Profile Management 2.1

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Profile Management 2.1

In This Section

This section of eDocs contains up-to-date product information about installing, configuring, and administering Profile management 2.1. These task-based topics help you set up the feature quickly and easily. Readers are assumed to have some knowledge of the Citrix product with which Profile management ships, and of Windows profiles in general.

Learn about the following important topics.

Overview	Review the new features in this release and a general overview of how Profile management works.
System Requirements for Profile Management	Ensure your environment meets all the requirements before you install Profile management.
XenApp / XenDesktop	Review important information about XenApp and XenDesktop deployments involving Profile management.

The following additional documentation is designed to increase the productivity of your Profile management deployment but is not contained in eDocs.

Frequently asked questions about troubleshooting your Profile management deployment	CTX119038
Frequently asked questions about setting up cross-platform profiles	CTX119039
Frequently asked questions about licensing Profile management	CTX119747
Frequently asked questions about how Profile management and Citrix user profiles work	CTX119791
Answers from experts to many questions about Profile management deployments	http://community.citrix.com/blogs

About Profile Management

Profile management from Citrix provides an easy, reliable, and high-performance way to manage user personalization settings in virtualized or physical Windows environments. It requires minimal infrastructure and administration, and provides users with fast logons and logoffs. Profile management is primarily intended as a profile solution for XenApp servers, virtual desktops created with XenDesktop, and physical desktops.

You install Profile management on each computer whose profiles you want to manage.

Group Policy allows administrators to control, in detail, how Citrix user profiles behave. Although many settings can be adjusted, in general you only need to configure those described in this document.

As used in this document, the term *computer* refers to user devices, virtual desktops, and servers that host published applications. The term *Citrix user profile* refers to profiles that users receive when Profile management is installed and enabled. Citrix user profiles are different from local, roaming, or mandatory Windows profiles.

Usage rights for this feature are described in the end-user license agreement (EULA).

New Key Features of Profile Management

This version includes the following new key features:

- **Windows 7 support**. You can now manage profiles on user devices running Windows 7.
- **Integration with Citrix Receiver**. Profile management releases and upgrades can be managed using Citrix Receiver.
- **Improved monitoring and reporting**. Additional Perfmon counters allow you to measure several new aspects of logon and logoff, providing improved benchmarking and integration with Citrix EdgeSight.
- **Upgrades without .ini files**. A command line option allows you to exclude the Profile management .ini files from upgrades.

Existing Features of Profile Management

Profile management 2.1 includes the following existing features:

- **Profile migration**. Allows administrators to migrate profiles to and from physical computers and virtual ones. Depending on the configuration settings, Profile management can copy existing roaming profiles and local Windows profiles to the user store.
- **Wildcard support**. Profile management allows wildcard characters to be used in file names for synchronization, inclusion, and exclusion lists.
- **Extended synchronization**. Profile management synchronizes files and folders that are located outside of users' profile folders.
- **Logging**. All entries in log files are identified with the user name, domain, and session id (where identifiable).
- **Multilingual profile support**. Profile management uses language-independent profile folder names in the user store for Windows XP and Windows Server 2003.
- **Simplified installation and management**. Installation and administration of Profile management have been enhanced.
- **Consistent user settings**. This feature solves the "last-write-wins" problem that occurs when the last open session overwrites all of the profile data from previously closed sessions.
- **Easy integration**. Profile management can be integrated simply into existing deployments. There is no single point of failure, and no changes to existing infrastructures, user rights, or logon and logoff scripts are required.
- **Unified installer**. The same .msi file can be used for servers and desktops. There are two versions of the file, for 32-bit and 64-bit systems.
- **Active Directory-managed licensing**.You can manage user entitlement using an Active Directory user group.

About Profiles

A Windows user profile is a collection of folders, files, registry settings, and configuration settings that define the environment for a user who logs on with a particular user account. These settings may be customizable by the user, depending on the administrative configuration. Examples of settings that can be customized are:

- Desktop settings such as wallpaper and screen saver
- Shortcuts and Start menu setting
- Internet Explorer Favorites and Home Page
- Microsoft Outlook signature
- Printers

Some user settings and data can be redirected by means of folder redirection. However, if folder redirection is not used these settings are stored within the user profile.

Types of Profiles

Windows includes several types of profiles:

Profile Type	Storage Location	Configuration Location	Application	Save Changes?
Local	Local device	Local device	Local device only	Yes
Roaming	Network	Active Directory	Any device accessed	Yes
Mandatory (Mandatory Roaming)	Network	Active Directory	Any device accessed	No
Temporary	Not Applicable	Not Applicable	Local device only	No

A temporary profile is only assigned when a specific profile type cannot be assigned. With the exception of mandatory profiles, a distinct profile typically exists for each user. In addition, mandatory profiles do not allow users to save any customizations.

For Remote Desktop Services users, a specific roaming or mandatory profile can be assigned to avoid issues that may occur if the same profile is assigned to a user within a Remote Desktop Services session and a local session.

Version 1 and Version 2 Profiles

Profiles in Microsoft Windows XP and Windows Server 2003 are known as Version 1 profiles. Those in Windows Vista, Windows 7, Windows Server 2008, and Windows Server 2008 R2 are known as Version 2 profiles. The folder structure (or namespace) of Version 1 profiles is mostly interchangeable; the folders on Windows XP and Windows Server 2003 are almost identical. Likewise, the structure of Version 2 profiles is mostly interchangeable.

However, the namespace is different between Version 1 and Version 2 profiles. This folder structure was changed in the later operating systems to provide user-specific folders isolated for user and application data. Version 1 profiles store data in the root folder, Documents and Settings. Version 2 profiles store data in a more intuitively named folder called Users. For example, the folder contents of AppData\Local in Windows Vista is the same as the contents of Documents and Settings\<username>\Local Settings\Application Data in Windows XP.

For more information about the differences between Version 1 and Version 2 profiles, seehttp://download.microsoft.com/download/3/b/a/3ba6d659-6e39-4cd7-b3a2-9c96482f5353/Managing%20

General Recommendations for Profiles

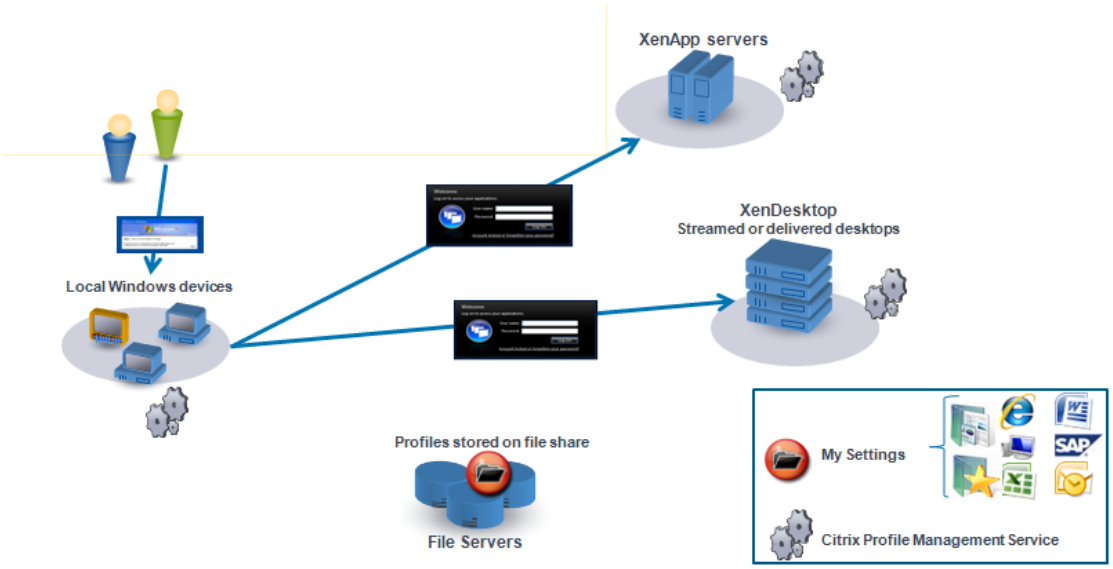
Where network-based profiles are employed, consider adopting Profile management in your organization. You may be able to implement other solutions such as mandatory or roaming profiles, and maintain them with standard knowledge of Microsoft Windows. However, unless your deployment is very restricted (for example, a call center where user customization is very limited so mandatory profiles are appropriate), Profile management may be preferred.

Citrix recommends using folder redirection so that user-specific data is saved separately from the profile.

Accessing Multiple Resources

Profiles become more complex as users access multiple resources. With profiles stored on a network, Microsoft Windows uses the registry to store user settings. Profiles are copied from the network to the local device at logon, and copied back to the network at logoff. On a daily basis, users access multiple computers, switch between desktops and laptops, and access virtual resources created with Citrix XenDesktop and Citrix XenApp.

This diagram illustrates how a single Citrix user profile follows a user who logs on to multiple resources.



For example, a user has a local, physical desktop and from it accesses applications published with XenApp. They also access a virtual desktop created with XenDesktop. The user's settings will not be uniform across all of these resources unless the settings are appropriately configured.

In addition, when they access a shared resource, the behavior of roaming profiles means that the "last write wins". For example, an administrator enables a roaming profile and a user changes the background color of the local desktop. The user then logs on to a XenDesktop virtual desktop, logs off the local desktop, and logs off the virtual desktop. Because both the local and virtual desktops were open at the same time and the last logoff was from the virtual desktop, the settings from the virtual desktop session were the last written to the profile, and the change to the background color is lost.

How Profile Management Works

Profile management addresses user profile deficiencies in virtualized environments where simultaneous domain logons by the same user introduce complexities and consistency issues to the profile. For example, if a user starts sessions to two different virtual resources, the profile of the session that terminates last overrides the profile of the first session. This problem, known as "last write wins", discards any personalization settings that the user makes in the first session.

You can tackle the problem by using separate profiles for each application silo. However this results in increased administration overhead and storage capacity requirements. Another drawback is that users or administrators must replicate settings for all profiles in all silos.

Profile management optimizes profiles in an easy and reliable way. At logoff, registry changes, as well as files and folders in the profile, are saved to the user store for each user. If, as is common, a file already exists, it is overwritten if it has an earlier time stamp.

At logon, users' registry entries and files are copied from the user store. If a locally cached profile exists, the two sets are synchronized. This makes all settings for all applications and silos available during the session and it is no longer necessary to maintain a separate user profile for each silo.

Profile management processes domain logons not local ones.

