

Engagement Report

Sametime QA Environment Setup for Jive Software

POKESHOT TECHNOLOGIES

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Scope

The scope of the engagement was to provide Jive Software QA with an environment to perform quality assurance for the Jive Software Sametime Integration Module. This would include a central Sametime server and 3 client machines. The scope was later amended to also include integration of Sametime user management into Jive's Active Directory infrastructure.

Installed components

Server components

The following components were installed on the designated server machine (il-stserv1.eng.jiveland.com):

- Lotus Domino Enterprise Version 8.5.2
- IBM Sametime Entry Version 8.5.2

Admin Workstation components

The following components were installed on the designated administrator workstation (il-stclnt1.eng.jiveland.com):

- Lotus Notes Client Version 8.5.2
- Lotus Domino Designer Version 8.5.2
- Lotus Domino Administrator Version 8.5.2
- IBM Sametime Connect Client Version 8.5.2

Client machine components

The following components were installed on the designated client machines (il-stclnt2.eng.jiveland.com and il-stclnt3.eng.jiveland.com):

- IBM Sametime Connect Client Version 8.5.2

Selected version

The Notes, Domino and Sametime version 8.5.2 was selected as it is the most commonly deployed version of the solution. Also, in regards to the components used by Jive's Sametime integration, there are no functional differences between version 8.5.2 and previous versions (8.5, 8.5.1) as well as more current versions (8.5.2 IFR1). It was decided that this version will provide adequate test coverage for the time being without the need to install a number

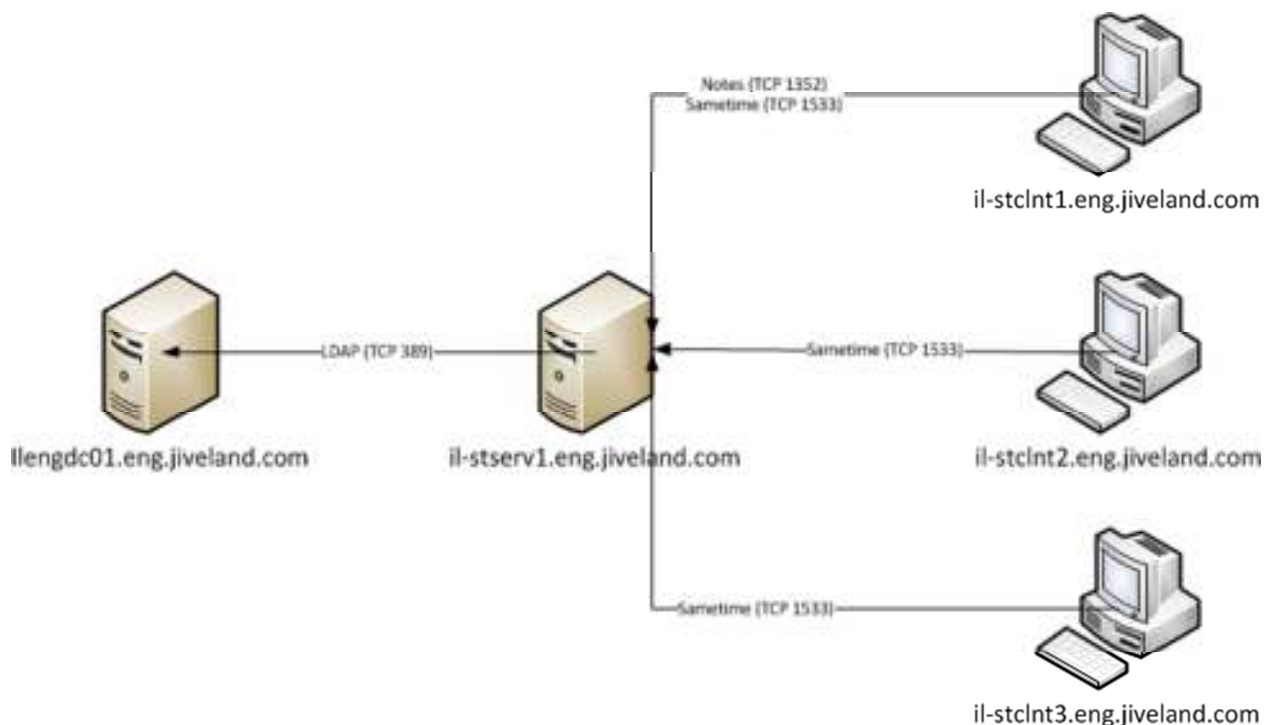
of different versions of the Sametime server components. As the Jive Sametime integration is purely client based it, installing additional versions can be achieved easily, as they are compatible with the Sametime server installed. The Sametime Entry server variant was chosen as it offers all capabilities supported by Jive's Sametime integration and because of the robustness and low required maintenance effort compared to Sametime Standard and Advanced variants.

