

Configuring MassTransit Server to listen on ports less than 1024 using xinetd

Summary:

This article explains how to configure MassTransit to listen on ports less than 1024 without running as root using the xinetd utility. Most commonly, this configuration is necessary to allow MassTransit to listen on the standard FTP ports (20 and 21) or the standard TCP/IP Secure port (443) without running as root. These configuration options also allow MassTransit to listen with TCP/IP on port 80.

Consult the sections below to:

- Configure FTP port redirection using xinetd
- Configure TCP/IP and TCP/IP Secure port redirection using xinetd

Note that to use this configuration to listen on the default FTP ports without running as root, you will need to use MassTransit 4.5.1x22 or later.

Limitations:

1. xinetd can only re-direct from well known ports (TCP/IP – 80, TCP/IP Secure – 443, FTP - 21).
2. When configuring multi-homed setups for FTP, the users must use "localhost" as the IP for port redirection.

Background:

In Mac OS X, only the root user has access to ports below 1024. Because of this limitation, in order for MassTransit to listen on the standard FTP or TCP/IP Secure ports, MassTransit needed to be run with root privileges.

In order to avoid this requirement, xinetd can be used to redirect traffic from one port to another. This allows MassTransit to be configured to listen on a port above 1024 but receive incoming traffic on a port below 1024.

Xinetd is just similar to inetd. For background information on xinetd or inetd please refer to the documentation at <http://www.xinetd.org/>

To Configure FTP Port Re-direction Using xinetd:

In order to have a MassTransit FTP server on the default ports of 20 and 21 without root user privileges, you must first configure the MassTransit FTP server listen on ports above 1024. This configuration requires MassTransit 4.5.1x22 or later and is described at the end of this article.

Things to keep in mind:

- If xinetd or any other application/process is already listening on the ports specified for the MassTransit FTP listen, the FTP listen will fail. Make sure

that your MassTransit FTP listen is enabled without an error before continuing to configure xinetd.

- A user must have root privileges in order to configure xinetd.

Xinetd Setup:

1. Configure an FTP Server listen in MassTransit that uses ports > 1024. See the section “To Configure an FTP Server Listen With Non-Default Ports.”
2. Run ConfigMTXinetd script provided with this article to automatically configure xinetd.
3. Select ‘FTP Server’ entry from the drop down list.
4. Enter the IPAddress that MassTransit is configured for. The default IP Address is set to localhost.
5. Enter a port number to which you would like xinetd to re-direct traffic to. This port number must be the same as that in ‘FTP Command Port’ field of Configure FTP Server window (Figure 1 – See below.)
6. Click ‘Configure’ button on the script.
7. Script should display ‘xinetd configuration complete’ message.
8. xinetd should now be configured to re-direct any traffic from port configured in the MT FTP Server listen to standard FTP port 21.

To configure SSL Port re-direction using xinetd:

MassTransit TCP/IP Secure must also be configured at a port > 1024 in order to run MT with non-root privileges. For instructions on properly configuring TCP/IP Secure listen, please refer to MassTransit manual.

1. After configuring MassTransit, run ConfigureMTXinetd script attached to this article.
2. xinetd is now configured to re-direct any traffic from the standard SSL port 443 to the port configured in the MT TCP/IP Secure listens.
3. Select ‘TCP/IP Secure’ entry from the drop down list.
4. Enter the IPAddress that MassTransit is configured for. The default IP Address is set to localhost.
5. Enter a port number to which you would like xinetd to re-direct traffic to. This must be the same port number that MassTransit TCP/IP Secure listen is configured for.
6. Click ‘Configure’ button on the script.
7. Script should display ‘xinetd configuration complete’ message.
8. xinetd should now be configured to re-direct any traffic from port configured in the MT TCP/IP Secure listen to standard TCP/IP Secure port 443.

To Configure an FTP Server Listen With Non-Default Ports:

1. In MassTransit, go to Setup and click on ‘**Incoming Calls**’ tab.
2. Click on the ‘**Add**’ button and select ‘**FTP Server**’ from method drop down list. The following window will appear:

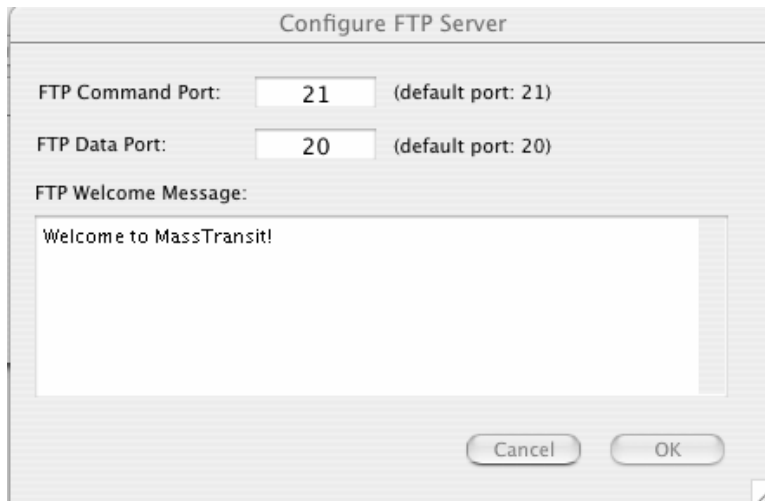


Figure – 1: Configure FTP Server window of MassTransit

Note: As stated in the window, ports 21 and 20 are default command and data ports respectively.

3. FTP requires two ports to function properly. Enter two different port numbers of your choice. If you wish to run MT as non-root user, then you must enter ports >1024.
4. Click 'OK' to close the window and 'Save' to close the setup dialog. Verify that MassTransit is listening on FTP. If you receive an error, you may need to select different ports.

Note: If you select ports other than 21 and 20, you **MUST** configure xinetd as described above or FTP clients will not be able to successfully connect unless they manually specify the port numbers you selected.