MIGRATE TO SYMAS OPENLDAP

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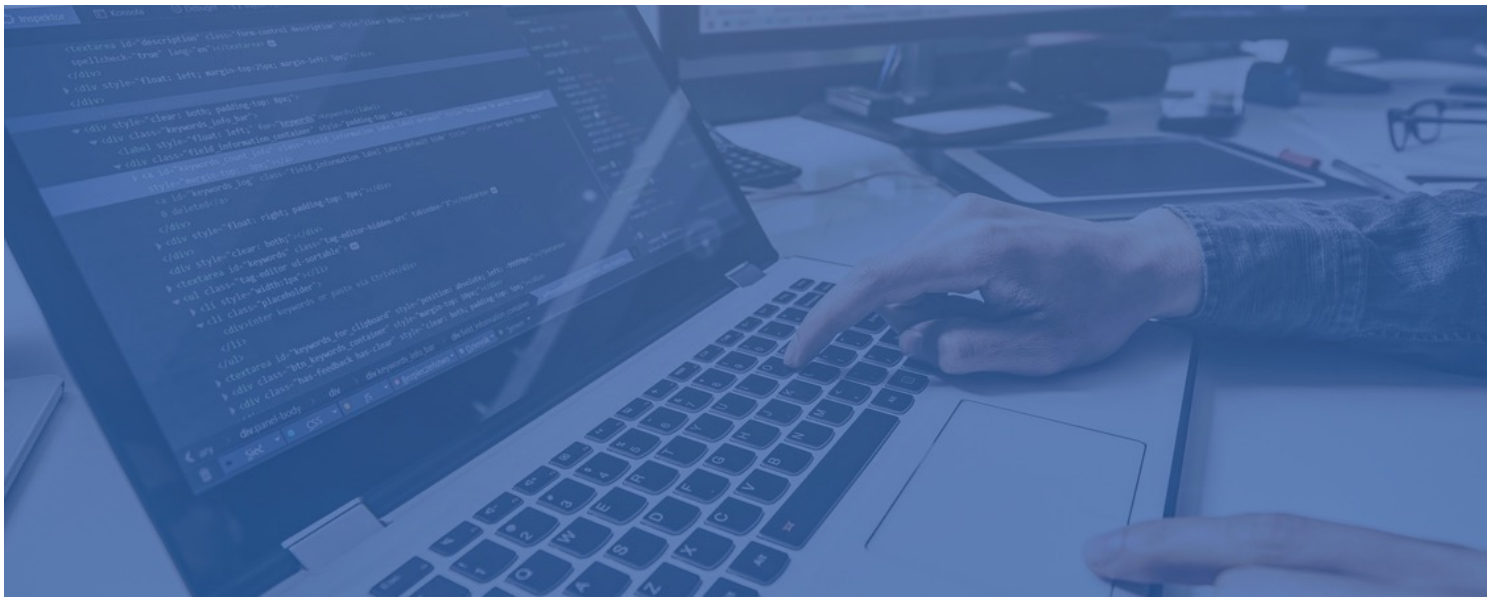

Migration Made Easy

Migrate knowing your data is secure, performance will improve, and the technical support will be unmatched.

Included Inside:

- Reasons to Migrate
- Detailed Migration Steps
- Derivative Scenarios
- Cost Options

Symas OpenLDAP Migration Methodology 2018

We receive many requests to upgrade existing LDAP deployments to our Symas OpenLDAP Gold directory system. The driving factors vary, but generally they include at least one of the following:

- Lower TCO
- Improved support response times
- Moving to the cloud
- Directory consolidation

Improvements Across the Board

Since 1999 when Symas was founded, the migration of various LDAP directory systems to Symas OpenLDAP has been a staple of our business. Our engineers are experienced with assisted and turnkey conversions. For the client, the result is always better across the board.

- Retain all of your current LDAP system features
- Gain new system features through Symas OpenLDAP
- Improve performance while reducing overall number of servers
- Access superior technical support and maintenance
- Achieve better uptime
- Reduce overall costs

The Migration - Four Easy Steps

1. Review Existing Install

Our experts analyze your existing LDAP directory system and suggest improvements for performance, availability, and resilience. We examine your directory contents for schema compliance, make corrections to the data if needed, load the cleaned-up data into the new system, and check it for integrity.

2. Analyze Access Controls

Next, we analyze your directory's access controls. After determining the intent of the access control model, we correctly translate it to OpenLDAP format. Then we test thoroughly to ensure that the data is securely stored and accessible only to those identities with appropriate privileges..

3. Test & Deploy

When your Directory is ready for production, we're there to help with the deployment to your network.

4. Training

Through our LDAP Bootcamp program, we train your staff on everything they need to know: managing backups, monitoring performance, diagnosing problems, recovering from system outages, and more.

Ready to Talk Migration?

So are we. Our staff aren't hiding behind an automated phone tree. When you call or email Symas, you'll reach someone who can talk to you about OpenLDAP migration. Contact us today for your free estimate.

855-SYMASCO or sales@symas.com

The Migration - More Detailed Steps

Survey existing systems and configurations

Meet with customer staff to determine detailed requirements

Export and analyze data

Evaluate data access security model and translate to OpenLDAP format

Validate and correct

- Schema conformance
- Syntax
- Content

Set up and validate the directory server host systems

- Staging
- Production

Install and configure the staging directory systems

- Routing & IP Addresses (DNS)
- Directory servers
- Load balancers
- Failover policies
- Monitoring

Test the staging system for compliance with the your organization's requirements

- Application function
- Provisioning function
- Crash recovery
- Rollback

Roll staging servers to production

- Halt provisioning activities
- Refresh contents of production servers with current data from ODSEE
- Redirect LDAP applications to new systems
- Enable provisioning activities

Validate proper function of the production systems and continue to monitor

Train your staff

"I can depend on my data being where I need it, when I need it. Symas has an amazing company with superior support, knowledge and fast reaction time."

