



Upgrading Windows 2000 MetaFrame Servers



Revision History

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1 Overview

This document is intended to provide detailed information regarding the upgrade of production Windows 2000 MetaFrame 1.8 servers to apply Windows 2000 Service Pack 1 along with MetaFrame 1.8 Feature Release 1 (FR1)/Service Pack 2. The following sections detail the process involved in ensuring the successful upgrade of these servers in an enterprise environment.



2 Required Software

In order to upgrade Windows 2000 MetaFrame 1.8 servers to apply Service Pack 1, along with MetaFrame 1.8 FR1/SP2, you will need the following:

- ✓ A Copy of Windows 2000 Service Pack 1, which can be downloaded (or directly installed) from <http://www.microsoft.com/windows2000/downloads/recommended/sp1/x86DLType.asp> or <http://windowsupdate.microsoft.com/>.
- ✓ A Copy of MetaFrame Feature Release 1/Service Pack 2, which can be downloaded from http://www.citrix.com/support/ftp_meta18a.asp. This downloads an executable, *FR1CD_MF18.exe* that contains all necessary files for the install.



3 Procedure

The following sections detail the process of upgrading Windows 2000 MetaFrame 1.8 servers to apply Windows 2000 Service Pack 1, along with MetaFrame 1.8 FR 1/SP2. This process involves moving each server off of its current subnet, installing the service packs, and re-joining the server to the subnet.

Depending on the number of servers to be upgraded in your enterprise, it may be feasible to have users stay off of the servers for the period of time needed to perform the upgrade.

3.1 Pre-Processing Procedures

The following Pre-Processing procedures are recommended, but not necessary to complete the upgrade successfully. These procedures merely help to optimize the upgrade process by decreasing the time it takes for each individual upgrade. The next section, *Section 3.2 Upgrade Steps* presumes that the Pre-Processing Procedures listed in this section were adhered to before beginning the upgrade process.

- ✓ **Download Windows 2000 Service Pack 1.** Navigate to <http://www.microsoft.com/windows2000/downloads/recommended/sp1/x86DLType.asp>. Follow the prompts on the screen. Choose Network Installation to download only the components necessary for the upgrade. Save the downloaded executable (sp1network.exe) onto a network directory on a file server.
- ✓ **Download MetaFrame 1.8 Feature Release 1/SP2.** Navigate to http://www.citrix.com/support/ftp_meta18a.asp. Choose to download the *Complete Feature Release 1/Service Pack 2 CD Image*. Save the downloaded executable (FR1CD_MF18.exe) onto a network directory on a file server.

3.2 Upgrade Steps

Although there are numerous tasks involved in order to upgrade the servers, each task is relatively simple to perform. This section describes the steps that will ensure a successful upgrade of a Windows 2000 MF 1.8 server to a Windows 2000 (SP1) MetaFrame 1.8 FR1/SP2 server.

For each server you wish to upgrade, the following steps should be adhered to:

1. Ensure that there are no users logged into the server.
2. Remove the server (test server) from the current subnet (production), by changing its subnet mask and IP address. For example, if the original server specifications for subnet mask and IP address were 255.255.255.0 and 10.10.1.1 respectively, alter them so that the subnet mask is 255.255.254.0 and the IP Address is 10.10.2.1. We will now refer to this new subnet as the test subnet.
3. On a server (production server 1) in the original subnet (production), type "Qserver /delete" at the command prompt to delete all browser information from the master browser for the subnet. At this point, all browser information is deleted from the Master Browser (MB). The purpose of this step is to remove test server's browser information from the Master Browser of the production subnet so clients are not able to see the server or any of its published apps through Program Neighborhood when trying to create an ICA connection.
4. Force an election on the production subnet to update the Master Browser. To do so, open the command prompt on a server in the production subnet and type "Qserver /election". After waiting approximately 30 minutes, typing "Qserver" at the command prompt of a server in the production subnet should show only the servers in its subnet. You can decrease the waiting period by adjusting the value of the "Master ICA Browser Refresh Interval" in the Citrix Server Administration utility, on the Browser tab of each server in the subnet. The default interval from the Unattended Installation is 1800 milliseconds (30 minutes). The "Master ICA Browser



Refresh Interval" setting refers to the interval that communication is sent to the Master Browser from the server indicating the current set of Published Applications on the server, the status of the server (if online), etc... Decreasing these values will decrease the time it takes for the election to complete.

