APACHE DIRECTORY STUDIO

Pierre-Arnaud Marcelot — IKTEK

ABOUT ME

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- Software Engineer at IKTEK, a french Open Source and Identity Management company

- Committer/Member at the Apache Software Foundation

- Current Apache Directory project Chairman

AGENDA

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- The State of Apache Directory Studio

- Presentation of Apache Directory Studio 2.0

- Questions

THE STATE OF APACHE DIRECTORY STUDIO

WHAT IS APACHE DIRECTORY STUDIO?

WHAT IS APACHE DIRECTORY STUDIO?

- An LDAP client platform based on Eclipse, extending it with several plugins and also extensible by third parties developers.

- Can be installed into a standard Eclipse distribution.

- Can also run as a standalone multi-platform application (Mac OS X, Linux and Windows).

- Free, Open Source (developed at the Apache Software Foundation) and distributed under the Apache License 2.0.
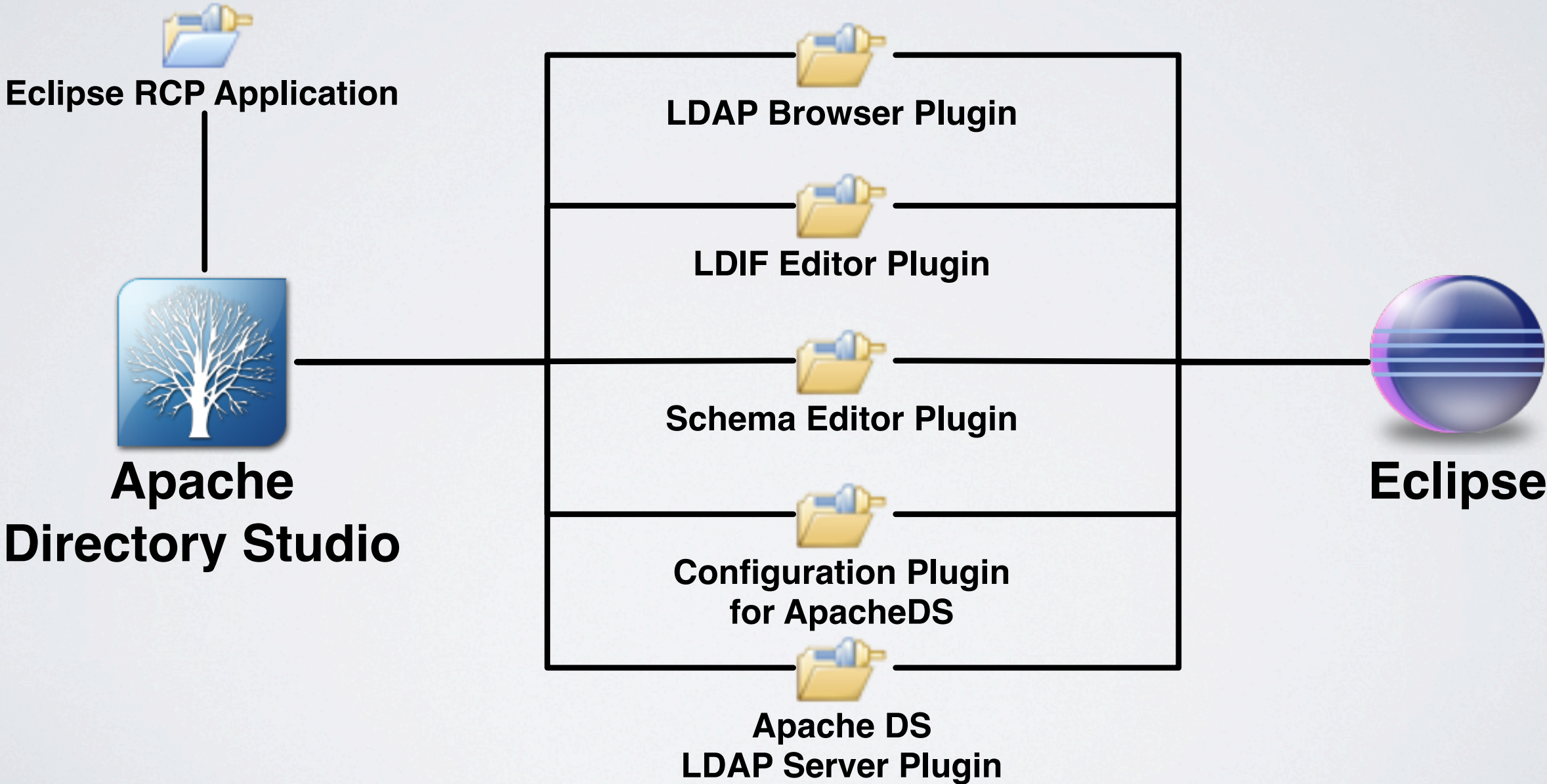
5 MAJOR FEATURES

