



Sametime & iNotes

Integration Guide

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Introduction

This guide provides an in-depth look at Sametime Awareness configuration in iNotes. We have included excerpts from several different areas in InfoCenter with the purpose of familiarizing admins and end-users with the basics. The primary areas of attention we focus on are architecture, configuration, and troubleshooting. This is because many iNotes awareness problems can stem from incorrect server or client configuration. We will review common configurations for both the web client and the server. For reasons of scope we will demonstrate on two web client browsers: Microsoft Internet Explorer and Firefox. These web browser scenarios are made with the latest available versions. The IBM on-premises servers (LDAP, iNotes, and Sametime) that the web clients connect to, as well as the Sametime Proxy Server installed on IBM Websphere Application Server, use the latest releases available at the time of publication.

1.0 iNotes Client Features

The main iNotes Client features are integrations. By configuring with Sametime, you are integrating with Chat, awareness (also known as status), and the Buddy List (also known as the Contact List). For Chat to function, awareness needs to be working from inside the iNotes web client.

1.1 Chat and Awareness

After logging into iNotes via a web browser, the online awareness of each user displays in the mail inbox. Users that are not logged into Sametime will have no awareness icon.

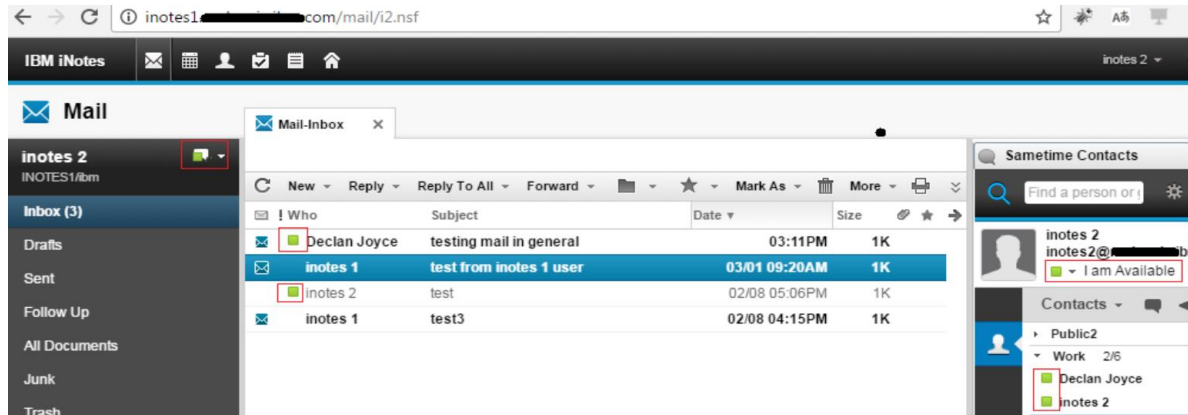


Figure 1. Sample iNotes mail user logged into iNotes and awareness working correctly

Note: If iNotes awareness is missing, check “Instant Messaging / Enable Instant Messaging” under Preferences.

To chat with a user, right-click on their name. This results in loading the web client for the Sametime Proxy Server, over port 9080 for this example.

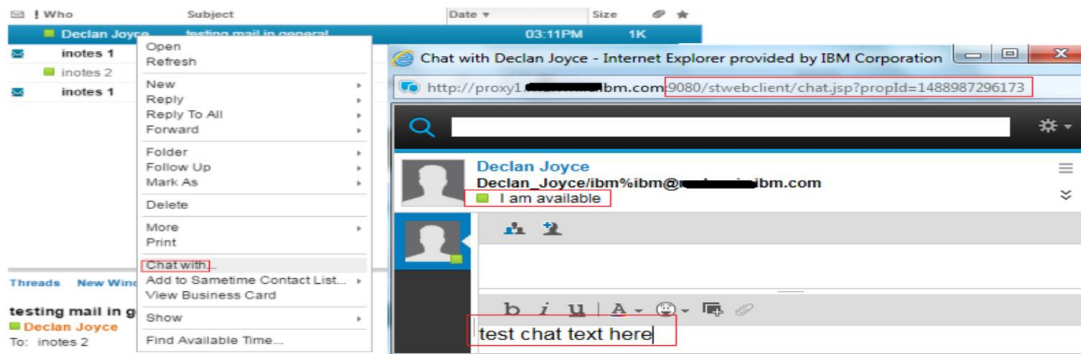


Figure 2. Chatting to online iNotes users

1.2 Buddy List

To display the Buddy List from iNotes, select **Show Sametime Contact List**.

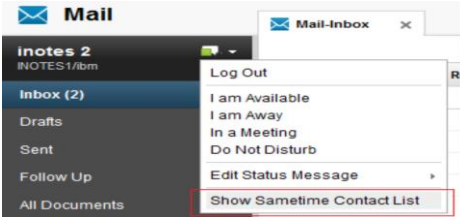


Figure 3. Show Sametime Contact List

2.0 Architecture

This section of the guide breaks down the testing environment into its many parts. Review this section to see what configuration files, server components, and URLs were used to set up our environment. You can also read a short summary of just how Sametime integrates with iNotes.

2.1 How Sametime Integrates with iNotes

The Sametime Proxy Server needs to connect to the Sametime Community Server on the Virtual Places (VP) Server Port 1516. The Sametime Community Server will allow this connection if the connecting server is trusted in the Trusted IP's field in the Sametime configuration database, as indicated in Figure 4.

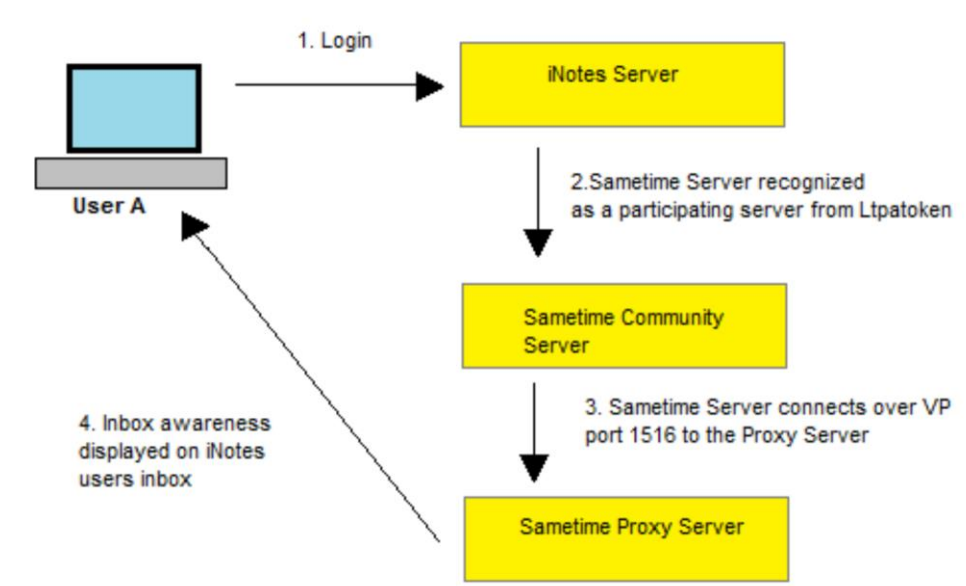


Figure 4. Top level overview of iNotes user A login scenario returning valid awareness

2.2 Server Components

Our test environment used a basic environment running the following server components:

- Sametime Proxy Server version 9.0.1. running on Websphere version 8.5.5.8.
- Servers (example Sametime Proxy Server, using SSO (single sign-on) must use the same LDAP directory that the Sametime Community Server uses.
- All servers participating in SSO must have the same domain name. For example; servername.acme.com.
- Parent Domino LDAP Server version 9.0.1. with existing user documents.
- Additional Domino Servers: Sametime Standard Server 9.01, Domino iNotes Web Server 9.0.1., FP7.
- All Domino Servers are part of the same clustered environment used in this guide.
- IBM DB2 Server version 10.5 Limited Use for Sametime.

