CA Desktop Migration Manager

Getting Started

12.8.01

CA Technologies Product References

This documentation set references to the following CA products:

- CA Advantage® Data Transport® (CA Data Transport)
- CA Asset Intelligence
- CA Asset Portfolio Management (CA APM)
- CA Common Services™
- CA Desktop Migration Manager (CA DMM)
- CA Embedded Entitlements Manager (CA EEM)
- CA Network and Systems Management (CA NSM)
- CA Patch Manager
- CA Process Automation
- CA Business Intelligence
- CA Service Desk Manager
- CA WorldView™
- CleverPath™ Reporter

Contact CA Technologies

Contact CA Support

For your convenience, CA Technologies provides one site where you can access the information that you need for your Home Office, Small Business, and Enterprise CA Technologies products. At http://ca.com/support, you can access the following resources:

- Online and telephone contact information for technical assistance and customer services
- Information about user communities and forums
- Product and documentation downloads
- CA Support policies and guidelines
- Other helpful resources appropriate for your product

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If you have comments or questions about CA Technologies product documentation, you can send a message to techpubs@ca.com.

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Chapter 1: Managing Desktop Migration

Welcome to CA DMM, the CA Technologies solution for the migration, replacement, and recovery of operating system settings, application settings, and data files, collectively known as DNA.

The Cost of Desktop Management and Migration

Have you ever received a new PC or upgraded your operating system (OS)? Then you know how difficult it can be to recreate a user's unique desktop environment. Imagine the time and cost required to upgrade or enhance tens of thousands of PCs.

When PCs are replaced or upgraded, their unique DNA — that is, system and application settings, network and printer settings, data files and folders, email address books, preferences and so on—must be preserved to help ensure uninterrupted end-user productivity. When performed manually, this process is time-consuming, labor-intensive, error-prone and costly, greatly impeding the adoption of new technology.

Effective PC DNA management is the foundation for efficient IT change management initiatives, including:

- Hardware refresh
- PC replacement
- Moving desktop and laptop users from NT domains to Active Directory
- Windows deployments
- OS upgrades
- Data migration
- Disaster recovery

These events disrupt your enterprise. Numerous costs, including IT technician time, end-user time, help desk time and more, are associated with switching out hardware or rolling out a new operating system. To minimize these costs when PCs are replaced or upgraded, the user's unique PC "DNA" must be preserved.

When attempted manually, this process is time-consuming, labor-intensive, error-prone and costly. Users experience downtime while their computers are unavailable and lost productivity while IT technicians try to reconfigure the computer when returned. Help desk calls dramatically increase after manual migration attempts. Furthermore, without an effective PC DNA management strategy, you might also have to overlap computer leases. These costs eliminate many of the benefits of adopting new technology.

CA DMM was developed to provide an efficient, cost-effective, controlled change management process for specific PC events. This helps to reduce the total cost of ownership, increase technician productivity, decrease end-user downtime, reduce help desk calls, and accelerate your return on investment (ROI).

Purpose of This Guide

This guide introduces you to CA DMM and some of its most powerful features. By the time you have finished reading this guide, you will have an idea of the scope of CA DMM and how you can put it to use in your enterprise.

Distinctive Features

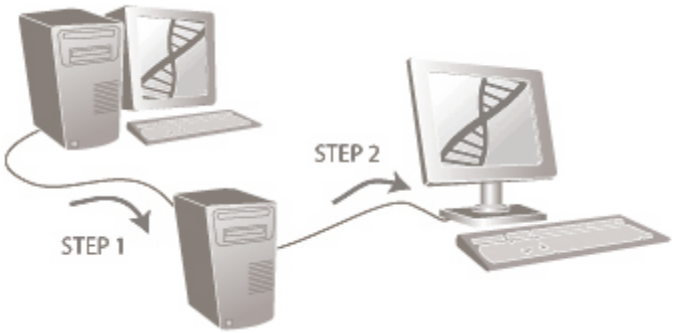
CA DMM includes the following distinctive features:

Flexible Migration Methods

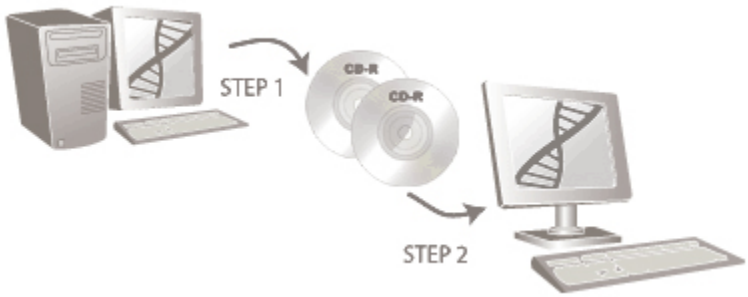
Flexibility is critical to supporting complex migration scenarios. CA DMM is a premier solution for system migration and the first to offer two system migration methods:

Deferred Migration

Deferred migration is a two step process. In step one, you create a DNA file from the source system (the old computer) and store the file on a local computer, network server, network appliance, or Apache Web server. The DNA file contains each user's unique PC DNA. In step two, you apply the DNA file to the destination system (the new or refreshed computer) at any time. In secure environments, the DNA file can be password-protected.

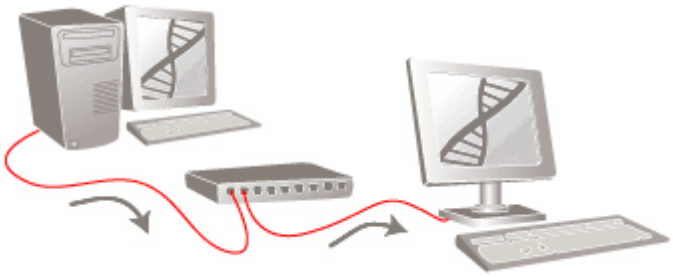


You do not have to save the DNA to a network drive; you can also save it to removable media, such as CD-ROM, DVD, Zip drives, and so on.



Real-Time Migration

Real-time migration involves moving a PC's DNA over the network from a source system to a destination system with no intermediary storage. In secure environments, the source system can be password-protected. CA DMM supports real-time migrations on both IPv4 and IPv6 environments.