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- An LDAP Browser

- An LDIF Editor

- A Schema Editor

- A Configuration Editor for ApacheDS

- An integrated ApacheDS LDAP Server utility

ARCHITECTURE

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HISTORY & FUTURE

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- Version 1.0 released at first LDAPCon, Sept. 2007 in Köln.

- 5 major improvements releases since then.

- Latest stable version is 1.5.3, released in April 2010.

    - More than 250,000 downloads (standalone application only).

    - On a 150,000 downloads/year curve (standalone application only).

- Work on the 2.0 version started more than a year ago.

PRESENTATION OF APACHE DIRECTORY STUDIO 2.0

LDAP

LDAP Browser

= ▼

DIT
▼ Root DSE (5)
  ▼ dc=example,dc=com (2)
    ▼ ou=groups (2)
      ▶ ou=crews (3)
      ▶ ou=ranks (2)
    ▶ ou=people (11)
  ▶ ou=config
  ▶ ou=schema
  ▶ ou=system
▼ Searches
  ▶ Managed by William Bligh (3)
  ▼ Managed by Horatio Nelson (2)
    cn=Cornelius Buckley,ou=people,dc
    cn=Thomas Masterman Hardy...=pe
▼ Bookmarks
  Horatio Nelson
  William Bligh

cn=Horatio Nelson,ou=people,dc=example,dc=com ✕

DN: cn=Horatio Nelson,ou=people,dc=example,c

Attribute Description	Value
objectclass	*inetOrgPerson (structural)*
objectclass	*organizationalPerson (structural)*
objectclass	*person (structural)*
objectclass	*top (abstract)*
cn	**Horatio Nelson**
sn	**Nelson**
description	Lord Horatio Nelson
givenname	Horatio
mail	hnelson@royalnavy.mod.uk
uid	hnelson
userpassword	SSHA hashed password

Outline

▼ cn=Horatio Nelson,ou=p
  ▶ uid (1)
  ▶ mail (1)
  ▶ sn (1)
  ▶ userpassword (1)
  ▶ cn (1)
  ▶ description (1)
  ▶ givenname (1)
  ▶ objectclass (4)