2.3 Important URLs

The following table outlines the URLs and how they were used in our test environment:

Table 1. URLs used in test environment

URL	How it is used
<i>https://sschost.test.ibm.com:8701/ibm/console/</i>	This is the URL for the Sametime System Console.
<i>http://communityServerHost.test.ibm.com/webadmin.nsf</i>	This is the URL used for checking Sametime Community Domino Directory settings like those in the server document, web sso configuration document, configuration document.
<i>http://DominoWebAccessServerHost.test.ibm.com/webadmin.nsf</i>	This is the URL used for checking iNotes Domino Directory settings like those in the server document, web sso configuration document, configuration document.
<i>http://ldapServerHost.mulvm.ie.ibm.com/webadmin.nsf</i>	This is the URL used for checking the Domino LDAP Directory settings, especially user documents.
<i>http://proxyHost.test.ibm.com:9080/stwebclient/popup.jsp</i>	This is the URL for the Sametime proxy web client. it automatically launches when a chat action is taken from a logged in iNotes users. The <i>HTTP transport port</i> can be verified by checking the Sametime Proxy servers <i>AboutThisProfile.txt</i> , sample path; <i>C:\IBM\WebSphere\AppServer\profiles\proxy1STPP\NProfile1\logs\</i>
Supported LDAP Directories for use with Sametime	<ul style="list-style-type: none"> • IBM® Lotus® Domino® Directory LDAP • Microsoft® Active Directory • IBM Tivoli® Directory Server • Sun ONE® iPlanet® • Novell® eDirectory®

2.4 Configuration Files and Databases

A tool like IBM Data Studio can be used to query Sametime DB2 database records, if required. The following table outlines which configuration files are needed for each server:

Table 2. How each configuration file is used in each server

Server	Configuration File	How each file is used
Sametime Community Server	<ul style="list-style-type: none"> names.nsf sametime.ini notes.ini stconfig.nsf communityConfig.txt sametime.log buildinfo.txt vpuserinfo.nsf 	<ul style="list-style-type: none"> The <i>names.nsf</i> file stores server documents, web sso configuration document, configuration document and person documents. The <i>sametime.ini</i> file stores service configuration settings for the server. The <i>notes.ini</i> file stores configuration settings for the Domino server hosting the server. The <i>stconfig.nsf</i> file stores connectivity and user lookup settings for the server. The <i>communityConfig.txt</i> file stores IP connectivity footprint of connections made to other Sametime servers. The <i>sametime.log</i> stores service activity of the server. The <i>buildinfo.txt</i> file stores current version number of the server. The <i>vpuserinfo.nsf</i> file stores user information that the client stores on the server side.
iNotes Server	<ul style="list-style-type: none"> names.nsf notes.ini 	<ul style="list-style-type: none"> The <i>names.nsf</i> file stores server documents, web sso configuration document, configuration document and person documents. The <i>notes.ini</i> file stores service configuration settings for the server.
Domino LDAP Server	<ul style="list-style-type: none"> names.nsf notes.ini 	<ul style="list-style-type: none"> The <i>names.nsf</i> file stores server documents and person documents. The <i>notes.ini</i> file stores service configuration settings for the server.
Sametime Proxy Server	<ul style="list-style-type: none"> wimconfig.xml AboutThisProfile.txt 	<ul style="list-style-type: none"> The <i>wimconfig.xml</i> file stores LDAP directory and security information as seen via the SSC. The <i>AboutThisProfile.txt</i> file stores port information for the server's profile.
IBM DB2 Server	<ul style="list-style-type: none"> STSC STPR 	<ul style="list-style-type: none"> <i>STSC</i> is the default name for the Sametime System Console database, contains deployment records. <i>STPR</i> is the default name for the Proxy database, contains internal data referenced by the Sametime Proxy Server.

3.0 Configuration

This guide assumes that the following IBM software on-premises components are already installed:

- Sametime Proxy Server version 9.0.1. running on WebSphere 8.5.5.8.
- Servers using SSO (single sign-on) must use the same LDAP directory that the Sametime Community Server uses.
- All servers participating in SSO must have the same domain name, for example: `servername.acme.com`.
- Parent Domino LDAP Server version 9.0.1. with existing user documents.
- Additional Domino Servers: Sametime Standard Server 9.01, Domino iNotes Web Server 9.0.1., FP7.
- All Domino Servers are part of the same clustered environment used in this guide.
- IBM DB2 Server version 10.5 Limited Use for Sametime.

3.1 The Sametime Proxy Server

The Sametime Proxy Server needs a common authentication between the Sametime Community Server and the iNotes Server. The Websphere LTPA key is this common authentication. Export the Websphere LTPA key used by the Sametime Proxy before importing it into the Community Servers' web SSO configuration and the iNotes Web Server SSO configuration.

About this task

The Sametime Community Server installation creates a Domino SSO key. You will need to replace this Domino SSO key with a WebSphere LTPA key to allow the Sametime Community server running on Domino and the other servers running on WebSphere Application Server (example Sametime Proxy Server) to have an identical key for token validation and generation.

Procedure

1. Log in to the WebSphere Integrated Solutions Console on the server hosting the Sametime System Console.
2. Click **Security > Global Security > WEB and SIP Security > Single Sign-on (SSO)**.



Figure 5. Single sign-on (SSO)

3. Ensure that the domain name matches the Sametime Server domain.

4. Use LTPA V2 cookie name and specify LtpaToken2.

The screenshot shows the 'Global security' configuration page for 'Single sign-on (SSO)'. The page title is 'Global security > Single sign-on (SSO)'. Below the title, it says 'Specifies the configuration values for single sign-on.' The 'General Properties' section includes several options: 'Enabled' (checked), 'Requires SSL' (unchecked), 'Domain name' (set to '.acme.com'), 'Interoperability mode' (unchecked), 'LTPA V1 cookie name' (set to 'LtpaToken'), 'LTPA V2 cookie name' (set to 'LtpaToken2', highlighted with a red box), 'Web inbound security attribute propagation' (unchecked), and 'Set security cookies to HTTPOnly to help prevent cross-site scripting attacks' (unchecked). At the bottom, there are buttons for 'Apply', 'OK', 'Reset', and 'Cancel'.

Figure 6. LTPA V2 cookie name

Note: com.ibm.ws.security.ssoInteropModeEnabled=false in Figure 6. The value can be checked via SSC/Global security > Custom properties > com.ibm.ws.security.ssoInteropModeEnabled

5. Click **OK**.
6. Save the change to the master configuration by clicking **Save** in the "Messages" box at the beginning of the page.
7. Click **Security > Global Security**.
8. In the "Authentication" section, click **LTPA**.
9. In the "Cross Cell single sign-on" section, enter a password, confirm the password, and specify a file name to store the key.

The screenshot shows the 'Cross-cell single sign-on' configuration page. It includes a description: 'Single sign-on across cells can be provided by sharing keys and passwords. To share the keys and password, log on to one cell, specify a key file, and click Export keys. Then, log on to the other cell, specify the key file, and click Import keys.' There are two password fields: '* Password' and '* Confirm password', both containing masked characters. Below them is a text field for 'Fully qualified key file name' with the value 'thisIsTheLTPAKeyToImportIntoTheCommunityServerAndiNotesServer'. At the bottom, there are two buttons: 'Import keys' and 'Export keys', with the 'Export keys' button highlighted by a red box.