Profile Management Use Cases

Citrix Profile management can be implemented to manage users' profiles in different scenarios regardless of how applications are delivered to users or where they are housed. The following are examples of these scenarios:

- Citrix XenApp with published applications
- Citrix XenApp with published desktops
- Citrix XenApp with applications streamed into an isolation environment
- Applications streamed to XenDesktop virtual desktops
- Applications installed on XenDesktop virtual desktops
- Applications streamed to physical desktops
- Applications installed locally on physical desktops

Of these, Citrix sees the following as the most common use cases:

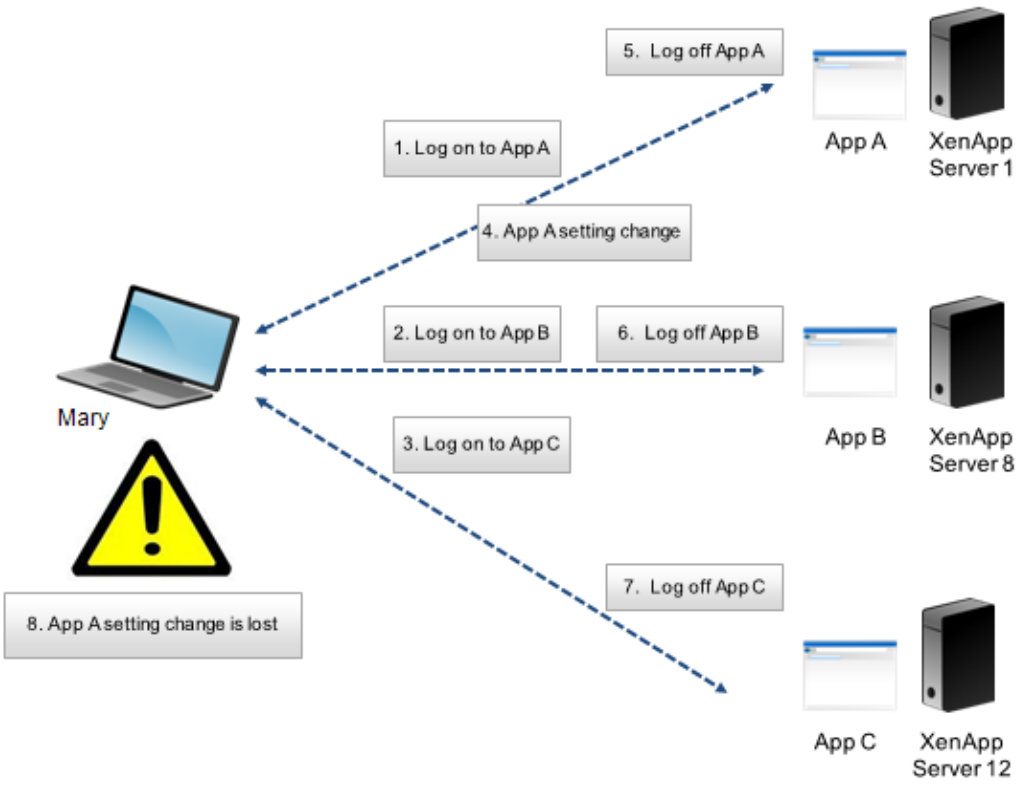
- **Multiple sessions**. The user accesses multiple XenApp server silos and therefore has multiple sessions open. Note however that application isolation and streaming on the server are alternatives to server silos. This scenario is described in more detail in this topic.
- **"Last write wins" and roaming profile consistency issues**. Because the last write to the roaming profile causes all settings to be saved, roaming profiles may not retain the right data if multiple sessions are open and interim changes are made. In addition, settings may not be written correctly to the profile as a result of network, storage issues, or other problems. This scenario is described in more detail in this topic.
- **Large profiles and logon speed**. Profile bloat can make user profiles unwieldy resulting in storage and management issues. Typically, during logon Windows copies the user's entire profile over the network to the local user device. For bloated profiles, this can prolong the user's logon time.

Multiple Sessions

Especially in large environments, it may be necessary for users to open multiple sessions to access different applications that are housed on different XenApp servers, whether in the same farm or multiple farms. Where possible, Citrix administrators should consider application isolation or streaming in order to house applications on the same XenApp server to allow users to access all applications from a single server and thus a single session. However, this may not be possible if a business unit controls specific servers or applications cannot be streamed.

Once it has been determined that it is indeed necessary for users to access applications from various XenApp servers, the impact on profiles should be ascertained.

This diagram illustrates the example below, where application settings may be lost when multiple sessions exist.



For example, Mary has the need to access AppA, AppB, and AppC and she is routed to Server 1, Server 8, and Server 12 respectively. Upon logon to each application, her Terminal Services roaming profile is loaded onto each server and folders are redirected for each session. When she is logged onto AppA on Server1, Mary changes Setting1 and logs off that session. She then completes her work in the other two applications and logs off.

At logoff, the change that Mary made within her session on Server 1 is overwritten because the settings within the last closed session are retained, not the interim change. When Mary logs onto AppA the next day, she is frustrated because the change she made is not visible.

Profile management can generally prevent this situation from occurring. Profile management only writes back the specific settings that were changed during a session; all other unchanged settings remain untouched. So the only potential conflict that would arise is if Mary changed Setting1 within another session. However, the user would likely expect that the most recent change was retained, which is the case, if Profile management is used in this scenario.

"Last Write Wins" and Roaming Profile Consistency Issues

This scenario is similar to the first one in this topic. "Last write wins" issues can present themselves in a variety of ways, and user frustration can mount as the number of devices accessed increases.

Because the roaming profile retains all profile data, with the exception of folders that have been redirected, the user profile can grow quite large. Not only does this add to the logon time because the profile must be downloaded, the potential for inconsistency grows during the write phase of the logoff, especially where network issues exist.

Profile management enables specific data to be excluded from the user profile, enabling the user profile to be kept to a minimal size. Because only differences are written to the profile, the write phase of the logoff involves less data and is faster. Profile management can be beneficial for applications that use profiles for temporary data but do not clean them up when the applications terminate.

Known Issues in Profile Management 2.1

The following known issues exist in Profile management 2.1.

Installation Issues

If you change the default location of Profile management cache files, they are not deleted when you uninstall the component. [#166/-]

On Windows Vista or Windows Server 2008, the log file directory is not deleted when Profile management is uninstalled. This issue does not occur when the component is removed in unattended mode. [#169/-]

If the path to the log file has been set to a non-default location in Group Policy or the .ini file, the file is not deleted when Profile management is removed. To workaround this issue, delete the log file manually. [#219376]

Other Known Issues

A gpupdate has no effect on the synchronization of new folders located on volumes that have not been synchronized before. To work around this issue, restart the Citrix Profile Management service. [#203859]

In Windows Performance Monitor, the log off counter is displayed as a number not as text. To work around this issue, read the four-digit number as Logoff Counter.[#201474]

Junction points and symbolic links appear not to be synchronized. If a user logs off, an error message such as the following may appear in the log file:

2009-01-12;12:01:45.231;ERROR;UPM;user5349;21;7468;FindFirstFileAPIWrapper: FindFirstFile for path <C:\U
2009-01-12;12:01:45.278;INFORMATION;UPM;user5349;21;7468;IsFSPathExcluded: Excluding directory <C:\Us

This is due to the fact that a junction point is accessed by another process. As junction points are not stored in the user store, this is only a cosmetic issue. Such error messages and can be ignored. [#204572]

Using extended synchronization in unsupported scenarios may result in data loss. Supported scenarios, in which this issue does not occur, are documented in Supported Uses of Extended Synchronization. [#216424]

Specific files and folders can be included and excluded from profiles. Inclusion and exclusion take place only at logoff, but log file entries make it appear they occur at logon. [#218834]

In Group Policy, you can change the location of the cache file used to monitor the Master File Table (MFT). The change is processed when policies are refreshed and take effect when the Citrix Profile Management service is next restarted. Changing the path when the Citrix Profile Management service is running has no effect, but the presence of log file entries may incorrectly give the impression that it does. [#218853]

Logging on immediately after restarting the computer running Profile management or the Citrix Profile Management service may result in two log file entries that include the fields “ctxupm5;0;1708;SessionCount:RealTimeCount - Could not enumerate sessiosn:<ctxupm5> because: The binding handle is invalid” and “ctxupm5;0;1708;ProcessLogon: User session count update failed.” These entries have no effect on profile processing and can be ignored. [#217421]

If you set Profile management to synchronize Internet Explorer temporary cache files, some are not processed and the error is noted (as multiple error messages) in the log file. These errors can be ignored, and, because the files are temporary, the effect on the user is negligible. This issue is observed only with Internet Explorer and only in its cache folder (AppData\Local\Microsoft\Windows\Temporary Internet Files). To workaround this issue, exclude this directory from synchronization. [#218212]

When a user's domain password is about to expire on Windows XP Service Pack 3, they are prompted to change it. When they do, the system loads a local copy of the user profile (or the default user profile) instead of the Citrix user profile, the session may become disconnected, and the Citrix user profile data is not saved. To resolve the issue, apply Microsoft hotfix KB958058 to the XP SP3 base virtual disk image on the Citrix Provisioning Server with the disk in private image mode. This issue is limited to Windows XP Service Pack 3. For more information, see the Citrix blog article on this topic. [#218418]

Frequently Asked Questions About Profile Management

This section contains questions and answers about Profile management. It includes general questions about installing and configuring the software.

General Questions

Are any changes required to profiles stored locally or on the file share?

Users must have write access to their profiles stored on the network. It is best to store these in users' existing home directory because permissions are already set correctly in that location. However, any UNC path may be defined as long as it uniquely and correctly resolves for every user.

Because the Citrix Profile Management Service runs before a user logs on, you can use only system environment variables, AD attributes, and any other variable that is set before logon to a system occurs. Two user environment variables are exceptions to this: %USERNAME% and %USERDOMAIN%.

When do profile keys get written back to the user store?

Changes to users' profiles are written back to the user store during logoff. The HKEY_CURRENT_USER registry settings are scanned and only changes are merged back to NTUSER.DAT. Any changes in managed files or folders are copied back to the user store.

Does "last write win?"

Last write wins is prevented in the entire registry hive. Only the last write operation to the set of defined files, folders, or registry keys wins. Profile management detects changes in these files and ensures that only the defined settings are overwritten. Compare this with roaming profiles where the entire profile is overwritten and therefore the last write wins. For more details, see http://community.citrix.com/x/OIENAg.

How does Profile management improve logon and logoff performance?

Profile management can reduce users' logon time by allowing administrators to exclude and include files and folders to prevent extraneous settings from needlessly being copied as part of the users' profile. For example, some applications create files and folders that are tens or hundreds of megabytes in size in the Application Data profile folder. This data is not required. By excluding these items, any user using the application has a smaller profile that loads faster. Alternatively, you can choose to only include specific files and folders, keeping to a minimum the amount of profile data that is managed.

For more information about profile bloat, see http://community.citrix.com/x/A4AaAg. For more information about improving logon times, see

http://community.citrix.com/x/HYXuAg.

Is profile corruption reduced or managed better?

Profile corruption often occurs when an application creates or writes to settings improperly. This is referred to as *profile inconsistency*. Corruption resulting from a network connectivity error is less likely; in most cases the operating system manages and recovers properly. You can reduce the effects of this type of corruption by minimizing the amount of data that is copied, and also by limiting the extent of damage to specific data if corruption occurs.

For more information about corruption and profile inconsistency, see the article *Corrupt User Profiles - Do They Even Exist?* on the Sepago blog from http://www.sepago.de/.

Users' Profiles and Settings

Where are profile settings and files stored?

Administrators can choose to store users' profile settings either on a UNC path or a path relative to users' home directory. By default, the folder created in %HOMESHARE% is named Windows but can be any name that you define when you configure Profile management.

In both cases, the path can include variables such as %USERNAME% and %USERDOMAIN%. The user needs write access to this folder. Within this path or folder, there is at least one subfolder named UPM_Profile that contains the users' profile data.

When using extended synchronization, each drive letter has an additional folder that follows the naming convention UPM_Drive_<drive letter> (for example,UPM_Drive_E for E:\).

Because the Citrix Profile Management Service runs before a user logs on, you can use only system environment variables, AD attributes, and any other variable that is set before logon to a system occurs. Two user environment variables are exceptions to this: %USERNAME% and %USERDOMAIN%.

How does folder redirection work with Profile management?

Folder redirection is automatically recognized and Profile management does not synchronize redirected folders and files. Folder redirection is recommended to ensure that user data stored in those folders is segregated.

How are files and folders synchronized?

During a session, Profile management monitors files and folders using the New Technology File System (NTFS) change journal. (Changes are recorded internally.) During logoff, a sophisticated algorithm recognizes the changes and performs only the minimum of operations on the files and folders over the network.

If a file or folder was renamed during a session, it is not copied during logoff. Instead, the file or folder on the network is simply renamed. If the attributes of a file or folder were changed, only the changed attributes are set during logoff. If the content of a file was changed, the file is copied during logoff.

How are changes to files and folders tracked during a user's session?

Profile management monitors the NTFS change journal. In order to resolve relative file names to absolute paths, the file system must be scanned once, which takes typically between 10 and 20 seconds. To avoid scanning at every subsequent startup, a cache file is used. It is called UserProfileManager_<DriveLetter>.cache and is located in the installation folder.

There may be environments in which the system cannot write to this folder (or you may not want software to write to it). For such environments, change the location using Group Policy.

Installation and Configuration

Where should I install Profile management?

