

1 Configuration

Figure 2-1 illustrates the proposed user home directory and roaming profile configuration.

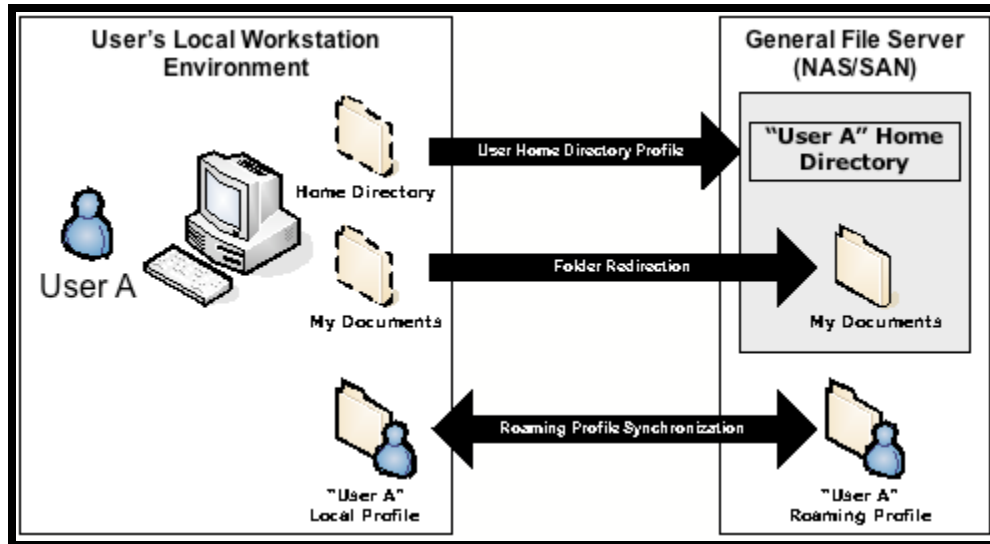


Figure 1-1 User Home Directory and Roaming Profile Overview

Each user is assigned a dedicated folder on the network server in the same location where the user's home directory and My Documents folder are stored. The user's home directory disk usage is managed based on a predetermined size limitation, or disk quota. The user's roaming profile is stored on a dedicated volume, and its size is managed by the profile quota defined in the GPO.

The folder redirection option is utilized to keep synchronization processing time to a minimum. This option reduces the time required to download or upload roaming profiles when the user logs in or logs out by excluding some folders from the synchronization process. Instead of keeping the folders in the roaming profile, they are kept on a network shared drive inside the user's home directory.

1.1 User Home Directory

Each user profile is configured to use the home directory on the SAN and NAS. The network-based home directory allows users to access their data regardless of which workstation they have logged in to, as long as the workstations are part of the AD domain and have access to the network share. Users have full control of their own home directory, and all saved data is backed up according to the regular server backup schedule.

1.2 Roaming Profile

The roaming profile captures a user's workstation environment and stores it on the network. When the user logs in to a workstation, that user's roaming profile is downloaded to that particular workstation, and is uploaded back to the network when the user logs off. By default,

the roaming profile includes user-specific data stored inside the Documents and Settings folder on the local workstation, except for the History, Local Settings, Temp, and Temporary Internet Files folders.

A roaming profile is not recommended for Work-at-Home (WAH) users, because WAH users connect to USCIS network via a dial-up network slow link. By default, Microsoft Windows prevents roaming profiles from being applied over a slow link.

For laptop users who connect either directly to the Local Area Network (LAN), or fast link, or remotely via dial-up, the application of a roaming profile should be determined based on the frequency that laptops user connects via the LAN. If log in is accomplished on a regular basis, a roaming profile is recommended. Configuring the roaming profile provides additional security, because the user's profile is backed up on the server in the event the laptop is lost or becomes disabled. Any changes made to the laptop user's local profile while the laptop was disconnected from the LAN will be merged with the copy on the server the next time user logs on through the fast link.

1.3 Folder Redirection and Offline Files Configuration

During the user logon and logoff processes, the roaming profile gets synchronized with the copy on the network. In order to improve the end-user's experience, excluding some of the large folders, such as Application Data, My Documents, Desktop and Start Menu, from the roaming profile synchronization process is recommended. This is accomplished by implementing folder redirection on these large folders, resulting in a significantly reduced synchronization process time and, ultimately, faster user logon and logoff time. In the future USCIS desktop environment, where access to both the Desktop and Start Menu is limited, folder redirection should be applied only to the My Documents folder. The folder will be redirected to user's home directory on the network where the disk quota is applied.

Implementing offline files allows a user access to network files and folders when the network is unavailable by caching those folders on the client's workstation. Usually, offline files are synchronized when the network is made available, but the synchronization schedule can be customized to maximize the end user experience. One of the main drawbacks of using offline files is that it adds additional network traffic when trying to synchronize large files and folders. In an environment where network failure is rare, use of offline files on the desktop is not recommended; however, regardless of the rate of network failure, the offline file configuration is recommended for laptop users.

1.4 Disk and Profile Quota

To centrally manage each user's disk size use, disk and profile quotas can be applied to a user's home directory and roaming profile, respectively.

The disk quota can be set via the New Technology File System (NTFS) volume property on the file server to impose a size limit on each user's home directory. It is configured at the Volume level (disk partition) and all the user's objects (files and folders) are recorded to

monitor the total size. Users will receive a warning message when the size reaches the pre-configured limit (such as 190 megabytes (MB) out of 200 MB available), but users still can write to the home directory. Once the user reaches the maximum allowed size limit, that user will not be able to save any additional information until some of the disk space is manually released, by deleting older items or archiving them to a compact disk (CD). To have different disk quotas set up for different user groups (such as for a standard user group versus an administrative user group), a separate volume should be created per each disk quota.

During the roaming profile synchronization process, Windows creates a temporary copy of the roaming profile in the directory where the roaming profile resides. As a result, the roaming profile requires twice the disk space of its actual profile size. The recommendation, therefore, is to place the roaming profile in a disk volume that is not limited by the disk quota. If the roaming profile is stored in a folder that has the disk quota limitation applied, users will not receive a warning message when the remaining disk space size become less than the half of total disk quota setting. Instead, users will receive an error message when they try to log off, and the roaming profile synchronization process will fail, resulting in an outdated copy of the user's roaming profile on the network.

Applying the profile quota to manage the roaming profile size is recommended to address this unique requirement of the roaming profile. The profile quota can be configured through an Active Directory (AD) GPO with a specific profile size limit and customized warning message. When the user reaches the maximum allowed profile size, the system will prevent the user from logging off until some of the data in the roaming profile are removed, avoiding failures during the roaming profile synchronization process at log off.