Connections | **LDAP Servers**

▼ Other Servers
  Active Directory (ADAM)
  OpenDJ
  OpenLDAP
LDAP ApacheDS

Modification Logs | **Search Logs**

```
#!RESULT OK
#!CONNECTION ldap://localhost:10389
#!DATE 2011-10-07T13:26:02.369
dn: cn=HMS Bounty,ou=crews,ou=groups,dc=example,dc=com
changetype: add
objectclass: groupOfUniqueNames
objectclass: top
```
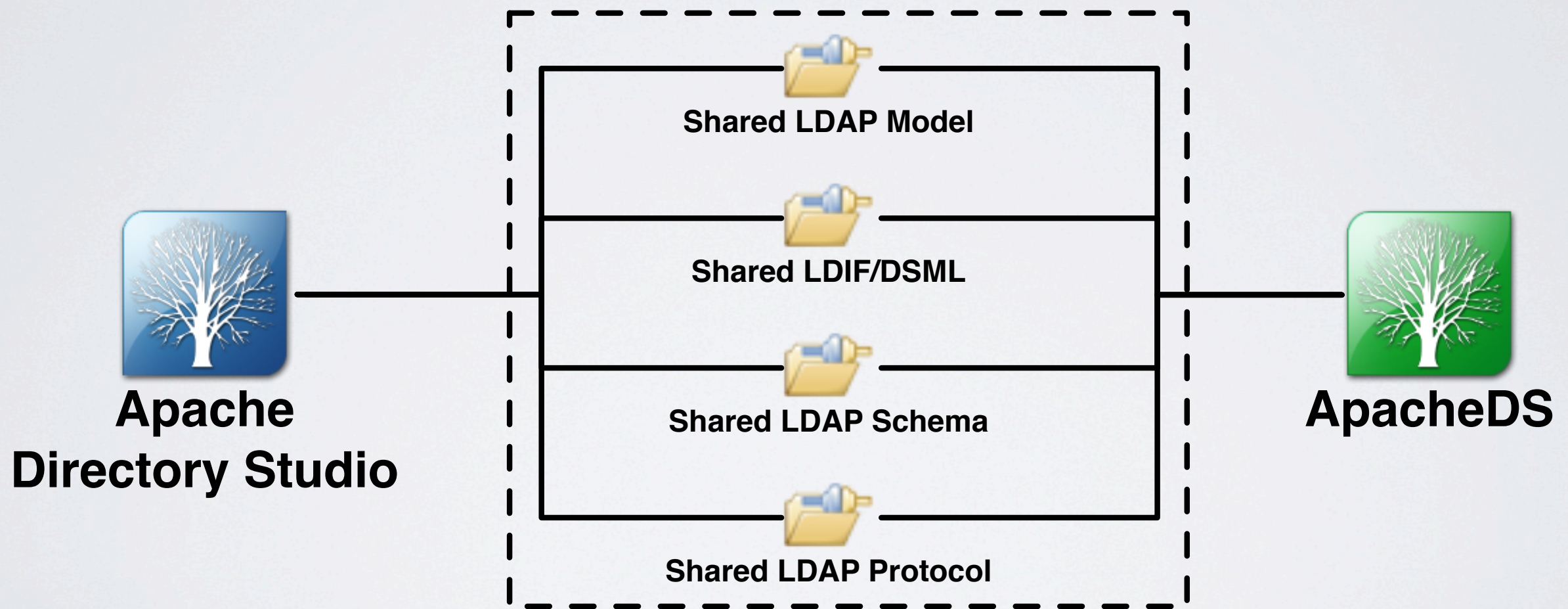
Progress

No operations to display at

A COMMON CODE-BASE ACROSS PROJECTS

A COMMON CODE-BASE ACROSS PROJECTS

- Work on ApacheDS 2.0 started at the same time.

- Leveraging a same code base for commonly used LDAP concepts like attributes, entries, etc.

- Few changes in the UI but major modifications in the inside.

A COMMON CODE-BASE ACROSS PROJECTS

THE APACHE DIRECTORY LDAP API

THE APACHE DIRECTORY LDAP API

- Initially co-presented at LDAPCon 2009 by OpenDS from Sun Microsystems and the Apache Directory teams.

- An API based on the LDAP Protocol.

- Easy to use and versatile.

- Support for simple and complex connections, entries, attributes and values manipulation, utilities for LDIF files.

THE APACHE DIRECTORY LDAP API

```java
// Creating the LDAP connection
LdapConnection connection = new LdapNetworkConnection( "localhost", 10389 );

// Binding
connection.bind( "uid=admin,ou=system", "secret" );

// Searching for entries
EntryCursor results = connection.search( new Dn( "ou=system" ),
    "(objectClass=*)", SearchScope.SUBTREE, "*" );

// Iterating on the results
while ( results.next() )
{
    // Getting the next entry
    Entry entry = results.get();

    // Iterating on the entry's attributes
    for ( Attribute attribute : entry )
    {
        // Iterating on the attribute's values
        for ( Value<?> value : attribute )
        {
            // TODO: Do something with the value
        }
    }
}
```

```java
// Adding an entry
Entry entry = new DefaultEntry( "ou=group, ou=system" );
entry.add( "objectClass", "top", "organizationalUnit" );
entry.add( "ou", "group" );
connection.add( entry );

// Deleting an entry
connection.delete( "ou=group, ou=system" );

// Closing the LDAP connection
connection.close();

/* ------------------------------------------------------------------ */

// Reading a LDIF file
LdifReader ldifReader = new LdifReader( "/Users/pajbam/Desktop/file.ldif" );

// Iterating on the entries in the LDIF file
while ( ldifReader.hasNext() )
{
    // Getting the next entry
    LdifEntry ldifEntry = ldifReader.next();
}

// Closing the LDIF reader
ldifReader.close();
```

THE APACHE DIRECTORY LDAP API

CONFIGURATION PLUGIN FOR APACHEDS 2.0

APACHEDS 2.0

- New in DIT and LDIF-based configuration (no more XML & Spring).

- Rewritten Schema Manager.