The MSI package contains the Citrix Profile Management Service and supporting DLLs. Install the package on any computer that will process users' logons, such as XenDesktop virtual desktops and XenApp servers.

How does the Service retrieve settings?

The Citrix Profile Management Service first checks the settings in the Group Policy Object (GPO) and then the .ini file that corresponds to the local system's language and version (for example, UPMPolicyDefaults_V1Profile_en.ini for an English Windows XP or Windows Server 2003 system). Finally, if necessary, the Service resorts to using its internal defaults.

The .ini file exists in the same folder as the Service executable file. The .ini file is located in the folder where the Service was installed. By default, this is \Program Files\Citrix\User Profile Manager.

Note: In most cases, you will probably find it unnecessary to use the .ini file for configuration.

What are the default settings?

The .ini file contains default settings that should work in most environments with minimal modifications (for example, you will always need to enable the Service). Profile management saves and restores users' registry settings and files and folders within profiles. Some files, folders, and registry keys that typically do not contain profile data are excluded by default.

If GPO settings are not configured and an .ini file is not present, Profile management synchronizes the entire HKCU hive from the registry and everything in the user profile.

Are local policies supported?

Yes. However, local policies present a similar challenge to .ini files because you must centrally manage their deployment. In addition, be aware that Group Policy takes precedence over local policies. For information, see Configuration Precedence.

Can I clone the installed Service as part of a base image?

Yes. For example, this has been tested successfully using Citrix Provisioning Services.

Planning Your Profile Management Deployment

You should consider how the following apply to your environment before installing and enabling Profile management:

- **Computers and users**. Define the computers and the users whose profiles you want to manage with Profile management, and plan any MSI packaging you will need to perform.
- **Migration**. Decide how to migrate existing Windows local and roaming profiles to Citrix user profiles.

In XenDesktop deployments, you can install Profile management on virtual desktops (on the desktop image if you use virtual desktop provisioning) and on user devices. Profile management is particularly suited to pooled desktops since it saves profile data that would otherwise be discarded at logoff.

In XenApp deployments, you can install the software on XenApp servers and on user devices.

Having considered these topics, check the behavior of Profile management in a test environment before rolling it out in a production environment. A typical deployment consists of:

1. Creating the user store
2. Installing Profile management
3. Adding an administrative template (ADM) file to Group Policy
4. Configuring and enabling Profile management

Important: If you intend to use one of the .ini files (for example, UPMPolicyDefaults_V1Profile_en.ini) for evaluation purposes, rename the file (for example, to UPMPolicyDefaults_V1Profile_en.old) before you switch to using Group Policy in a production environment. Renaming the file allows you to be certain that only production settings are applied, and that no settings you specified during your evaluation are used.

If the file is not renamed, Profile management examines it for any settings not configured in Group Policy (and adopts any non-default settings it finds). So, to eliminate the risk of unwanted settings being introduced, configure all settings you want to use in your production environment using Group Policy, not the .ini file.

As well as these general points, some details of your environment affect the way you deploy Profile management. Consider those details as part of your planning.

Planning Considerations for Profile Management

Before deploying Profile management, consider the unique qualities of your environment. Answering these questions helps to guide your planning and ensures that your users get the best experience while you maintain a manageable user profile solution.

Note: Sample answers may not be applicable to every environment.

Question	Sample Answer
Is there a need to implement Profile management based on distinct operating systems?	Yes, because your XenDesktop deployment is based on Windows Vista but your XenApp deployment is based on XenApp 5 for Windows Server 2003.
Which of my Organizational Units store Profile management functionality?	The OUs that store your virtual desktops (published with XenDesktop) and XenApp servers share the Profile management GPO, and your Citrix administrator has rights to configure GPOs within these OUs.
Where are Citrix user profiles stored?	Citrix user profiles are stored by default in the same location as your users' home directories. Your administrator can use an arbitrary UNC path instead.
Are there any files and settings that I can exclude from the Citrix profiles?	Yes, you can configure Profile management to exclude registry keys and file system objects in the Citrix user profile. However, because the exclusion applies to users' logoffs, you cannot delete these files and settings from the profile by activating exclusion lists. There are other tools, such as Profile Nurse (available from the Sepago Web site), that can delete unwanted data from your users’ profiles.
Is the .ini file used for local configuration?	It depends. Where feasible, configuring Profile management through a GPO is preferred. However for each setting which is not configured in the GPO, you can configure the corresponding setting in the .ini file for the local machine.
Is folder redirection used?	The folders Documents and Application Data are redirected to users' home directories. You can redirect other folders. Citrix recommends performing pilot tests first.

About the User Store

The user store is the central location for Citrix user profiles. This defaults to the WINDOWS folder in the user's home directory.

The following features make use of the user store:

- Extended synchronization
- Multilingual profile storage (Version 1 profiles only)

Recommendations on creating secure user stores are available in the article called Security Recommendations for Roaming User Profiles Shared Folders on the Microsoft TechNet Web site. These are minimum recommendations that ensure a high level of security for basic operation. Additionally, when configuring access to the user store include the Administrators group, which is required in order to modify or remove a Citrix user profile.

Note: If an application modifies the access control list (ACL) of a file in the user's profile, Profile management does not replicate those changes in the user store. This is consistent with the behavior of Windows roaming profiles.

Naming Conventions

To distinguish between Version 1 and Version 2 profile folder types, the following suffix is appended to folders in the user store.

Folder Suffix	Notes
_upm_var	The localized folder name with the _upm_var suffix is used when profiles are imported into the user store at logoff. When profiles are exported at logon, the suffix is removed.

Paths anywhere in the local file system (even outside the user profile) are supported.

Absolute paths outside the user profile are stored by replacing the drive letter with UPM_Drive_<Drive letter>. Example: UPM_Drive_D.

Folder Structure

The folder structure of the user store at the root level is shown in this table.

Folder	Notes

\	Root of the current profile in the user store.
\UPM_Profile	Contains files folders from the user profile.
\UPM_Drive_C	Contains files and folders from elsewhere in the file system, in this case from drive C: (UPM_Drive_A to UPM_Drive_Z are supported).

Network drives are not supported.

Some examples are shown in this table.

Example Folder Name	Notes
\UPM_Drive_C\MyProgData	The synchronized content of C:\MyProgData.
\UPM_Profile\Data	The synchronized content of the Data folder in the user profile.
\UPM_Profile\AppData_upm_var	The synchronized content of the de-localized Application Data folder in the user profile.

An overview of how Profile management localizes and de-localizes folders is shown in this table. Only folder names are localized and de-localized. For example, Start menu entries and registry settings are not translated into the correct language by Profile management.

V1 English Folder	User Store Folder	Full Path Relative to the User Profile
Accessibility	Accessibility_upm_var	\Start Menu\Programs\Accessories\
Accessories	Accessories_upm_var	\Start Menu\Programs\
Administrative Tools	AdminTools_upm_var	\Start Menu\Programs\
Application Data	AppData_upm_var	\Local Settings\
Cookies	Cookies_upm_var	\
Desktop	Desktop_upm_var	\
Entertainment	Entertainment_upm_var	\Start Menu\Programs\Accessories\
Favorites	Favorites_upm_var	\
History	History_upm_var	\Local Settings\
Links	Links_upm_var	\Favorites\
Local Settings	LocalSettings_upm_var	\
My Documents	MyDocuments_upm_var	\
My Music	MyMusic_upm_var	\My Documents\
My Pictures	MyPictures_upm_var	\My Documents\
My Videos	MyVideos_upm_var	\My Documents\

NetHood	NetHood_upm_var	\
PrintHood	PrintHood_upm_var	\
Programs	Programs_upm_var	\Start Menu\
Recent	Recent_upm_vars	\
Start Menu	StartMenu_upm_var	\
Templates	Templates_upm_var	\
Temporary Internet Files	TemporaryInternetFiles_upm_var	\Local Settings\
SendTo	SendTo_upm_var	\
Startup	Startup_upm_var	\Start Menu\Programs\
System Tools	SystemTools_upm_var	\Start Menu\Programs\Accessories\

The User Store and AD Forests

Users in different domains can share the same user store in an Active Directory forest, allowing multiple users with the same logon name to access the same resources in the forest. But you must use variables to disambiguate identical logon names when setting the path to the user store. To do this, append the domain name variable to the path. You must also set permissions on the user store and Profile management's Processed Groups setting using Active Directory's Universal Groups.

Examples of User Store Paths in AD Forests

```
\\servername\userstore\%username%.%userdomain%\Vista
```

```
\\servername\userstore\%username%.%userdomain%\2008
```

Use a manually defined system variable such `%ProfVer%` to set the operating system version:

```
\\servername\userstore\%username%.%userdomain%\%ProfVer%
```

Creating the User Store

Any Server Message Block (SMB) or Common Internet File System (CIFS) file share can be used for the user store, but it's good practice to ensure that the share:

- Can be accessed by the accounts used with Citrix user profiles
- Is large enough to store profile data
- Is robust in case of disk or network failure

Recommendations on creating secure user stores are available in the article called Security Recommendations for Roaming User Profiles Shared Folders on the Microsoft TechNet Web site. These are minimum recommendations that ensure a high level of security for basic operation. Additionally, when configuring access to the user store include the Administrators group, which is required in order to modify or remove a Citrix user profile.

Note: If an application modifies the access control list (ACL) of a file in the user's profile, Profile management does not replicate those changes in the user store. This is consistent with the behavior of Windows roaming profiles.

Installing Profile Management

Install Profile management on each computer whose user profiles you want to manage.

Typically, you install the software on computers using a distribution tool, an imaging solution, or streaming technology. You can also install it directly on any computer using one of the installers in the download package.

Unattended installations are also supported. Make sure the installer runs with elevated rights to prevent issues with unattended installations on Windows Server 2008.

Installation alone does not enable Profile management. You must enable it separately (using the procedure To enable User Profile Manager) after performing all other setup tasks.

Citrix recommends that the same version of Profile management is installed on all user devices and the same version's ADM file is added to each Group Policy Object on all domain controllers. This prevents corruption of profile data, which may result when different user store structures (from different versions) exist.

System Requirements for Profile Management

Systems running Profile management must have one of the following operating systems:

- **Desktops**. Microsoft Windows XP Service Pack 3, Windows Vista Service Pack 1, or Windows 7
- **Servers**. Standard, Enterprise, and Datacenter Editions of: Windows Server 2003 Service Pack 2 and Windows Server 2008

Windows NT domains are not supported.

Every user should have access to the user store, a network folder where profiles are stored centrally. Alternatively, profiles can be stored in users' home drive if preferred. Read more about the user store.

Active Directory Group Policy (GP) is used for configuration. Active Directory forest functional and domain functional levels of Windows Server 2003 native mode and above are supported. Alternatively, local .ini files may be used for configuration settings, but in general the .ini files should be used for testing purposes only. Note that settings in the .ini files are applied for any setting not set in the Group Policy Object (GPO), that is any Group Policy setting that is left in the Not Configured state.

If you are planning to use GP to deploy the installer, you must upgrade to Service Pack 2 any domain controllers that will store the Profile management ADM file and that currently run the 64-bit edition of Windows Server 2003 Service Pack 1. You do not have to upgrade the 32-bit edition.

If short file names (also known as 8.3 file names) are mandated in a Citrix product or component you are using with Profile management, do not turn off support for short file names in your Profile management deployment. Doing so may cause issues when files are copied to and from the user store.

Make sure the change journal is set up on computers running the Profile Management Service. In addition, profiles on those computers must be stored on a single disk mounted by drive letter. This avoids the possibility of masking from the Service the profile that is intended to be monitored. This can occur when a disk is mounted into the folder used for profiles (for example, a disk is mounted into the C:\Users folder, which is a typical location for user profiles).

Files Included in the Download

The following files are included in this release.

File Name	Description
Profilemgt2.1.0_x86.msi	Installer for 32-bit systems
Profilemgt2.1.0_x64.msi	Installer for 64-bit systems
Ctxprofile2.1.0.adm	ADM file used in Group Policy
welcome.html	List of documentation resources

In addition to DLLs, the following files are created by the installers.