Manage Users During Migration

When several users share the same computer, every user's PC DNA must be effectively migrated to the new computer. CA DMM provides features for migrating user profiles, migrating from NT domains to Active Directory, creating accounts, redirecting users, and providing security.

Current and Multiple User Migration

CA DMM lets you migrate the currently logged in user or multiple users on a given PC. When performing a current user migration, all settings migrated from the source computer are selected from the user logged in to perform the migration. During a current user migration, no user profile settings are migrated. When migrating multiple users, CA DMM lets you selectively migrate any or all user profiles that exist on the computer with the settings and data for each user.

Passwords and Security

CA DMM creates new accounts on the destination computer when migrating multiple users. It provides three options regarding user passwords: leave the current password; randomly generate a password using rules you define; or require the user to reset his or her password when logging in to the new system after the migration is complete. CA DMM fully supports the option to migrate users' group memberships and NTFS (file and folder) security.

Migrate Users to Active Directory

CA DMM migrates user profiles from NT domain systems into Active Directory (AD). Administrators can combine the two processes of desktop and AD migration into one easy-to-execute process. CA DMM redirects users into AD, renaming them to a new naming convention, and migrating the file/folder and group security at the same time. It lets you migrate only those users who are active, effectively cleaning up your directory system by omitting obsolete users. Migrations from NT domains to NT domains and AD to AD are also fully supported.

Create User Accounts

CA DMM automatically creates a new user account on a system when a user is redirected to a different path. The account is created when you rename or move the user into a different domain regardless of the source and destination OS.

Dynamic User Account Selection

You can dynamically select users during an automated migration process by using the command line interface. CA DMM allows wild cards, explicit include/exclude rules and definition of date ranges of an account's last access date, all of which help you eliminate the migration of obsolete users.

Migrate Settings and Data

CA DMM migrates one of the most comprehensive sets of user-customized settings and includes advanced data collection capabilities for robust migration. This minimizes help desk calls, because users are not trying to reconfigure their own systems.

Desktop, System and Application Settings

System settings are all of the configuration information for the operating system of a PC. They include wallpaper, keyboard configurations, mouse pointers, screen savers, network identification and printers, and so on. CA DMM migrates thousands of these customized settings over 160 applications between same or different versions of those applications. This keeps users productive, as they do not have to recreate preferences such as custom dictionaries, macros, display properties, and so on.

Data Include, Exclude, and Omit Filters

CA DMM provides a filter mechanism to migrate files and folders from the source system. These criteria can include or exclude file name, location, modification or creation date, size and file types and can even omit specific files and folders from filter or from all filter processing.

File Redirection

File redirection lets the migration process capture all data from a source computer, wherever it is located, and save it in a predefined location on the destination, such as the user's "My Documents" folder. Redirection lets you clean up the directory structure of data based on the same functionality of the data filters.

Unlimited File Size

At times, depending on the migration needs, a DNA file can exceed four gigabytes (GB) of data. CA DMM can transfer large files regardless of networking limitations. You can save DNA files to your network, including network appliances and Apache Web servers. Additionally, you can save DNA files to CD-ROM, Zip disks, or other forms of removable media.

Post-Migration Management

A comprehensive logging feature tracks the success of the migration and monitors the overall progress of an enterprise-wide migration process. You can reverse a migration and examine detailed logs to help you develop an effective migration scenario. Some of the logs CA DMM provides are as follows:

- Event Log captures events that can occur during a migration. CA DMM provides support for event logging in a reusable XML format. CA DMM creates an XML-based file that includes information about the events generated during migration with their severity levels. This XML file provides an easy access to information enabling applications and devices of all types to use, store, transfer, and display information without any difficulty. You can easily extract and analyze information and take appropriate actions before proceeding with the migration process. The name and location of the XML event log file is the same as specified in the Event log section, and the extension of the file is logx. The XML format is in addition to the text format.
- Undo Log shows all items that were migrated from the source system to the destination system. It lets you select and reverse migration items, reverting the PC to the state it was in before the migration.
- Manifest Log records the details of a migration. You can use it to programmatically verify migration results or import it into a database for further processing and data mining.

Redirection

You can redirect users, drives, data files and folders, and applications settings from the location on the source system to new locations on the destination. This lets you change and manage drive configurations, redirect the application settings to a new location, and better organize a user's data files and folders on the destination system.

Windows Mail Support

CA DMM provides support for Windows Mail on Windows Vista. You can migrate Windows Mail settings from a Windows Vista source computer to a Windows Vista destination computer.

You can use Windows Mail script to migrate MS Outlook Express settings from a Windows XP or Windows 2000 source computer to a Windows Vista destination computer, which in turn supports Windows Mail on Windows Vista while migrating from Windows XP or Windows 2000.

Fully Automated Migration

To reduce IT costs you must automate the migration process. Large-scale migration projects that span an enterprise may require integration into a larger overall process. To support both, you can run CA DMM from a central location using shared configuration resources, such as option files and templates. You can use environment variables that are unique for each PC in the process to differentiate homogeneous PC DNA. After the migration process is complete, you can use return codes to trigger the next steps in a larger process. And you can perform all automation in "Quiet Mode," invisible to the end user.

Command Line Interface

You can use the CA DMM command line to automate a migration process that can be integrated into a large-scale, enterprise-wide migration deployment using existing software investments.

Environment Variables

CA DMM provides environment variables that you can use in command lines and the user interface. Variables let you uniquely name DNA files and log files, selectively identify the correct DMM template file to use for the migration, identify and migrate selected users, and much more.

Shared Configuration Resources

CA DMM does not need to be installed in the traditional sense. It can be run from a network share, from a local drive or even directly from the installation CD. Any migration type (real-time, deferred or removable media) can be performed without installing the product locally. The resources included in the product (such as the executable, template files, configuration files and DNA files) can be accessed from a centralized location by multiple systems simultaneously.

DMM Options File

The DMM Options file is an XML-based file that lets you customize the configuration of the product. You can customize every aspect of how the product is configured to perform efficiently in any environment.