- Improved replication following RFC 4533 (same as OpenLDAP):
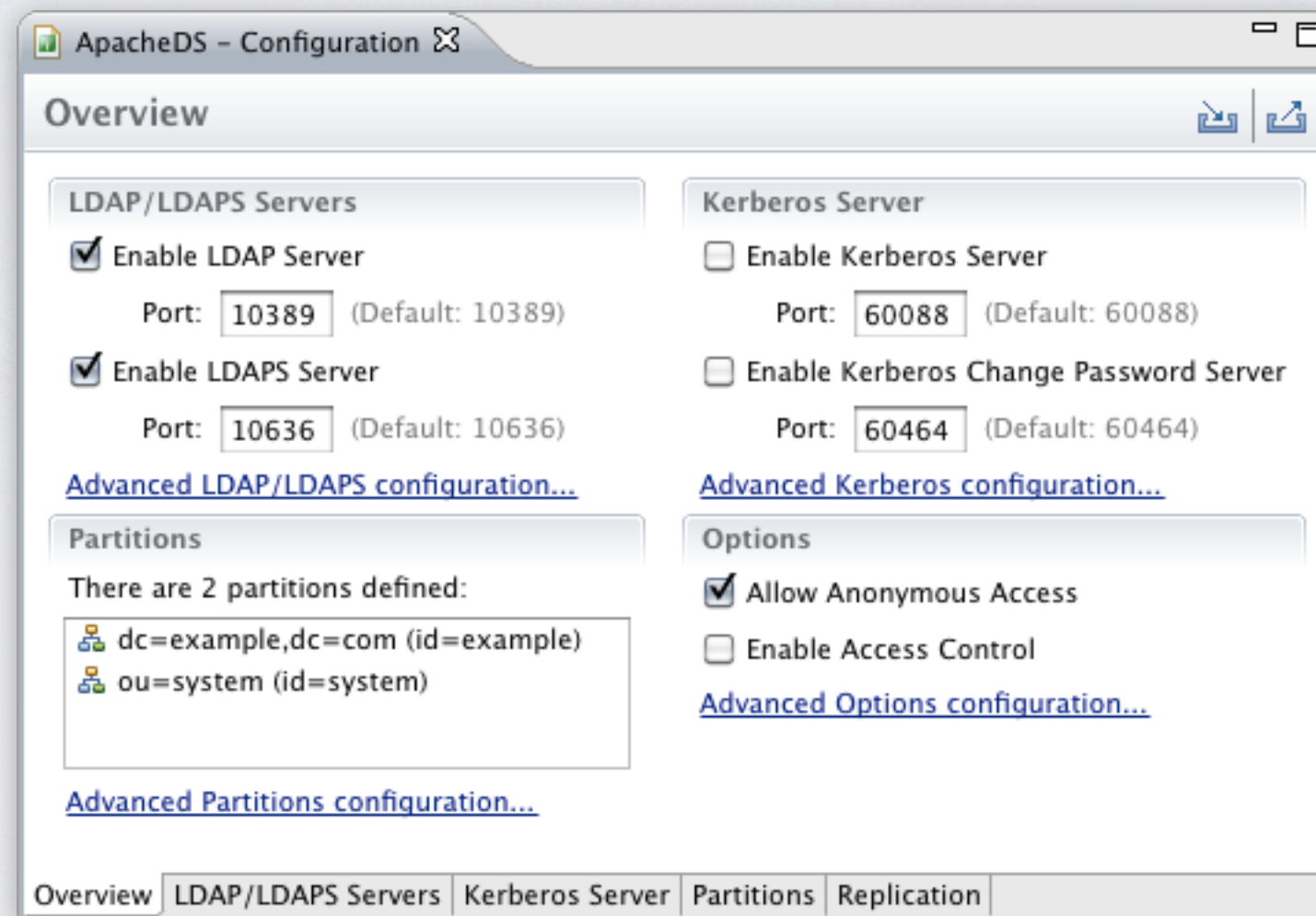
  - Master-Slave

  - Multi-Master

- OSGI compliant.

CONFIGURATION PLUGIN FOR APACHEDS 2.0

- Reads the configuration of an ApacheDS 2.0 server live, over a connection in the LDAP Browser and/or via its LDIF file on the disk.

- The graphical editor allows you to edit basic settings, as well as partitions and indexes configurations.