5. Force an election on the test subnet by typing "Qserver /election".
6. On production server 1, go to the command prompt and type "Qserver" to see the servers on the current subnet. Only the servers on the production subnet should appear.
7. If you wish to publish some applications while test server is on the test subnet, you may do so at this point. Likewise, if you want to publish applications on any server in the production subnet, you can do so now.

Note: If its necessary to have clients connect to the server that you are in the process of upgrading, make sure that they specify an appropriate server's IP Address in the Custom ICA Connection Properties Address List of Program Neighborhood.

8. **Install Windows 2000 Service Pack 1 on test server.** Insert the CD into the CD-ROM drive of test server. Run *sp1network.exe*. Running this executable extracts files and prompts you to begin the installation of the service pack. You can view the Read Me file for details on the Service Pack features that will be installed. When the installation is completed, reboot the server.
9. When test server restarts, it will be fully functional on the test subnet. Published Application Manager, Citrix Server Administration, etc... should all run without issues.
10. **Install MetaFrame Feature Release 1/SP2 on test server.** To install FR1, you must first put the server in install mode. To do so, open a command prompt and type "change user /install". Similarly, you could go to the Control Panel and choose Add/Remove Programs to install the service pack. Going through Add/Remove Programs to install applications also puts the server in install mode. Having the server in install mode allows applications to be installed on the server.

Insert the CD into the CD-ROM of test server. Run *FR1CD_MF18.exe*. When prompted, specify local directory to extract the program files to. For this example, we'll call the directory c:\SP2. After all of the files have been extracted, navigate to the c:\SP2\FR1CD_MF18\MF18_W2K directory, and run *setup.exe*. This will kick off the installation. Follow the prompts on the screen to complete the installation. Reboot the server when prompted to do so after the installation has completed.

11. When test server restarts, the server will be fully functional. All published applications still exist on the server/subnet, connections can be made directly to these published applications, etc...
12. **Add Upgraded Server Back to the Original Subnet.** Change test server's subnet mask back to its original subnet mask and IP Address. Set the subnet mask back to 255.255.255.0 and IP Address back to 10.10.1.1. Reboot the server.
13. When the server restarts, it will be back on the production subnet.
14. Repeat step 3 (above) to delete all browser information from the Master Browser and force a new Master Browser election. When the election completes, test server will be reflected as being part of the production subnet. The published applications on this server will now be available for client access.
15. Repeat steps 1-14 for each server being upgraded.



4 Issues and Concerns

The following is a list of possible issues that can be encountered during specific circumstances while upgrading the servers. Although all of these may not be preventable, all consultants performing the upgrade should be aware of the possible issues that can arise.

- ✓ While performing the upgrade, the server being upgraded will not be able to see other servers on the production subnet, unless a router exists between the servers. This is the main reason why it is recommended to download and install these service packs from a CD, rather than a server on the network.
- ✓ Failing to delete the Browser information from the Master Browser, using "Qserver /delete", then forcing an election, using "Qserver /election", could result in varying results when typing "Qserver" at the command prompt of the production subnet. Some tests have shown that when typing "Qserver" on a server in the production subnet without first using the /delete and /election parameters to force a new election, may result in varying Master Browser information. For example, one time "Qserver" may respond back with the appropriate MB and servers for the subnet, while the next time it could display the MB and servers for an alternate subnet.
- ✓ If at all possible, it will cause less confusion and troubleshooting issues if users could keep from connecting to the servers during the upgrade process. It is very possible, and likely, that users have created ICA connections to particular published applications (that may be only installed and published on one server), and try to connect to these published applications during the server's upgrade. Although the MB for the subnet would not display the published application as an available published application if the users were to attempt to create a new ICA connection, the existing ICA connection icon the user(s) had previously created still exist in their Program Neighborhood.