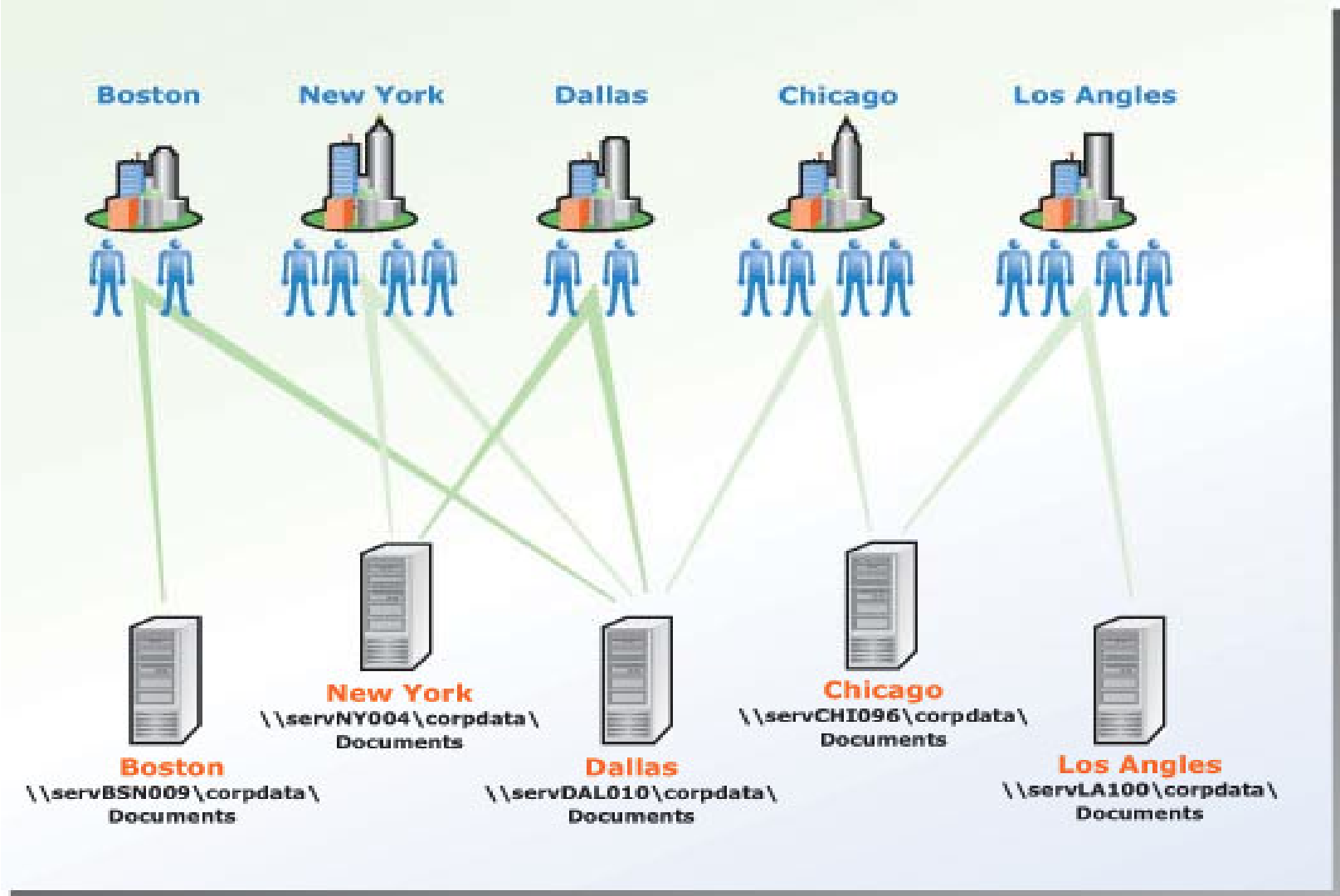


# A Loss of Time and Productivity

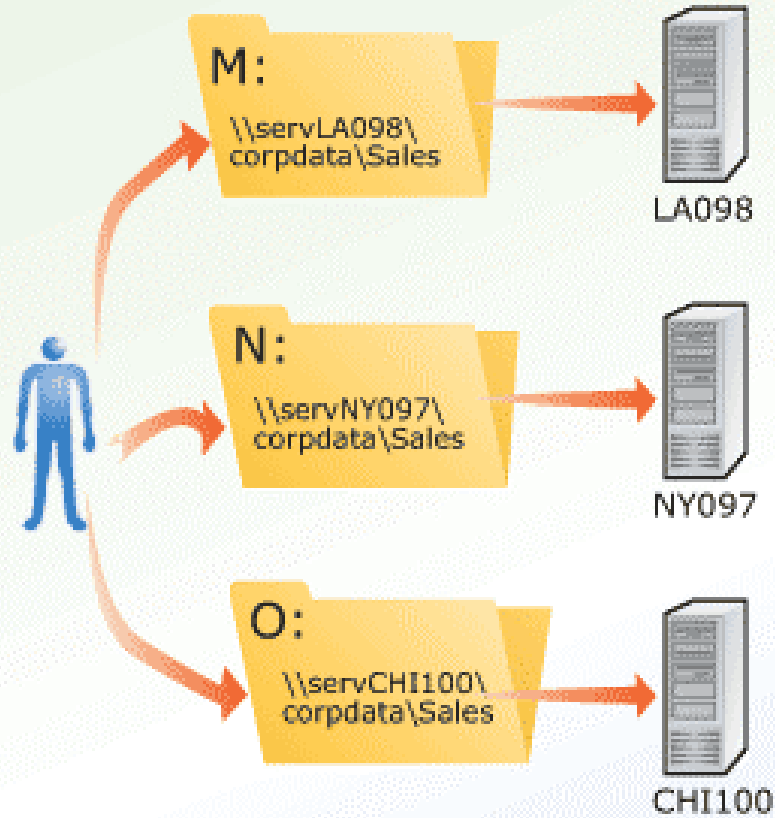
- For example, a user might map a drive letter to a server and share. The full Universal Naming Convention (UNC) path might be something like \\Server\Share\Path\Filename, but users can map drive x: to \\Server\Share. By doing so they avoid remembering long or meaningless names, and they can navigate faster to the information they need. Some additional navigation is usually required to locate a particular file on the share.
- For small groups of users, this solution may suffice, but as networks continue to grow in size and as organizations begin to use existing internal and external storage for purposes such as intranets, mapping a single drive letter to individual shares scales poorly. Even if users are comfortable using UNC paths directly, they can still become overwhelmed by the number of places where files can be stored. And each time a network administrator needs to move, rename, or upgrade a file server, they quickly discover how inflexible this solution is, while the entire user community feels the change as a productivity loss.