Return Codes

CA DMM returns codes upon completion of a migration. You can capture the return codes for use in a larger overall process to systematically determine the next step in the process.

Limited User Interaction in an Automated Migration

You can customize the wizard user interface to control access to only the pages or functions you want the technicians or end users to access. You have complete control over an automated migration process, and the flexibility to let the technicians or end users select certain items for migration, such as specific files or folders.

Restore and Recovery

Each time you make a change to your DNA files, CA DMM saves the changes as a revision. If you ever need to rollback to an earlier revision of a DNA file, you can. Additionally, you can use the Always Current Scheduler to ensure that regular revisions of your PC's DNA are stored to a safe location.

Selective Apply of Files and Folders

While applying a DNA file on the destination, CA DMM gives you the choice to restore only relevant files and folders from the Files and Folders tree. You can customize the selection in the Files and Folders tree (on the apply side) for the files and folders that were selected on the source. This helps in logically separating and applying only those files and folders that are applicable to the requirements of a particular user group. You do not need to apply the entire Files and Folders tree on the destination.

Additionally, you can decide to enable or disable the Selective Apply feature, by using the Enable Selective Apply of Files and Folders option, depending on your requirements. For example, if you have a large number of files to migrate and you want the migration to be faster, you can disable the Selective Apply feature and improve performance of the migration.

Open File Migration

CA DMM lets you migrate open and locked files. You do not need to close the corresponding applications before starting the migration. As a result, no interruption in work takes place and you can continue working on the files even while performing the migration. You can migrate open and locked files using deferred migration and real-time migration modes. In deferred migration mode, you back up open and locked files into a .dna file (or a self-extracting file). In real-time migration mode, you directly migrate open and locked files from a source computer to a destination computer.

Migration Toolkit

CA DMM provides a flexible collection of time-saving automation tools: The Migration Toolkit dramatically reduces the time required to develop and refine a process of a new OS rollout, PC software/hardware refresh or disaster management scenario.

DMM Director

Provides top-level command and control for large-scale enterprise migration to streamline the migration process. Wizards ask you key questions to facilitate the automation of your migration process, and then create the necessary elements for a smooth execution of the migration. In addition, DMM Director automatically logs the entire process.

DMM Template Editor

Saves time and increases control over your migration process by creating custom templates that you can tailor to any user, department or organization. DMM Template Editor provides the ability to customize a migration regardless of the user environment.

DMM Explorer

Lets you examine the contents of DNA files easily, including revisions to the individual files, folders and settings contained in the DNA file. You can also apply individual files, folders or settings directly from DMM Explorer. Administrators can streamline, analyze, reference, troubleshoot, catalog and fine-tune the automation process.

DMM Options Editor

Lets you update and configure DMM Options files without having to know or understand the XML file format.

DMM Studio

Lets you create scripts to easily migrate your in-house or custom applications. You can develop scripts to fit any situation or migration need.

CA Technologies Merger and Acquisition Tool

Lets you migrate domain information, user profiles, application settings, data, and other resources, as is. Your existing settings, data, and other resources remain unchanged, though a new user ID and computer name are created.

Chapter 2: Installing CA DMM

The topics that follow describe how to install and remove CA DMM. For information about operating system support and system requirements, see *Release Notes* on the product media.

Installation Options

The installation supports combinations of CA DMM and the Migration Toolkit.

You can perform three different types of installations:

Typical

The typical installation installs:

- CA DMM program files
- DMM Director program files
- DMM Always Current Scheduler
- Migration Toolkit:
  - DMM Template Editor
  - DMM Explorer
  - DMM Options Editor
  - DMM Studio
- DMM Deployment Setup
- Merger and Acquisition
- Web Update
- Scripts
- Bookshelf

Compact

The compact installation installs:

- CA DMM program files
- Scripts
- Web Update

Custom

The custom installation lets you choose to install any combination of components and where you want to install those components. The default for the custom installation is all the typical components mentioned previously.

Install CA DMM

Use the CA DMM installation wizard to install the product.

To install CA DMM

Note: Before starting the installation, make sure that you uninstall the previous version of the product.

1. Insert the CD in the CD-ROM drive.

   The installation wizard starts.

   Note: If the installation wizard does not start, double-click DDNAAutorun.exe in the root directory on the CD. Alternatively, enter the following command from Start, Run:
   [cd-rom drive]\DDNAAutorun.exe

2. Click Install Desktop Migration Manager.

   The Choose Language page appears.

3. Select the language for the installation from the drop-down list and click Next.

   The Welcome page appears.

4. Click Next.

   The License Agreement page appears.

5. Use the scroll bar to read the entire agreement, click I Agree after you scroll to the bottom of the window.

   The User Information page appears asking for information about user name and company name.

6. Enter your name and company, and click Next.

   The Setup Type page appears asking you to select a setup type.

7. Select the type of setup you prefer on the Setup Type page, and click Next.

   The three options are:

   - Typical
   - Compact

- Custom

Note: If you select a custom installation, you must select the components to install. Each component has a description in the installer so you can choose which components to install. Select the components you want to install, and click Next.

The Install Location page appears asking if you want to change the location to install CA DMM. The default install location is: C:\Program Files\CA\Desktop Migration Manager.

8. Click Change to choose another location or click Next.

   The Ready to Install the Program page appears prompting you to begin the installation.

9. Select the FIPS mode in which you want CA DMM to operate.

   FIPS-Only

   Specifies that only FIPS-compliant cryptography is allowed. This mode is not backward-compatible and you cannot access DNA files created using the previous releases of CA DMM.

   FIPS-Preferred

   Specifies that FIPS-compliant cryptography is preferred. This mode is backward-compatible and lets you access DNA files created using the previous releases of CA DMM. However, when you install CA DMM to operate in FIPS-preferred mode, by default it operates in the same FIPS mode as CA ITCM. For example, if CA ITCM is operating in the FIPS-only mode, CA DMM will also operate in the FIPS-only mode even though you have selected the FIPS-preferred mode. You can configure CA DMM to ignore the FIPS mode of CA ITCM using a command line option. For more information, see the Reference Guide.