Licenses

Even though Pokeshot Technologies performed the installation of the software, it is Jive Software's responsibility to acquire the appropriate licenses to legally run the software.

Environment Configuration

Pictured below is a representation of the Sametime environment setup.



The Lotus Domino and Sametime server components are installed into the c:\IBM directory on il-stserv1.eng.jiveland.com. All instance specific configuration is in the Lotus Domino data directory at c:\IBM\Lotus\Domino\Data . Lotus Domino specific logs are saved into the log.nsf database. Sametime specific logs are saved into c:\IBM\Lotus\Domino\Trace directory.

All Client components are installed into the standard directories on the client machines. The Sametime Connect Client at C:\Program Files (x86)\IBM\Lotus\Sametime Connect and Lotus Notes to C:\Program Files (x86)\IBM\Lotus\Notes (it-stclnt01.eng.jiveland.com only). Sametime user specific information is located at

C:\Users\%username%\AppData\Roaming\Lotus\Sametime, with log files located at C:\Users\%username%\AppData\Roaming\Lotus\Sametime\logs.

Lotus Domino/Notes Configuration

A standard install of a Lotus Domino Enterprise server was performed. The Lotus Domino server was configured to run as a Windows service and start automatically upon Windows boot.

The following Domino environment settings were configured:

- Organization Name: Jive Software
- Domino Domain: Jive
- Admin User: Admin User/Jive Software
- Server name IL-STSERV1/Jive Software

All users and the certifier ID are created with the password “jive123”.

The following changes to the configuration were performed to accommodate a single server Sametime installation:

- Enabling the Domino HTTP task, by adding HTTP to the list of the SERVERTASKS config variable in the notes.ini files located at c:\IBM\Lotus\Domino\notes.ini
- Configuring single server web authentication in the Domino Directory (names.nsf) database: Configuration / Servers / All Server Documents / <this-server> / Internet Protocols / Domino Web Engine / Session Authentication.

