

Why an Enterprise Directory Should Be a Separate Implementation from a Network Operation System Directory

by Ed Owens

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Even though a single directory technology, such as Active Directory or Novell's eDirectory, can be used for either a Network Operating System (NOS) directory or an Enterprise directory, *iit* believes that the two types of directories are different and distinct. The two uses of directory technology are so different that even if you use one technology for both types of directories, they should be separate implementations.

A NOS requires a directory to define its users. The directory is used to support a single point of sign-on and a single point of administration for file, print and other services, as well as access to NOS-aggregated applications. The directory is where the administration and management of the network, desktops and other resources is stored.

An enterprise directory provides a single source of vital enterprise information. It is a logically central repository accessible to:

- Individuals in the enterprise
- Application programs running in the enterprise
- Customers, vendors and partners in the extended enterprise.

Technical Differences

Entries in the directory may not be actual users of a network or anything the enterprise directory cares about. The enterprise directory may not even be a single physical directory, particularly in the next five years. It will at least be a logical grouping of directories and supporting services, used by multiple systems. It will provide authoritative content across the enterprise, and as such is subject to a higher standard of definition, re-usability, integrity and stability than exists in a normal application.

Every person in a NOS directory is a user of the network. This affects the design of the directory structure in several important ways. The two most important ways are depth of structure and assignment of identifiers. A NOS directory tends to develop a deep tree structure to support distributed administration and replication. And multiple unique identifiers are required, such as login id (SAMAccountName), User Principal Name



(usually built on the SAMAccountName) and the Microsoft provided unique identifiers (SID, etc.) along with the directory required fully distinguished name. An enterprise directory works better with a relatively flat tree structure. The fully distinguished name is the only required unique identifier. In addition, entries for applications and individuals outside the corporation or without access to the network must be included.

At this time using the NOS directory to be the enterprise directory itself causes a great deal of frustration. The unique requirements of the NOS directory point to making the NOS directory that is both a source for and a recipient of information for the Enterprise directory but not the Enterprise directory itself

Integration Issues

This situation is further exacerbated by the fact that a NOS directory and an Enterprise directory are integrated into the other systems in the enterprise in very different ways. The NOS directory has relatively few sources of information, and the NOS itself is its primary user. On the other hand, an Enterprise directory has many sources of information and may have many varied uses of its information. These complexities drive the whole field of Meta-Directories, which are primarily concerns of the Enterprise directories. To constrain an Enterprise directory to live in the simplified environment of a NOS directory would be overly limiting; to weight down a NOS directory with all of the integration features of an Enterprise directory would unnecessarily delay its deployment and increase its cost.

Business Drivers

Furthermore, there are radically different reasons for deploying an Enterprise directory and a NOS directory. These differences can drive design decisions.

The NOS directory is deployed for technical reasons: it is critical to providing network-based set of file and print services. In some cases, such as Windows 2000, installation of a NOS directory service is even required by the upgrade in the server operating system.

On the other hand, deployment of an Enterprise directory is driven by powerful economics. There are the obvious operational and support savings in simplifying and clarifying the IT infrastructure. And there are even bigger savings in application development, once the directory service infrastructure is in place. Furthermore, there are broad organizational benefits from greater data consistency and better reliability. In almost all organizations, the bottom line has come out to the Enterprise directory project having better than a 100% annual Return on Investment; there are very few projects out there with that kind of pay-off.

