



FTP Server Configuration

For HP customers who need to configure an IIS or FileZilla FTP server before using HP Device Manager

Technical white paper



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Overview

This document contains two parts:

- The first part discusses the configuration of IIS FTP. It includes IIS FTP installation, configuration of an FTP site with basic authentication, passive mode configuration, external IPv4 address configuration, and Windows Firewall settings.
- The second part discusses the configuration of Filezilla FTP Server. It includes Filezilla FTP Server installation and configuration of an FTP site.

IIS FTP server configuration

Installing FTP v7.5 for IIS

If the FTP service is not already installed on the server, please follow these steps to add the service. Otherwise, skip to the next section [Creating an FTP site with basic authentication](#).

1. Click on the **Start > Administrative Tools > Server Manager**.
2. In the Server Manager, click on **Roles** on the left side, then click **Add Roles** on the right side to invoke the Add Roles Wizard.
3. Scroll down and select **Server Roles** on the left side, then click to select **Web Server (IIS)** on the right side, and click **Next**.
4. Click **Next**.
5. On the Select Role Services page of the Add Role Services wizard, scroll down and expand the **FTP Server** option. Then, click to select **FTP Service**.
6. Click **Next**.
7. On the Confirm Installation Selections page, click **Install**.
8. On the Results page, click **Close**.

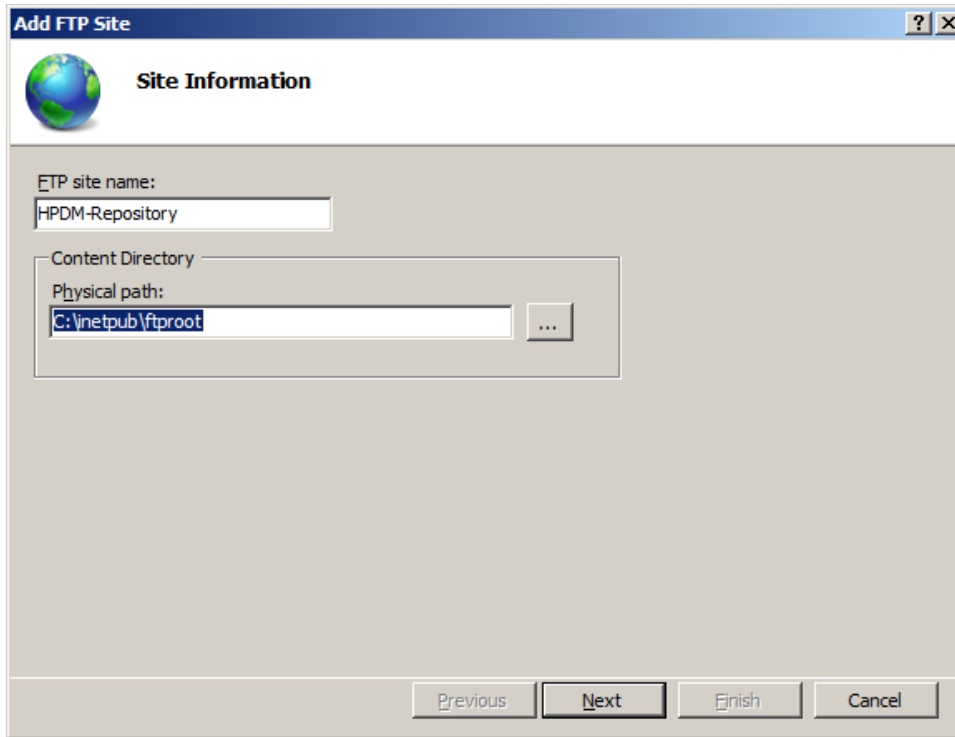
Creating an FTP site with basic authentication

This section details how to create a new FTP site to which the HP Device Management Server, as well as the Device Management Agents on the thin clients, can connect to for read and write access using basic authentication. Before creating this site, ensure that you create a user account from which the FTP service can authenticate. The example provided here uses a local user account with the username of "hpdmadm". Use the following steps to create the FTP site:

1. Click on the **Start > Administrative Tools > Internet Information Services (IIS) Manager**.
2. In the Connections pane on the left side of the IIS 7 Manager, expand the root server node, and then click to select the **Sites** node in the tree.
3. In the Actions pane on the right side, click **Add FTP Site...**, or right-click the **Sites** node in the Connections pane and select **Add FTP Site...** from the pop-up context menu. This will launch the Add FTP Site wizard.



4. On the Site Information page, enter a name for the FTP site, and browse and select a path on the local system to use as the Content (or root) directory. In this example, we will use the site name of "HPDM-Repository" and provide the root path of "C:\inetpub\ftproot".