10. Click Install.

    The Installation Progress page displays the progress of the installation. CA DMM and the tools you selected to install from the Migration Toolkit are installed as defined.

    When the installation of CA DMM is complete, a page appears that lets you indicate other tasks you can perform, such as view the readme file, run CA DMM, or add a CA DMM shortcut to your desktop.

11. Select one or more options, and click Next.

    The installation completes.

12. Click Finish.

    The installation wizard closes and any of the options you selected, such as View Readme start.

Remove or Modify Your Installation

To modify your CA DMM installation, such as adding or removing a component, or to remove CA DMM from your system, follow these steps:

1. Open the Windows Control Panel.
2. Double-click Add/Remove Programs, select CA DMM, and click Change/Remove.

   The installation wizard opens.

   You can choose to do the following:

   Modify

   Lets you add new components (if you did a custom installation), or selectively remove components.

   Repair

   Lets you try to fix your installation by installing all the components to the same locations you chose during the initial installation.

   Remove

   Lets you remove all installed CA DMM components from your system.
3. Make your selection and click Next.

   The wizard displays the progress.
4. Click Finish when the Maintenance Complete window appears.

You are guided through an uninstall process.

Chapter 3: Using DMM Director

This chapter steps you through the Director Setup wizard and automates a process for a deferred migration that can be accessed and used by multiple workstations in your organization simultaneously.

DMM Director is a component of the CA DMM Migration Toolkit. DMM Director gives you the flexibility and power to quickly configure a migration process scaled to fit your organization. After installing the software you can start DMM Director by selecting Start, Programs, CA, Desktop Migration Manager, DMM Director.

Welcome to DMM Director Setup

The DMM Director wizard guides you through the creation of a simple migration process. The migration process created can be used immediately. If you want to access the full power of DMM Director you can customize the basic migration process to accommodate any type of migration support you need.

Click Next to advance to the next page of the wizard.

Migration Setup

To automate a migration, you must define a location for the migration directory and the data directory on your network. You can identify these two directories on the same server or on separate servers on your network.

To specify the migration setup, follow these steps:

1. Enter the file path and name for the location of the migration directory in the Migration Directory field.

   DMM Director automatically copies or creates all necessary files to execute the configured automated migration into the migration directory.

2. Enter the file path and name for the location of the data directory in the Data Directory field.

   DMM Director automatically creates a directory and folder structure to contain the DNA files and the related log files on the first migration performed using the DMM Director.

   Note: Ensure all computers have access to the Migration and Data Directories. CA Technologies recommends you use UNC paths instead of mapped drives to avoid access issues during migrations.

3. Click Next to advance to the next page.

Access CA DMM

You must define whether CA DMM is accessed and run from the migration directory on the server, or accessed on each workstation.

To access CA DMM, follow these steps:

1. Select from the following options:

   From the migration directory

   Indicates the path entered on the Migration Setup page is set as the location from which to run CA DMM during the migrations. Director Setup automatically copies the DNA executable and all related files into the migration directory.

   From the workstation

   When AutoDNA is initiated on the workstation, DMM Director automatically performs a silent installation of CA DMM before initiating the migration.

2. Click Next to advance to the next page.

Select Migration Type and FIPS Mode

You must define what type of migration to perform. Based on this selection, Director Setup takes one of two paths to guide you in automating your process, one path for a deferred migration, the other for a real-time migration. This guide steps you through the process of automating a deferred migration.

Additionally, you can use this dialog to specify the FIPS mode that you want to use.

To select migration type and FIPS mode

1. Select from the following options:

   Deferred migration using a DNA file

   Defines the creation of a DNA file to be stored in the data directory.

   Note: For this example, select the Deferred migration using a DNA file option.

Real time migration over the network

Defines the source and destination workstations for a real time migration.

2. Select the appropriate FIPS mode:

FIPS-Preferred

Specifies that FIPS-compliant cryptography is preferred. This mode is backward-compatible and lets you access password-protected DNA files created using the previous releases of CA DMM. However, if you have a CA ITCM installation on the computer, CA DMM will operate in the same FIPS mode as CA ITCM. For example, if CA ITCM is operating in the FIPS-only mode, CA DMM will also operate in the FIPS-only mode even though you have selected the FIPS-preferred mode. You can configure CA DMM to ignore the FIPS mode of CA ITCM using a command line option. For more information, see the Reference Guide.

FIPS-Only

Specifies that only FIPS-compliant cryptography is allowed. This mode is not backward-compatible and you cannot access password-protected DNA files created using the previous releases of CA DMM

3. Click Next to advance to the next page.

Template Selection

You must identify a template file to use for the migrations. You can select the default template file included with DMM Director or create your own template file.

Note: The default template contains the following: Desktop settings of: background, keyboard, mouse, screen saver, and my documents. Application settings of: Internet Explorer, MS Access, MS Excel, MS Office Shortcut Bar, MS PowerPoint, MS Project, MS Word, Norton Anti-Virus, and WinZip.

To complete this page, follow these steps:

1. Select how templates are associated with the migration:

   User selects a template

   Allows you to select a template before you begin the migration. You can also construct multiple templates and place them in a directory for selection at the time of migration.

   Use the default template

   Allows you to use the default template. You can also modify the default template to support your migration needs. DMM Director automatically copies the specified template into the migration directory.

   Use the following template

   Allows you to create and save a template, and then return to the DMM Director to enter the path and template name.

   Note: For this example, select the Use the following template option.

2. Click Launch Template Editor to create and save a template for this example.

   The DMM Template Editor opens.

DMM Template Editor

DMM Template Editor is a powerful, enterprise-level tool that helps you simplify the reuse of migration settings. You can create a migration template without being on the computer that is migrated because it is "detection-less."

Templates let you customize and automate migrations for the different departments in a company or for specific individuals or work groups. You can add migration selections to a template even if the specified applications and settings do not exist on the system that uses the migration.

You can define the migration of the source computer, and define how the DNA in the DNA file created is applied to the destination computer in a single template file.