File Name	Description
UPMPolicyDefaults_V1Profile_en.ini	.Ini file for English Windows XP and Windows 2003
UPMPolicyDefaults_V2Profile_all.ini	.Ini file for Windows Vista, Windows 7 and Windows Server 2008
UserProfileManager.exe	Windows service carrying out functions on computers managed by Profile management

To install Profile management

Install the software on all computers whose user profiles you want to manage. This procedure installs Profile management on a single computer.

If you perform the installation on Windows XP or Windows Server 2003 and have disabled support for short file names (also known as 8.3 file names), each folder in the installation location must conform with the short file naming convention, for example C:\Citrix\ProfMgr. This issue does not occur on other supported operating systems.

Important: Before installing this version of Profile management, remove any existing versions.

1. Log on to the computer with administrator privileges.
2. Locate and run the appropriate installer from the download package. The installation wizard appears.
3. Follow the on-screen instructions, accepting the end user license agreement and clicking **Install**.
4. Once installation is complete, click **Finish**.
5. Restart the computer.

To install Profile management silently

Important: In this version of Profile management, the following keys have been removed from the registry exclusion list in the supplied .ini file:

- HKEY_CURRENT_USER\Software\Microsoft\Windows\CurrentVersion\Group Policy
- HKEY_CURRENT_USER\Software\Policies
- HKEY_CURRENT_USER\Software\Microsoft\Windows\CurrentVersion\Policies

If you add one or more of these keys to the registry exlusion list in Group Policy, be aware of the effect the command-line option `OVERWRITEINIFILES=yes` has when you run the installer. (This option is primarily intended for deployments using Group Policy rather than an .ini file, or for either deployment type in which configuration settings can be discarded and the default .ini files re-installed.) The option overwrites all of the changes you made throughout the .ini file including the keys. Citrix recommends running the installer without this option and then manually removing the key settings in the .ini file.

1. At a command line, run the following command:

   ```
   msiexec /i <path to the MSI file> /quiet [/norestart]
   [INSTALLDIR=<installation directory>] [OVERWRITEINIFILES=yes]
   ```

   This command performs the installation without displaying a user interface and then performs a restart. Optionally, you can suppress the restart using the `/norestart` option, but, depending on the operating system, Profile management will not function until the computer has restarted. For example, you do not need to restart user devices running Windows Vista.

   `installation directory` can be user specified.

   For information on the `OVERWRITEINIFILES=yes` option, see Considerations When Upgrading .Ini Files.

   Note: If UAC is enabled on Windows Vista or Windows Server 2008, run the msiexec command with elevated rights, for example from an elevated command prompt.

2. If you are upgrading, a dialog box may advise you that some files are in use. You are given the option to close the application or continue without closing. Select the option to close the application.

Deploying Profile Management with Citrix Receiver

You can use Citrix Receiver and Merchandising Server (components of the Citrix Delivery Center solution) to distribute Profile management MSI packages. No configuration of Profile management is required to do this. For instructions on deploying components this way, see the Citrix Receiver documentation.

Adding the ADM File to Group Policy

In production environments, you configure Profile management with Group Policy. For each OU containing the computers you want to manage, you create and link a Group Policy Object (GPO), and then add the Profile management ADM file to the GPO.

To configure Citrix user profiles, you can use any computer that runs Windows Group Policy Management Console. The computer does not have to be a domain controller. Domain controllers only store the ADM file.

Note: For small pilot projects and evaluations where no separate test deployment of Active Directory is available, you can also use the installed .ini files instead of the ADM file.

To store the ADM file

1. On the domain controller, import the Profile management ADM file from the download package. The file is called Ctxprofile2.1.0.adm and is located in the Group Policy Templates folder.

To add the ADM file to Group Policy

1. On the computer you want to use to configure Profile management, open **Active Directory Users and Computers**.

2. Create a new OU for each supported operating system whose profiles you want to manage: Windows XP, Windows Vista, Windows 7, Windows Server 2003, and Windows Server 2008. You can skip this step if individual OUs already exist for each operating system.

   Tip: In cross-platform scenarios, as an alternative to creating new OUs, you can simplify administration by implementing a system environment variable that specifies the profile version. Use this variable when setting the path to the user store along with variables such as %USERNAME% and %USERDOMAIN% to uniquely define users' accounts. For example, \\servername\profilestore\%USERNAME%\%ProfileVer% can resolve to \\servername\profilestore\JoeBloggs\WinXP or \\servername\profilestore\JoeBloggs\Win2k8ts. User environment variables are not supported.

3. In Group Policy Management, create a GPO and link it to each OU.

   Note: If you apply security filtering to the GPO, do so using either the Authenticated Users group or a computer group. Do not use a security group that only contains users.

4. Edit the GPO in Group Policy Editor:

   a. Expand **Computer Configuration** and right-click **Administrative Templates** under the GPO.

   b. Click **Add/Remove Templates** and click **Add.**

   c. In the **Policy Templates** dialog box, browse to the ADM file that you copied locally and click **Open.**

   d. In the **Add/Remove Templates** dialog box, click **Close.** This creates a Citrix folder and a User Profile Manager subfolder that stores the settings from the ADM file.

Setting Folder Redirection with Profile Management

Profile management works with folder redirection. Use this technique when your users' profiles contain many folders but don't use it if the folder contents are accessed frequently.

Ensure that the access permissions on folders containing Citrix user profile data are set appropriately. Also, secure the servers on which the data is stored. For instructions on performing these tasks, see the following articles on the Microsoft TechNet Web site, http://technet.microsoft.com:

- Security Recommendations for Roaming User Profiles Shared Folders
- Configuring Folder Redirection

To upgrade Profile management

Important: It's important that you follow the order of the steps in this upgrade process. Upgrade the software on all computers only after adding the new ADM file to Group Policy. If you upgrade it beforehand, log files may be stored in two locations (one containing log files for the old version and the other for the new version). This consideration particularly affects XenDesktop deployments.

Tip: You can hotfix your Profile management 2.1 deployment by upgrading to Version 3.x. If you do so, install the Version 3.x ADM file and be sure to disable the new features introduced in that release. At a minimum, you must disable the active profile write back feature (enabled by default) before installing Profile management on all user devices, virtual desktops, and XenApp servers. When all copies of Version 2.1 are upgraded, you can, if desired, enable any 3.x feature. Coexistence of Version 2.1 and any version earlier than Profile management 3.2 is not supported. For more information, see http://forums.citrix.com/thread.jspa?threadID=276625&tstart=0 and CTX126659.

1. Create a new Group Policy Object (GPO).
2. Add the ADM file to the new GPO.
3. Back up and then import the configuration from your existing GPO to the new GPO.
4. Upgrade the Profile management software on all computers by installing this version over the earlier version.
5. Apply the new GPO.

Managing Multiple Versions of Profile Management

This topic describes the support for multiple versions of the software.

Citrix recommends that the same version of Profile management is installed on all user devices and the same version's ADM file is added to each Group Policy Object on all domain controllers. This prevents corruption of profile data, which may result when different user store structures (from different versions) exist.

If you upgrade, do so using this procedure.

Deployments that contain version 2.1 and any combination of version 2.01 and 2.0, although not recommended, are supported. Deployments that contain any earlier versions, including Citrix Technical Preview or beta releases, are not supported when used with version 2.1.

Considerations When Upgrading .Ini Files

If you edited the .ini file in an earlier version of Profile management and upgrade to this version, the software detects that the file was edited and, by default, does not overwrite it. So, if you want to preserve your .ini file settings but also make use of the new settings in this version, you must do one of the following:

- Manually add the new settings from this version's .ini file to your edited .ini file
- Save a copy of the earlier version's .ini file, use the `OVERWRITEINIFILES=yes` command-line option to force an overwrite of the file during the upgrade, and add your saved settings to the upgraded .ini file

To remove Profile management

This procedure removes Profile management from a single computer.

1. From the list of installed programs in **Add or Remove Programs** (on Windows XP) or **Programs and Features** (on Windows Vista), select **Profile management** and click**Remove** (XP) or **Uninstall** (Vista).

2. Click **Yes**.

3. Restart the computer.

You can also remove Profile management in unattended mode.

Configuring Profile Management

Once you have added the ADM file to Group Policy, you set up Profile management to match the needs of your Citrix deployment using the procedures in this section. For example, you perform basic setup operations such as specifying the location of the user store and the groups whose profiles you want to manage. If necessary, you can also perform advanced setup operations such as identifying any files and folder to exclude from processing.

Configuring Profile Management - Basic Setup

There are many settings that allow you to customize the way user profiles are processed. This section lists the tasks used to configure commonly used settings.

The tasks for setting up Profile management are as follows. Typically, you don't need to follow all of these tasks because defaults are provided. Enabling the software is, however, mandatory. The tasks that you are most likely to use are listed first:

1. Enabling Profile management

   Important: Perform this task only after checking any other settings were configured as intended and after testing them.

2. Deciding how to resolve conflicting profile data

3. Choosing an appropriate migration policy that turns existing Windows user profiles into Citrix user profiles

4. Specifying the path to the user store

5. Defining the groups whose profiles you want Profile management to process

6. Setting up logging (if you want to troubleshoot profile management)

You configure Profile management in Group Policy Object Editor, under the **Computer Configuration** > **Administrative Templates** > **Citrix** > **Profile Management** folder. (In Windows Server 2008, the folder is **Computer Configuration** > **Administrative Templates** > **Classic Administrative Templates (ADM)** > **Citrix** > **Profile Management**.) Any settings not configured there (that is, settings in the Not Configured state) take the default values from the Profile management .ini files if these exist.

For information on any setting, consult the Profile Management ADM File Reference.

Testing Profile Management with Local GPO

Before deploying Profile management in a production environment, you are strongly encouraged to use a test environment. While you can create this setup on a local machine with the supplied .ini files, a fully supported and easier means of transferring settings to the domain GPO is based on a local installation and configuration of the ADM file on a device. Test logon and logoff behaviors and make adjustments to the local GPO until satisfactory results are obtained. You can perform tests safely this way if the device is a member of a production OU because local policies are invoked where OU and domain policies do not exist or are not configured. When using local policies, ensure no Profile management GPOs are used anywhere else (for example, in the domain or sites).

In addition, where an administrator does not have access to or control of domain GPOs for the configuration of the Profile management ADM file, local GPOs can be used as a long-term solution. However, this introduces complexities into the environment, such as ensuring that the Profile management ADM file is installed and correctly configured on each device and the inability of domain users to maintain settings when accessing multiple devices.

For testing purposes, consider using a Windows Management Instrumentation (WMI) filter to temporarily restrict your configuration to just one machine in an OU.

Important: For these reasons Citrix does not recommend the use of local GPOs as a long-term, enterprise solution.

To specify the path to the user store

Read about the structure of the user store and how your use of the extended synchronization and multilingual profile storage features affect it.

1. Under **Profile Management**, click the **Path to user store** policy.

2. Select **Enabled** and enter the path. If you enter a relative path, it is relative to users' home directories. Enter a complete UNC path to define an explicit path name. You can use AD variables (for example, #sAMAccountName#) or system environment variables (for example, the combination of %USERNAME% and %USERDOMAIN%). Note that AD variables are case-sensitive. Unlike #cn# or #sAMAccountName#, the system environment variables allow users to be defined unambiguously in Active Directory networks with multiple domains.

   For information on managing system environment variables in Windows XP, see http://support.microsoft.com/kb/310519.

3. Click **OK**.

For your changes to take effect, run the `gpupdate` command from the command prompt as documented at http://technet.microsoft.com/en-us/library/bb490983.aspx.

To define which groups profiles are processed

Use this procedure to select the profiles that are controlled by Profile management. If you don't define any groups with this setting, all user profiles are processed.

1. Under **Profile Management**, click the **Processed Groups** policy.
2. Select **Enabled.**
3. Click **Show.**
4. Add the groups containing the users whose profiles you want Profile management to process.
5. Click **OK.**

For your changes to take effect, run the `gpupdate` command from the command prompt as documented at http://technet.microsoft.com/en-us/library/bb490983.aspx.