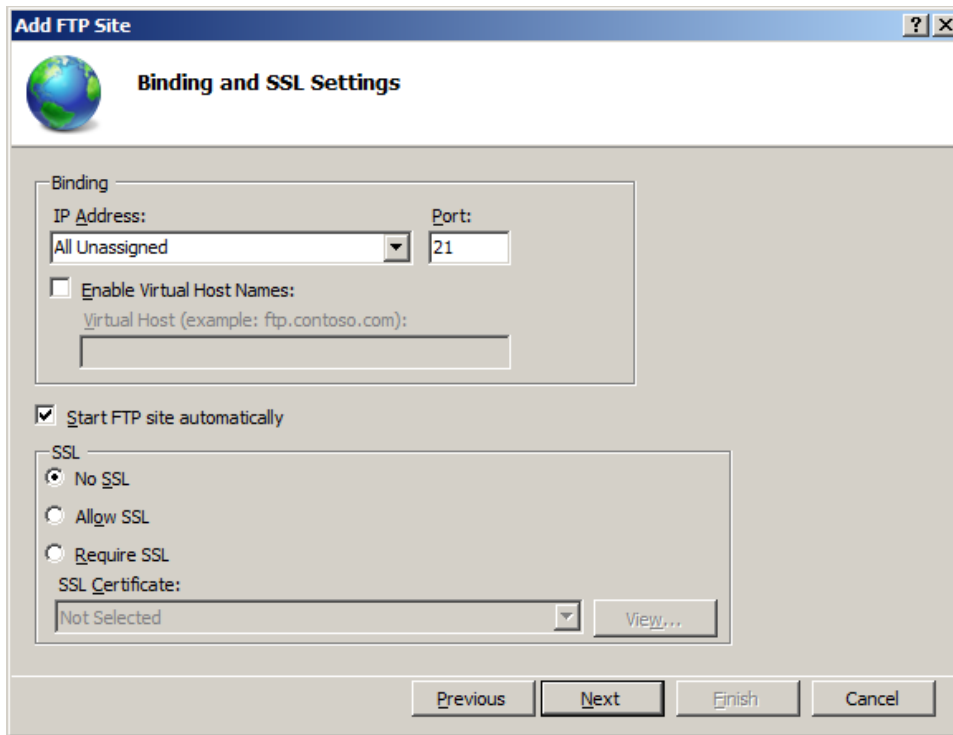


NOTE: Please ensure that the user account being used for HPDM FTP transactions has sufficient rights to allow reading, writing, and directory listing on the folder selected for the Content (or root) directory.

5. Click **Next**.



- On the Binding and SSL Settings page, enter or modify the details for your particular needs. In our example, we kept the default values for IP Address and Port, "All Unassigned" and "21" respectively. We did not select Enable Virtual Host Names and selected No SSL.



The screenshot shows the 'Add FTP Site' dialog box with the 'Binding and SSL Settings' tab selected. The 'Binding' section includes an 'IP Address' dropdown menu set to 'All Unassigned', a 'Port' text box containing '21', an unchecked checkbox for 'Enable Virtual Host Names', and an empty text box for 'Virtual Host (example: ftp.contoso.com)'. The 'Start FTP site automatically' checkbox is checked. The 'SSL' section has three radio buttons: 'No SSL' (selected), 'Allow SSL', and 'Require SSL'. Below the radio buttons is an 'SSL Certificate' dropdown menu set to 'Not Selected' and a 'View...' button. At the bottom of the dialog are four buttons: 'Previous', 'Next', 'Finish', and 'Cancel'.

NOTE: Configuration of Secure Sockets Layer (SSL) FTP is beyond the scope of this document.

- Click **Next**.



8. On the Authentication and Authorization Information page, select the **Basic** authentication option. Then, select to allow access only to **Specified users** and provide the username of the account that was created for HPDM FTP transactions. In our example, we created and are using the account username of "hpdmadm". For the Permissions options, be sure to click to select both **Read** and **Write**.

The screenshot shows the 'Add FTP Site' dialog box with the 'Authentication and Authorization Information' tab selected. The 'Authentication' section has the 'Basic' checkbox checked. The 'Authorization' section has 'Allow access to:' set to 'Specified users' and the username 'hpdmadm' entered in the text box. The 'Permissions' section has the 'Read' and 'Write' checkboxes checked. At the bottom, there are buttons for 'Previous', 'Next', 'Finish', and 'Cancel'.