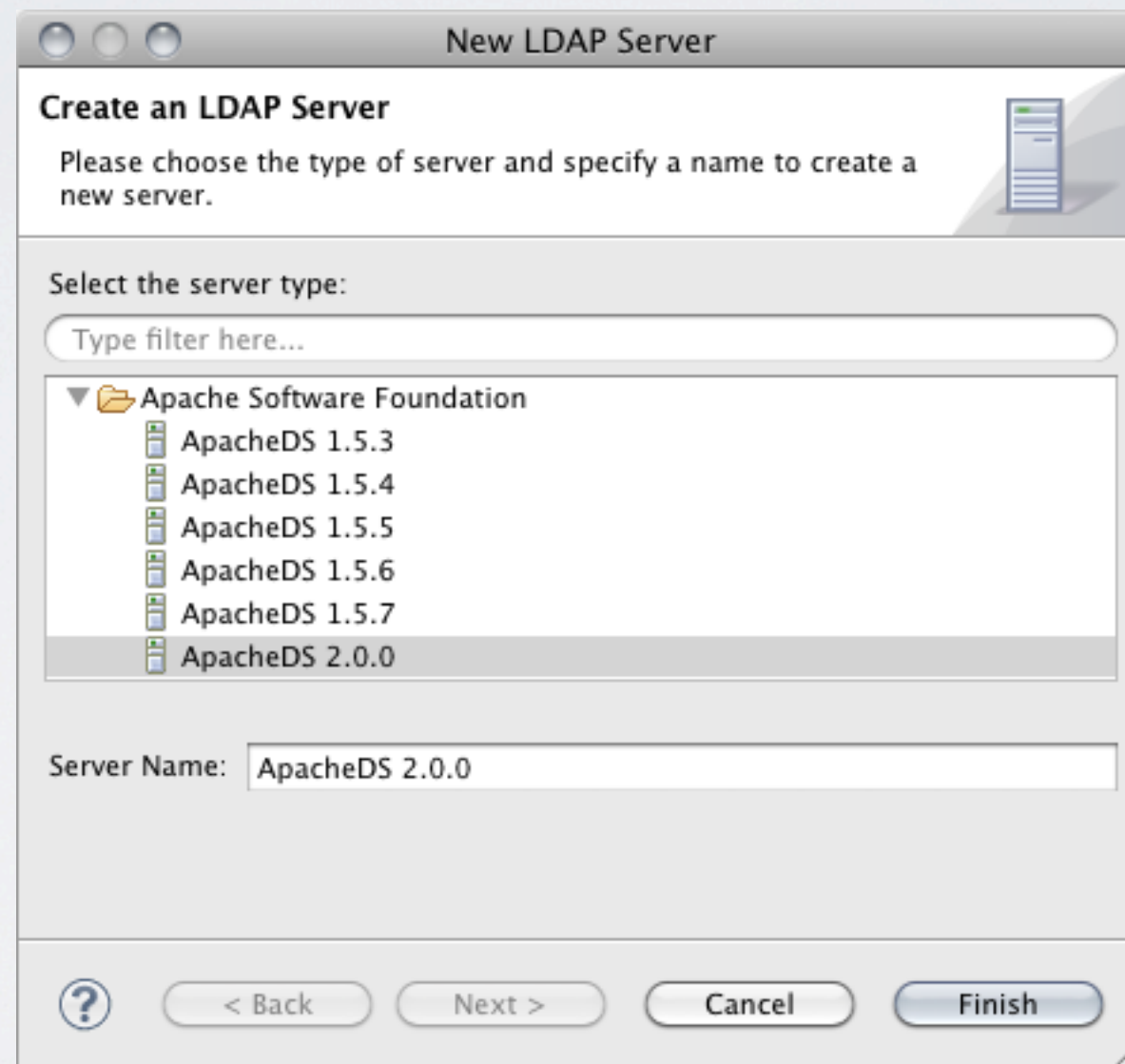# CONFIGURATION PLUGIN FOR APACHEDS 2.0

NEW EXTENSIBLE LDAP SERVERS PLUGIN

NEW EXTENSIBLE LDAP SERVERS PLUGIN

- Inspired from the ApacheDS LDAP Server plugin.

- Makes it easy to create, start and stop a new LDAP Server.

- Perfect for running an LDAP Server in the "development" phase of a project.

- Its extension point allows the addition of new LDAP Servers Adapters.

NEW EXTENSIBLE LDAP SERVERS PLUGIN

DEMONSTRATION

THANK YOU!

QUESTIONS?

(AND ANSWERS...)