

JNDI removing

Introduction

The server is using JNDI internally for manipulating data. It makes sense as a layer on top of the server, if someone want to use it embedded, but the JNDI API is not exactly the best fit for LDAP operations.

The idea is to simply redefine the JNDI structure to use what we really need, and nothing else.

JNDI API usage in ADS

This table list the JNDI classes and interface, exposing those which are used and those we are not.

Classes and interfaces

I / C	JNDI class	Used	I / C	ADS class	Comment
I	<i>Attribute</i>	✓	I	ServerAttribute	Not used yet
I	<i>Attributes</i>	✓	I	ServerEntry	Not used yet
C	<i>BasicAttribute</i>	✓	C	ServerAttributeImpl	Not used yet
C	<i>BasicAttributes</i>	✓	C	ServerEntryImpl	Not used yet
C	<i>BinaryRefAddr</i>	✗			
C	<i>Binding</i>	✓			
C	<i>CompositeName</i>	✓			Used only in one test
C	<i>CompoundName</i>	✓	C	<i>LdapDN</i>	We should use <i>LdapDN</i> everywhere inside the server
I	<i>Context</i>	✓	I	<i>ServerContext</i> ?	It's all over the code. Do we have to define our own interface ?
I	<i>Control</i>	✓	I	<i>MutableControl</i> (Should be <i>ServerControl</i>)	We also have a <i>Control</i> class in codec which should be renamed to something like <i>MsgControl</i>
C	<i>ControlFactory</i>	✗			
I	<i>DirContext</i>	✓			
C	<i>DirectoryManager</i>	✓			Used in apacheds-core
I	<i>DirObjectFactory</i>	✓			
I	<i>DirStateFactory</i>	✓			Used in tests and in kerberos
C	<i>DirStateFactory.Result</i>	✓			Used in core and kerberos
I	<i>EventContext</i>	✓			
I	<i>EventDirContext</i>	✓			
I	<i>ExtendedRequest</i>	✓			
I	<i>ExtendedResponse</i>	✓			
I	<i>HasControls</i>	✓			Used in <i>ChangeListener</i> and <i>PersistentSearchTest</i> in server-unit
C	<i>InitialContext</i>	✓			
I	<i>InitialContextFactory</i>	✓			
I	<i>InitialContextFactoryBuilder</i>	✗			
C	<i>InitialDirContext</i>	✓			
C	<i>InitialLdapContext</i>	✓			
I	<i>LdapContext</i>	✓			
C	<i>LinkRef</i>	✗			
C	<i>ModificationItem</i>	✓	C	<i>ServerModification</i>	Not Implemented Yest
I	<i>Name</i>	✓	I	<i>ServerName</i>	We don't have an interface yet
C	<i>NameClassPair</i>	✓			Used in core-unit and in the JNDI layer
I	<i>NameParser</i>	✓	C	<i>LdapDNParser</i>	An implementation
I	<i>NamespaceChangeListener</i>	✓			
I	<i>NamingEnumeration</i>	✓	I	<i>ServerIterator</i>	To be defined

C	NamingEvent	✓		
C	NamingExceptionEvent	✓		
I	NamingListener	✓		
C	NamingManager	✗		
I	ObjectChangeListener	✓		
I	ObjectFactory	✗		
I	ObjectFactoryBuilder	✗		
C	RefAddr	✗		
C	Reference	✓	ServerReference	
I	Referenceable	✓		
I	Resolver	✗		
C	ResolveResult	✗		
C	SearchControls	✓	ServerSearchControls	
C	SearchResult	✓	ServerSearchResult	
I	StateFactory	✗		
C	StringRefAddr	✗		
I	UnsolicitedNotification	✓		Only used in DisconnectNotificationCommandExecutor
C	UnsolicitedNotificationEvent	✓		Only used in DisconnectNotificationCommandExecutor
I	UnsolicitedNotificationListener	✓		Implemented by DisconnectNotificationCommandExecutor

Exceptions

JNDI	used	ADS
AttributeInUseException	✓	LdapAttributeInUseException
AttributeModificationException	never returned	
AuthenticationException	✓	LdapAuthenticationException
AuthenticationNotSupportedException	✓	LdapAuthenticationNotSupportedException
CannotProceedException	✗	
CommunicationException	✓	
ConfigurationException	✓	LdapConfigurationException
ContextNotEmptyException	✓	LdapContextNotEmptyException
InsufficientResourcesException	✗	
InterruptedNamingException	✗	
InvalidAttributeIdentifierException	✓	LdapInvalidAttributeIdentifierException
InvalidAttributesException	✗	
InvalidAttributeValueException	✓	LdapInvalidAttributeValueException
InvalidNameException	✓	LdapInvalidNameException

InvalidSearchControlsException	✗	
InvalidSearchFilterException	✓	
LdapReferralException	✓	LdapReferralException
LimitExceededException	✓	
LinkException	✗	
LinkLoopException	✗	
MalformedLinkException	✗	
NameAlreadyBoundException	✓	LdapNameAlreadyBoundException
NameNotFoundException	✓	LdapNameNotFoundException
NamingException	✓	LdapNamingException
NamingSecurityException	✗	
NoInitialContextException	✗	
NoPermissionException	✓	LdapNoPermissionException
NoSuchAttributeException	✓	LdapNoSuchAttributeException
NotContextException	✗	
OperationNotSupportedException	✓	LdapOperationNotSupportedException
PartialResultException	✓	
ReferralException	✓	LdapReferralException
SchemaViolationException	✓	LdapSchemaViolationException
ServiceUnavailableException	✓	LdapServiceUnavailableException
SizeLimitExceededException	✓	LdapSizeLimitExceededException
TimeLimitExceededException	✓	LdapTimeLimitExceededException

Define a JNDI Wrapper

We want to keep a wrapper around the server for users who want to embed the server. All the JNDI layer is buried into apacheds-core, in the org.apache.directory.server.core.jndi package.

We should just create a new project, which will cover this layer exclusively.