9. Click **Finish**.

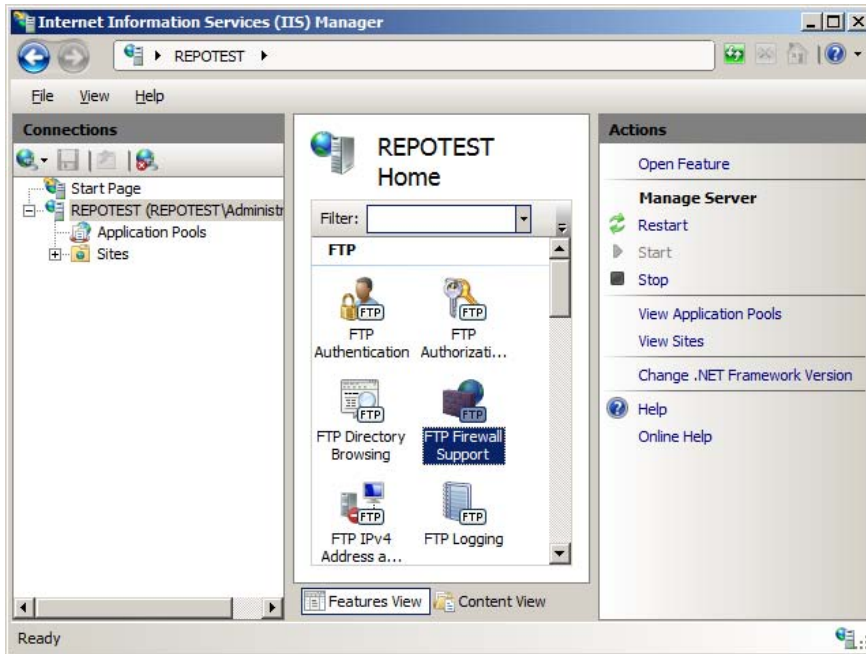
Configuring the Passive Port Range for the FTP service

In this section, we will configure the server-level port range for passive connections for the data channel from thin clients. Although the FTP client used by the HPDM Agent on the thin clients supports both an active and passive mode for the data channel, the passive mode enables the thin client to initiate both the control and data connections to the server, solving the problem of a firewall filtering the incoming data port connection to the thin client from the server. However, in order to support a firewall on the server, a passive port range needs to be specified and the server's firewall must be configured to allow traffic on this port range. Use the following steps to configure the Passive Port Range:

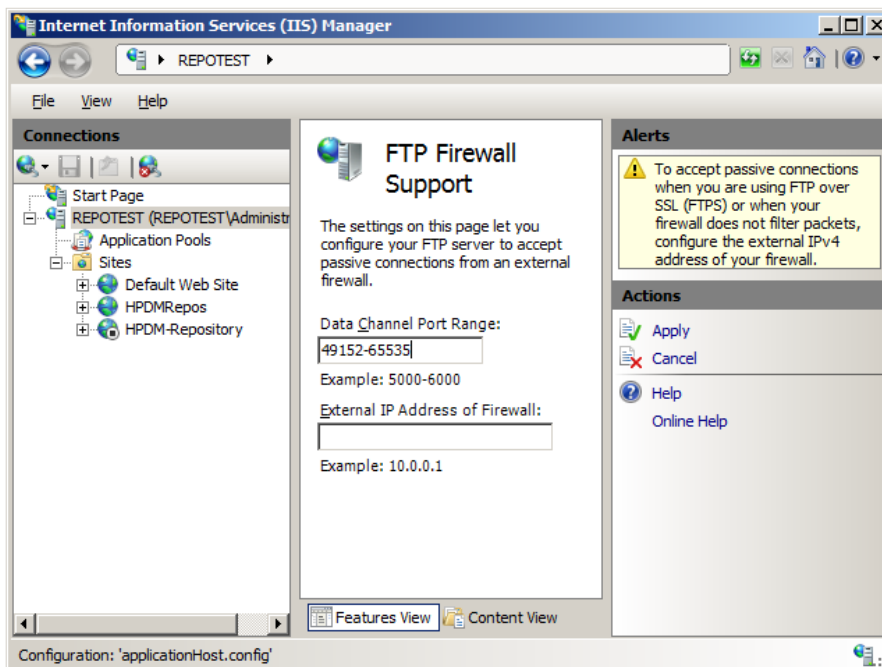
1. If the IIS 7 Manager is not already still open, click on the **Start > Administrative Tools > Internet Information Services (IIS) Manager**.



- In the Connections pane on the left side, click to select the server-level node, then double-click the **FTP Firewall Support** icon in the center pane.



- Enter a range of values for the **Data Channel Port Range**. The valid range for ports is 1024 through 65535. Ports from 1 through 1023 are reserved for use by system services. For our example, we use the port range of "49152-65535".