Figure 7. Exporting the LTPA key for importing into the Community Server and iNotes Server

Note: Make a note of the location of the file created. You will need to know its location when you import the file to the Sametime Community Server.

10. Click **Export keys**.
11. Click **OK**.
12. Save the change to the master configuration by clicking **Save** in the "Messages" box at the beginning of the page.
13. Navigate to the directory where you exported the LTPA key.
14. Copy the LTPA key to a location where you can access the file from the Sametime Community Server.

Next steps

After exporting the LTPA token from the WebSphere Application Server (WAS), import it into the iNotes Web Server and the IBM Sametime Community Server to enable single sign-on.

3.2 The iNotes Web Server

Setting up the iNotes Web Server is a more complex process than the previous proxy server. You will need to edit several files before you can begin to configure.

Before you begin

Several configuration documents require editing in order to complete the awareness on the iNotes environment.

Editing the Domino directory

1. Open the directory (**names.nsf**) of the iNotes Web Server.
2. Find the “configuration document.”
3. Navigate to the iNotes tab.
4. Add the Sametime Proxy server location.

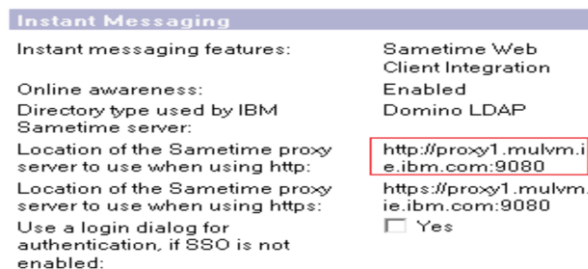


Figure 8. Instant Messaging settings for the iNotes Web Server configuration document

5. Restart your Domino server to pick up the change.
6. Additional configuration is required to enable the **iNotes Contact list**. In the iNotes Web Server “server document” for Java Servlet Support, select **Domino Servlet Manager**.



Figure 9. iNotes Web Server / Domino Web Engine / Java Servlet Support

7. On the iNotes Web Server, create the following servlet configuration file:

```
..\data\servlets.properties
```

8. Insert the following line into your new servlet configuration file:

```
servlet.DWABuddyList.code=com.lotus.dwa.stbuddy.DWABuddyList
```


Updating the Web SSO Configuration

1. Ensure that the Domino Directory has replicated throughout the Domino domain since you installed Sametime.

For example: On the Domino Console for the iNotes Web Server, issue the following replication commands:

```
replicate LDAP1 (sample hostname of the LDAP Directory)
replicate SAMETIME1 (sample hostname of the Sametime Server)
```

2. Navigate to the “LtpaToken” file found in the “Server/Web Configurations” view.

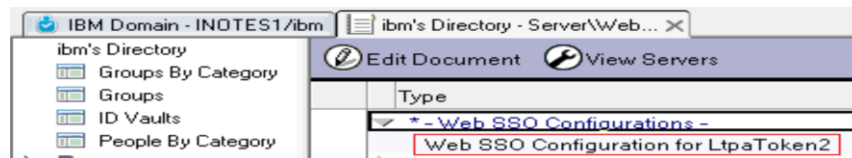


Figure 10. Web SSO Configuration for LtpaToken2

3. Update the Web SSO Configuration document, “LtpaToken,” that was created when Sametime was installed.

Note: For the purposes of this guide, the LtpaToken has been given the name LtpaToken2.

Procedure

After you have edited the necessary files, you can start to configure the iNotes server for Web SSO.

1. Check that the Sametime Server(s) and iNotes Server(s) are listed under the “Participating Servers.”
2. Check that a period (.) is present at the start of the DNS Domain value. The Domain name should be the domain used by both iNotes Web Server and the Sametime Server.



Figure 11. Sample LtpaToken on the iNotes Web Server

3. Import the WAS LTPA token into the iNotes Web Server by doing the following:
 - a. Choose the Web SSO Configuration for LtpaToken document and click **Edit Document**.
 - b. Verify that the “Configuration Name” under “Token Configuration” is set correctly. In this example, it is LtpaToken2.

- c. Click **Keys > Import Websphere Ltpa Keys**.

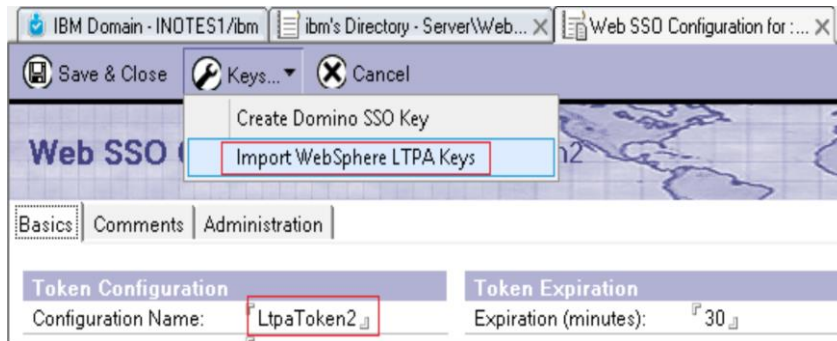


Figure 12. Import WebSphere LTPA Keys

4. Type the exact file location of the key file that you exported from the WebSphere-based Sametime server.
5. Enter the password you created on the server when you enabled single sign-on.
6. Click **OK**.
7. The message "Successfully imported WebSphere LTPA keys" appears after the key has been imported.
8. Set the token format for single sign-on by doing the following:
 - a. In the "Token Format" field of the "WebSphere Information" section, set the LTPA level to match the LTPA level set in the Sametime System Console.
 - b. If Interoperability Mode is used on the Sametime System Console, select **LtpaToken** and **LtpaToken2**; otherwise, select **LtpaToken2**.
 - c. Click **Save and Close**.
9. Restart the Domino server to put any changes you made into effect.

Next Steps

Enable single sign-on and basic authentication in the Server document for the iNotes Web Server. This is done by updating the Web SSO Configuration field and selecting the appropriate LtpaToken from the list. As indicated before, replicate any updates to all relevant servers in the domain.

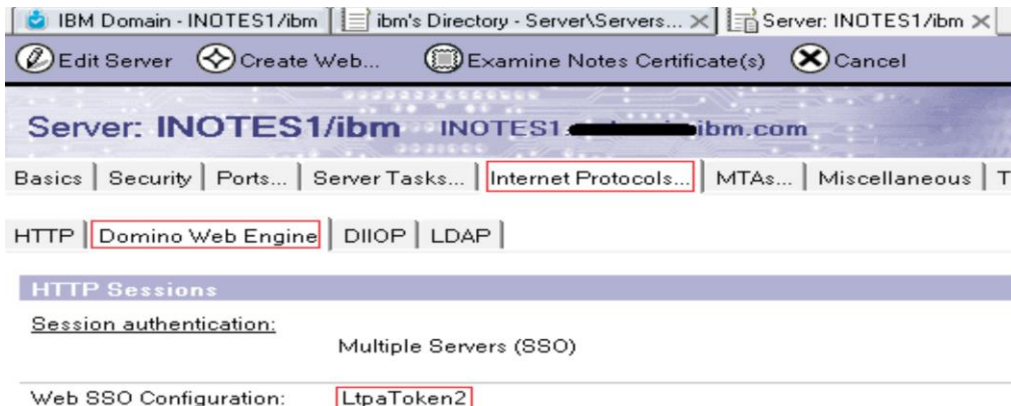


Figure 13. Web SSO Configuration for the iNotes Web Server

Note: While Domino SSO is the preferred authentication method, administrators can continue to use secrets and tokens authentication databases if these are already in use. For example; if any server in your domain is configured for something other than multiple server SSO, like single server SSO, you are required to use secrets and tokens authentication.

