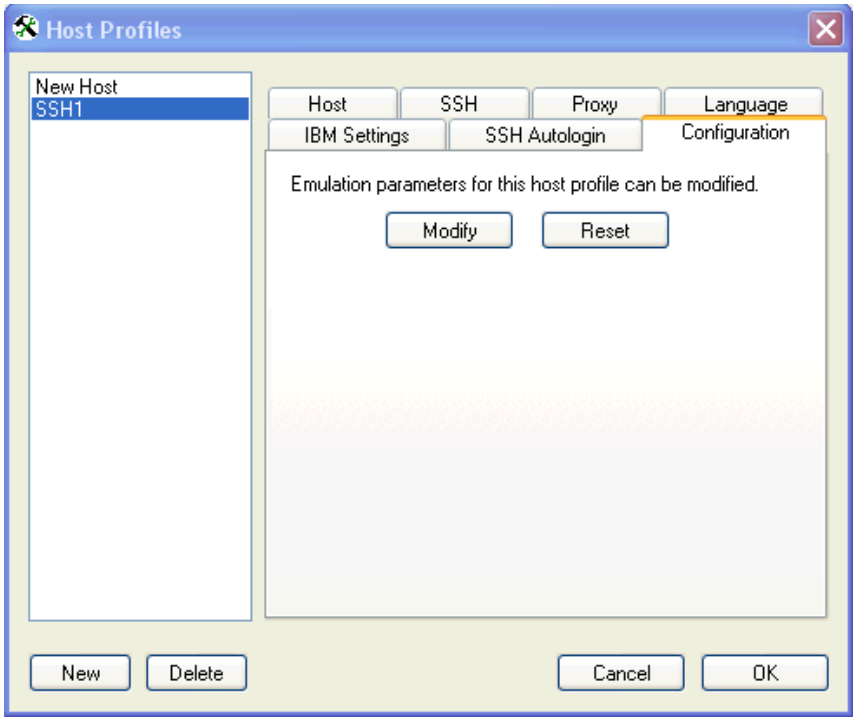
If you are tunneling VT, HP or XTERM over SSH, the Autologin tab will also be available for you to enter the Telnet username and password. If you are using IBM emulation, the Autologin tab will not be available.



Autologin

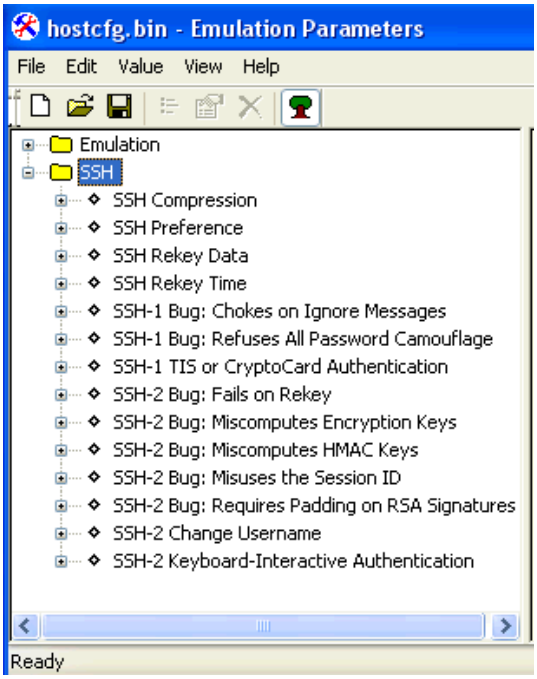
CONFIGURING THE SSH PARAMETERS

Use the Configuration tab to modify the emulation parameters for a specific host profile.



Configuration

When you click `Modify`, the Emulation Parameters screen opens where you will see that the SSH parameters has been added to the tree view. Clicking `Reset` will return the parameters to their previous settings.