To choose a migration policy

When a user first logs on after Profile management is enabled, no Citrix user profile exists for that user. You can decide which existing Windows profile (roaming, local, or both) is copied by Profile management and used in all further processing. If this setting is disabled, no profile is migrated.

1. Under **Profile Management**, open the **Profile handling** folder.
2. Click the **Migration of existing profiles** policy.
3. Select **Enabled.**
4. Select one of the following options from the drop-down list:
    - **Roaming and local profiles**
    - **Roaming profiles only**
    - **Local profiles only**
5. Click **OK.**

For your changes to take effect, run the `gpupdate` command from the command prompt as documented at http://technet.microsoft.com/en-us/library/bb490983.aspx.

To resolve conflicting profiles

Conflicts between local Windows profiles and Citrix user profiles (in the user store) can occur when you add Profile management to an existing deployment. You need to decide how the data in the local Windows profile is managed.

1. Under **Profile Management**, open the **Profile handling** folder.
2. Click the **Local profile conflict handling** policy.
3. Select **Enabled.**
4. Select one of the following options from the drop-down list:
    - **Use local profile**. Profile management processes the local data.
    - **Delete local profile**. Profile management deletes the local data and processes the data in the user store.
    - **Rename local profile**. Profile management renames the local data (for backup purposes) and processes the data in the user store.
5. Click **OK.**

For your changes to take effect, run the `gpupdate` command from the command prompt as documented at http://technet.microsoft.com/en-us/library/bb490983.aspx.

To enable Profile management

Enable Profile management only after carrying out all other setup tasks and testing how Citrix user profiles perform in your environment.

1. Under **Profile Management**, click the **Enable Profile management** policy.
2. Select **Enabled.**
3. Click **OK**. This enables Profile management.

For your changes to take effect, run the `gpupdate` command from the command prompt as documented at http://technet.microsoft.com/en-us/library/bb490983.aspx.

Configuring Profile Management - Advanced Setup

Use the settings in this section once you are familiar with the basic operation of Profile management, you have tested it and rolled it out in a production environment, and have a clear business requirement to use these advanced profile configuration settings.

About Profile Management Settings

Conflicts

Profile management does not check any settings for conflicts. For example, you can set the same directory to be both included and excluded but this leads to unpredictable results.

Default Configuration

Profile management comes with a default configuration stored in .ini files. The .ini files must be located in the installation folder so that the Citrix Profile Management service can recognize them. The default configuration is suitable for most environments. It processes the profiles of all users in all groups.

Use the following table, which lists the installed files, to find the .ini file used by each operating system. If you are not sure which file is used, examine the log file and search for the text `Reading from policy defaults file`.

Operating System	.Ini File Name
Windows XP and Windows Server 2003	UPMPolicyDefaults_V1Profile_en.ini
Windows Vista, Windows Server 2008, and Windows 7	UPMPolicyDefaults_V2Profile_all.ini

On Windows XP and Windows Server 2003, if you are configuring a non-English version of one of these operating systems, you must create an appropriate language version of the file using UPMPolicyDefaults_V1Profile_en.ini. Rename a copy of this file to reflect your language (for example, UPMPolicyDefaults_V1Profile_es.ini for Spanish) and localize the folder names. Use these file names:

- For French operating systems, UPMPolicyDefaults_V1Profile_fr.ini
- For German operating systems, UPMPolicyDefaults_V1Profile_de.ini
- For Spanish operating systems, UPMPolicyDefaults_V1Profile_es.ini
- For Japanese operating systems, UPMPolicyDefaults_V1Profile_ja.ini

The operating system language uses the appropriate version of the file, so if that version is not present Profile management may not work as expected.

The same .ini file is used for all languages on Windows Vista and Windows Server 2008.

Modifying .Ini Files

If you add entries to an .ini file, ensure the variables and values have the correct format.

Flags (on/off indicators) must be of this form:

<variable>=<value>

A value of 1 enables a setting and any other value or no value disables it. For example, the following entry enables the ServiceActive setting:
ServiceActive=1

The following entries disable the setting:
ServiceActive=ON
ServiceActive=OFF
ServiceActive=TRUE
ServiceActive=FALSE
ServiceActive=

List entries must be of this form:

<value>=

Do not append 1 after the equals sign. For example, the following entries specify files to be synchronized:
[SyncFileList]
Local Settings\Application Data\Microsoft\Office*.qat=
Local Settings\Application Data\Microsoft\Wallpaper1.bmp=

Important: Citrix recommends that you exclude the folder Local Settings (on Windows XP and Windows Server 2003) or AppData\Local and AppData\LocalLow (on Windows Vista and Windows Server 2008) from synchronization. If you do not, a very large amount of data may be transferred over the network and users may experience logon delays. These folders are not synchronized by standard Windows roaming profiles. In the default configuration, the exclusion lists contain these folders.

Changes to Group Policy settings take effect when a manual or automatic policy refresh occurs on the target computers. Changes to the .ini file take effect when you issue the command `gpupdate /force`, which is recommended, or you restart the Citrix Profile Management service on the target computers.

Configuration Precedence

You can configure Profile management using Group Policies and .ini file. Configuration settings are applied as follows:

1. Settings defined by Group Policies take precedence. The .ini file will only be queried if a policy setting is set to **Not Configured**.

   Note: If you apply a Group Policy Object selectively to sites and domains within an Organizational Unit, a further precedence applies. This is documented at http://technet.microsoft.com/en-us/library/cc785665(WS.10).aspx. In addition, note that domain and OU Group Policies take precedence over local policies.

2. Where a setting is not defined by a policy, Profile management tries to read the setting from the .ini file.

3. If a setting is not configured by a group policy or in the .ini file, the default setting is used.

There may be situations where you want to configure the same setting differently in Group Policy and the .ini file, for example when you want to activate default logging with a Group Policy setting but activate verbose logging using the .ini file on a computer that you use for troubleshooting.

You can view the description of any setting and its default value in the Group Policy Object Editor or here.

Optimizing Profile Management

You can fine tune how profiles are processed using the following settings: **Inclusion list**, **Exclusion list**, **Directories to synchronize**, and **Files to synchronize**. These define the files, folders, and registry keys (in the HKCU hive) that are processed or ignored when users log on or log off.

By selecting the values for these settings that meet your organization's needs, you can further improve the logon and logoff experience of your users.

For example, you might *include* Microsoft Word because it is a highly customizable and frequently used application that should present the same experience to roaming users however it is accessed. Conversely, you might *exclude* an enterprise application because it is infrequently used by some groups so its profile data does not need to be downloaded at each logon and logoff.

Including and Excluding Items

By default, all files and folders in local profiles are synchronized with the user store. You can specify files and folders that are not synchronized, by adding them to an *exclusion list*. If you exclude a folder, you can specify subfolders of it that are synchronized by adding them to an *inclusion list*.

In addition to files and folders contained in profiles, you can include and exclude:

- Registry entries related to profiles in the HKCU hive. Entries in the HKLM hive are not processed by default and cannot be configured to do so.
- Files and folders that are not included in the profile (using the extended synchronization feature).

The default configuration specifies included and excluded items in the file system and registry.

All included and excluded folder names are language specific. However, folder names in the user store are in a format independent of the operating system language.

You can synchronize files or folders on disks that are treated as local by the operating system. You cannot synchronize files or folders on network mapped drives.

Important: Citrix recommends that you exclude the folder Local Settings (on Windows XP and Windows Server 2003) or AppData\Local and AppData\LocalLow (on Windows Vista and Windows Server 2008) from synchronization. If you do not, a very large amount of data may be transferred over the network and users may experience logon delays. These folders are not synchronized by standard Windows roaming profiles. In the default configuration, the exclusion lists contain these folders.

To include items

1. Under **Profile Management** > **Registry**, click the **Inclusion list** policy.
2. Add any registry keys in the HKCU hive that you want to be processed during logoff.
3. Select **Enabled.**
4. Under **Profile Management** > **File system** > **Synchronization**, click the **Directories to synchronize** policy.
5. Add any folders that you want Profile management to process but that are located outside the user profile or in excluded folders.
6. Select **Enabled.**
7. Under **Profile Management** > **File system** > **Synchronization**, click the **Files to synchronize** policy.
8. Add any files that you want Profile management to process but that are located outside the user profile or in excluded folders.
9. Select **Enabled.**

For your changes to take effect, run the `gpupdate` command from the command prompt as documented at http://technet.microsoft.com/en-us/library/bb490983.aspx.

To exclude items

1. Under **Profile Management** > **Registry**, click the **Exclusion list** policy.
2. Add any registry keys in the HKCU hive that you do not want to be processed during logoff.
3. Select **Enabled.**
4. Under **Profile Management** > **File system**, click the **Exclusion list - directories** policy.
5. Add any folders that you do not want Profile management to process.
6. Select **Enabled.**
7. Under **Profile Management** > **File system**, click the **Exclusion list - files** policy.
8. Add any files that you do not want Profile management to process.
9. Select **Enabled.**

For your changes to take effect, run the `gpupdate` command from the command prompt as documented at http://technet.microsoft.com/en-us/library/bb490983.aspx.

Default Included and Excluded Items

The tables in this topic show the items that are included and excluded items by default if you use the .ini files. If instead you use Group Policy, no items are included or excluded by default.

Registry Inclusion List

Default Value	Notes
<empty>	All entries in the HKCU hive are included by default.

Registry Exclusion List

Default Value	Notes
Software\Microsoft\Windows\CurrentVersion\Explorer\TrayNotify	Windows Explorer caches tray notification icons as binary data in the registry.

Folder Inclusion List

This table shows the included folders on English systems. For other languages, you must edit the entries. For example, for German systems use Favoriten instead of Favorites.

Default Value	Notes
Windows XP and Windows Server 2003	
Local Settings\Application Data\Microsoft\Credentials	Must be included because it is inside an excluded folder. Stores user certificates.
Local Settings\Application Data\Citrix\Citrix offline plug-in	Must be included because it is inside an excluded folder. Location of the per-user storage for the Citrix offline plug-in.
Windows Vista and Windows Server 2008	
AppData\Local\Microsoft\Credentials	Needs to be included because it is inside an excluded folder. Stores user certificates.
AppData\Local\Citrix\Citrix offline plug-in	Needs to be included because it is inside an excluded folder. Location of the per-user storage for the Citrix offline plug-in.

Folder Exclusion List

Folders in this table are excluded from synchronization.

Default Value	Notes
Windows XP and Windows Server 2003	
Application Data\Citrix\PNAgent\AppCache	This is a cache.
Application Data\Citrix\PNAgent\Icon Cache	This is a cache.
Application Data\Citrix\PNAgent\ResourceCache	This is a cache.
Application Data\ICAClient\Cache	This is a cache.
Application Data\Macromedia\Flash Player\#SharedObjects	This is a cache.
Application Data\Macromedia\Flash Player\macromedia.com\support\flashplayer\sys	This contains flash cookies.
Application Data\Sun\Java\Deployment\cache	This is a cache.
Application Data\Sun\Java\Deployment\log	This is a log folder.
Application Data\Sun\Java\Deployment\tmp	This is a temporary folder.
Local Settings	Mostly specific to the computer. Also excluded with roaming profiles.
Start Menu	The Start menu is mostly specific to the computer.
Windows Vista and Windows Server 2008	
$Recycle.Bin	Also excluded with roaming profiles.
AppData\Local	Mostly specific to the computer. Also excluded with roaming profiles.
AppData\LocalLow	Mostly specific to the computer. Also excluded with roaming profiles.
AppData\Roaming\Citrix\PNAgent\AppCache	This is a cache.
AppData\Roaming\Citrix\PNAgent\Icon Cache	This is a cache.
AppData\Roaming\Citrix\PNAgent\ResourceCache	This is a cache.
AppData\Roaming\ICAClient\Cache	This is a cache.
AppData\Roaming\Macromedia\Flash Player\#SharedObjects	This is a cache.
AppData\Roaming\Macromedia\Flash Player\macromedia.com\support\flashplayer\sys	This contains flash cookies.
AppData\Roaming\Microsoft\Windows\Start Menu	This (the start menu) is mostly machine-specific.
AppData\Roaming\Sun\Java\Deployment\cache	This is a cache.