3.3 The Sametime Community Server

Set up for the Sametime Community Server is a similar process to the iNotes Server.

Before you begin

Enable SSO Configuration for the Sametime Community Server.

Updating the Web SSO Configuration

1. Ensure that the Sametime Directory has replicated throughout the Sametime domain.

For example: On the Sametime Console for the Sametime Community Server, issue the following replication commands:

```
replicate LDAP1 (sample hostname of the LDAP Directory)
replicate SAMETIME1 (sample hostname of the Sametime Server)
```

2. Navigate to the “LtpaToken” file found in the “Server/Web Configurations” view.
3. Update the Web SSO Configuration document, “LtpaToken,” that was created when Sametime was installed.

Note: For the purposes of this guide, the LtpaToken has been given the name LtpaToken2.

Importing the WAS LTPA token

1. Import the WAS LTPA token into the Sametime Community Server by doing the following:
 - a. Choose the Web SSO Configuration for LtpaToken document and click **Edit Document**.
 - b. Verify that the Configuration Name (Under Token Configuration) is set correctly, in this example it is *LtpaToken2*.
 - c. Click **Keys > Import Websphere Ltpa keys**.
2. Type the exact file location of the key file that you exported from the WebSphere-based Sametime server.
3. Enter the password you created on the server when you enabled single sign-on.
4. Click **OK**.
5. The message "Successfully imported WebSphere LTPA keys" appears after the key has been imported.
6. Set the token format for single sign-on by doing the following:
 - a. In the “Token Format” field of the "WebSphere Information" section, set the LTPA level to match the LTPA level set in the Sametime System Console.
 - b. If Interoperability Mode is used on the Sametime System Console, select **LtpaToken and LtpaToken2**; otherwise, select **LtpaToken2**.
 - c. Click **Save and Close**.
7. Restart the Domino server to put any changes you made into effect.

Procedure

For requests originating from the iNotes Web Server to be trusted by the Sametime Community Server, the IP address of the iNotes Web Server needs to be added in the Sametime configuration.

1. Open the Sametime Configuration application, **stconfig.nsf**, on the Sametime server.
2. From the “By Form” view, open the **Community Connectivity** document.

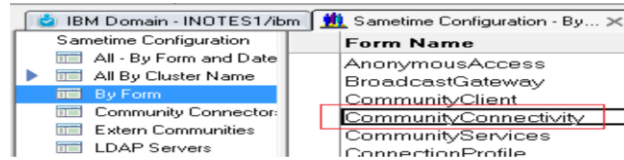


Figure 14. Sametime Community Server stconfig.nsf

3. Add the IP address of the iNotes server to the Community Trusted IPs field.

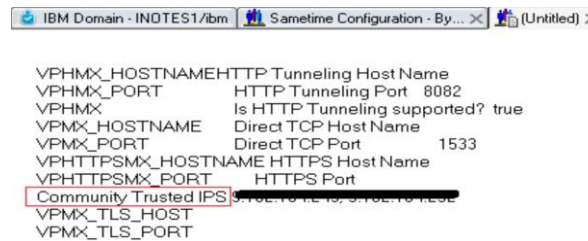


Figure 15. Sametime Community Server stconfig.nsf/CommunityConnectivity document / Trusted IPS

Note: IP addresses are separated by the semi colon character (;).

4. Save and close the document.
5. Restart the Sametime server.

4.0 Troubleshooting

If you have not completed the checklist or have run into other problems with your configuration, check out these solutions. The errors you receive could be the result of log-in issues, server access permissions, or incorrect certificates.

4.1 Login Failures

Login to iNotes can fail for many reasons. We will discuss some typical reasons that can prevent login to iNotes.

Redirection settings configured incorrectly

In the event any redirection is configured with iNotes, check first if the mail inbox can be accessed by manually entering the URL including iNotes server host and corresponding mail file. If login succeeds, then that is an indication that redirection configuration needs to be validated.



Figure 16. Manually entering iNotes mail file location via web browser

Note: The sample URL for the figure uses `http://inotes1HostName.ibm.com/mail/i2.nsf`

Problems accessing the iNotes Server

If no login Prompt appears, check that the iNotes Domino Server is running, and that the http task is running on the Domino server:

```
[0DEC:0002-0E84] 13/03/2017 07:11:53 HTTP Server: Using Web Configuration View
[0DEC:0002-0E84] 13/03/2017 07:11:57 JVM: Java Virtual Machine initialized.
[0DEC:0002-0E84] 13/03/2017 07:11:57 HTTP Server: Java Virtual Machine loaded
[0DEC:0002-0E84] 13/03/2017 07:11:57 HTTP Server: DSAPI Domino Off-Line Services HTTP extension Loaded
successfully
[0DEC:0002-0E84] 13/03/2017 07:11:57 Servlet engine initialization was successful
```

Problems accessing the Sametime Proxy Server.

Check that the Sametime Proxy Server is running by checking its status via the SSC:

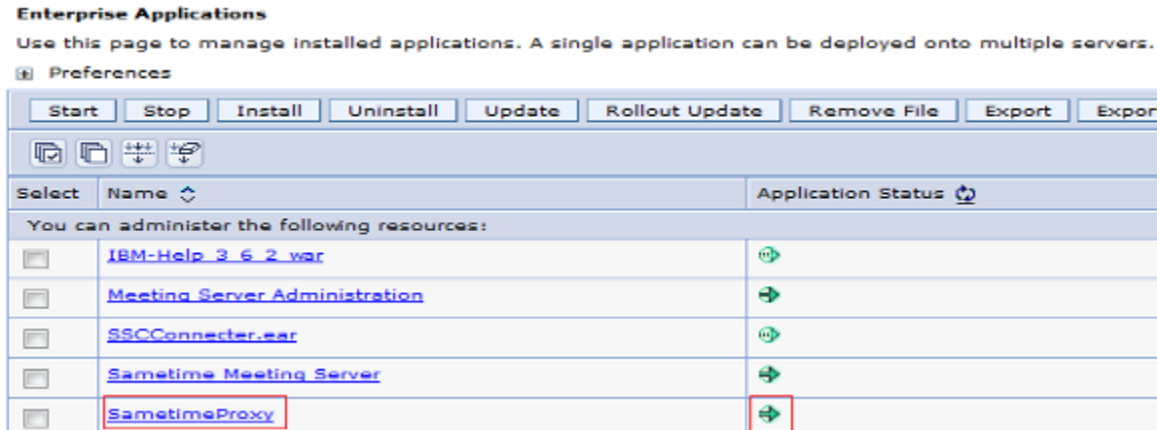


Figure 17. Enterprise Applications

Problems accessing the LDAP Server.