Judy Tyrer, *President, 3 Turn Productions*

The Migration Costs

Although there are many brands of LDAP directories, most of them come from a relatively small number of code bases. Derivatives from each code base have many similarities, and so the conversion costs for each one are also similar.

The list that follows organizes the various servers by code base and describes conversion issues and relative conversion/migration costs.

OpenLDAP Derivatives

COST RANGE: Moderate

- IBM Security Directory Server
- IBM Tivoli Directory Server
- IBM SecureWay Directory
- Apple Open Directory
- Red Hat OpenLDAP
- SuSE OpenLDAP
- Debian OpenLDAP Save & Exit
- Ubuntu OpenLDAP
- Linux Tool Box (LTB) Project
- Other OpenLDAP distributed with GNU/Linux distributions

Because of its permissive licensing, the OpenLDAP code base has for years been a popular starting point for companies wishing to develop proprietary directory servers. The IBM products listed below were split off from OpenLDAP fairly early in its life, and so have not benefitted from later improvements. The conversion cost for these directories is in the moderate range but can vary quite a bit depending on configuration complexity.

OpenLDAP in its current form is found in many GNU/Linux distributions including Red Hat Enterprise Linux, SuSE Linux Enterprise Server (SLES), and Debian and Ubuntu distributions. The OpenLDAP versions in these distributions lag the OpenLDAP Project releases by anywhere from several months to several years. The conversion cost for these directories will be the lowest of all, due to the fact that access controls match almost exactly and the capabilities are almost identical. Capacity and reliability will improve with Symas OpenLDAP due to the availability of the LMDB database and other improvements.

iPlanet Directory Server Derivatives

COST RANGE: Low to Moderate

- Red Hat Directory Server
- Netscape Directory Server
- Sun Java System Directory Server (JSDS)
- Oracle Directory Server Enterprise Edition (ODSEE)
- Sun Directory Server Enterprise Edition (Sun DSEE)
- Sun Open Network Enterprise (SunONE) Directory Server
- 389 Directory Server (Fedora)

Development of the iPlanet Directory Server began in the 1990s as a joint project between Netscape and Sun Microsystems. The partnership was later dissolved, and although the codebases diverged, overall the servers remained fairly similar. The Netscape version of the code became the Netscape Directory Server and was eventually sold to Red Hat in a fire sale after the various mergers of Time/Warner, Netscape, and AOL. It was then open-sourced and became the 389 Directory Server and the Red Hat Directory Server, which was then taken private again.

Servers in this family are generally simple to convert, but the implementations have tended to be very loose on schema enforcement. As a result, careful attention needs to be paid to the content. Sometimes conversion scripts need to be used on the data and special overlays used to compensate for behavior of applications written to these loose standards.

Novell eDirectory Derivatives

COST RANGE: Low

- NetIQ eDirectory

The Novell eDirectory Server is the inheritor of the older Novell Directory Server (NDS) product and has all but replaced it. It has been a stalwart of the industry but has seen no improvement and few maintenance releases since its acquisition and renaming by NetIQ/Micro Focus. Schema enforcement is moderate. Careful attention needs to be paid to the content and sometimes conversion scripts need to be used on the data.

Access controls are relatively mature but generally not as versatile as those available in OpenLDAP. As a result, the converted ACLs are simpler and easier to maintain.

Sun OpenDS Derivatives

COST RANGE: Moderate

- OpenDJ
- Oracle Unified Directory
- ForgeRock Directory Services
- UnboundID Directory Server
- Ping Directory and Data Server

Although OpenDS development ceased shortly after Sun was acquired by Oracle Corporation, ForgeRock inherited the bulk of the deployments and continued development of the product under the name OpenDJ.

A competing LDAP server product based on the same code was also developed by UnboundID, which was acquired by Ping Identity in 2016. Conversion costs to OpenLDAP are in the moderate range, depending on the features in use.

Datacraft DX-500 Derivatives

COST RANGE: Low to Moderate

- CA eTrust Directory
- CA Directory

The Australian company Datacraft, later known as Open Directory, used heavy SQL database servers to underpin its DX-500 family of pure X.500 server products. LDAP and SSL(TLS) communication capabilities were added at about the time Datacraft was acquired by Computer Associates in 1999. Given X.500's strict schema enforcement, data migration is usually very straightforward, but translation of access controls can be tricky.

The topological tricks used to achieve good geographic scaling are often unnecessary after conversion, but similar analogs are available if needed. OpenLDAP's LMDB database scales beyond the capabilities of the heavy SQL databases while requiring only a fraction of the resources and none of the administration overhead. Conversion costs from this directory range from moderate to low, depending on the complexity of the access controls and the directory server topology.

Other LDAP Directory Servers

COST RANGE: Low to High

- Apache Directory Server (ApacheDS)
- Microsoft Active Directory
- Oracle Internet Directory
- M-Vault LDAP/X.500 Server

The remaining directory servers are an agglomeration of independent codebases: some Java; others in various combinations of C or C++. The Apache Directory stands out in this group because it was specifically designed to afford a high degree of compatibility with OpenLDAP and so has a very low cost for conversion. Costs for the remainder of these directories can be highly variable depending on the desired outcome and the capabilities that are being used.