

Features

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ApacheDS Features

The Apache Directory Server is an embeddable LDAP server implemented in pure Java. It has several features that make it unique among LDAP servers. Some of these features are as follows:

- Designed as an LDAP and X.500 platform; pluggable components and subsystems make ApacheDS extremely modular and ideal for experiments with various aspects of the LDAP protocol.
- The server's frontend is completely separable from its backend and vice-versa making it very flexible for implementing virtual directories, proxy servers and gateways to X.500 directories.
- Several backends can be implemented and plugged into the server's partition nexus. The server supports a BTree based partition out of the box but any backing store can be used to implement a partition as long as it conforms to interfaces.
- The server exposes aspects of administration via a special system backend. LDAP can be used to manage these concerns through the system naming context at ou=system.
- Both the backend subsystem and the frontend are separable and independently embeddable.
- The server contains a server side JNDI LDAP provider as the facade for the entire backend subsystem. JNDI operations are directly translated by this provider into operations against the nexus and the target partitions storing server entries.
- The server's networking code, MINA (Multipurpose Infrastructure for Network Applications) was designed for pluggable protocol providers, of all sorts and not just LDAP. MINA gives ApacheDS the ability to handle large amounts of concurrency.
- The server uses the Twix tools and APIs for ASN.1 BER encoding and decoding. These tools are designed for a very small encoding and decoding footprint as well as for use in non-blocking servers. The chunking nature of the BER codec makes the server very efficient while handling encoding and decoding making it more resistant to DoS attacks.
- LDAP Stored Procedures and Triggers are scheduled for the next major version of ApacheDS.
- LDAPv3 compatible certified by the OpenGroup

Comparing ApacheDS, Fedora Directory Server and OpenLDAP

General

	ApacheDS	Fedora DS	OpenLDAP	OpenDS
Website	directory.apache.org	directory.fedoraproject.org/	openldap.org	opends.org
License	Apache License 2.0	GNU General Public License	OpenLDAP Public License	Common Development and Distribution License
Documentation	minimal	extensive	sufficient	extensive
Code	Java	C/C++	C/C++	Java
Backed by organization	Apache Software Foundation	RedHat	OpenLDAP Foundation	Sun
Origin	genuine	Netscape DS (Michigan university)	Michigan university	genuine
Admin Gui	no	yes	no	yes
Installation	Installer	Installer	Package/build	Installer

Technical

	ApacheDS	Fedora DS	OpenLDAP	OpenDS
Back-End	JDBM and custom	Berkeley DB	Berkeley DB and others	Berkeley DB Java Edition, NDB and memory
Multiple Back-Ends	yes	yes	yes	yes
Front-ends	LDAP, Kerberos, DNS, NTP, DHCP	LDAP, DSMLv2 (SOAP/HTTP)	LDAP/LDAPS	LDAP/LDAPS. DSMLv2 gateway (SOAP/HTTP)
Replication	Multi-Master (2 masters) ... soon	Multi-Master (up to 4 masters)	Single-Master	Multi-Master (up to 8 masters)
Referrals	yes	yes	yes	yes
Schema	Compilation	dynamic/gui	dynamic/ldap	dynamic/ldap/gui
Attribute Encryption	no	yes	no	no
Monitoring	LDAP	LDAP/SNMP	LDAP	LDAP/SNMP/JMX