SSH Parameters

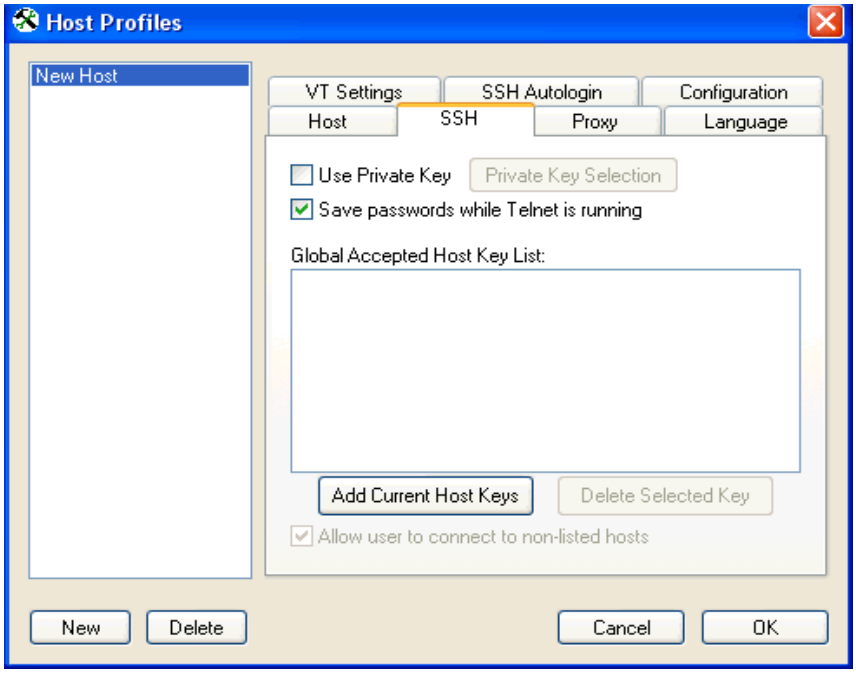
You can specify the SSH settings that should be applied to all host profiles in the Emulation Parameters utility.

CONFIGURING PRIVATE KEYS

Private keys are an optional way of allowing you to authenticate to the SSH server. Refer to the documentation for your SSH server for instructions on how to create and install user-specific private keys on the SSH server.

To configure private keys:

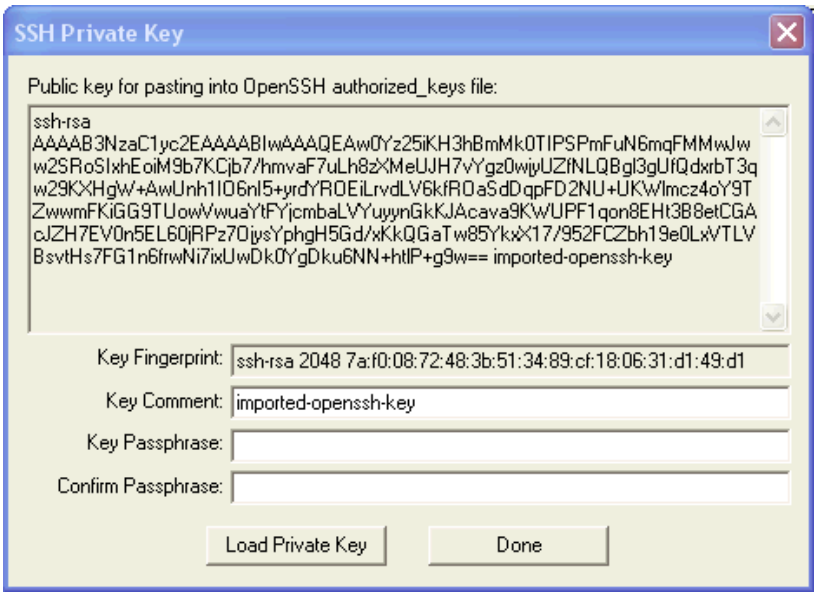
1. Access the host profiles configuration utility for the Telnet Client.
2. Select a host profile.
3. Enable the `Use SSH encryption` option.
4. Click the **`SSH`** tab to configure private key encryption.



Private Key Encryption

5. Enable the **`Use Private Key`** option, then click `Private Key Selection`.

   The *SSH Private Key* dialog box appears.



Load Private Key

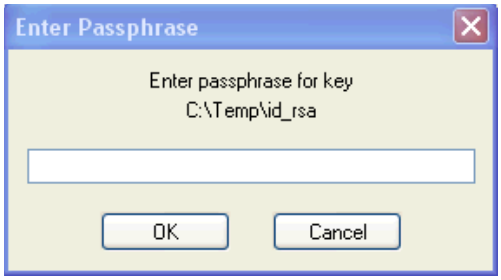
6. Click `Load Private Key` to open a window where you can browse for the private key file.

7. Locate the file and click `Open`.

   Private keys from OpenSSH, SSH.com (Tectia), and PuTTY are recognized. Other private keys will need to be converted to one of these formats before they can be loaded.

   The *Enter Passphrase* dialog box appears.

8. Enter the passphrase for the private key.



Enter Passphrase

The passphrase is whatever was specified at the time the private key was created.

9. Click `OK` to return to the *SSH Private Key* dialog box.

10. Change the **`Key Comment`** and **`Key Passphrase`** values, if desired.

NOTE: A blank passphrase is allowed, but not recommended

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11. Click `Done`.

