sgi

DMF™ 6 Client Guide for Windows® Systems

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About This Guide

This publication provides information about the SGI® DMF™ client on Microsoft Windows® systems.

Related Publications

For information about this release, see the SGI InfiniteStorage™ Software Platform (ISSP) release notes (README.txt) and the DMF release notes (README_DMF.txt).

The following publications contain additional information:

- *DMF 6 Administrator Guide*
- *DMF 6 Filesystem Audit Guide*

Obtaining Publications

You can obtain SGI documentation as follows:

- See the SGI Technical Publications Library at http://docs.sgi.com. Various formats are available. This library contains the most recent and most comprehensive set of online books, man pages, and other information.

- You can view man pages on a Linux system by typing man *title* at a command line.

- The /docs directory on the ISSP DVD or in the Supportfolio™ download directory contains the following:

  - The ISSP release note: /docs/README.txt

  - DMF release notes: /docs/README_DMF.txt

  - A complete list of the packages and their location on the media: /docs/RPMS.txt

  - The packages and their respective licenses: /docs/PACKAGE_LICENSES.txt

- The release notes and manuals are provided in the `noarch/sgi-isspdocs` RPM and will be installed on the system into the following location:

  `/usr/share/doc/packages/sgi-issp-`*ISSPVERSION*`/`*TITLE*

Conventions

The following conventions are used throughout this document:

Convention	Meaning
`command`	This fixed-space font denotes literal items such as commands, files, routines, path names, signals, messages, and programming language structures.
variable	Italic typeface denotes variable entries and words or concepts being defined.
user input	This bold, fixed-space font denotes literal items that the user enters in interactive sessions. (Output is shown in nonbold, fixed-space font.)
[ ]	Brackets enclose optional portions of a command or directive line.
...	Ellipses indicate that a preceding element can be repeated.
GUI	This font denotes the names of graphical user interface (GUI) elements such as windows, screens, dialog boxes, menus, toolbars, icons, buttons, boxes, fields, and lists.

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Introduction

This chapter discusses the following:

- "Overview of the Features" on page 1
- "Permissions Required for DMF Operations" on page 2
- "Software Requirements" on page 2
- "Using the DMF Client" on page 2

Overview of the Features

The DMF client for Windows systems lets users and administrators control DMF via file shares configured on the Samba server. The Samba server must have SGI enhanced Samba installed, and may be either the DMF server or a CXFS client-only node.

Using Windows Explorer, you can do the following for files on which you have the appropriate permission, depending upon site-specific configuration:

- View DMF file properties
- Execute the following DMF user operations:

    - Recall files, similar to the functionality of the dmget(1) command

    - Migrate files, similar to the functionality of the dmput(1) command

    - Set site tags, similar to the functionality of the dmtag(1) command

- Set a project ID, similar to functionality of the dmprojid(8) command

Permissions Required for DMF Operations

DMF operations require the following permissions or administrative rights on the Samba server:

- Viewing DMF file properties requires that the user has read permission or administrative rights

- Recalling files requires that the user has read, write, or execute permission or administrative rights

- Migrating files and setting site tags requires that the user is the file owner or has administrative rights

- Setting project IDs requires that the user has administrative rights

Software Requirements

The DMF client for Windows requires the following:

- A supported version of Windows as listed in the DMF release note

- The version of SGI enhanced Samba that is supported by the associated ISSP release

Using the DMF Client

Note: The figures shown here are examples. The actual menus and dialogs may differ at your site, depending upon your configuration. In addition, if the Group Policy is in effect, certain features may be disabled. See "Setting Group Policy Settings" on page 9.

This section discusses the following:

- "DMF Submenu" on page 3
- "DMF Tab" on page 5

DMF Submenu

If a file or folder is within a filesystem managed by DMF, you will see a **DMF** submenu when you click on its icon within Windows Explorer. Figure 1-1 shows an example.
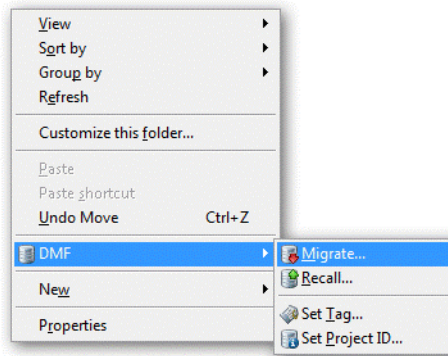
Figure 1-1 DMF Submenu

For example, to migrate the files in a given folder, you would click on the folder and select the following:

DMF
> **Migrate ...**

This would invoke the **DMF — Migrate** dialog, which would let you choose the scope of the operation (such as all files, but not any subfolders) and optionally free the space in the online disk after the migration takes place. Click **OK** to complete the action or **Cancel** to cancel it. Figure 1-2 shows an example.
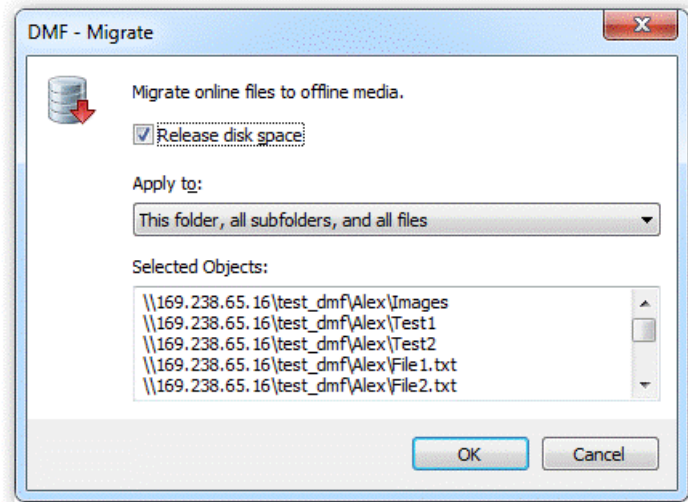
Figure 1-2 Windows Client: Migrate Dialog

DMF Tab

If you click on the **Properties** menu selection (see Figure 1-1) for a file or folder within a filesystem managed by DMF, you will see a **DMF** tab (shown in Figure 1-3). This tab lets you perform actions by clicking **Migrate** or **Recall**, or clicking **Advanced** to access **Site Tag** (similar to the functionality of the dmtag(1) command) and **Set Project ID** (similar to the dmprojid(8) command).
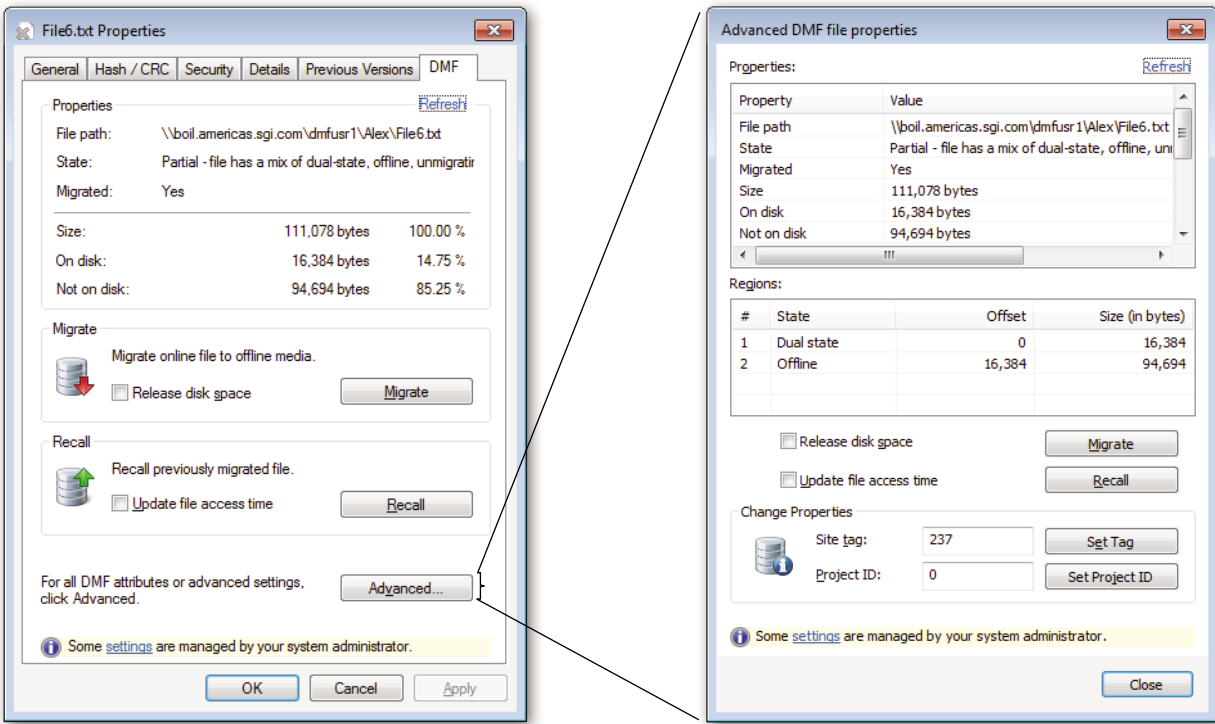
Figure 1-3 DMF Tab on the Properties Dialog for a File