To create the template for this example, follow these steps:

1. Add a title and a description to the DNA files created with this template in the DNA file properties section.
2. Click the Users branch to define users to migrate.

   Note: By default the current user's setting are used. You do not have to select a user if you want to migrate the only current user. If you want to migrate domain, Active Directory, or local users, you can select a category of user and expand it to define users for migration.

   If you want to redirect users, click the Redirection tab. You can expand the user tree, and double-click the Destination column to define the user destination.
3. Click the System branch in the tree to display settings for your migration selection. Select the system settings you want to migrate.
4. Click the Applications branch in the tree to display application settings for your migration selection. Select the application settings you want to migrate.

   Note: If you want to redirect any applications, click the Redirection tab and double-click the Destination column to define the application settings destination.
5. Click the Files branch in the tree to display the local file system. Select the files you want to migrate. If you select My Documents for migration, CA DMM selects the users' My Documents directory regardless of the operating system.

   Note: If you want to redirect any files or folders, click the Redirection tab and double-click the Destination column to define the file and folder destinations.

   For this example you could redirect the files and folders to a single location on the destination computer. Redirection supports the use of environmental and DMM variables in the paths. For more information on redirecting files, see the online help for DMM Template Editor.
6. Click the Filters branch in the tree to define data filters. Define the data filters you want to user for migration.

   Note: If you want to redirect a filter, click the Redirection tab and click the check box for Redirect to this folder. Enter the path to redirect the filter results.
7. Click the Drive Destinations branch in the tree to define drive destinations for the migration.

   For example, your hard drive on the old system might be C:\ but the hard drive on the new system is D:\. You need to redirect the drives. To redirect a drive, double-click the Destination column and define the drive destination.
8. Click the Save toolbar button to save the template file.

   A Save As dialog appears.
9. Click Save to accept the default location (C:\My Documents) and file name.

10. Close the DMM Template Editor.

    Template Selection page of Director Setup appears.

11. Click Browse and select the template you just created.

12. Click Next.

Deferred Migration

The Deferred Migration page appears because you selected a deferred migration type on the Migration Type page. You must define a naming method for the individual migration folders that are used to store the DNA files and logs from each migration. You also define how the correct DNA file is identified to apply to a destination workstation.

To complete this page, follow these steps:

1. Select Create folder using the machine name in the Store group box.

   The Store group box determines how the DNA file is named and saved when it is stored in the data directory. For this example, DMM Director stores the DNA file in the data directory in a folder named with the computer name.

2. Select Create the folder using the machine name or the user name (according to choice in Store) in the Apply group box.

   The Apply group box determines how the DNA file is retrieved from the data directory and applied to the destination computer. For this example, DMM Director automatically retrieves the DNA file from the data directory based on either the computer name or the user name.

3. Click Next.

Source User Interface

The Source User Interface page appears because you selected a deferred migration type on the Migration Type page. You can customize the actions a user can perform during a migration by customizing the CA DMM wizard interface. This increases migration security and streamlines migration process for the end user.

To customize the user interface on the source system, follow these steps:

1. Select the actions you want users to take during a migration. For this example, accept the default of displaying only the Migration Status page.

2. Click Next.

Destination User Interface

The Destination User Interface page appears because you selected a deferred migration type on the Migration Type page. You can customize the actions a user can perform during a migration by customizing the CA DMM wizard interface. This increases migration security and streamlines migration processes for the end user.

To customize the user interface on the destination system, follow these steps:

1. Select the actions you want users to take during a migration. For this example, accept the default of displaying only the Migration Status page and also select Log Results page.
2. Click Next.

Configuration Review

The Configuration Review page lets you review all the options you have configured for your automated migration. If you find an error or discrepancy on this page, you can go back and make any changes needed, and re-review before DMM Director creates the automated migration process.

Review your choices, and click Confirm.

Director Setup automatically locates and copies or creates all necessary folders and files into the migration directory based on your configuration. A status dialog appears during this process.

Configuration Complete

The Configuration Complete page appears to indicate that DMM Director has completed the creation of the migration directory based on your specifications. The Configuration Complete page contains a report with instructions on the steps you should take next to proceed with the automated migration.

Director Setup created a Director Migration folder in the path you specified. This directory contains folders and files depending on your selected options.

Click Finish to exit DMM Director Setup.

Overview of the Migration Directory Structure

Director Setup automatically created a migration directory in the path you specified. The folder for the migration directory is named: Director Migration.

The following files are copied or created in the Director Migration folder by Director Setup:

Autorun Source

This shortcut can be accessed from the Migration directory or copied to the source workstation. It accesses the source migration file and the AutoDNA.exe to perform the configured migration. It executes the following command line:

```
"<Path to your migration directory>\DirectorMigration\ddnarun\AutoDNA.exe"
"<path to your Migration directory>\DirectorMigration\Source\DirectorSource.dmx
```

You can add any additional command line parameters necessary to further customize your migration.

AutoRun Destination

This shortcut can be accessed from the Migration directory or copied to the destination workstations. It accesses the destination migration file and the AutoDNA.exe to perform the configured migration. It executes the following command line:

```
"<path to your migration directory>\DirectorMigration\ddnarun\AutoDNA.exe"
"<path to your Migration
directory>\DirectorMigration\Destination\DirectorDestination.dmx"
```

You can add any additional command line parameters necessary to further customize your migration.

Template File

The template configured for use during the migrations is copied from its original location into the DirectorMigration folder.

The following folders are copied into or created in the DirectorMigration folder:

Setup folder

This folder contains the CA DMM installation and is copied to the Migration directory. It is used if CA DMM or any component must be installed on the workstation before a migration.

ddnarun folder

This folder contains the CA DMM executable and supporting files and is copied into the Migration directory. It is used if CA DMM is accessed from the migration directory. It also contains AutoDNA.exe. This executable is accessed by the shortcuts you place on the workstations to perform the migrations.

Source folder

This folder contains DirectorSource.dmx, the migration file created by Director Setup. It contains the options you configured. You can edit this migration file using DMM Options Editor to further customize your migration process.