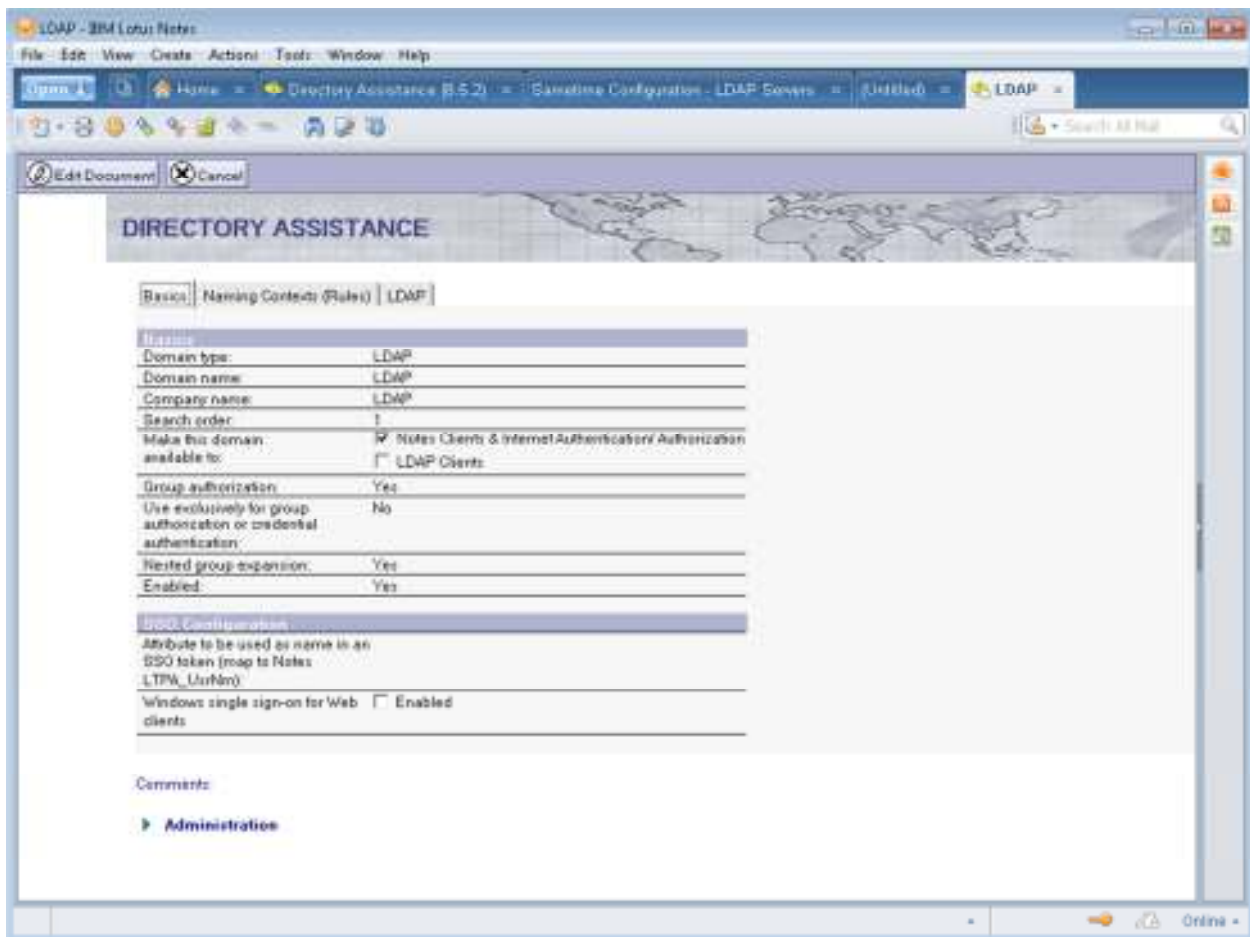
After the Lotus Domino installation was complete a Sametime Entry server installation was performed on the system. The installation was performed with LDAP integration for authentication instead of the Domino Directory.