AppData\Roaming\Sun\Java\Deployment\log	This is a cache.
AppData\Roaming\Sun\Java\Deployment\tmp	This is a temporary folder.

File Inclusion List

Files in this table are included on synchronization. Wildcards are supported for file inclusions.

Default Value	Notes
Windows XP and Windows Server 2003	
Local Settings\Application Data\Microsoft\Office*.qat	Quick Access Toolbar entries for Microsoft Office. For further information, refer to http://support.microsoft.com/kb/926805/en-us.
Local Settings\Application Data\Microsoft\Wallpaper1.bmp	The background graphic used on Windows XP desktops.
Windows Vista and Windows Server 2008	
AppData\Local\Microsoft\Office*.qat	Quick Access Toolbar entries for Microsoft Office. For further information, refer to http://support.microsoft.com/kb/926805/en-us.

File Exclusion List

Files in this table are excluded from synchronization. Wildcards are supported for file exclusions.

Default Value	Notes
Windows XP and Windows Server 2003	
<empty>	By default, no files are excluded.
Windows Vista and Windows Server 2008	
<empty>	By default, no files are excluded.

Combining Inclusion and Exclusion Lists

Combining an inclusion list and an exclusion list is a powerful way of ensuring no extraneous items are processed by Profile management. Although this sounds like a good way of improving the efficiency of profile synchronization for any deployment, in practice you only need to combine inclusion lists and exclusion lists for "badly behaved" applications (that is, those that store temporary application data in user profiles and, by doing so, create profile bloat). All you have to do to combine both list types is:

- Add to an inclusion list a subfolder of a folder that is on an exclusion list
- Add to an exclusion list a subfolder of a folder that is on an inclusion list

No other configuration is required. The following examples describe each of these cases.

Excluding Temporary Data

Your Windows XP users have an application called MyApp that creates and stores many supporting files in the \Application Data\MyApp folder. A subfolder is called Stuff contains temporary data that does not need to be synchronized.

You add the MyApp folder to the inclusion list and add the Application Data\MyApp\Stuff folder to the exclusion list. At logoff, these files remain on the user device and are not transferred to the user store. If you configure local profiles not to be cached, this temporary data is deleted at logoff along with the cached profile.

Including Internet Explorer Passwords

Your Windows Vista users roam between one desktop and another. They want their Internet Explorer passwords to follow them, which means that their Microsoft credentials must be processed by Profile management.

You add the Local Settings folder to the exclusion list because by default it is a folder where applications store user data that typically should not roam. You add the Local Settings\Application Data\Microsoft\Credentials folder to the inclusion list so that its contents are synchronized and available to users whichever desktop they log on to.

To use extended synchronization

By default, only files, folders, and registry settings that are part of Windows user profiles are synchronized by Profile management. However, you can include other items. You may need to do so because a "bad" application stores data in a non-standard location.

Caution: Only use extended synchronization in a supported scenario. Using this feature in an unsupported one may result in data loss. For more information, see Supported Uses of Extended Synchronization.

1. For any item that is not part of a Windows user profile, add it to the inclusion list using an absolute path.

For your changes to take effect, run the `gpupdate` command from the command prompt as documented at http://technet.microsoft.com/en-us/library/bb490983.aspx.

Supported Uses of Extended Synchronization

Extended synchronization is designed to enable personalization settings that are not properly stored in the user's profile location to be captured as part of the user profile. So-called "bad applications", for example, store settings in non-standard locations. This topic sets out what is supported and what is unsupported.

In brief, the feature is not intended to manage multi-user access to these files or folders (for example, it is not designed to support an application that is not multiuser aware). Nor is it intended to become a file and folder synchronization mechanism (for example, one that allows you to synchronize the entire contents of c:\docs across machines).

It is intended purely to extend personalization settings that exist outside the default user profile location and thus provide a consistent experience across all resources accessed by the user.

Supported Scenarios

The supported scenarios are all based on a single-user with exclusive access to a workstation environment (typically XenDesktop, but a native workstation environment is also supported where the license permits.)

Scenario 1: Assigned Desktop (XenDesktop) Not Shared with Any Other User

This scenario also covers a domain workstation, again not shared with any other user.

Extended Synchronization supports synchronization of one or more external folders (that is, folders outside the user's profile area). For example, assume we have an application App1 which stores its personalization in two folders c:\App1 and c:\App1Blobs.

Prior to a user logging on and creating their profile you must configure all the folders to be synchronized. Extended synchronization does not support the addition of further folders after logon, once the user's profile has been created. It is essential to pilot the application before deploying it to a production environment.

Once extended synchronization has been configured as described above, the user may log on and create (or migrate) their profile. Extended synchronization supports the use of pre-installed applications (for example, using a standard image with all applications already installed) and also applications that are installed by the user after the profile has been created.

Scenario 2: Pooled Desktop (XenDesktop), Not Shared with Any Other User

This is very similar to Scenario 1. In this supported configuration, the application will have been installed as part of a shared image, but will not have been run, so that personalization takes place on the first use of the application.

Unsupported Scenarios

Other scenarios - those typically involving shared access by multiple users to a workstation, or simultaneous access by multiple users to a server - are not supported. Specific examples of unsupported scenarios include:

- Domain workstations, including domain-joined XenDesktop workstations, shared by multiple users. Fast User Switching disabled.
- Domain servers, concurrently shared with other users, whether Remote Desktop Services and XenApp environments.
- Domain workstations. Fast User Switching enabled.

These unsupported scenarios all involve a folder or folders being shared by multiple users, which gives rise to privacy and security issues, as well as profile bloat.

More Information

The scenarios described in this topic may be further constrained by any End User License Agreements (EULAs) that apply to the Citrix products in your deployment.

Wildcards and Profile Management

You can use ? (question mark) and * (asterisk) as wildcard characters in file inclusion and exclusion lists. The ? (question mark) matches a single character. The * (asterisk) matches zero or more characters.

Wildcards work recursively and are not supported in folder names. Ensure you specify the path when using wildcards.

Examples

The wildcard <path name>\h*.txt matches house.txt, h.txt, and house.txt.txt, but does not match ah.txt.

The wildcard <path name>\a?c.txt matches abc.txt, but does not match ac.txt.

The wildcard <path name>\a?c*d.txt matches abcd.txt and abccd.txt, but does not match acd.txt.

To store certificates

Follow this procedure to save personal certificates that have been imported into the certificate store during a session. By default, certificates are automatically synchronized.

1. Add the path Application Data\Microsoft\SystemCertificates\My to the list of folders to be synchronized. The operating system language determines the Application Data folder in this location. If a policy is used to configure multi-language systems, add each language's location to the list.

Example

On an English system, the path is Application Data\Microsoft\SystemCertificates\My. On a German system it is Anwendungsdaten\Microsoft\SystemCertificates\My.

For your changes to take effect, run the `gpupdate` command from the command prompt as documented at http://technet.microsoft.com/en-us/library/bb490983.aspx.

Using Profile Management with Citrix Products

This section contains information for Citrix administrators deploying Profile management with XenApp or XenDesktop. Use this information in addition to, not instead of, the other topics in the Profile management documentation.

See System Requirements for Profile Management for requirements relating to the use of Profile management with other Citrix products or components.

Profile Management and XenApp

This version of Profile management is available to customers who are licensed to use Enterprise and Platinum Editions of XenApp (version 4.5 or later). Users of that product can also install Profile management on their local desktop, which allows them to share their local profile with their published resources.

Profile management works in XenApp environments that employ Terminal Services. In these environments, you must set up an OU for each supported operating system. For more information, see the article "Using User Profiles in Windows Server 2003" on the Microsoft TechNet Web site at http://technet.microsoft.com.

In farms that contain different versions of XenApp or that run different operating systems, Citrix recommends using a separate OU for each server that runs each version or operating system.

Important: Citrix does not recommend using extended synchronization on folders that are shared by multiple users (for example, folders containing shared application data). If you apply this feature to such folders, the application data created by one user may be overwritten by Profile management when another user logs off.

Profile Management and XenDesktop

This version of Profile management is available to customers who are licensed to use:

- the Advanced, Enterprise, or Platinum edition of XenDesktop 2.1 or 3.0
- any edition of XenDesktop 4.0 or later

This topic contains advice for administrators using XenApp for Virtual Desktops. For information on XenApp administration in a XenDesktop environment, see the XenDesktop documentation.

Profile management works in XenApp environments that employ Terminal Services. In these environments, you must set up an OU for each supported operating system. For more information, see the article "Using User Profiles in Windows Server 2003" on the Microsoft TechNet Web site at http://technet.microsoft.com.

In farms that contain different versions of XenApp or that run different operating systems, Citrix recommends using a separate OU for each server that runs each version or operating system.

If you upgrade Profile management in a XenDesktop deployment, consider the effect on the log file locations.

On virtual images (for example, vDisks created with Citrix Provisioning Services), the Citrix Profile Management service starts before Group Policy is applied if Profile management has not been configured correctly on the images before they are rolled out. Configure Profile management on the images using the documented procedures before you put the images into a production environment. If you are using vDisks, follow the best practices in CTX119036.

Important: Citrix does not recommend using extended synchronization on folders that are shared by multiple users (for example, folders containing shared application data). If you apply this feature to such folders, the application data created by one user may be overwritten by Profile management when another user logs off.

Monitoring and Logging Profile Management

You can log many aspects of your Profile management deployment, but you typically set up logging only when you troubleshoot problems after enabling Profile management or if you want to gather performance data in a production environment. You can change the verbosity of logging and select different log settings. You must enable logging so that log files are created.

The log file is created on the computer on which Profile management is installed, in the folder %SystemRoot%\System32\LogFiles\UserProfileManager.

You can use Windows Performance Monitor to track several aspects of logon and logoff.

About the Profile Management Log File

The event log is used primarily for the purpose of error reporting. Only errors are written to it. All other warning and informational messages, in addition to errors, are written to the log file.

Log Entry Types

- **Common warnings**. All common warnings.
- **Common information**. All common information.
- **File system notifications**. One log entry is created each time a processed file or folder is changed.
- **File system actions**. File system operations performed by Profile management.
- **Registry actions**. Registry actions performed by Profile management.
- **Registry differences at logoff**. All registry keys in the hive HKCU that have been changed in a session. **Important**: This setting produces large amounts of output in the log file.
- **Active Directory actions**. Each time Profile management queries the Active Directory, an entry is written to the log file.
- **Policy values**. When the Profile management service starts or a policy refresh occurs, policy values are written to the log file.
- **Logon**. The series of actions during logon are written to the log file.
- **Logoff**. The series of actions during logoff are written to the log file.
- **Personalized user information**. Where applicable, user and domain names are logged to dedicated columns of the log file.

Log File Format

Each line in the log file has several fields, separated by semicolons.

Field	Description
Date	Date of the log entry
Time	Time of the log entry (including milliseconds)
Severity	Either INFORMATION, WARNING, or ERROR
Domain	The domain of the user (where applicable)

User name	The name of the user (where applicable)
Session ID	The session ID (where applicable)
Thread ID	The ID of the thread that created this line
Function and description	The name of the Profile management function executing at the time, and the log message

To set up logging

1. In Group Policy Object Editor, navigate to the **Computer Configuration** > **Administrative Templates** > **Citrix** > **Profile Management** folder. (In Windows Server 2008, the folder is **Computer Configuration** > **Administrative Templates** > **Classic Administrative Templates (ADM)** > **Citrix** > **Profile Management**.)
2. Open the **Log Settings** folder.
3. Click the **Enable logging** policy.
4. Select **Enabled.**
5. Click **OK.**
6. Click the **Log Settings** policy.
7. Select **Enabled.**
8. Select the type of events that you want Profile management to log.
9. Click **OK.**

For your changes to take effect, run the `gpupdate` command from the command prompt as documented at http://technet.microsoft.com/en-us/library/bb490983.aspx.