Destination folder

This folder contains DirectorDestination.dmx, the migration file created by Director Setup. It contains the options you have configured. You can edit this migration file using DMM Options Editor to further customize your migration process.

Logs

This folder is empty until the first migration. After the first migration, this directory contains the Director log. It is named <migration directory>\DirectorMigration\Logs\DirectorSourceLogs_%DNA_Machine_Name%.txt.

IEInstaller

This folder is empty when the Director Migration folder is created. If the computers do not have Internet Explorer v5.X or higher already installed, copy the IEInstaller\IE5Setup.exe into the migration directory into the IEInstaller folder. Then open the DMM Options Editor from the Start menu, open the .dmx file in the source and destination folders, and define the option for Path to the Internet Explorer installer option.

Perform a Source Migration

You are now ready to perform an automated migration.

To perform the migration, follow these steps:

1. Use Windows Explorer on this computer (the source computer) to go to the Director Migration folder.
2. Double-click the Autorun Source shortcut in the Director Migration folder.

   The migration initiates, displaying only the migration status page.

   When the migration is complete, CA DMM automatically closes.

Note: To perform source migrations on other computers, copy the Autorun Source shortcut to those computers, and double-click the shortcut.

View the DNA File Created

CA DMM created a DNA file for the source computer.

To view the DNA file, follow these steps:

1. Go to the path where you asked DMM Director to create the Data Directory. With the generation of the first DNA file using the automated process you configured, DMM Director creates the Data Directory.

   It will be located in the path you configured and is called Director Data.

2. Open the folder with the computer name from the migration.
3. Double-click the DNA file.

   DMM Explorer opens.

DMM Explorer

DMM Explorer lets you open and examine the contents of a DNA file, including all the files, registry items, and values that you have migrated.

View the contents of the DNA file. Everything you selected for migration in the DMM template you created is contained in the DNA file.

To apply individual files, folders, or settings directly from DMM Explorer to the computer, follow these steps:

1. Click the file or folder you want to apply to the system.
2. Right-click and select Apply to directly apply it to its original location. Click Apply to if you want to relocate or rename the file or folder.
3. Click OK.

   The file is applied directly from DMM Explorer to the computer.

4. Close DMM Explorer.

DMM Director Logs

DMM Director also creates a Director log containing all the details about the automated migration.

To view the log, follow these steps:

1. Go to the Directory Migration folder and double-click the Logs subfolder.

   The Director log is named Director Source Log_ <Machine Name>.txt.

2. Open the text file and review the details of the automated migration including the CA DMM return code.

Destination Computer

When you have reconfigured and loaded a new operating system on the destination computer you can apply the DNA file you created.

To apply the DNA file, follow these steps:

1. Use Windows Explorer on the destination computer (we assume the computer name is the same in this example) to go to the Director Migration folder.

2. Double-click the Autorun Destination shortcut in the Director Migration folder.

   The migration initiates, displaying the migration status page.

   When the migration is complete, the user interface automatically closes.

   A Reboot message box opens. It has a delay of 15 seconds before restarting the computer so that you can cancel the restart, if desired.

   Note: To perform destination migrations on other computers, copy the Autorun Destination shortcut to those computers, and double-click the shortcut.

3. Review the log file Logs folder on the Directory Migration folder. The Director log is named Director Destination Log_ <Machine Name>.txt.

   Open the text file and review the details of the automated migration including the CA DMM return code.

Migration Complete

You have successfully automated and performed a migration using CA DMM and the Migration Toolkit.

Performing Disk-to-Disk Migration

Disk-to-disk migration helps you restore all settings and data, as is, from a hard disk with minimum effort. The source hard disk is connected to a host computer as a slave disk and a virtual system is constructed that provides a view of the old system as if it is running the OS. You can define the settings such as user settings, system and desktop settings, application settings, and files and folders to be migrated.

Note: Disk-to-disk migration does not work for Windows 7 and Windows 8.

Drive Mapping Information

When you connect a source disk to another computer, called the host computer, CA DMM displays all the operating systems and their drive maps (in the source disk) in the Disk-To-Disk Drive Mapping page. The host computer also displays the drive where the operating system is installed in the Source OS drop-down list. If the source disk is a multi-boot disk, the Source OS drop-down list displays all the drives where the operating system is installed, thus helping you select the operating system to migrate.

While providing the drive mapping information in the Source column, consider the following points:

- You can change a drive based on your requirements. Clicking the Source column in the Drive Map area displays a complete list of drives (from C to Z) to choose from.
- You can decide not to map any non-OS drive by selecting the blank ("---") option from the Source column. However, you cannot select the blank option for a drive where the operating system is installed; you must map the OS drive. For example, if the Source OS drop-down list shows WINXP(P), and drive P is mapped to drive C, then you cannot select the blank option for drive P. You can anyway map drive P to any other drive.
- CA DMM makes sure that your drive mapping is always unique. It automatically swaps the drive mapping information whenever you change an existing drive. For example, if drive P is mapped to drive C and drive Q is mapped to drive D, but you want to map drive Q to drive C, then drive P will automatically point to drive C.

You can also set the drive mapping information in the DMM Options file Command Line field using the command line as follows:

```
/T C:\MyTemplate.dtf /D (or /SE) C:\MyDNA.dna /DD <WINXP/WIN2K/WIN2000/WINVI>(OS Drive) <DriveMap>
```

Example

```
/T C:\MyTemplate.dtf /D (or /SE) C:\MyDNA.dna /DD WINXP(P) P:C,Q:D,R:E
```

Note: P indicates that the operating system is available in the P drive of the slave disk, which represents your source computer. For more information on the Command Line Switches and Command Line examples, see the *Reference Guide*.

How the Disk-to-Disk Migration Process Works

The disk-to-disk migration process involves the following sequence of steps:

1. Take out the hard drive from the source computer.
2. Attach the source hard drive to the host computer as a slave disk.
3. Launch CA DMM and enable disk-to-disk migration by selecting the relevant option in the CA DMM application user interface.