Installation and Configuration

This chapter discusses the following:

- "Installing the DMF Client" on page 7
- "Enabling Support for the DMF Client on the Samba Server" on page 8
- "Setting Group Policy Settings" on page 9

Installing the DMF Client

To install the DMF client for Windows, do the following using the account that has **local administrator rights with elevated privileges**:

1. Install the **DMF Client Installer for Windows** software onto the DMF server, as directed in the ISSP release note installation procedure. The files will be installed in the following location on the DMF server, where *DMFVERSION* is a variable that represents the DMF release version:

   /opt/dmf/client-dist/*DMFVERSION*/windows/all/noarch

   For example, for the DMF 6.4 release:

   /opt/dmf/client-dist/6.4.0/windows/all/noarch

2. Transfer the client software from the DMF server to the Windows node.

3. Install the client software using one of the following installation files:

   - 32–bit platform: DmfClientSetup-x86.msi

   - 64–bit platform: DmfClientSetup-x64.msi

   You can perform an interactive install or use the quiet method:

   - Interactive install:

     a. Open the Windows Explorer folder that contains the .msi file for your target Windows platform.

     b. Double-click on the .msi file and follow the setup wizards.

- Quiet method:

    a. Start the command prompt.

    b. Run the following commands, as appropriate for your platform:

       – 32–bit platform:

          ```
          msiexec.exe /i DmfClientSetup-x86.msi /quiet
          ```

       – 64–bit platform:

          ```
          msiexec.exe /i DmfClientSetup-x64.msi  /quiet
          ```

To uninstall, see "Uninstall the DMF Client Software" on page 18.

Enabling Support for the DMF Client on the Samba Server

Note: The following procedure assumes that the Samba server has been installed and configured. For details about configuring Samba, see the Samba documentation supplied with the operating system.

To enable DMF support for Windows clients, do the following on the Samba server:

1. Verify that the required RPMs for SGI enhanced Samba and the DMF client have been installed:

   ```
   samba# rpm -qa | grep sgi-samba
   samba# rpm -qa | grep dmf-libs
   ```

2. Add the following set of parameters to the share configuration section in the /etc/samba/smb.conf file, creating one set for each filesystem that is managed by DMF:

   ```
   [DMF_managed_filesystem_share_name]
   dmapi support = yes
   vfs objects = dmf_ext
   dmf_ext:dmf_enabled = 1
   ```

   The above parameters do the following, respectively:

- Enables FILE_ATTRIBUTE_OFFLINE, which supplies an offline icon in Windows Explorer for offline files in the managed filesystem (setting this parameter in the share section is a best practice rather than a requirement)

- Includes the DMF extension in the virtual filesystem (VFS) set of modules

- Denotes that the shared folder or filesystem is enabled for DMF

3. Restart the smb service:

```
samba# service smb restart
```

Note: If the Samba server is a CXFS client-only node, specify its hostname for the VALID_ROOT_HOSTS parameter in the DMF configuration file on the DMF server. See *DMF 6 Administrator Guide* or the dmf.conf(5) man page.

Setting Group Policy Settings

For Windows Vista and later versions, you can also optionally install the DmfGroupPolicySetup.msi file on computers used by Windows administrators to define group policies. (Do not install this software on every DMF client.) This software installs templates that make it easy to define the policies using standard Windows UI tools. The DmfGroupPolicySetup.msi file applies to both 32-bit and 64-bit platforms.

The Windows administrator can use specific registry key settings and the Windows Group Policy to control the behavior of the DMF client for Windows systems, specific to particular computers and users.

Note: Settings for the user policy override the corresponding settings for the computer policy.