Performance Monitoring and Profile Management

Profile management collects data about the efficiency of your deployment using Microsoft Windows Performance Monitor (Perfmon) counters. For each session, the following counters are stored under the object called Citrix Profile Management:

- **Logon Bytes**. The size of the Citrix user profile when it is retrieved from the user store at logon (Bytes).
- **Logoff Bytes**. The size of the Citrix user profile when it is copied to the user store at logoff (Bytes).
- **Local Profile Setup Duration**. The time taken to create or prepare a Citrix user profile on the local computer (milliseconds).
- **Start Monitoring Profile**. The time that the Profile management session started.
- **Stop Monitoring Profile**. The time that the Profile management session ended.
- **Logon Duration** and **Logoff Duration**. The duration of logon and logoff processing by the Citrix Profile Management service (milliseconds).
- **Processed Logon Files - <file size range>** and **Processed Logoff Files - <file size range>**. A series of counters that together measure the profile size. Separately for logon and logoff, the number of files that are synchronized is categorized by file size.

Perfmon information is also stored in the log file (except that logon and logoff times are summarized in seconds instead of milliseconds). No configuration of Perfmon is required.

Troubleshooting Profile Management

The checklists in this section are designed to help you identify and solve issues. To troubleshoot an issue, work your way through the steps in the checklists. In many cases, the source of an issue is not Profile management but another component or a misconfiguration of the environment.

Basic Troubleshooting

As a first step in troubleshooting any issue that you or your users experience, follow these steps:

1. Check the .ini file on the affected user device.
2. Check the settings in Group Policy (GP).

   To deactivate any Profile management policy that you enter as lists (for example, exclusion lists and inclusion lists), set the policy to Disabled. Do not set the policy to Not Configured.
3. Check the HKLM\Software\Policies registry entry on the affected device to see if there are any stale policies due to GP tattooing issues, and delete them.

Examining the Profile Management Log File

After performing the basic troubleshooting steps, check the Profile management log file as follows. Log file entries are a good starting point when troubleshooting.

1. Make sure that logging is activated.
2. Check the log file for errors. You can locate these by searching for the word ERROR.
3. Check the log file for warnings. You can locate these by searching for the word WARNING.
4. Run the command `gpupdate /force` on the computer on which the error occurs, and check the log file again. Review which settings are active and from where the configuration has been read (either Group Policy or an .ini file).
5. Check the path to the user store is correct.
6. Check all information from Active Directory was read correctly.
7. Check the time stamps. Is there an action that took too long?

If the log file does not help you identify the issue, check these other steps.

Other Troubleshooting Steps

Once you have followed the basic troubleshooting steps to try and correct the issue, and eliminated the Profile management log file as a source of useful information, use this checklist to troubleshoot further.

- Check the Resultant Set of Policies (RSoP) from the computer you are analyzing. Are all GPOs applied the way you expect them to be applied?

- Check that you have the latest version of Profile management installed. Examine the version information of UserProfileManager.exe by right-clicking the file in Windows Explorer and clicking **Properties** > **Version**.

  If you are not using the latest version, upgrade.

- Check the support forum at http://support.citrix.com/forums/forum.jspa?forumID=185. Someone else may already have encountered the problem and solved it.

- Enable user environment debug logging (available on Windows XP and Windows Server 2003). Instructions on this are provided at http://support.microsoft.com/kb/221833/. The user environment debug log contains a lot of information about the logon process.

  Analyze the output file. Help with analysis is available at http://technet.microsoft.com/en-us/library/cc786775.aspx.

- Try to reproduce the issue you are observing on a clean computer with the same operating system as the affected computer. Ensure the clean computer only has the operating system and Profile management installed.

  Install the software products that are present on the affected computer one by one and see if the issue is reproduced after each installation.

To produce a session dump file

You can save Profile mangement's internal data state to a dump file. This is helpful when you can isolate an issue to a specific point in a session but there is no associated entry in the log file.

1. Create a file called $$upm_log$$.txt in the root of the drive on which the affected user profile is located (typically C:). Profile management dumps its internal data state to the file UserProfileManagerInternalData.log in the log file folder and deletes the file $$upm_log$$.txt.

Contacting Citrix Support

If you have checked the log file and the other troubleshooting advice in this section, and believe the problem you experience is due to Profile management, contact Citrix Support. Always include the following files and information. The more information you can provide, the better:

- All Profile management log files (in %SystemRoot%\System32\Logfiles\UserProfileManager). Be sure you have all log settings activated.

  A log file from the affected machine should contain at least the following information:

  - Start of the service (including the version and build number of Profile management)
  - Reading of the configuration by the service
  - One full logon process of the affected user
  - The activity the user performed when the issue occurred
  - One full logoff process for the affected user
- The Resultant Set of Policies (RSoP) for the machine and affected user. You can generate this using the Group Policy Management Console (GPMC).
- Details of the operating system, language, and version installed on the affected system.
- If available, the Userenv debug file.
- If available, the session dump file.

Deleting Local Profiles

If you delete a local profile on Windows Vista or Windows 7, ensure you follow Microsoft best practice to delete the entire profile including the user-specific Registry entries. Do not delete profiles manually, which can result in errors when users log on. For more information, see http://support.microsoft.com/kb/947215/en-us.

Profile Management Reference Section

When configuring Profile management settings or when troubleshooting, you may occasionally need to look up information in this section.

Profile Management ADM File Reference

This topic describes the settings in the ADM file, the template used to configure Profile management settings. In the Group Policy Object Editor, the settings appear under **Computer Configuration** > **Administrative Templates** > **Citrix**.

Modifying Settings

To deactivate any Profile management policy that you enter as lists (for example, exclusion lists and inclusion lists), set the policy to Disabled. Do not set the policy to Not Configured.

For your changes to take effect, run the `gpupdate` command from the command prompt as documented at http://technet.microsoft.com/en-us/library/bb490983.aspx.

Sections in the ADM File

All Profile management policies are contained in the following sections, located in the Citrix folder:

Profile Management

Profile Management\Profile handling

Profile Management\Advanced settings

Profile Management\Log settings

Profile Management\Registry

Profile Management\File system

Profile Management\File system\Synchronization

Profile Management

Enable Profile management

By default, to facilitate deployment, Profile management does not process logons or logoffs. Turn on processing by enabling this setting.

If this setting is not configured here, the value from the .ini file is used. If this setting is not configured here or in the .ini file, Profile management does not process Windows user profiles in any way.

This policy requires User Profile Manager 2.0.0 or later.

Path to user store

Sets the path to the directory (the user store) in which the user settings (registry changes and synchronized files) are saved. The path can be an absolute UNC path or a path relative to the home directory. In both cases the following types of variables can be used: system environment variables enclosed in percent signs and attributes of the Active Directory user object enclosed in hashes. Attributes are case-sensitive. User environment variables cannot be used, except for %username% and %userdomain%.

Examples:

- The folder Windows\%ProfileVer% stores the user settings in the subfolder called Windows\W2k3 of the user store (if %ProfileVer% is a system environment variable resolving to W2k3)
- \\server\share\#SAMAccountName# stores the user settings to the UNC path \\server\share\JohnSmith (if #SAMAccountName# resolves to JohnSmith for the current user)

If this setting is disabled, the user settings are saved in the Windows subdirectory of the home directory.

If this setting is not configured here, the setting from the .ini file is used. If this setting is not configured here or in the .ini file, the Windows directory on the home drive is used.

This policy requires User Profile Manager 1.0.0 or later.

Process logons of local administrators

Specifies whether logons of members of the local Administrators group are processed by Profile management.

If this setting is disabled, logons by local administrators are not processed by Profile management.

If this setting is not configured here, the value from the .ini file is used. If this setting is not configured here or in the .ini file, administrators will not be processed.

This policy requires User Profile Manager 1.0.0 or later.

Processed groups

Both computer local groups and domain groups (local, global and universal) can be used. Domain groups should be specified in the format: <DOMAIN NAME>\<GROUP NAME>.

If this setting is configured here, Profile management processes only members of these user groups. If this setting is disabled, Profile management processes all users.

If this setting is not configured here, the value from the .ini file is used. If this setting is not configured here or in the .ini file, members of all user groups are processed.

This policy requires User Profile Manager 1.0.0 or later.

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Profile Management\Profile handling

Delete locally cached profiles on logoff

Specifies whether locally cached profiles are deleted after logoff.

If this setting is enabled, a user's local profile cache is deleted after they have logged off. This is recommended for terminal servers. If this setting is disabled cached profiles are not deleted.

If this setting is not configured here, the value from the .ini file is used. If this setting is not configured here or in the .ini file, cached profiles are not deleted.

This policy requires User Profile Manager 2.0.0 or later.

Local profile conflict handling

This setting configures how Profile management behaves if both a profile in the user store and a local Windows user profile (not a Citrix user profile) exist.

If this setting is disabled or set to the default value of **Use local profile**, Profile management uses the local profile, but does not change it in any way. If this setting is set to **Delete local profile**, Profile management deletes the local Windows user profile, and then imports the Citrix user profile from the user store. If this setting is set to **Rename local profile**, Profile management renames the local Windows user profile (in order to back it up) and then imports the profile from the user store.

If this setting is not configured here, the value from the .ini file is used. If this setting is not configured here or in the .ini file, existing local profiles are used.

This policy requires User Profile Manager 2.0.0 or later.

Migration of existing profiles

Profile management can migrate existing profiles "on the fly" during logon if the user has no profile in the user store.

The following event takes place during logon: if an existing Windows profile is found and the user does not yet have a Citrix user profile in the user store, the Windows profile is migrated (copied) to the user store on the fly. After this process, the user store profile is used by Profile management in the current and any other session configured with the path to the same user store.

If this setting is enabled, profile migration can be activated for roaming and local profiles (the default), roaming profiles only, local profiles only, or profile migration can be disabled altogether. If profile migration is disabled and no Citrix user profile exists in the user store, the existing Windows mechanism for creating new profiles is used as in a setup without Profile management.

If this setting is not configured here, the value from the .ini file is used. If this setting is not configured here or in the .ini file, all types of existing profiles are migrated.

This policy requires User Profile Manager 2.0.0 or later.

Template profile

By default, new user profiles are created from the default user profile on the computer where a user first logs on. Profile management can alternatively use a centrally stored template when creating new user profiles. Template profiles are identical to normal profiles in that they reside in any file share on the network. Use UNC notation for specifying the folder where the template is located. For example, to specify a template, ntuser.dat, located at \\myservername\myprofiles\template, enter that path. Do not include the template file name in the path,\\myservername\myprofiles\template\ntuser.dat.

Users need read access to a template profile.

If this setting is disabled, templates are not used. If this setting is enabled, Profile management uses the template instead of the local default profile when creating new user profiles. If a user has no Citrix user profile, but a local Windows user profile exists, by default the local profile is used (and migrated to the user store, if this is not disabled). This can be changed by enabling the checkbox **Template profile overrides local profile**.

If this setting is not configured here, the value from the .ini file is used. If this setting is not configured here or in the .ini file, no template is used.

This policy requires User Profile Manager 2.0.0 or later.

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Profile Management\Advanced settings

Directory of the MFT cache file

Sets the path to the directory in which a cache file of the MFT directory content is stored.

Example: D:\Data\UPMCache

This cache is auto-created if not present by scanning the MFT upon service startup. If this setting is disabled, the cache is created in the folder where you installed Profile management.

If this setting is not configured here, the default value from the .ini file is used. If this setting is not configured here or in the .ini file, the file is stored in the installation directory.

This policy requires User Profile Manager 1.0.0 or later.

Number of retries when accessing locked files

Sets the number of retries when accessing locked files.

If this setting is disabled the default value of five retries is used.

If this setting is not configured here, the value from the .ini file is used. If this setting is not configured here or in the .ini file, the default value of five retries is used.