   Note: You can also select the Disk To Disk Migration option in the DMM Options file, before launching the CA DMM application, to enable disk-to-disk migration.
4. Select the drive and the settings to migrate and also to create a DNA or a SE (self-extractor) DNA file.
5. The Disk-To-Disk Drive Mapping dialog displays all operating systems available on the slave disk and their drive maps.
6. Select users, systems, applications, and files from the source disk to create a DNA file or SE file.

   Note: You can also create a DMM template file and select the settings to migrate like users, systems and so on in DMM Template Editor.
7. Apply the DNA or the SE DNA file to any computer including the host computer.

Perform a Disk-to-Disk Migration

You can perform a disk-to-disk migration using one of the following modes:

- User interface
- Command line interface

Only users with administrative privileges can run this process on the host computer.

Note: If Windows 2000 is installed on your host computer, then you can migrate only Windows 2000 from the slave disk.

Perform a Disk-to-Disk Migration Using the User Interface

You can specify the operating system drive and the settings to migrate in the user interface and perform a disk-to-disk migration.

To perform a disk-to-disk migration using the user interface

1. Connect the source disk to the host computer as a slave disk.
2. Open CA DMM from Start, Programs, CA, Desktop Migration Manager.

   The Welcome page opens.

   Note: You can disable all the Welcome screens in the application by selecting the Disable welcome screens check box.
3. Click Next to open the Select a DMM Task dialog.

   The Select a DMM Task dialog opens.
4. Select the Creates a DNA file from Slave Disk check box to enable disk-to-disk migration.

   Note: You can also select the Disk To Disk Migration check box in the DMM Options file to enable disk-to-disk migration. If you select the Disk To Disk Migration check box in the DMM Options file, the Creates a DNA file from Slave Disk check box is automatically selected in the CA DMM application.
5. Click Create.

   The Disk-To-Disk Drive Mapping page opens.
6. Specify the drive mapping information as applicable. If your slave disk has dual operating system, you can select the relevant operating system from the Source OS drop-down list. You can also change the drive map if you find that the drive map generated by CA DMM is not proper. Click Next.

   The Select Settings dialog opens.
7. Click Next and provide necessary information in the Settings and Destination tabs as you provide for any DNA file. Click Start Store in the Migrate tab to create the DNA file or the SE DNA file.

   Note: You can also create a DMM template file in DMM Template Editor and use the settings specified in the DMM template file. You can open the file in the CA DMM application, review the settings, make necessary modifications, and then proceed with the migration. For more information on how to create a DMM template file, see the *DMM Template Editor Online Help.*
8. Apply the DNA file or the SE DNA file to any computer including the host computer.

   The template settings are applied. You can undo the disk-to-disk migration by loading the undo file in the Logs tab of the CA DMM and following the instructions in the wizard.

Note: If you want to apply the DNA or the SE DNA file on the host computer, you must first clear the Creates a DNA file from Slave Disk check box in the CA DMM application or clear the Disk To Disk Migration check box, if selected, from the DMM Options file. For more information about creating a DNA file, applying a DNA file or SE DNA file, and undo options, see the *CA DMM Online Help*.

Perform a Disk-to-Disk migration using the Command Line Interface

You can perform a disk-to-disk migration by specifying the template file path and the drive mapping information using the command line interface.

To perform a disk-to-disk migration using the command line interface

1. Open the command line from the Start menu.

   The command line window appears.

2. Enter the command with the path of the template file and the drive mapping information to create the DNA file or the SE DNA file.

   ```
   /T C:\MyTemplate.dtf /D (or /SE) C:\MyDNA.dna /DD <WINXP/WIN2K/WIN2000/WINVI>(OS Drive) <DriveMap>
   ```

   Example:

   ```
   /T C:\MyTemplate.dtf /D (or /SE) C:\MyDNA.dna /DD WINXP(P) P:C,Q:D,R:E
   ```

   The DNA file or the SE DNA file is created.

3. Apply the DNA file or the SE DNA file either to any computer including the host computer.

Note: For more information about the Command Line Switches and Command Line examples, see the *Reference Guide.*

Chapter 4: Using DMM Always Current Scheduler

IT professionals know that change is constant. While using CA DMM to save time and money during operating system or computer migrations is important, what about after those users start working on those systems for a day, a week, a month, or a year? Users install new applications, change their settings, uninstall applications, and perform other tasks that alter their DNA.

What if they install something that creates conflict? Or they change a setting, and it prevents another application from running properly? How can they easily recover their old settings?

The DMM Always Current Scheduler lets you manage your DNA. After the initial creation of a DNA file, users can take a snapshot of their current DNA (know as a revision), or make changes to it. Each time users make a change to their DNA, CA DMM creates a new revision. If problems occur, users can always restore their DNA from a previous revision.

This chapter describes how to do the following:

- Schedule a DMM storage task
- View a DMM scheduled task
- Apply a DMM storage task

Schedule a DMM Storage Task

In the previous chapter, you used DMM Director to create a template and a DNA file. Your template specifies all the users, settings, applications, files and folders that you want store to your DNA file. By creating a DMM Storage task you ask CA DMM to create a revision at a specified time. The revision contains the following:

- Changes you might have made to the template
- Changes to the items you specified the template to store in the DNA file (settings, and so on)

If you have not made any changes, a new revision is created to indicate that DMM Always Current Scheduler ran at the specified time.

To schedule a DMM storage task, follow these steps:

1. Start DMM Always Current Scheduler from the Start menu.

   The DMM Always Current Scheduler opens.

2. Click Next and follow the tasks in the wizard.

   The wizard asks you to do the following:

   - Create a task and identify the DNA you want to store.
   - Specify details about the task, including the name of the template, and the name of the user under which this task runs.

     Note: When specifying the name of the user under which the task runs, CA DMM uses values from the registry to provide the user name. Be sure that the information is correct (user name, including domain, and password) or the job will not run. Also, if you are required to change your password at regular intervals, you must change the password for the task. The scheduled task will fail to run until you change the password.

   - Specify how often the task runs.
   - When the task should run

3. Click Finish after you review the details about the task.

   The first time the task runs, it creates the specified DNA file. At the next scheduled run it creates a revision to the DNA file.