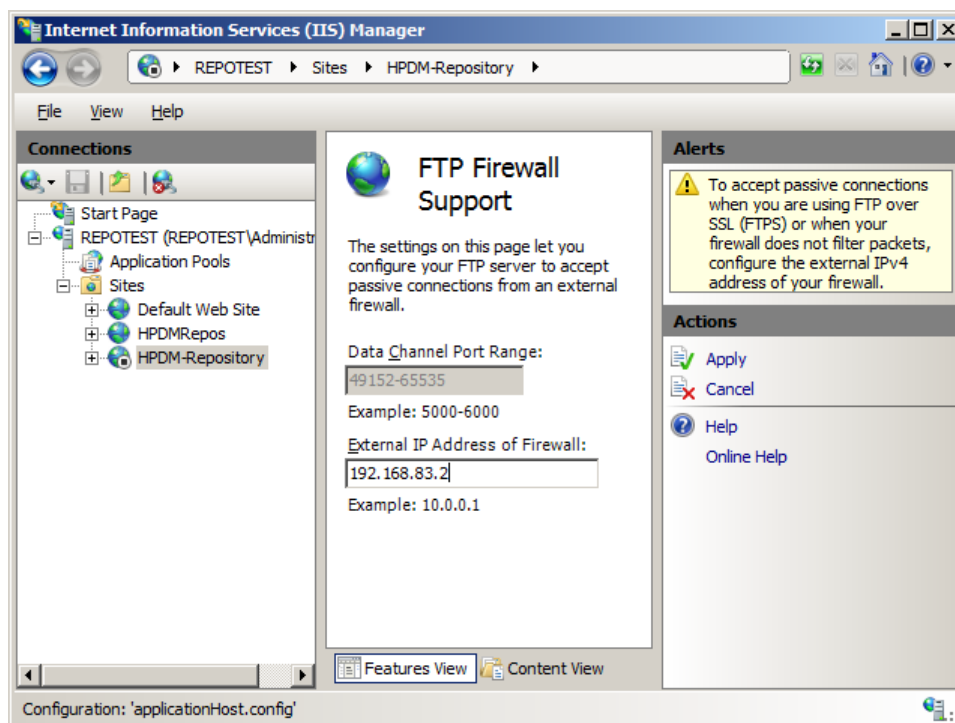


4. In the Actions pane, click **Apply**.
5. You may see a warning message at this point that indicates that the ports need to be added to the server firewall. We will be doing this a little later. Click **OK**.

Configuring the external IPv4 address for the FTP site

In order for the FTP site to accept passive connections when the Windows Firewall is enabled, you must specify the external address of the firewall (in most cases this is just the IP address of the server itself), in the FTP site configuration. In this section, we will configure the external IPv4 address for the FTP site that we created for the HPDM repository. To do this, use the following steps:

1. If the IIS 7 Manager is not already still open, click **Start > Administrative Tools > Internet Information Services (IIS) Manager**.
2. In the Connections pane on the left, expand the **Sites** node, click to select the FTP site we created earlier, and then double-click the **FTP Firewall Support** icon in the center pane.
3. Enter an IP address in the **External IP Address of Firewall** field. In our example, this is simply the IP address of the server itself.



4. In the Actions pane, click **Apply**.

Note: Besides IIS FTP configuration, we recommend another FTP configuration tool. Please see the chapter [FileZilla FTP server configuration](#).



Windows Firewall settings

In Windows Server 2008 R2, the built-in firewall service is provided to help secure your server from network threats and is enabled by default. If you choose to use the built-in Windows Firewall, you will need to configure your settings so that the HPDM and FTP traffic can pass through the firewall. This section will not only cover how to configure the FTP ports but also the basic ports used by HPDM. Please note that you will need to be logged in as Administrator or as a user that has administrator privileges. If you are only logged in using an account that has administrator privileges (and not as the Administrator account), then you will need to ensure that you open the command prompt by right-clicking the **Command Prompt** menu item that is located in the Accessories menu for Windows and selecting **Run as administrator**. This is required because the User Account Control (UAC) security component in the Windows Server 2008 R2 operating system prevents non-Administrator account access to the firewall settings.

Firewall settings for FTP

An exception is needed for both the control channel (port 21) and the port range for the passive data channel. Though this can be done in the GUI for the Windows Firewall, it is easier to add these rules from the command line. Use the following steps to add the rules:

1. Click **Start > All Programs > Accessories > Command Prompt**. If not logged on as Administrator, be sure to right-click on **Command Prompt** and select **Run as Administrator**.
2. To add an inbound rule for the command channel and allow connections to port 21, enter the following command and then hit **Enter**:

```
netsh advfirewall firewall add rule name="FTP (non-SSL)" action=allow  
protocol=TCP dir=in localport=21
```

3. To disable stateful FTP filtering so that Windows Firewall will not block FTP traffic to the passive port range, enter the following command and then hit **Enter**:

```
netsh advfirewall set global StatefulFtp disable
```



FileZilla FTP server configuration

FileZilla is free, open source, cross-platform FTP software, consisting of FileZilla Client and FileZilla Server. We just need FileZilla Server here.

1. Download FileZilla Server at <http://filezilla-project.org/>. Select **Download FileZilla Server**.



The screenshot shows the FileZilla website homepage. The browser address bar displays "http://filezilla-project.org/". The page features the FileZilla logo and the tagline "The free FTP solution". A navigation menu on the left includes links for Home, FileZilla (Features, Screenshots, Download, Documentation), FileZilla Server (Download), General (Contact, Forum, Project page, Wiki), and Development. The main content area is titled "Overview" and contains the following text:

Welcome to the homepage of FileZilla, the free FTP solution. Both a client and a server are available. FileZilla is open source software distributed under the GNU GPL. Support is available through our [forums](#), the [wiki](#) and the [bug and feature request trackers](#). In addition, you will find documentation on how to compile FileZilla and nightly builds for multiple platforms in the development section.