# How DFS Works

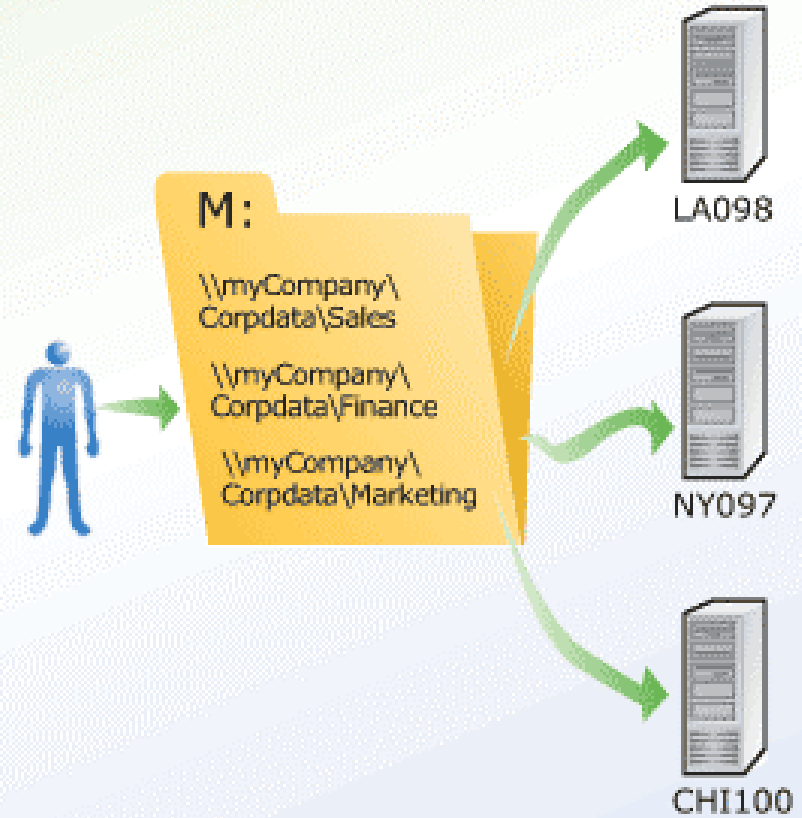
- The DFS service consists of a client component and a server component. The client component is included with all Windows clients and allows the client to make requests to the DFS server. The server component is included with Windows NT, Windows 2000, and Windows Server products. The DFS server component receives a client request and redirects or refers it to a physical target, similar to the way a browser receives a DNS call and refers the client to a Web site.
- The view of shared folders on different servers is called the DFS namespace. Another way to think of a DFS namespace is as an intuitive view of shared folders on different servers. Or think of it as a virtual UNC path. A namespace is much easier to use as Figure 1 below shows. For example, an administrator can create a single namespace for commonly accessed corporate documents called `\\myCompany.com\corpdata\Sales` that maps to physical resources residing on multiple servers that could be located just about anywhere.