The policies are located as follows:

- Computer policy:

  HKEY_LOCAL_MACHINE\SOFTWARE\Policies\SGI\DMF Client\DmfShellExt

- User policy:

  HKEY_CURRENT_USER\SOFTWARE\Policies\SGI\DMF Client\DmfShellExt

For Windows Vista and later releases, the Windows administrator can use the following standard Windows UI tools to define DMF group policies:

- **Group Policy Management Editor** (gpmc.msc)

- **Local Group Policy Editor** (gpedit.msc)

The menu paths are as follows:

- Group policy computer configuration:

  Computer Configuration
      > Policies
          > Administrative Templates
              > SGI
                  > DMF Client
                      > DMF Shell Extension

- Group policy user configuration:

  User Configuration
      > Policies
          > Administrative Templates
              > SGI
                  > DMF Client
                      > DMF Shell Extension

- Local group policy computer configuration:

  Computer Configuration
      > Administrative Templates
          > SGI
              > DMF Client
                  > DMF Shell Extension

- Local group policy user configuration:

  User Configuration
  > **Administrative Templates**
  > **SGI**
  > **DMF Client**
  > **DMF Shell Extension**

Note: User settings override the corresponding computer settings.

Table 2-1 lists the settings available in the UI and the corresponding registry parameters. Each of the registry values is of type REG_DWORD. The default value is the same as the **Not Configured** value in the UI. For more information in the UI, see the online help.

Table 2-1 Registry Settings for DMF Shell Extension

UI Setting Selection	Registry Parameter	Description
Remove "Advanced" button	HideAdvancedTab	Removes the **Advanced** button from the **DMF** tab on the **Properties** dialog. When enabled, users cannot use the **Advanced DMF file properties** dialog to view or change DMF properties. • **Disabled** or **Not Configured** or 0 = Button is visible (default) • **Enabled** or 1 = Button is hidden
Remove "DMF" menu	HideMenu	Removes the **DMF** menu from **Windows Explorer** and from other programs that use the **Windows Explorer** browser, such as **My Computer**. When enabled, users cannot use this menu to change the DMF properties of managed filesystems available from their computers. • **Disabled** or **Not Configured** or 0 = Menu is visible for managed filesystems (default) • **Enabled** or 1 = Menu is hidden

UI Setting Selection	Registry Parameter	Description
Do not display "*Some settings are managed by your system administrator*" text	HidePolicyInfoText	Removes the informational text, which will appear if any of the other DMF registry settings are present in the registry: • **Disabled** or **Not Configured** or 0 = Text is visible (default) • **Enabled** or 1 = Text is hidden
Remove "Refresh" Link	HideRefresh	Removes the **Refresh** link from the **DMF** tab in the **Properties** dialog and from the **Advanced DMF file properties** dialog: • **Disabled** or **Not Configured** or 0 = Link is visible, which allows the user to refresh DMF properties without closing the tab or dialog (default) • **Enabled** or 1 = Link is hidden
Remove "Regions" list	HideRegions	Removes the **Regions** list from the **Advanced DMF file properties** dialog: • **Disabled** or **Not Configured** or 0 = List is visible (default) • **Enabled** or 1 = List is hidden
Remove "DMF" tab	HideTab	Removes the **DMF** tab from **Windows Explorer** and from other programs that use the **Windows Explorer** browser, such as **My Computer**. When enabled, users cannot use this tab to view or to change the DMF properties of managed filesystems available from their computers. • **Disabled** or **Not Configured** or 0 = Tab is visible for managed filesystems (default) • **Enabled** or 1 = Tab is hidden

Table 2-2 Registry Settings for DMF Operations

UI Setting Selection	Registry Parameter	Description
Migrate	Migrate	Allows the user to perform migration via the **Migrate** button and menu: • **Disabled** or 0 = The user cannot perform migration and the button and menu are hidden • **Enabled** or **Not Configured** or 1 = The user can perform migration (default)
Project ID	ProjectID	Allows the user to view project IDs and potentially make changes via the **Set Project ID** button and menu (if project IDs are supported by the filesystem): • **Disabled** or **Enabled**+**Hidden** or 0 = Hides the project ID field and the **Set Project ID** button and menu • **Enabled**+**Read Only** or 1 = Allows the user to view the project ID field but hides the **Set Project ID** button and menu • **Enabled**+**Change Allowed** or **Not Configured** or 2 = Allows the user to view and to set the project ID (default)

UI Setting Selection	Registry Parameter	Description
Recall	Recall	Allows the user to explicitly recall migrated files via the **Recall** button and menu: • **Disabled** or 0 = The button and menu are hidden • **Enabled** or **Not Configured** or 1 = The **Recall** button and menu are visible (default)
Site Tag	SiteTag	Allows the user to view site-specific tags and potentially make changes via the **Site Tag** button and menu: • **Disabled** or **Enabled**+**Hidden**, or 0 = The user cannot view or set the site tags, the button and menu are hidden • **Enabled**+**Read Only** or 1 = The user can view the site tags but not set them, the button and menu are hidden • **Enabled**+**Change Allowed** or 2 = The user can view and set site tags (default)