Quick download links

Two download buttons are visible: "Download FileZilla Client" (All platforms) and "Download FileZilla Server" (Windows only). The "Download FileZilla Server" button is circled in red. Below the buttons, the text reads: "Pick the client if you want to transfer files. Get the server if you want to make files available for others."

News

2010-11-21 - FileZilla Client 3.3.5.1 released

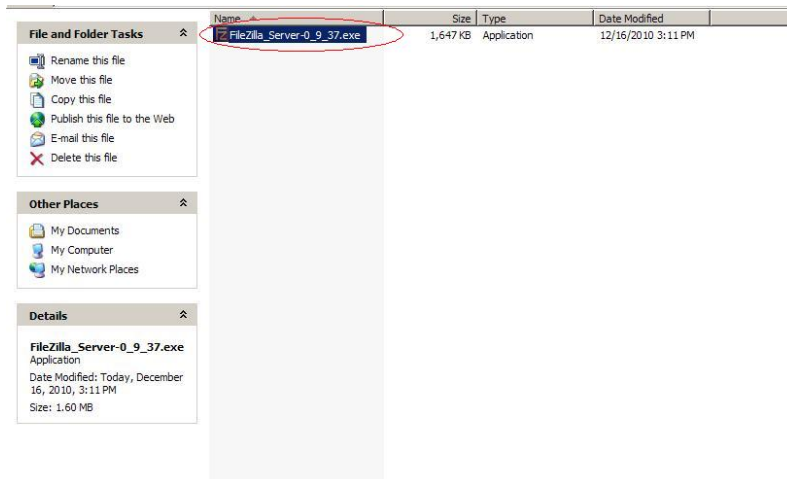
Bugfixes and minor changes:

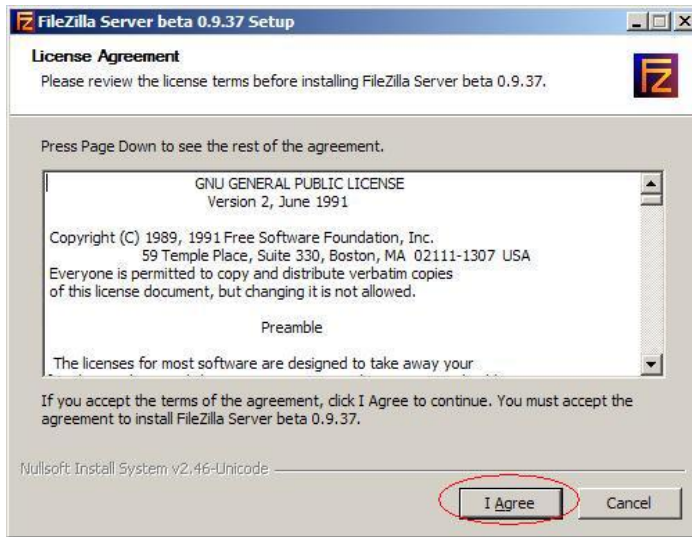
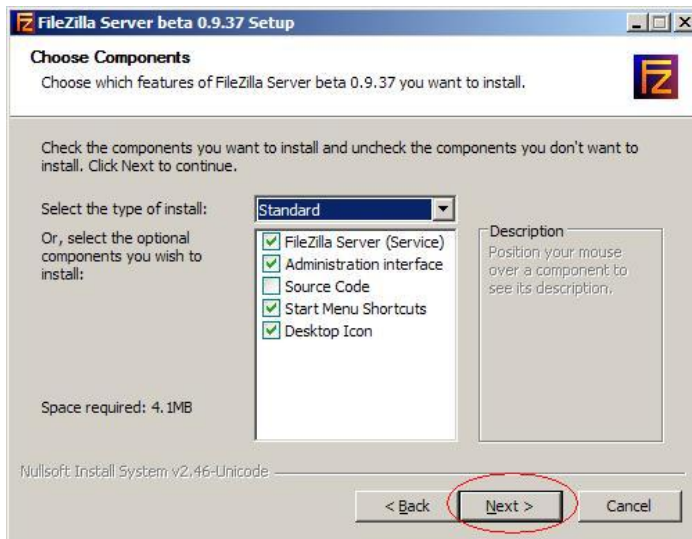