1. To confirm if the LDAP Domino Server is unavailable, check the Sametime Community Server's Domino Console for errors like below:

```
[2558:004E-2110] 13/03/2017 07:35:59 Error connecting to server LDAP1/ibm: Remote system no longer responding
```

2. Verify the LDAP server is up and running, by checking the LDAP's Domino Server Console:

```
[0998:0002-0434] 13/03/2017 07:44:35 LDAP Server: Started  
[0C54:0050-0C94] 13/03/2017 07:44:53 Opened session for INOTES1/ibm (Release 9.0.1FP7)  
[0C54:0051-0C94] 13/03/2017 07:44:55 Opened session for STCHAT4/ibm (Release 9.0.1)
```

3. Also check that the iNotes Server and Sametime Server have recently accessed the LDAP Server.

Problems accessing the Sametime Server

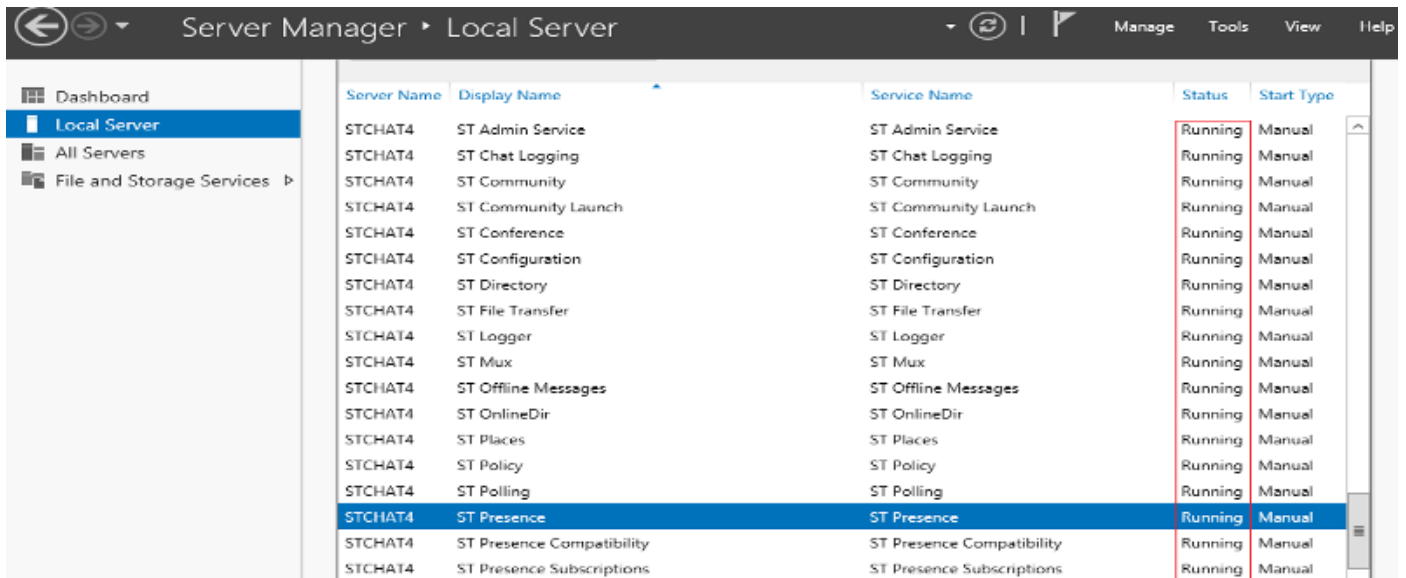
iNotes web users using Sametime may report error: "Chat is temporarily unavailable."

1. Check that the Sametime Server is running, by checking its Domino Server console:

```
09/03/2017 07:26:59 HTTP JVM: com.ibm.sametime.userinfo.servlets.UserInfoServlet: init  
09/03/2017 07:27:01 HTTP JVM: com.lotus.sametime.startup.SametimeStartupServlet: init  
09/03/2017 07:27:10 HTTP Server: Started  
09/03/2017 07:27:14 Initiating Sametime Startup  
09/03/2017 07:27:15 Sametime Server: Starting services  
.  
.  
09/03/2017 07:27:16 Sametime Server: Running  
09/03/2017 07:27:18 Sametime: Starting service [Java Services].  
09/03/2017 07:27:18 Sametime: Process 8932 created.  
09/03/2017 07:27:19 Sametime: Service [Java Services] started successfully.  
09/03/2017 07:27:19 Sametime: All services started successfully.
```

09/03/2017 07:27:19 Sametime: Server startup successful.

2. Check when was the last time the Sametime Server startup completed successfully.
3. Also check all 24 Sametime Services are running in the background, as indicated in Figure 18:



The screenshot shows the IBM Server Manager interface for a local server. A table lists 24 services, all of which are in a 'Running' status. The 'Status' column for each row is highlighted with a red border. The services listed are:

Server Name	Display Name	Service Name	Status	Start Type
STCHAT4	ST Admin Service	ST Admin Service	Running	Manual
STCHAT4	ST Chat Logging	ST Chat Logging	Running	Manual
STCHAT4	ST Community	ST Community	Running	Manual
STCHAT4	ST Community Launch	ST Community Launch	Running	Manual
STCHAT4	ST Conference	ST Conference	Running	Manual
STCHAT4	ST Configuration	ST Configuration	Running	Manual
STCHAT4	ST Directory	ST Directory	Running	Manual
STCHAT4	ST File Transfer	ST File Transfer	Running	Manual
STCHAT4	ST Logger	ST Logger	Running	Manual
STCHAT4	ST Mux	ST Mux	Running	Manual
STCHAT4	ST Offline Messages	ST Offline Messages	Running	Manual
STCHAT4	ST OnlineDir	ST OnlineDir	Running	Manual
STCHAT4	ST Places	ST Places	Running	Manual
STCHAT4	ST Policy	ST Policy	Running	Manual
STCHAT4	ST Polling	ST Polling	Running	Manual
STCHAT4	ST Presence	ST Presence	Running	Manual
STCHAT4	ST Presence Compatibility	ST Presence Compatibility	Running	Manual
STCHAT4	ST Presence Subscriptions	ST Presence Subscriptions	Running	Manual

Figure 18. Sametime Services

Certificate Problems

Token related errors can generate on the Sametime Proxy Server, similar to the following sample errors:

```
[27/02/17 10:50:54:554 EST] 000000e4 CommunityServ W
com.ibm.collaboration.realtime.stproxy.services.community.CommunityService doService, SID: caa370e8-eb47-453e-
87d4-59dbcb48801d CLFRX0027E: Unable to complete the login request for user inotes 2: Reason: 1
.
CLFRX0035E: Token was not found for login by token by user inotes 2
```

It can happen when the Sametime Community Server loads the incorrect LtpaToken specified in the server document. The default value is LtpaToken. In a scenario like this, please add the following Sametime.ini entry below under the “[AuthToken]” section, to force the Sametime Server to load the correct LtpaToken name:

```
[AuthToken]
ST_TOKEN_TYPE=InsertNameOfLtpaTokenWithCorrectSettings
```

The resulting configuration correction should result in successful login to the Sametime Proxy from iNotes.