   When the task runs, it displays a dialog that lets you choose to reschedule the task or cancel it. If you choose to reschedule, DMM Always Current Scheduler opens and you can choose an alternate time. If you choose cancel, the task does not run until its next scheduled time.

Note: The DMM Always Current Scheduler creates an XML file (with the .dmx extension) that contains the settings. By default it stores the file in your My Documents directory. You can open this file using DMM Options Editor and make changes if you like.

View Scheduled DMM Task

To modify the scheduled task you created with DMM Always Current Scheduler

1. Open the Windows Scheduler from the Start menu.

   The Windows Scheduled Tasks dialog opens to display the DMM Scheduled Tasks.

2. Double-click a task to modify the schedule settings.

   The Windows Scheduler opens; you can make any modifications to the scheduled task.

3. Click OK when you have completed the modifications.

   The changes to the scheduled task are saved.

Apply DNA from Storage

To apply a stored DNA file for your PC

1. Execute the Apply DNA from Storage command from the Start menu.

   The CA DMM wizard opens displaying the DNA File Options page.

2. Select from the following options:

   Edit

   Select what settings are applied. You can proceed through the CA DMM wizard to select individual settings, files and folders, or filters to apply.

   Destination

   Opens the Destinations tab. You can apply everything stored in the DNA file, and also define redirection for settings, files and folders or filters, if you choose.

   Revision

   Select a different DMM revision. You can select a previous version of the DNA file and select individual settings, files and folders, or filters to apply, allowing you to rollback to a specific point in time.

3. Follow the rest of the CA DMM wizard instructions to complete the application of the stored DNA.

Note: You can use the /RD parameter to apply a revision. For more information, on command line parameters and examples, see the *Reference Guide*.

Appendix A: Using Software Delivery to Install CA DMM

CA DMM, like most of the products shipped by CA Technologies, includes predefined, ready-to-deploy software delivery packages. Software delivery is a flexible solution for building, distributing, installing, and managing software across its life cycle on target systems across your enterprise. The package types supported by software delivery include the following:

- MSI packages (Microsoft Installer)
- Palm, Windows CE, and Nokia packages
- SXP packages (Windows)
- PIF packages (UNIX)
- PKG packages (UNIX SVR4 pkgadd)
- RPM packages (Linux Red Hat Package Manager)
- Generic software delivery packages

The following package type is available:

- Full version of CA DMM including Migration Toolkit

All packages typically run in an unattended installation mode. The software delivery packaged CA Desktop Migration Manager component has a software delivery installation procedure, Install. The Install procedure does a full install of the product.

Note: The following sections and procedures are intended for system administrators only. Other users should see the software delivery documentation for information about using the SD Explorer to build, register, and deploy packages.

Basic Procedure

The basic steps for installing CA DMM using software delivery are as follows:

1. Register the software delivery software package.
2. Create a software delivery job to deploy and install the package.

Each step is described in the following sections.

Automatically Register the Package

The SDRegister tool is one method to automatically register predefined software delivery packages in your software library. To use this tool, follow these steps:

1. Browse to the Packages directory on the CA DMM CD.
2. Locate the \Packages\CA DMM directory. This directory contains the necessary information for registering the agent packages in your library.
3. Open the \Packages\CA DMM directory and double-click SDRegister.exe to launch the Registration wizard.
4. Select a predefined package to register from the Choose Products to Register page, and click Next.
5. Enter a user name, domain, and password on the Software Delivery User Details page. Click Next.

   Note: If you already have permission to register software in software delivery, you do not need to specify the user details.

   The Registering Products page appears. The wizard reads the appropriate .INI file, determines which files it needs to copy from the CD to make up the contents of the software delivery package, and starts copying files.
6. Click Complete when the wizard finishes copying files and indicates that the registration process is completed.

Note: If you want to register a package manually, see Manually Registering the Package later in this chapter.

Creating the Job

After configuring the procedures you want to use to contain your site-specific information, drag the required procedure onto your targets in the SD Explorer to start the installation of CA DMM.

For detailed information about creating a software package and a job, see the software delivery documentation.

Manually Registering the Package

Note: We recommend that you register software delivery packages with the SDRegister tool, which does all of the file copying automatically, or the SD Explorer.

To manually register the packages in software delivery, use the SD Explorer application, but first, copy the required files from the CD to a temporary location. The following is the list of the files and directories to copy:

Package	Status
\DDNAInst	Required
\Packages\Unicenter Desktop DNA\DDNAInst\DNAInstall.dms	Required
\Packages\Unicenter Desktop DNA\reginfo	Required

Understanding Automatic Registration Using SDRegister

The SDRegister tool scans a directory tree for software packages it can register in software delivery. Packages are identified by the presence of .INI files, which detail the contents of each package. The packages are created in a temporary area, and sdcmd registers them in software delivery.

Prerequisites

The Software Delivery Enterprise, Local, Workgroup Server, or an Admin Console must be installed.

In addition, you must have access to an account that is privileged to register software in software delivery.

Command

The format of the command is as follows:

`SDRegister [-u] [-n] [-d search path] [-t temporary directory] [-l logfile path]`

where:

-u

Specifies unattended mode. SDRegister automatically tries to register every package it finds. Because the user will not be prompted to enter user details, the user running SDRegister must have permission to register software in the Software Delivery Software Library.

-n

Does not run sdcmd. Instead, creates all temporary directories, copies, and quits. The correct registration command will be written to the log.

-d

Specifies the path from which to start the search for packages. By default, SDRegister starts the search in the current working directory.

-t

Specifies an alternate temporary directory location to copy files to. By default, SDRegister will use CA_APPSW\SDRegister\temp. CA_APPSW is usually c:\ca_appsw. If multiple packages are to be created and the -n option is specified, each package gets a unique directory within the temporary directory. This directory is named after the package (for example, c:\ca_appsw\SDRegister\temp\prod 1).

-l

Specifies an alternative log file for SDRegister to write information to. By default, SDRegister uses CA_APPSW\SDRegister\ sdreg*ddmmhhmm*.log

Note: Use sdconf to set NOS to None to avoid share permission problems.