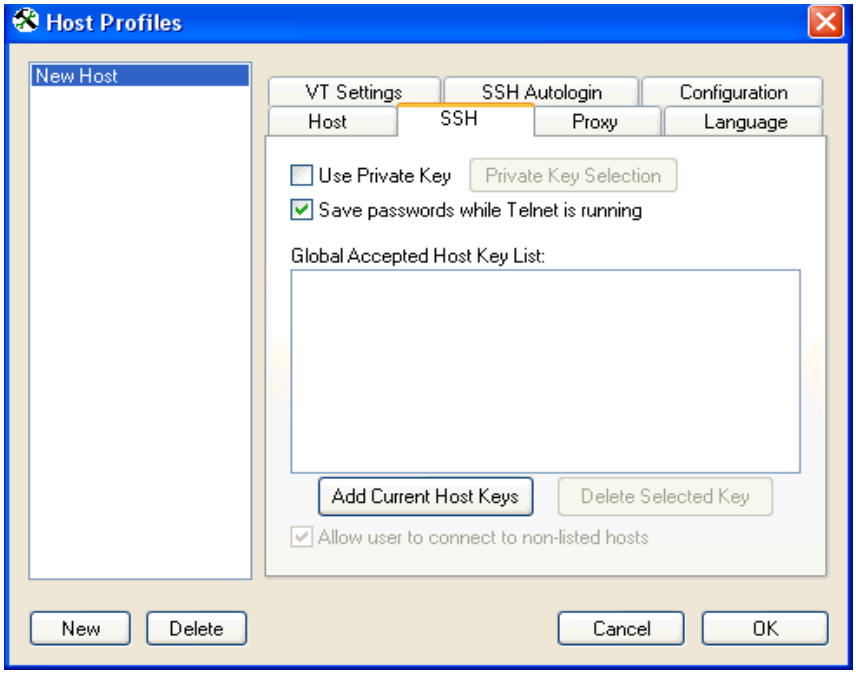
You will need to re-enter the passphrase for the private key in order to view or edit it.

SECURITY OPTIONS

Every server identifies itself by means of a host key. Once the Telnet client knows the host key for a server, it will be able to detect if a malicious attacker redirects your connection to another machine. Host key checking guaruntees that you are communicating with the correct server.

To add a host key to the Global Accepted Host Key List:

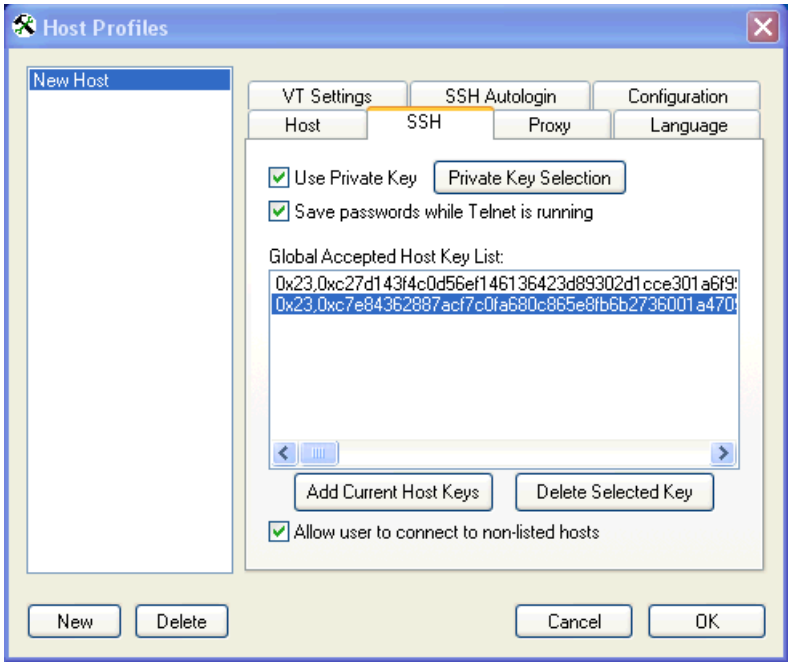
1. Access the host profiles configuration utility for the Telnet Client.
2. Select a host profile.
3. Enable the **`Use SSH encryption`** option.
4. In the *Host Profiles* window, click the **`SSH`** tab.