For more information about using group policies, see the following links:

https://technet.microsoft.com/en-us/windowsserver/bb310732.aspx

https://en.wikipedia.org/wiki/Group_Policy

https://support.microsoft.com/en-us/kb/307882 (useful information that applies beyond Windows XP)

Troubleshooting

To assist the administrators , this chapter discusses the following:

- "Enable Log Files and Core Files" on page 15
- "The Windows Client Cannot Communicate with Samba" on page 16
- "Repair the DMF Client Software" on page 16
- "Uninstall the DMF Client Software" on page 18

For information about troubleshooting DMF in general, see the *DMF 6 Administrator Guide.*

Enable Log Files and Core Files

For troubleshooting purposes, the DMF server administrator may wish to enable logs and core files by adding or updating the following parameters in the `global` configuration section of the `/etc/samba/smb.conf` file:

```
[global]
# log file location
log file = file_location

# log level
log level = level

# enable core files on crash
enable core files = Yes
```

For details, see the Samba documentation supplied with the operating system.

The Windows Client Cannot Communicate with Samba

If the Windows client cannot communicate with Samba, the DMF server administrator should do the following:

1. Verify that the smbd daemon has started. For example:

   samba# **ps -ef | grep smbd**

2. Verify that the network connection has been established for the smbd daemon. For example:

   samba# **netstat -anpo | grep smbd**

   For more information, see the netstat(8) man page.

3. Verify that the SMB ports are open in the firewall.

4. Verify that the share permissions allow the user to access the share.

5. Verify that the filesystem permissions allow the user to access the destination path.

6. Check the Samba log file for errors.

For more information, see the Samba documentation provided with the operating system.

Repair the DMF Client Software

If the DMF client software is corrupted or if some installation files are unintentionally deleted, you can repair the software using the account that has **local administrator rights with elevated privileges**:

- "Interactive Repair" on page 16
- "Quiet Repair" on page 17

Interactive Repair

To perform an interactive repair:

1. Open the **Control Panel**:

   - Windows XP and Windows Server 2003:

> **Control Panel**
> > **> Add or Remove Programs**

- All other Windows versions:

  Control Panel
  > **> Programs and Features**

2. Select "**DMF Client for Windows *DMFVERSION*** " and click **Repair**.

3. *(If installed)* Select "**DMF Group Policy Templates *DMFVERSION*** " and click **Repair**.

Quiet Repair

To perform a quiet repair:

1. Start the command prompt.

2. Run the following commands, as appropriate for your platform:

   - 32–bit platform:

     ```
     msiexec.exe /famus DmfClientSetup-x86.msi /quiet
     msiexec.exe /famus DmfGroupPolicySetup.msi /quiet (if installed)
     ```

   - 64–bit platform:

     ```
     msiexec.exe /famus DmfClientSetup-x86.msi /quiet
     msiexec.exe /famus DmfGroupPolicySetup.msi /quiet (if installed)
     ```

   For more information, see:

https://technet.microsoft.com/en-us/library/cc759262%28v=ws.10%29.aspx#BKMK_Repair

Uninstall the DMF Client Software

If you must uninstall the DMF client software, do the following using the account that has **local administrator rights with elevated privileges**:

- "Interactive Uninstall" on page 18

- "Quiet Uninstall" on page 18

Interactive Uninstall

To perform an interactive uninstall:

1. Open the **Control Panel**:

   - Windows XP and Windows Server 2003:

     Control Panel
     > **Add or Remove Programs**

   - All other Windows versions:

     Control Panel
     > **Programs and Features**

2. Select "**DMF Client for Windows *DMFVERSION***" and click **Uninstall**.

3. *(If installed)* Select "**DMF Group Policy Templates *DMFVERSION***" and click **Uninstall**.

Quiet Uninstall

To perform a quiet uninstall:

1. Start the command prompt.

2. Run the following commands, as appropriate for your platform:

   - 32–bit platform:

     ```
     msiexec.exe /x DmfClientSetup-x86.msi /quiet
     msiexec.exe /x DmfGroupPolicySetup.msi /quiet (if installed)
     ```

- 64–bit platform:

```
msiexec.exe /x DmfClientSetup-x86.msi /quiet
msiexec.exe /x DmfGroupPolicySetup.msi /quiet (if installed)
```

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