Check also if the key store contains the correct certificate info using the keytool command, refer to sample below:

```
C:\ibm\WebSphere\appserver\java\jre\bin> ./keytool -list -v -keystore
C:\IBM\WebSphere\AppServer\profiles\proxy1STPPN
Profile1\config\cells\chat17SSCCell\key.p12 -storetype PKCS12 -storepass WebAS > key_info.txt
```


Sample keytool command output:

```
Keystore type: PKCS12
Keystore provider: IBMJCE

Your keystore contains 1 entry

Alias name: default
Creation date: 30-Jan-2017
Entry type: keyEntry
Certificate chain length: 2
Certificate[1]:
Owner: CN=sscHostName.domainName.ibm.com, OU=SSCnameSSCCell,, OU=DMgrNode, O=IBM, C=US
Issuer: CN=sscHostName.domainName.ibm.com, OU=Root Certificate, OU=SSCnameSSCCell,, OU=DMgrNode, O=IBM, C=US
Serial number: 1d51d57f22b94
Valid from: 29/01/17 10:48 until: 29/01/18 10:48
Certificate fingerprints:
    MD5: AC:04:88:C0:5A:F5:3A:FF:5F:0B:62:90:94:D6:47:EE
    SHA1: 33:99:D6:EA:0E:C2:A4:C7:8F:E6:ED:E6:90:D6:11:BD:1F:72:43:9A
Certificate[2]:
Owner: CN=sscHostName.domainName.ibm.com, OU=Root Certificate, OU=SSCnameSSCCell,, OU=DMgrNode, O=IBM, C=US
Issuer: CN=sscHostName.domainName.ibm.com, OU=Root Certificate, OU=SSCnameSSCCell,, OU=DMgrNode, O=IBM, C=US
Serial number: 1d51cfc6a4172
Valid from: 29/01/17 10:48 until: 26/01/32 10:48
Certificate fingerprints:
    MD5: 7A:BC:AF:B6:B6:19:7C:27:9A:33:4F:B4:FA:44:A8:DB
    SHA1: 92:13:43:12:40:D6:46:C5:19:E7:2B:B7:DF:FE:EE:22:5E:22:E0:74

*****
*****
```

iNotes users may report other certificate problems. For example:

["javax.net.ssl.SSLHandshakeException: java.security.cert.CertificateException"](#)

If iNotes users have login problems, check the iNotes web console (by hovering over the "IBM iNotes" tab and pressing CTRL as indicated in Figure 19):

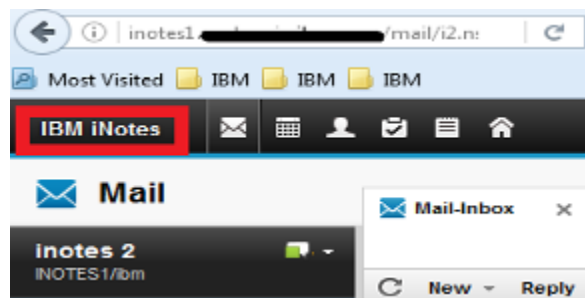


Figure 19. Loading the iNotes Console

This will load the web browsers iNotes Console log. Select the **Details** option to check what LTPA tokens are loaded, as well as to check if the correct port and hostname is loaded for the Sametime proxy server, as seen in sample from Figure 20:

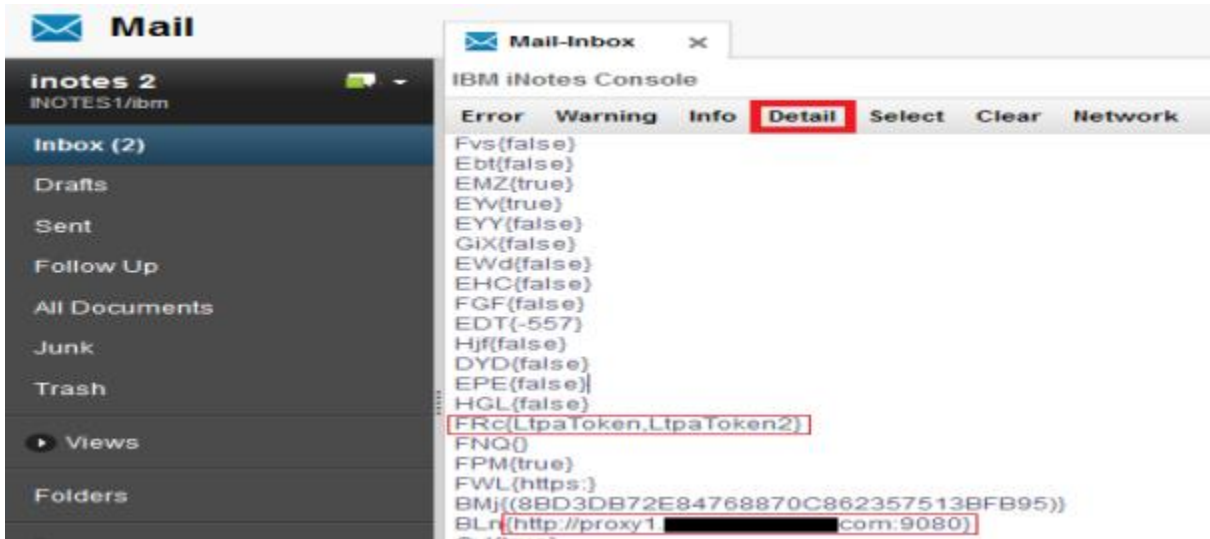


Figure 20. Sample iNotes web console entries

Additional iNotes Console checks

1. Check if dojo is loading correctly from the iNotes Server:

```
03/13/2017 11:52:36AM [http://inotes1.mulvm.ie.ibm.com/domjs/dojo-1.5.4/dojo/dojo.js?201607141215] Logging started
03/13/2017 11:52:36AM Loading element script with src=http://inotes1.mulvm.ie.ibm.com/domjs/dojo-1.5.4/ibm/sametime/widget/layout/SametimeDojoDeps.js?201607141215... (Key: LISTENER115)
03/13/2017 11:52:37AM Loading element script with src=http://proxy1.mulvm.ie.ibm.com:9080/stwebclient/latest/dojo.blue/sametime/livenameLight.js?lang=en... (Key: LISTENER121)
```

2. Check if iNotes is listening for Sametime:

```
03/13/2017 11:52:36AM CxS() (Sametime Listener)
```

3. Check if the Sametime Proxy java scripts are loading correctly without any errors:

```
03/13/2017 11:52:36AM Loading element script with src=http://proxy1.mulvm.ie.ibm.com:9080/stbaseapi/latest/baseComps.js?lang=en... (Key: LISTENER117)
```

4. Check that the Forms9.nsf loads without error:

```
03/13/2017 11:52:37AM Loading URL: /iNotes/Forms9.nsf/iNotes/Proxy/?OpenDocument&pt&Form=f_StyleSheet_STProxy&ui=dwa_form&l=en&gz&C R&MX&
```

5. iNotes users certificate may expire, if this happens they will see the error from Figure 21 below:

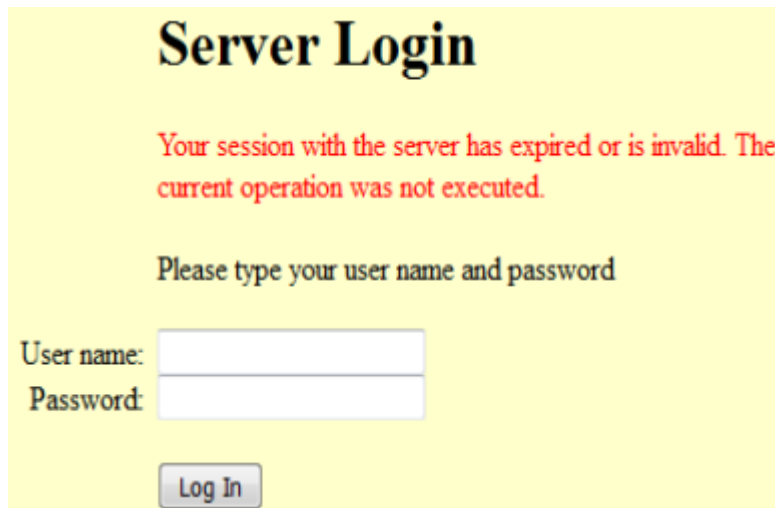


Figure 21. Session expired

By default iNotes will log out a user if the web session has been idle for more than 15 minutes. Refer to technote:

<http://www-01.ibm.com/support/docview.wss?uid=swg21569226>.