2. Select the Windows platform.

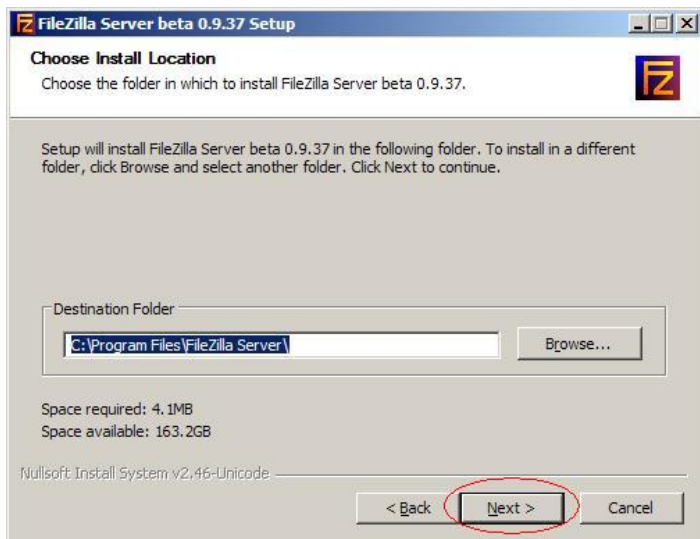


3. Download this file to the specified location of the server system, and double-click this file to install it.

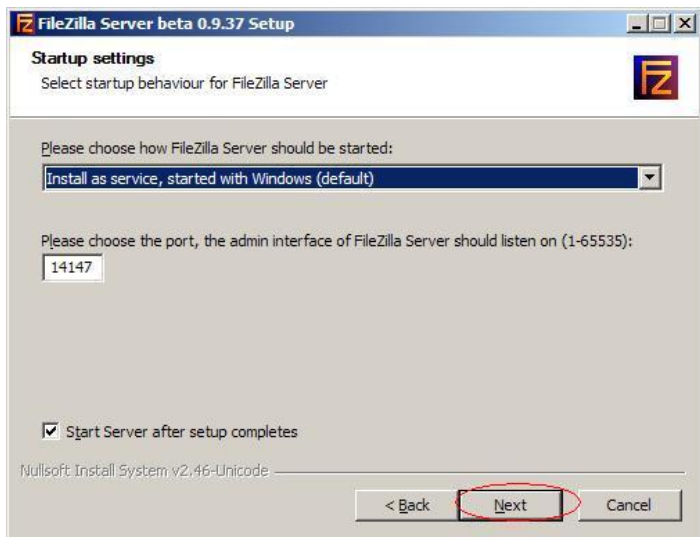


4. Click **I Agree**.5. Click **Next**.

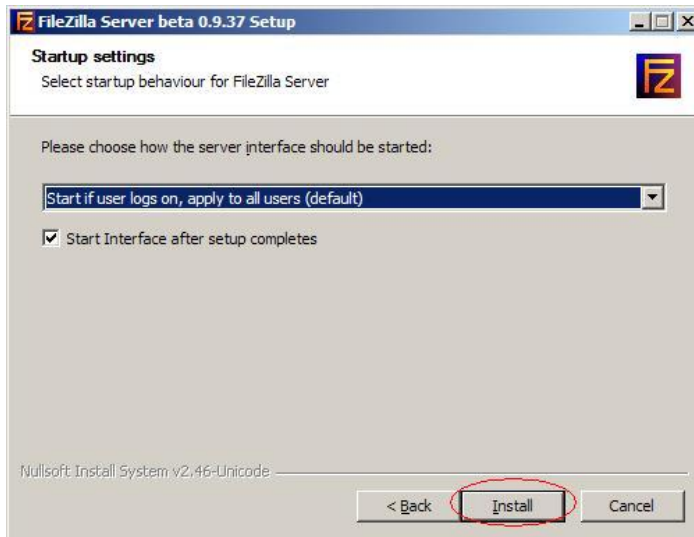
- Set the destination folder, then click **Next**.



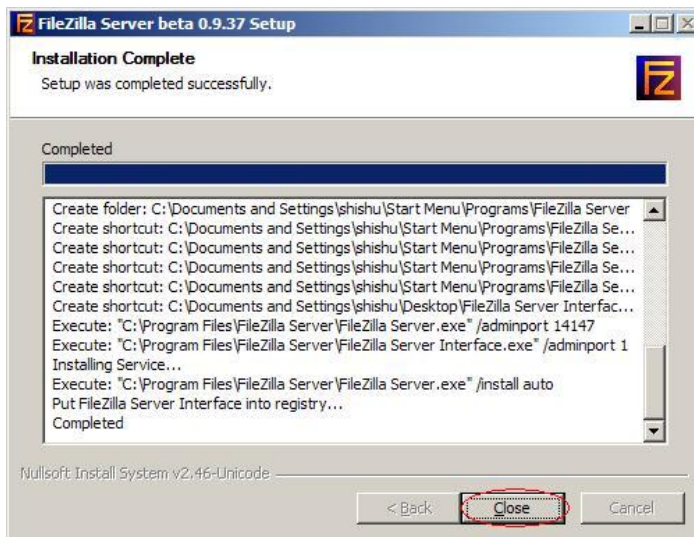
- Click **Next**.