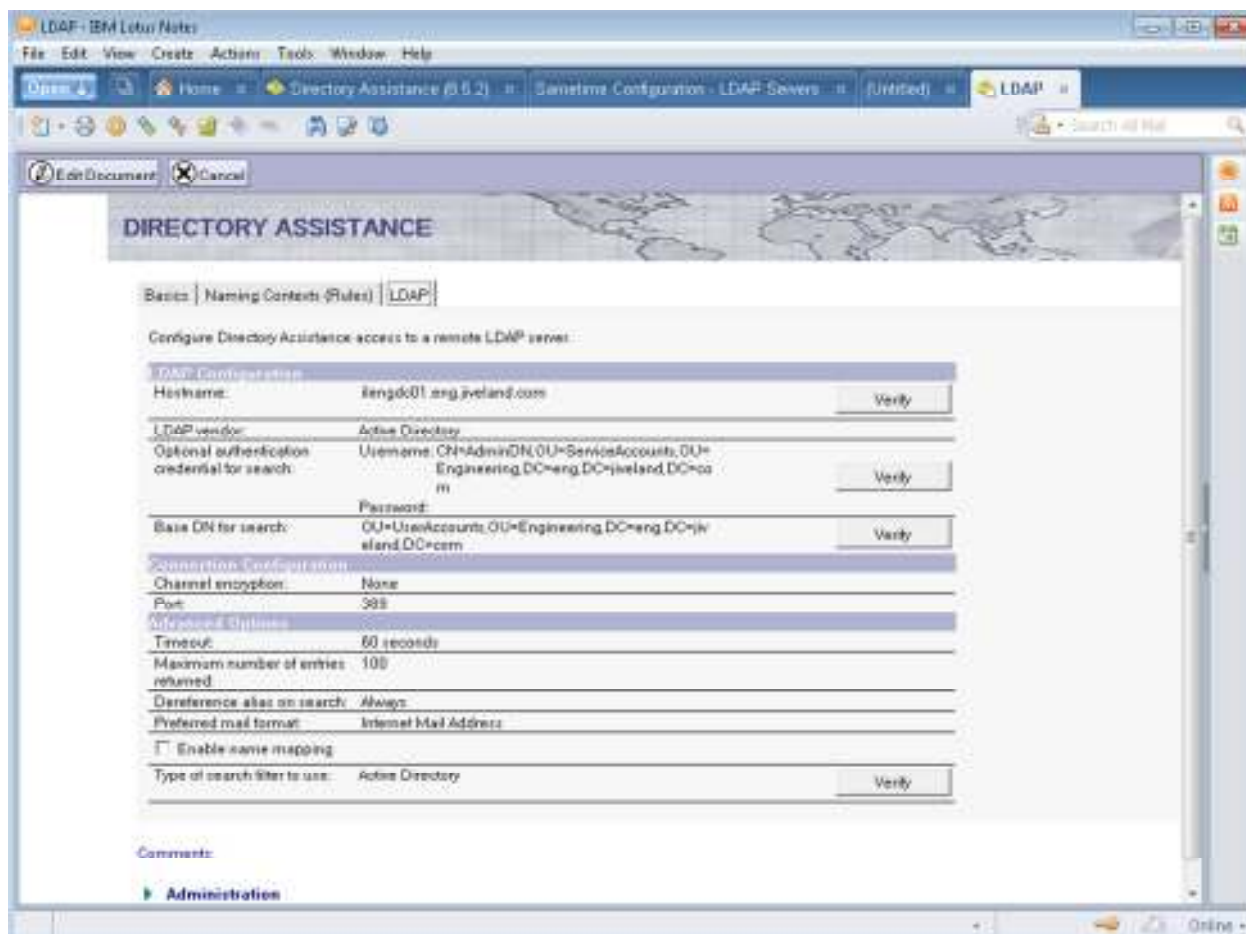
No configuration was performed during the setup process.

After installation the Lotus Domino service was restarted. Successful installation was validated by verifying the existence of the message “Sametime Server started” using the Domino System Console. *Note: As you start or restart the server it is common that Sametime services are not available for 2-5 minutes after the “Sametime Server started” message appears in the log.*

The following configuration changes were performed to finalize the LDAP/Active Directory integration of the Sametime server:

- Validate that the Directory Assistance (da.nsf) database is successfully created on the server.
- Validate that the Directory Assistance database is correctly configured in the server document of the Sametime Server. Names.nsf: Server Document\Basics\Directory Information\Directory Assistance Database Name.
- Add a new LDAP directory entry for the Engineering AD server to the Directory Assistance database.





Relevant configuration fields:

- Hostname: ilengdc01.eng.jiveland.com (Active Directory server)
- LDAP Vendor: Active Directory
- Authentication credentials for search:
CN=AdminDN,OU=ServiceAccounts,OU=Engineering,DC=eng,DC=jiveland,DC=com (used to authenticate against AD if anonymous binding is not allowed)
- Base DN for search: This is where the Sametime server will look for user accounts
- Type of search filter to use: Active Directory

- Configure the Sametime configuration database (stconf.nsf) to support LDAP/AD authentication

Open the database using the Notes client. An entry for an LDAP system should have been created during the setup process. Here are the relevant configuration entries for this form:

- Network Address of LDAP Connection: ilengdc01.eng.jiveland.com
- Port Number: 389 (default)

- Login name for LDAP Connection:
CN=AdminDN,OU=ServiceAccounts,OU=Engineering,DC=eng,DC=jiveland,DC=com
- Password: This is stored in clear text in the database. For a production environment this document would be encrypted.
- SSL Enabled: false (Set to true once SSL is available for the DC)
- SSL Port: Once SSL is available for the DC set accordingly
- Search Order: 1 (only relevant if multiple LDAPs are used)
- Search filter for resolving person names: (mail=%s*) A regular expression denoting that the email address will be used as the username for Sametime login
- Base object when searching for person entries:
OU=UserAccounts,OU=Engineering,DC=eng,DC=jiveland,DC=com This is where Sametime will look for user accounts in AD
- Attribute of the person entry that defines a person's name: cn
- Attribute of the person entry that defines a person's email address: mail
- Name of the home server attribute: pager **Note: This needs to be set for all users that require Sametime access.** It defines the home Sametime server that the user connects to in X.500 notation. For the Jive QA environment this is CN=IL-STSERV1/O=Jive Software
- All other fields are not used for this environment and can be left set to their defaults.