6. © Fiddler trace captures can help identify root cause of login problems. On a machine where an iNotes reports problems accessing iNotes and Sametime;
- Capture a © Fiddler trace, and check JSON data for URL
<http://proxy1.hostname.com:9080/stwebapi/user/connect>
 - Check the WebForms login values for loginType, username, and loginMethod, as indicated in sample from Figure 22:

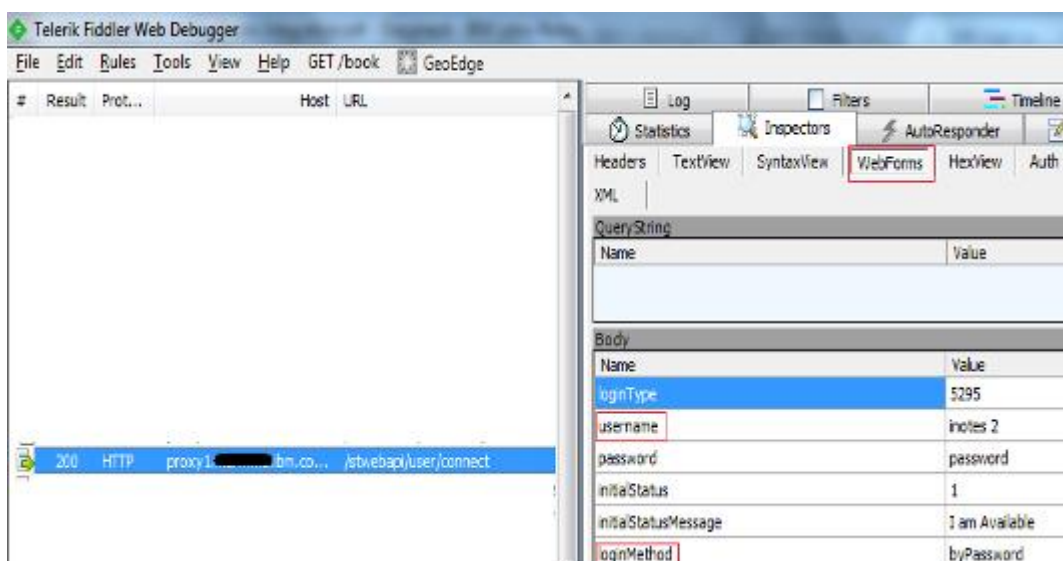


Figure 22. Sample WebForms data from a © Fiddler trace

Server Component Trace

If web client activity (for example: © Fiddler Trace, iNotes web console log) does not indicate an obvious root cause, server side debug trace parameters may need to be enabled:

1. SSO Trace
 - a. Enable SSO notes.ini debugging on the iNotes & Sametime Community server:

debug_sso_trace_level=2

- b. Restart the http tasks to activate the trace.
2. Websphere Security Trace
 3. Via the SSC, enable runtime tracing on the Sametime Proxy server:

```
*=info:com.ibm.ws.security.*=all:com.ibm.websphere.wim.*=all:com.ibm.wsspi.wim.*=all:com.ibm.ws.wim.*=all
```

4. Reproduce login failure via iNotes web client.
5. Check for any errors in the Sametime Proxy trace.log and both Community Server and iNotes Server console.log files.

Sample user security activity log excerpts

- iNotes Domino Server Console.log SSO trace excerpt

```
[0DEC:000A-0F80] 13/03/2017 08:22:45.58 SSO API> -Raw Token Username = CN=inotes 2,O=ibm
[0DEC:000A-0F80] 13/03/2017 08:22:45.58 SSO API> -LDAP Realm = defaultWIMFileBasedRealm
[0DEC:000A-0F80] 13/03/2017 08:22:45.58 SSO API> -Username = CN=inotes 2/O=ibm
[0DEC:000A-0F80] 13/03/2017 08:22:45.58 SSO API> -Expiration Ticks = 1489407735666 [13/03/2017 08:22:15].
[0DEC:000A-0F80] 13/03/2017 08:22:45.58 SSO API> *** Getting Single Sign-On Config Data (SECGetSSOConfigData)
***
[0DEC:000A-0F80] 13/03/2017 08:22:45.58 SSO API> ConfigName specified [LtpaToken2].
[0DEC:000A-0F80] 13/03/2017 08:22:45.58 SSO API> Retrieved global static cache memory for config [LtpaToken2].
[0DEC:000A-0F80] 13/03/2017 08:22:50.25 SSO API> *** Validating Token List (SECTokenListValidateAndGetInfo) ***
[0DEC:000A-0F80] 13/03/2017 08:22:50.25 SSO API> Decoding Websphere style LTPA2 Single Sign-On token
(LtpaToken2).
```

- Sametime Community Domino Server Console.log SSO trace excerpt

```
[2CA0:0005-2CAC] 09/03/2017 07:29:54.01 SSO API> -Raw Token Username = CN=Declan Joyce,O=ibm
[2CA0:0005-2CAC] 09/03/2017 07:29:54.01 SSO API> -LDAP Realm = defaultWIMFileBasedRealm
[2CA0:0005-2CAC] 09/03/2017 07:29:54.01 SSO API> -Username = CN=Declan Joyce/O=ibm
[2CA0:0005-2CAC] 09/03/2017 07:29:54.01 SSO API> -Expiration Ticks = 1489060019666 [09/03/2017 06:46:59].
[2CA0:0007-2CAC] 09/03/2017 07:29:55.85 SSO API> ConfigName specified [LtpaToken2].
[2CA0:0007-2CAC] 09/03/2017 07:29:55.85 SSO API> Retrieved global static cache memory for config [LtpaToken2].
[2CA0:0007-2CAC] 09/03/2017 07:29:55.85 SSO API> Decoding Websphere style LTPA2 Single Sign-On token
(LtpaToken2).
```

- Sametime Proxy Websphere Application Server trace.log security trace excerpt

```
[13/03/17 07:37:34:004 EDT] 000000e7 LTPAToken2 3 u: user:defaultWIMFileBasedRealm/CN=inotes 2,O=ibm
```

expire: 1489405747666 Expiration time: 17.03.13 07:49:07:666 EDT
[13/03/17 07:37:34:004 EDT] 000000e7 LTPAToken2 < validate LTPAToken2 from byte[] Exit
[13/03/17 07:37:34:004 EDT] 000000e7 LTPAToken2Fac < validateTokenBytes (**success**) Exit
[13/03/17 07:37:36:183 EDT] 00000120 ContextManage 3 Setting invocation subject: Subject:
Principal: defaultWIMFileBasedRealm/server:**SSChostnameSSCCell_proxy1STPNode1_STProxyServer**

Note: Turn off server side debug trace parameters after logs are collected and reviewed, as trace log output can generate excess verbose log output on the file systems storing the log files. Contact IBM Support if assistance is required analysing the client or server log activity.

4.2 No Awareness in iNotes Web Mail Inbox

Normally, a completed login is accessible and awareness is loaded as an “OK.” If users report seeing no Sametime awareness in their inbox for Domino mail users, check the following:

1. Check for any awareness related errors in the iNotes client console log:

`Dwf{{$Inbox}}`

Note: If mail file customizations are in place and the default inbox view is \$Inbox, check if awareness loads on the standard iNotes mail file, without any customizations.