This policy requires User Profile Manager 1.0.0 or later.

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Profile Management\Log settings

Enable logging

Activation of this setting enables debug mode (verbose logging). In debug mode, extensive status information is logged in the log files in %SystemRoot%\System32\Logfiles\UserProfileManager.

Some logon and logoff processing is done in the context of the user using impersonation. Citrix recommends that you grant write permissions on the log folder for the users group so that Profile management can write to the log files during impersonation.

If this setting is disabled only errors are logged.

If this setting is not configured here, the value from the .ini file is used. If this setting is not configured here or in the .ini file, only errors are logged.

This policy requires User Profile Manager 1.0.0 or later.

Log settings

Defines detailed log settings, those events or actions that Profile management logs in depth.

If this setting is not configured here, Profile management uses the settings from the .ini file. If this setting is not configured here or in the .ini file, errors and general information are logged.

This policy requires User Profile Manager 1.0.0 or later.

Maximum size of the log file

Sets the maximum size of the log file in bytes. If the log file grows beyond this size an existing backup of the file (.bak) is deleted, the log file is renamed to .bak, and a new log file is created.

The log file is created in %SystemRoot%\System32\Logfiles\UserProfileManager.

If this setting is disabled, the default value of 1 MB is used.

If this setting is not configured here, the value from the .ini file is used. If this setting is not configured here or in the .ini file, the default of 1 MB is used.

This policy requires User Profile Manager 1.0.0 or later.

Path to log file

Sets an alternative path in which the log files are saved.

Some logon and logoff processing is done in the context of the user using impersonation. Citrix recommends that you grant write permissions on the log folder for the users group so that Profile management can write to the log files during impersonation.

If this setting is not configured here, the value from the .ini file is used. If this setting is not configured here or in the .ini file, the default location %SystemRoot%\System32\Logfiles\UserProfileManager is used.

This policy requires Profile management 2.1 or later.

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Profile Management\Registry

Exclusion list

List of registry keys in the HKCU hive which are ignored during logoff.

Example: Software\Policies

If this setting is disabled, no registry keys are excluded.

If this setting is not configured here, the value from the .ini file is used. If this setting is not configured here or in the .ini file, no registry keys are excluded.

This policy requires User Profile Manager 1.0.0 or later.

Inclusion list

List of registry keys in the HKCU hive that are processed during logoff.

Example: Software\Adobe.

If this setting is enabled, only keys on this list are processed. If this setting is disabled, the complete HKCU hive is processed.

If this setting is not configured here, the value from the .ini file is used. If this setting is not configured here or in the .ini file, all of HKCU is processed.

This policy requires User Profile Manager 1.0.0 or later.

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Profile Management\File system

Exclusion list - directories

List of folders that are ignored during synchronization. Folder names can be specified as absolute paths or as paths relative to the user profile (%USERPROFILE%).

Examples:

- Desktop ignores the Desktop folder in the user profile
- C:\MyApp\tmp ignores the folder C:\MyApp\tmp

If this setting is disabled, no folders are excluded.

If this setting is not configured here, the value from the .ini file is used. If this setting is not configured here or in the .ini file, no folders are excluded.

This policy requires User Profile Manager 2.0.0 or later.

Exclusion list - files

List of files that are ignored during synchronization. File names can be specified as absolute paths or as paths relative to the user profile (%USERPROFILE%). Wildcards are allowed. Wildcards are applied recursively.

Examples:

- Desktop\Desktop.ini ignores the file Desktop.ini in the Desktop folder. C:\MyApp\myapp.tmp ignores the file myapp.tmp in the directory C:\MyApp.
- C:\MyApp*.tmp ignores all files with the extension .tmp in the folder C:\MyApp and its subfolders.

If this setting is disabled, no files are excluded.

If this setting is not configured here, the value from the .ini file is used. If this setting is not configured here or in the .ini file, no files are excluded.

This policy requires User Profile Manager 2.0.0 or later.

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Profile Management\File system\Synchronization

Directories to synchronize

Profile management synchronizes each user's entire profile between the system it is installed on and the user store. It is not necessary to include subfolders of the user profile by adding them to this list. You can use this setting to synchronize folders that are not part of the user profile. In addition, you can use it to include subfolders of excluded folders.

Paths on this list can be absolute or relative. Relative paths are interpreted as being relative to the user profile.

Examples:

- Desktop\exclude\include ensures that the subfolder called include is synchronized even if the folder called Desktop\exclude is not
- C:\MyApp\data ensures that the folder called data is synchronized even though the folder called C:\MyApp is not (because it is not part of the profile)

Disabling this setting has the same effect as enabling it and configuring an empty list.

If this setting is not configured here, the value from the .ini file is used. If this setting is not configured here or in the .ini file, only non-excluded folders in the user profile are synchronized.

This policy requires User Profile Manager 1.0.0 or later.

Files to synchronize

Profile management synchronizes each user's entire profile between the system it is installed on and the user store. It is not necessary to include files in the user profile by adding them to this list.

This setting can be used to include files outside the user profile in the synchronization process. In addition, it allows for the inclusion of files below excluded folders. Paths on this list can be absolute or relative. Relative paths are interpreted as being relative to the user profile. Wildcards can be used but are only allowed for file names. Wildcards cannot be nested and are applied recursively.

Examples:

- AppData\Local\Microsoft\Office\Access.qat specifies a file below a folder that is excluded in the default configuration
- C:\MyApp\myapp.cnf specifies the file myapp.cnf in the folder C:\MyApp\
- AppData\Local\MyApp*.cfg specifies all files with the extension .cfg in the profile folder AppData\Local\MyApp and its subfolders

Disabling this setting has the same effect as enabling it and configuring an empty list.

If this setting is not configured here, the value from the .ini file is used. If this setting is not configured here or in the .ini file, only non-excluded files in the user profile are synchronized.

This policy requires User Profile Manager 1.0.0 or later.

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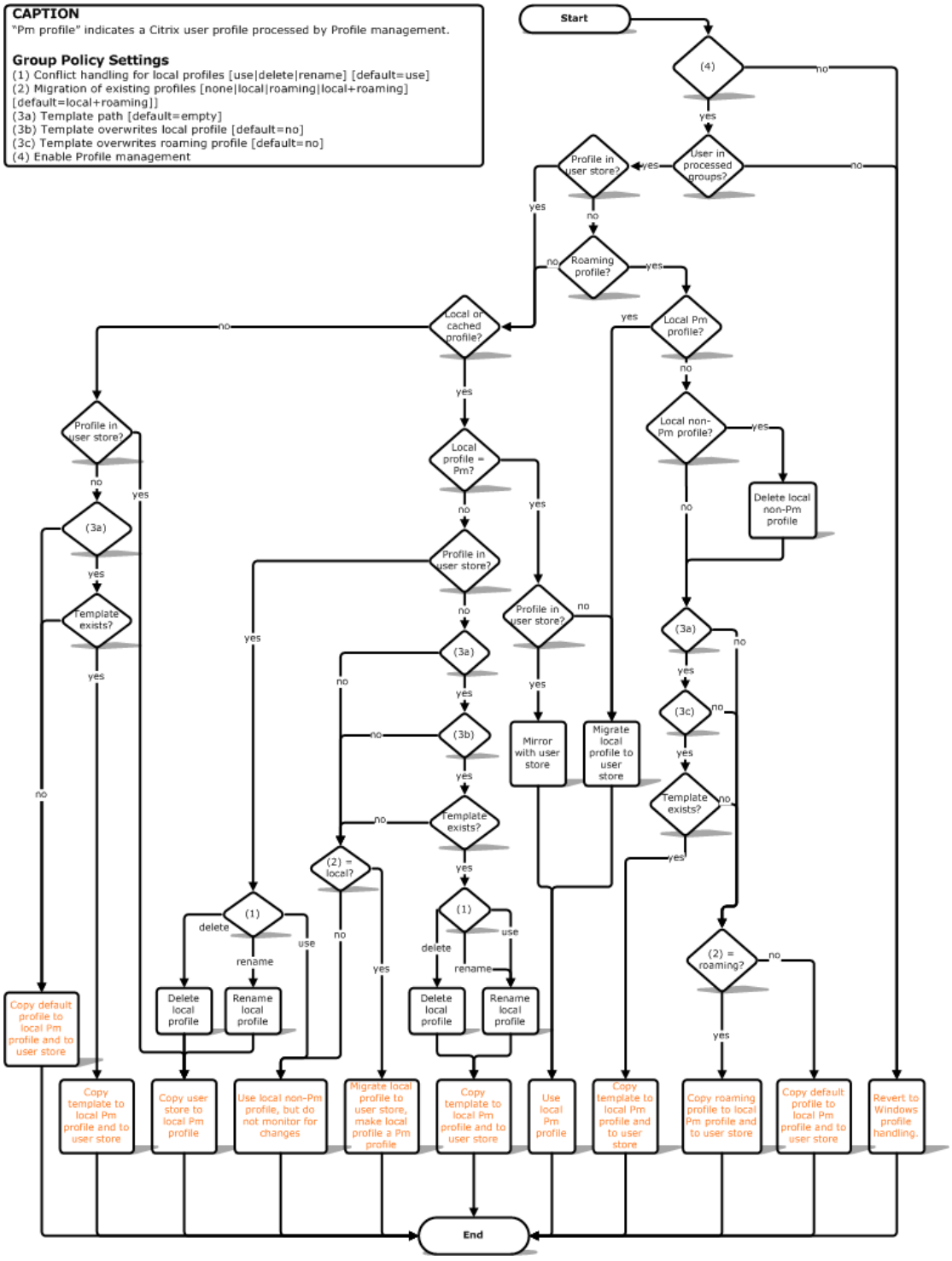
Logon Diagram

This diagram helps you work out the details of your user profile migration strategy. It also explains these aspects of performance:

- When you migrate a profile, two network copies can take place, which slows down the logon process. For example, the operation "Copy default profile to local Pm profile and to user store" first involves a full profile copy from the roaming profile store to the local computer and then a second full profile copy from the local computer to the user store.

- When a cached profile is used, no copying of profile data across the network takes place.

Read the diagram from the bottom to the top. Check the desired operations in the boxes at the bottom (for example, "Copy default profile to local Pm profile and to user store") and track a path back to identify the required migration settings.


CAPTION
"Pm profile" indicates a Citrix user profile processed by Profile management.
Group Policy Settings
(1) Conflict handling for local profiles [use|delete|rename] [default=use]
(2) Migration of existing profiles [none|local|roaming|local+roaming] [default=local+roaming]]
(3a) Template path [default=empty]
(3b) Template overwrites local profile [default=no]
(3c) Template overwrites roaming profile [default=no]
(4) Enable Profile management
Start
(4)
User in processed groups?
Profile in user store?
Roaming profile?
Local or cached profile?
Local Pm profile?
Local non-Pm profile?
Delete local non-Pm profile
Local profile = Pm?
Profile in user store?
(3a)
Template exists?
(3b)
(2) = local?
(1)
delete
rename
use
Delete local profile
Rename local profile
Mirror with user store
Migrate local profile to user store
(3c)
(2) = roaming?
Copy default profile to local Pm profile and to user store
Copy template to local Pm profile and to user store
Copy user store to local Pm profile
Use local non-Pm profile, but do not monitor for changes
Migrate local profile to user store, make local profile a Pm profile
Use local Pm profile
Copy roaming profile to local Pm profile and to user store
Copy default profile to local Pm profile and to user store
Revert to Windows profile handling.
End

Logoff Diagram

This diagram describes the logic used to copy or merge profile data at logoff.

CAPTION
"Pm" indicates a Citrix user profile processed by Profile management.

Group Policy Settings
(1) Conflict handling for local profiles [use|delete|rename] [default=use]
(2) Migration of existing profiles [none|local|roaming|local+roaming] [default=local+roaming]]
(3a) Template path [default=empty]
(3b) Template overwrites local profile [default=no]
(3c) Template overwrites roaming profile [default=no]
(4) Enable Profile management