2018

Titan FTP Server and Port Forwarding with a Firewall

A guide for configuring port forwarding with the Titan FTP Server for increased LAN security.

QuickStart Guide

Titan Servers and Port Forwarding with the Corporate Firewall

Corporate networks today rely on a router and/or firewall to protect their computers or LAN (Local Area Network) from unauthorized access by outside users. Firewalls provide a high level of security by preventing inbound traffic (from computers outside the LAN, on the Internet) while allowing outbound traffic.

To ensure users have access to a Titan server newly installed on the internal LAN without endangering the computers linked through the LAN, use port forwarding on the firewall to direct the TCP/IP traffic to the proper computer. **Port forwarding** is used by most routers/firewalls. Put simply, port forwarding literally forwards data incoming on a specific port to the same port on a different computer.

Both your router/firewall and Titan will need to be configured according to this QuickStart to use port forwarding.
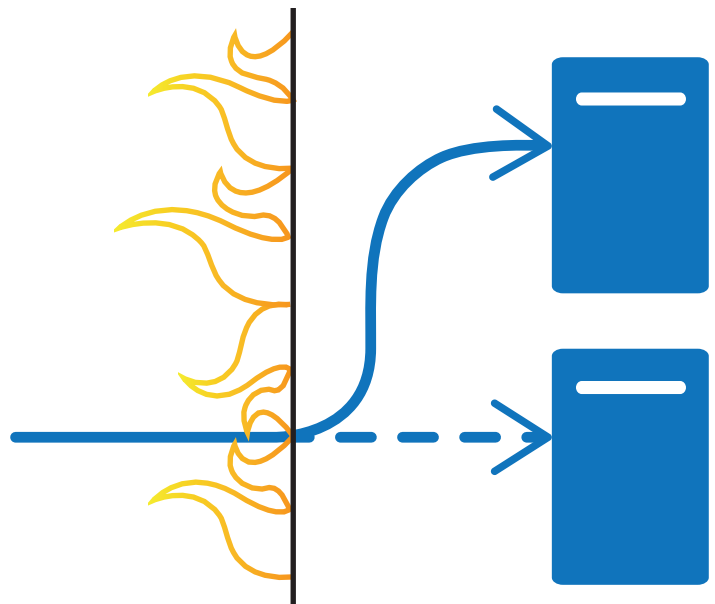
Configuring your Router/Firewall

During port forwarding, the firewall will redirect traffic to the Titan server based on IP address. Therefore, the LAN computers must use a static IP address the firewall can always refer to. If the Titan Server's IP address is DHCP (Dynamic Host Configuration Protocol) based, the firewall could forward the data to the wrong computer.

To set up a static IP on a Titan installed on an internal LAN-based computer:

1. Retrieve the external public IP address of the firewall, the internal IP address of the router, and the internal LAN IP address of the Titan server.

2. Have the Network/LAN Administrator reconfigure the firewall to forward server traffic to the Titan Server according to the following table:

Protocol	Ports to Route
FTP	21, 20, 50000-50050*
FTP/S	21, 990
SFTP	21

Protocol	Ports to Route
HTTP/WebDAV	80
HTTPS/WebDAVS	443
AS/2	443

We recommend opening a range of 10 to 50* ports for information from the firewall known as a passive port range. These ports will be used for transferring data and directory listings to the client. Do not use a single port, as this may result in data transfer failures for clients. Our example uses 50,000-50050, but this range can cover any sequence, so long as Titan's passive port range settings match. If you have heavy traffic through your firewall, you may want to specify a wider range of ports.

Configuring Titan FTP to Use a Router/Firewall

1. Run the Titan Administration utility and start the New Server Wizard. Follow the steps to create a new server. For more information on this process, see the Administrator's Guide: http://www.webdrive.com/product-support/cornerstone-mft/.

2. Click the dropdown arrow to choose your IP Address. Any available IP address indicates that the server will listen on all IP addresses that are configured on the PC along with the local IP address of 127.0.0, also known as localhost. Type the WAN address (the Public IP address for use outside the router). You do not need to type "http" (ie, myserver.com).

3. On the "Enable or disable FTP access for this server" page of the wizard, select **Enable FTP Services**. Select the FTP Port number by using the up/down arrows. Select **This server is sitting behind a router/firewall** and type the External WAN IP address of router/firewall. Click Next.

4. You must enable FTP access if you are using FTPS with explicit SSL (also known as AUTH SSL). The FTP protocol (RFC-959) establishes default ports for FTP traffic. Port 21 is the default port for the primary control connection, and port 20 is sometimes used for the default data connection. If you install a Titan Server on your internal LAN and have the requirement that users must be able to access the server from the Internet, your router must be configured with ports 21 and 20 open (or ports 21 and 990 for FTPS). The router must also be configured to provide port forwarding for traffic through the firewall to the computer being used as the FTP Server.