2. Check © Fiddler related activity for URL:

`http://proxy1.hostname.com:9080/stwebapi/presence`

Note: An *http error 502* will generate if the Sametime Proxy Server is not running, for URL:

`http://SametimeProxyHostName.com:9080/stbaseapi/latest/baseComps.js?lang=en`

3. Check for any errors in the Sametime Proxy Server trace.log, for example around log entries for presence activity:

`[13/03/17 07:37:36:325 EDT] 00000109 WebAuthentica 3 method : POST URL:/stwebapi/presence[13/03/17 07:37:36:325 EDT] 00000109 WebAuthentica 3 method : POST URL:/stwebapi/presence`

4. Does awareness load in other Sametime clients? Does it load like the Standalone Sametime Client, the embedded Sametime client in the Social Notes Client, or the Sametime Proxy Web Client? If the answer is no to any of these clients (we understand not all environments are configured for all Sametime client types), that could indicate a server configuration problem independent of iNotes/Sametime configuration settings.

4.3 Buddy List Issues

1. Check for any buddy list errors in the iNotes client console.log

```
03/13/2017 02:26:04PM Loading URL:  
/iNotes/Forms9.nsf/iNotes/Proxy/?OpenDocument&Form=_StdPageOperations_Safari&I=en&gz&CR&MX&TS=2  
0160816T154745,21Z&charset=UTF-8&pt&PresetFields=s_buddylist;1... (Key: LISTENER139)
```

2. Check © Fiddler related activity for related URLs:

```
http://proxy1.hostname.com:9080/stwebapi/buddylist?isWatchList=true&isWatchLocation=true&noCache=14882  
82493200
```

3. Check for any errors in the Sametime Proxy Server trace.log, for example around log entries for presence activity:

```
[13/03/17 07:52:41:041 EDT] 000000ec EJSWebCollabo 3 Request Context Path=/stwebapi, Servlet  
Path=/buddylist, Path Info=null
```

4. If the buddy list is not loading, it is possible the Buddy List Servlet is not configured correctly on the iNotes Domino Server. Check Buddy List (Contact List) configuration.
5. Do buddy lists load on the other Sametime clients? Does it load like the Standalone Sametime Client, the embedded Sametime client in the Social Notes Client, or the Sametime Proxy Web Client? If the answer is no to any of these clients, that could indicate a server configuration problem independent of iNotes/Sametime configuration settings. Consider running `vpuserinfo.nsf` maintenance, refer to <http://www-01.ibm.com/support/docview.wss?uid=swg21985537>.

4.4 Must Gather Data

For general iNotes/Sametime problems, IBM Support recommends collecting the following data:

1. Sametime Proxy trace.log (after enabling WIM trace).
2. iNotes sso console.log (after enabling SSO trace).
3. Sametime Community Server console.log (after enabling SSO trace).
4. A client © Fiddler trace.
5. An iNotes web console log.
6. An overview of the iNotes/Sametime Architecture, including where server components are situated, refer to components listed under Introduction, listing hostnames and corresponding IP addresses.

Note: When collecting the required data, confirm the date and time the issue was reproduced, along with username used in the test. Sametime Component and corresponding Log file location documentation is under References.

Verification Checklist

Use this checklist to confirm Sametime instant messaging functionality works for iNotes web clients. The following configuration steps should now be verified and completed without errors:

Tokens

- WAS LTPA Key used by the Sametime Proxy Server, exported from SSC.
- The same LTPA Key imported into the iNotes Web Server names.nsf SSO configuration document.
- The same LTPA Key imported into the Sametime Community Server names.nsf SSO configuration document.

Configuration Documents

- The iNotes Web Server names.nsf Configuration document settings are verified correct including Sametime Proxy Server specified in the document.
- The iNotes Web Server names.nsf server document is configured to handle iNotes Contact lists.
- servlets.properties is configured to handle iNotes Contact lists on the iNotes Web Server
- Values like DNS name, Participating Servers, Configuration Name, Websphere settings are verified correct on both web sso documents for the iNotes and Sametime Servers
- Relevant IP Addresses are added as trusted Ips in the stconfig.nsf on the Sametime Community Server
- The correct LtpaToken is specified in the server documents for both iNotes and Sametime Servers (Internet Protocols/Domino Web Engine).

Replication Conflicts

- There are no replication conflicts for server documents, configuration documents or web sso documents in the names.nsf files for both iNotes and Sametime Servers.
- All configuration changes replicated correctly between LDAP, iNotes and Sametime Servers

Synchronization between Servers, and startup

- The Sametime Proxy Server, WAS SSC, iNotes Server, Community Server and LDAP Server, IBM DB2 Server (STSC, Proxy and Community databases) are confirmed running without any errors.

SSC Security Settings

- SSC Global Security Settings using expected LTPA configuration and LDAP configuration.

End User Access

- Web Clients can access iNotes and display online awareness and iNotes contact lists

Glossary

- Single Sign-on:** With single sign-on (SSO) support, web users can authenticate once when accessing both WebSphere® Application Server resources, such as HTML, JavaServer Pages (JSP) files, servlets, enterprise beans, and Lotus® Domino® resources, such as documents in a Domino database, or accessing resources in multiple WebSphere Application Server domains.
- DOJO:** The DOJO framework parses Sametime Widgets. The dojo files on the iNotes Domino Server are required for iNotes to show the iNotes Buddy List sidebar. Default path: \IBM\Domino\data\domino\js\dojo-1.5.4
- Sametime System Console:** Install the IBM® Sametime® System Console (SSC) before you attempt to deploy other Sametime servers. You use the Sametime System Console to install, administer, and configure other Sametime servers.
- Awareness:** Lotus Sametime awareness technology lets members who have logged in to Lotus Sametime to see all other members who are logged in. The names of online users display in "awareness contact lists" in Lotus Sametime applications. From these awareness lists, members of the community can chat through instant messaging sessions.
- iNotes:** IBM® iNotes® integrates an instant messaging (IM) capability so that users can chat with others online and maintain an instant messaging list that shows the online status of others. The instant messaging awareness feature also displays online status next to the names of people in mail messages, views and folders.

Resources

IBM Redbooks: Creating Integrated Web Experience with IBM Lotus collaboration software

https://www10.lotus.com/ldd/lcwiki.nsf/xpDocViewer.xsp?lookupName=IBM+Redbooks%3A+Creating+Integrated+Web+Experience+with+IBM+Lotus+collaboration+software#action=openDocument&res_title=9_iNotes_integration&content=pdcontent

Sametime 9.0.1 Integration Guide

https://www-10.lotus.com/ldd/stwiki.nsf/dx/Sametime_9.0.1_Integration_Guide

IBM Sametime Wiki

<https://www-10.lotus.com/ldd/stwiki.nsf>

IBM Connections Wiki

<https://www-10.lotus.com/ldd/lcwiki.nsf>

References

Setting up the Connect to LDAP Servers prerequisite activity

https://www.ibm.com/support/knowledgecenter/en/SSKTXQ_9.0.1/admin/install/inst_config_ssc_ldap_start.html

Sametime prerequisite: Connect to DB2 Databases for Sametime Proxy Server

https://www.ibm.com/support/knowledgecenter/en/SSKTXQ_9.0.1/admin/install/inst_config_ssc_db2_ga.html

Exporting LTPA Keys

https://www.ibm.com/support/knowledgecenter/SSKTXQ_9.0.1/admin/config/config_sso_exportkeys.html

Setting up iNotes with Sametime

https://www.ibm.com/support/knowledgecenter/SSULMR_9.0.1/admin/inst_settinguplotusinoteswithsametime_t.html

Log file locations

https://www.ibm.com/support/knowledgecenter/SSKTXQ_9.0.0/admin/trouble/trbl_intro_log_collection.html

About the authors

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