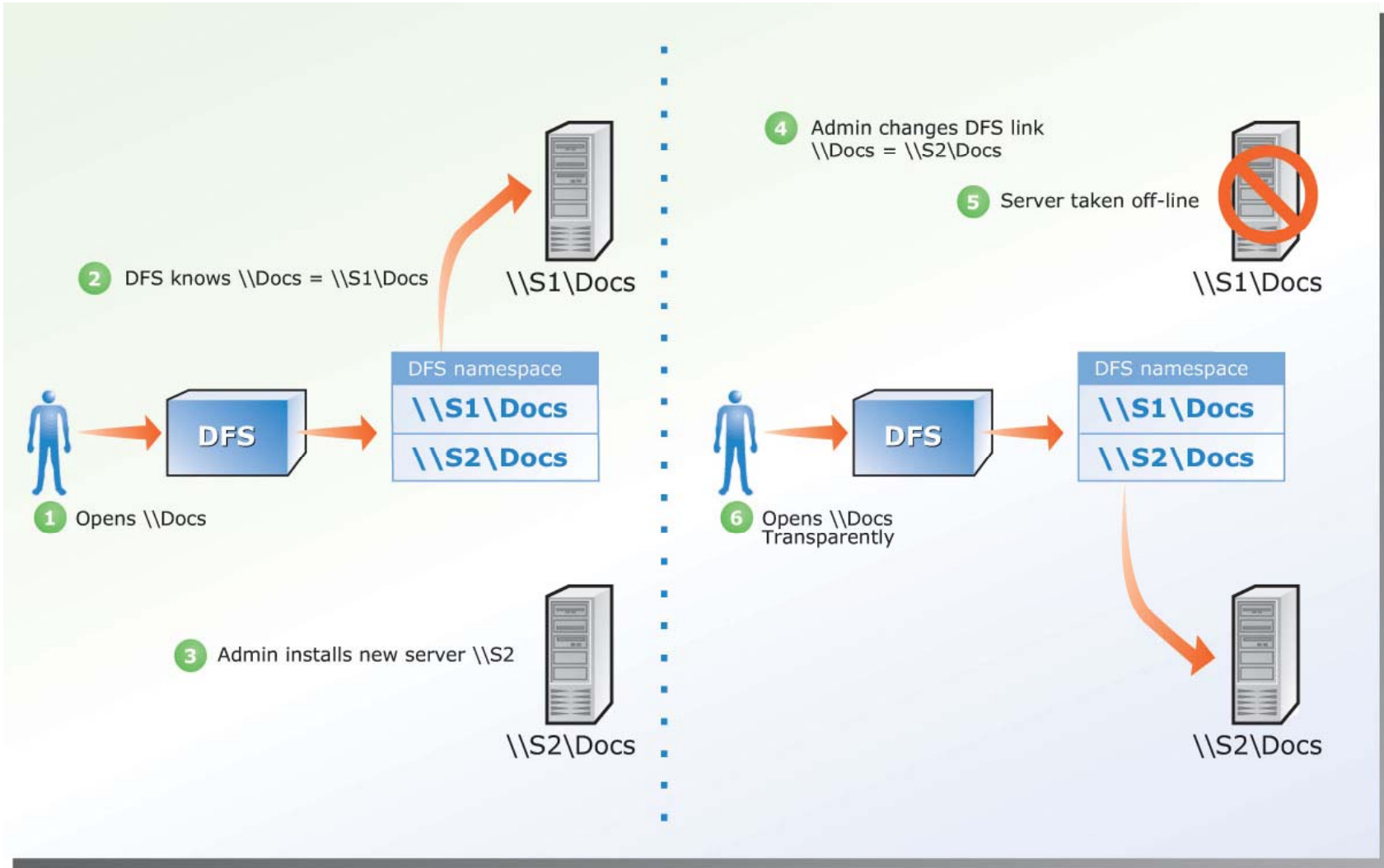


## Without DFS



## With DFS





# How DFS Works

- Technically speaking, DFS is a multi-protocol architecture that uses the default, built-in authentication protocols server message block (SMB) and LAN Manager (LM) to communicate between a DFS client and a DFS server as Figure 5 illustrates. In this figure, Step 1 shows the client making a request of the DFS namespace, in Step 2, DFS returns the appropriate path to the data (including AD site-costing information when AD is in use), and Step 3 illustrates the client making a connection to the server and share.
- A DFS namespace can consolidate many types of share, including shares created by Network File System (NFS) servers, Services for Macintosh™ servers, and Netware™ Core Protocol (NCP) servers. As long as the Windows client machine has a suitable client redirector driver installed supporting these other protocols, DFS can be used to provide a virtual namespace for these types of shares.