5. Finish the New Server Wizard and expand the newly-created server in the left-hand tree menu and select Connections. Select the Connections Advanced tab. Enable **Allow PASV mode connections**. Enable **Limit PASV Port range from** and set the range to the same range as the firewall. Once you have configured your settings, click Apply.
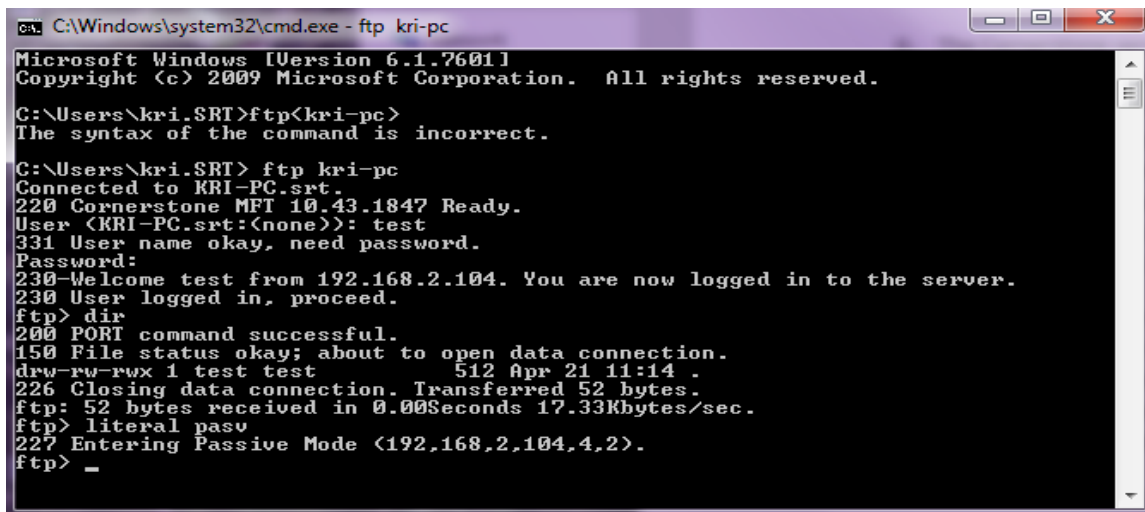
Testing Your Server

If you would like to test your server, download a secure file transfer client like WebDrive, or use the following instructions to test your server using a command prompt.

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Test your Server Using a Command Prompt

1. On the computer with Titan installed, open a command prompt and use the command line FTP utility to connect to the Titan server:

   ◊ Type: ftp <ip-address of server>

2. You will see a welcome message from the Titan server, including the IP address, which will look something like the test response below (192.168.2.104).

3. Log onto Titan using a user account or using anonymous if anonymous access is enabled.

4. Log on and issue the DIR command to see if a directory listing can be created. The Windows FTP client will run in Active/Port mode; you should see a directory listing of existing files:

   ◊ Type: dir

5. While still in the FTP session, test to see if the Titan Server will return the proper passive address and port for internal LAN clients:

   ◊ Type: literal pasv

6. Titan will respond with numbers like (192,168,2,104,4,2), the IP address and port Titan is listening on for a data connection from the client. The first four numbers should match the IP address the Titan Server is listening on. The last two numbers are the port, mathematically broken down. Since our port range is 1025-65535, the port will fall into this range, beginning at the low end and incrementing sequentially to the last port, then returning to the first port in the range. For our example, Titan used port 1026, written as 4 * 256 + 2 .

Once you succeed, connect to the server from the Internet in PASV mode; Titan should return information. If you receive an error, the firewall is not routing the passive ports correctly to the Titan server, or the Titan server is not returning the public/external IP address of the firewall as part of the response to the PASV command.

System Requirements

Supported Operating Systems

- Windows Server 2012-R2 editions, 32-bit and 64-bit

- Windows Server 2012, all editions, 32-bit and 64-bit

- Windows Server 2008-R2, all editions, 32-bit and 64-bit

- Windows Server 2008, all editions, 32-bit and 64-bit

- Windows Server 2016, all editions, 32-bit and 64-bit

Minimum Hardware Requirements

- 2 GHz Pentium® class processor

- 4GB of RAM is required; 8GB of RAM is recommended

- Minimum 100MB of free disk space for the application

- Minimum SVGA (800x600) resolution display is required to run the Administration console program.

Minimum Software Requirements

- Microsoft .NET Framework v4.0 is required

- Microsoft SQL Server 2005 or later is required

- Microsoft SQL Server Management Studio Express (only if you plan to enable Statistics Tracking and reporting)

Limitations

- Titan FTP Server is a multi-threaded, dynamic server solutions for the Microsoft Windows operating system. While designed to handle an unlimited number of user connections and servers, like all software, Titan is limited by the resources of the computer; most notably, those limitations imposed by the Windows Sockets (WINSOCK) Library.

About South River Technologies

South River Technologies (SRT) is an innovator in secure file management software. SRT software allows users to securely access, manage, and collaborate on files over the Internet, streamlining business processes to improve productivity. SRT's products enhance customers' existing applications by instantly enabling secure access and collaboration within those applications. More than 90,000 customers in 140 countries use SRT's software to make remote file access and collaboration more efficient for their customers, partners, and distributed workforce.

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