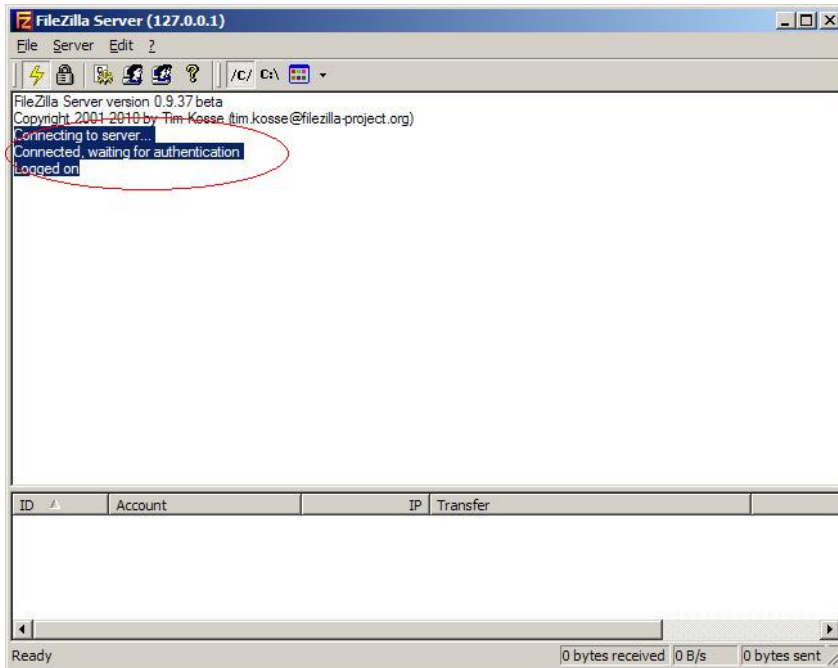
8. Click **Install**.



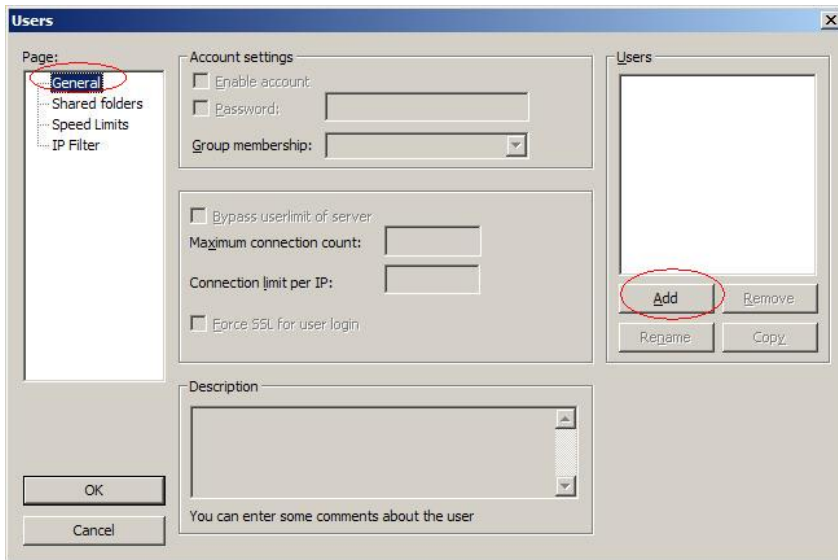
9. After the installation is complete, click **Close**.



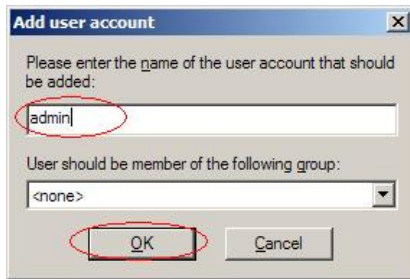
10. There will be a connected FileZilla Server dialog.



11. From the menu, select **Edit > Users**, and Users dialog will appear. Select the **General** page, and click the **Add** button to add a user.



12. Input a user name, then click **OK**.



Add user account

Please enter the name of the user account that should be added:

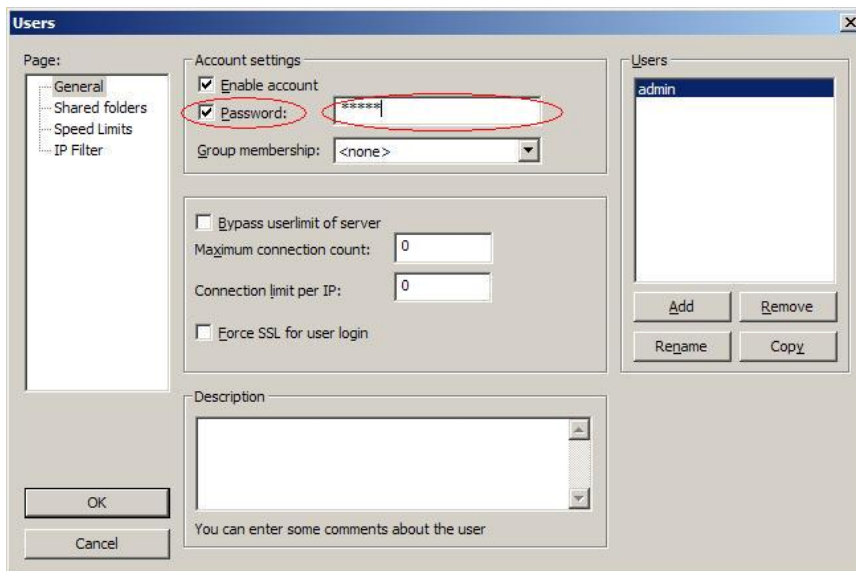
admin

User should be member of the following group:

<none>

OK Cancel

13. Check the **Password** option, then input your password.



Users

Page: General Shared folders Speed Limits IP Filter

Account settings

Enable account

Password: *****

Group membership: <none>

Bypass userlimit of server

Maximum connection count: 0

Connection limit per IP: 0

Force SSL for user login

Description

You can enter some comments about the user

Users

admin

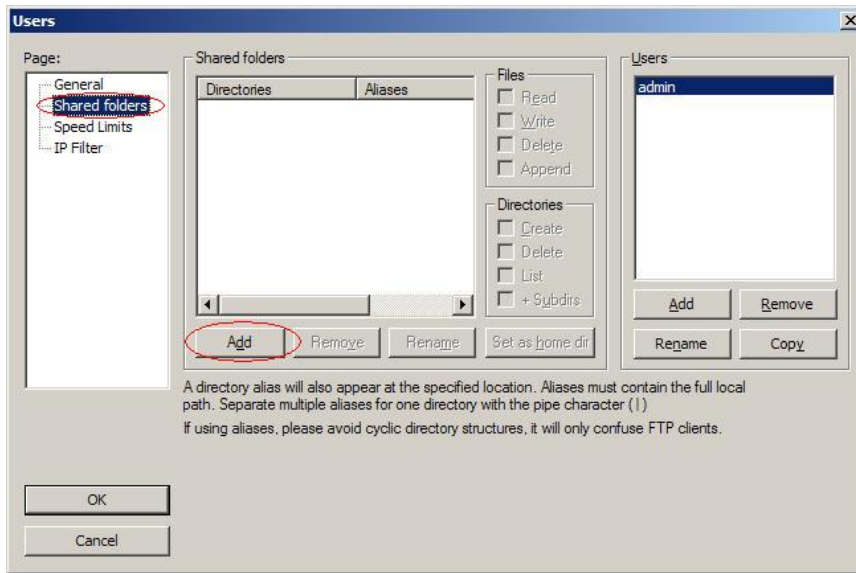
Add Remove

Rename Copy

OK Cancel



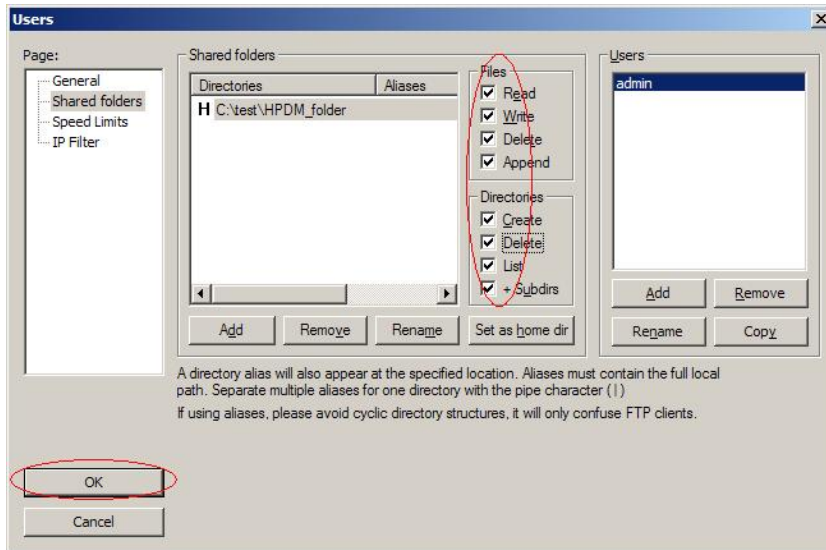
14. Select the **Shared folders** page, then click the **Add** button to add a shared folder.



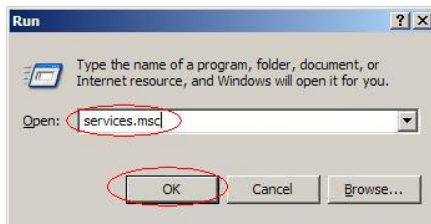
15. Select the shared folder, then click **OK**.



16. Back on the User dialog, check **Read**, **Write**, **Delete**, and **Append** options in Files panel, and check **Create**, **Delete**, **List**, and **+ Subdirs** options in Directories panel, then click **OK**.



17. The FTP server has been created, and we see this FTP service by inputting **services.msc** in the Windows "Run" dialog.



18. The service of the FileZilla Server FTP server has been started.