After making the changes to the configuration restart the Lotus Domino server.

Relevant configuration files

- C:\IBM\Lotus\Domino\notes.ini : The notes.ini file is the primary configuration file of the Lotus Domino server. It is the only configuration file, commonly used, that is not a Notes database, i.e. it can be edited using a text editor. However, a variety of configuration changes performed using the Domino Administrator tools, are written to the notes.ini. In the case of the QA Sametime environment, no direct changes were made to the notes.ini file.
- C:\IBM\Lotus\Domino\sametime.ini : Similar to the notes.ini file, the sametime.ini file holds the Sametime configuration that is not kept in a Notes database. The file is also used to configure various debug options. For the Jive Sametime QA environment changes were made to the [Debug] section of the file. The VP_LDAP_TRACE=1 parameter was added. This configuration enables extensive debugging information for the LDAP/Active Directory integration. Another configuration that can be used is VPN_TRACE_ALL=1 which will enable debugging for all Sametime components. This setting is very verbose and should only be enabled during troubleshooting as it impacts server performance.
- C:\IBM\Lotus\Domino\UserInfoConfig.xml: Holds the LDAP configuration from the stconf.nsf database, and can be used to verify the setup. It should not be edited directly.
- Lotus Domino/Sametime databases: names.nsf, stconf.nsf: The names.nsf database, the Domino Directory holds all configuration information for the Lotus Domino environment, including users, servers and server configuration. It is a core element of the environment and changes should only be made if necessary. The stconf.nsf holds the Sametime server configuration as mentioned above.

Backup and Restore

All relevant configuration and production data, with the exception of the notes.ini and sametime.ini files, is stored in the c:\IBM\Lotus\Domino\Data directory. For backup purposes we recommend daily backups of this directory and weekly backups of the full c:\IBM\Lotus\Domino directory. When backing up regularly check for files that cannot be backed up due to file locks. Alternatively shut down the Lotus Domino service during backups.

The following restore procedure has been verified on a Windows 2008 R2 server with no Lotus components installed:

- Install Lotus Domino 8.5.2 into the c:\IBM\Lotus\Domino directory.
- Do not start the server or run the configuration wizard
- Restore a full backup of the original server into the c:\IBM\Lotus\Directory
- Install the Sametime Entry server components
- Restore a full backup of the original server into the c:\IBM\Lotus\Directory
- Start the Lotus Domino service

Relevant Log Files

Here are a number of Sametime related log files that are typically used for troubleshooting and monitoring. All of these are located in c:\IBM\Lotus\Domino\Trace

Sametime_YYYYMMDD.log: This is the main Sametime log that holds information about system startup and general system level error messages.

StResolve_XXXXX.log: This log file holds information about the LDAP connectivity and user authentication. Check this log if users are experiencing issues connecting to Sametime.

STDirectory_XXXX.log and STUsers_XXXX.log: These logs also hold information about LDAP connectivity. They can be used for ongoing monitoring as the heartbeat connection attempts the Sametime server makes against the LDAP system are logged here in this format:

```
120521_200309.081,INF,LDAP  ,Sent dummy search request
120521_200309.097,INF,LDAP  ,---- Thread ID: 4428
120521_200309.097,INF,LDAP  ,Received dummy search response
120521_200409.170,INF,LDAP  ,---- Thread ID: 4424
120521_200409.170,INF,LDAP  ,Sent dummy search request
120521_200409.170,INF,LDAP  ,---- Thread ID: 4428
120521_200409.170,INF,LDAP  ,Received dummy search response
```


120521_200509.291,INF,LDAP ,---- Thread ID: 4424

120521_200509.291,INF,LDAP ,Sent dummy search request

120521_200509.291,INF,LDAP ,---- Thread ID: 4428

120521_200509.291,INF,LDAP ,Received dummy search response