Global Accepted Host Key List

5. Click `Add Current Host Keys.`

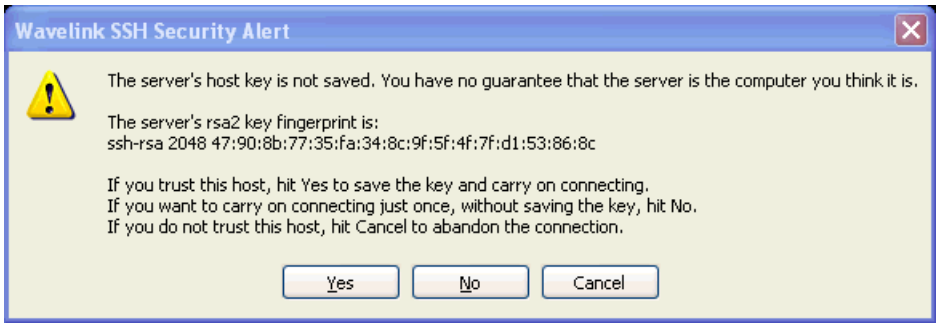
   A dialog box appears telling you that the public keys for the SSH server, specified on the host page, were detected and added to the list.



Public Keys Added to List

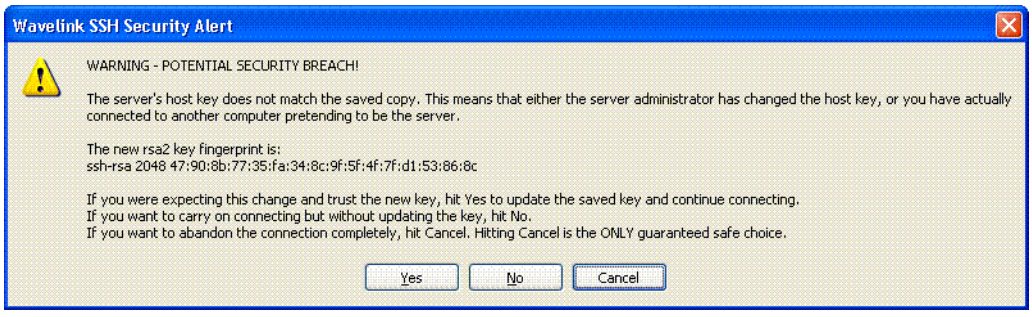
6. Enable **`Allow user to connect to non-listed hosts`** to allow connections to a host whose key is not listed in the **`Global Accepted Host Key List`**.

   If no keys are listed or if all the keys you have are different than the ones provided by the server you want to connect to, the following error message appears:



SSH Security Alert

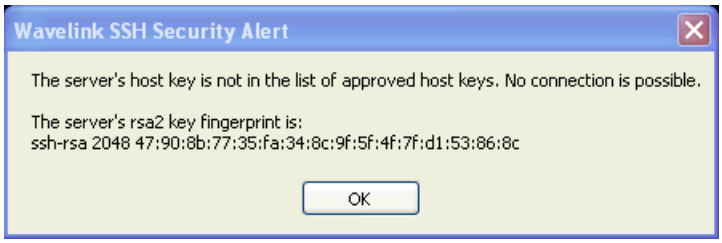
   If you connect to the server and the key on the server has been changed, the following error message appears:



Security Breach

This message also appears if you are connecting to a different server than the one to which you previously connected. This could be an indication that someone is attempting to duplicate your server.

If the SSH server returns a key that is not in the **`Global Accepted Host Key List`** and the **`Allow user to connect to non-listed hosts`** option is disabled, the Telnet client will not be allowed to connect to that server and the following error message appears:



Connection Refused

DEPLOYING WINDOWS SSH SUPPORT

You can use Avalanche or ActiveSync to deploy SSH support to the device.

To deploy SSH support through Avalanche:

1. Obtain the Avalanche SSH support file.
2. Open Avalanche Manager and connect to an agent.
3. From the Software Management menu in Avalanche Management Console, select `Install Software Package`.
4. Browse to the location of the Avalanche SSH support package and select the package.
5. Select the software collection to which you want to install the SSH support package and click `Next`.
6. Click `Yes` to agree to the license agreement.
7. Enable the SSH support package by right-clicking the package and selecting `Enable Package`.
8. Perform an Avalanche update on the device to download the SSH support package to the device.

If you use ActiveSync to install SSH support, you will need to install the package to each device separately.

To install SSH support using ActiveSync:

1. Obtain the Wavelink SSH support install from http://www.wavelink.com/downloads/files/sshagreement.aspx.
2. In the Wavelink welcome screen, click `Next`.
3. Click `I Agree` to accept the license agreement.
4. Click `Yes` to install using the default application install directory.
5. Click `OK` to complete the install.

You will need to run the application again to install to other CE devices.

REVISION HISTORY

- 02/16/2006. Document created.

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