Introduction

Instant IMtegrity 4 for IBM Lotus Sametime

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Instant IMtegrity 4 for IBM Lotus Sametime is a complete solution to increase the value and manageability of your IBM Lotus Sametime infrastructure.
Instant IMtegrity enables you to centrally log, filter, review, audit, archive and manage Lotus Sametime instant messages ("IM") in your enterprise.

Instant IMtegrity provides you with:

- Automatic server-side storage of IM chat transcripts complete with images and emoticons in a Lotus Notes database, plain text files and/or XML files.

- Expert insight into the usage and content of Lotus Sametime IM in your department or enterprise.

- Options to automatically notify compliance officers, Human Resource personnel or administrators based on content found in IM chats such as restricted words, phrases, profanity, etc.

- Browser-based or Lotus Notes-based access, search and retrieval of IM text based on criteria you specify.

- Options to customize and extend the log database with additional views, etc.

What's New in Instant IMtegrity 4.13

What's new in Instant IMtegrity 4.13:

- Fixed error "Subscript out of range (#9)" when importing chat log files containing images.
- Fixed another instance of error "Font size must be between 1 and 250, or STYLE_NO_CHANGE (#4364)" when importing files with HTML formatting.

What's new in Instant IMtegrity 4.12:

- Fixed error "Object variable not set (#91)" when merging transferred files starting with an !exclamation mark in their file name.
- Fixed error "Font size must be between 1 and 250, or STYLE_NO_CHANGE (#4364)" when importing files with very large HTML font sizes.

What's new in Instant IMtegrity 4.11:

- Fixed erroneous message "ERROR: Unable to clear file attributes" when importing file transfers.

What's new in Instant IMtegrity 4.1:

- Improved file transfer logging support
- Improved scalability for Sametime servers with very large numbers of concurrent chat sessions
- Added new notes.ini variables to limit the number of log files to be processed per import run. (See the documention for "Limiting the number of log files per import" for mode details).
- New Action rule option: You can now refer to specific values in multi-value items when using keyword expansion by using [n], ie. {%fieldname[1]%} (See the documention for "Action Rule Keyword Expansion" for mode details).
- New Action Rule option: You can now customize both the sender name and SMTP From address in notification emails.
- New Action Rule option: You can now include fields as custom SMTP X-Headers in notification emails.
- New Action Rule option: You can now perform keyword expansion when tagging log documents.
- Fixes a server crash when importing very large log files
- Misc. optimizations and bugfixes

What's new in Instant IMtegrity 4.09:

- Chat log documents now display with original HTML formatting when viewed in a Lotus Notes Client and/or web browser.

What's new in Instant IMtegrity 4.08:

- GIF animations are now shown animated when chat log documents are viewed in a Lotus Notes Client and/or web browser.
- Added support for PNG files
- Action Rules: Custom subject, header and footer text in notification emails can now include log field values by using {%fieldname%}, {$fieldname$} or {#fieldname#} (See the documention for "Action Rule Keyword Expansion" for mode details).
- New Rule Criteria option: You can now perform Directory lookups to search chat participants person records.
- New Action Rule option: You can now copy arbitrary fields from the chat log document into notification emails.
- New Action Rule option: You can now attach the source XML log file to notification emails.
- Fixed an import bug when the log folder contains both encrypted and unencrypted chat logs.

What's new in Instant IMtegrity 4.07:

- Fixed various bugs with importing n-way chat documents

What's new in Instant IMtegrity 4.06:

- New feature: Archiving of file transfers.
- New feature: n-way conference chats between Sametime 8 clients now get archived with images and emoticons inline.
- Rules enhancement: Added "any" and "all" operators for "Participant names" selection option.
  Important: If you currently have rules configured which use Particiant name matching, you must re-save them after installing version 4.06!

What's new in Instant IMtegrity 4.05:

- Fixed a bug which prevented Sametime chats from taking place when "Plain Text" logging was enabled.

What's new in Instant IMtegrity 4.04:

- Fixed a bug with LDAP names. LDAP names are now correctly stored in chat log documents as expected by Domino with forward slashes instead of commas.
- Fixed a bug with group membership checking in rules to prevent the error "Unable to build nameslist"

What's new in Instant IMtegrity 4.03:

- Added new option to import existing V3.x Instant IMtegrity chat logs into the new imtchatlog4.nsf database
  To import, select "Actions\Import Instant IMtegrity V3 Database..." inside the imtchatlog4.nsf using a Lotus Notes Client.
  (See chapter "Importing existing 3.x chat log databases into the new imtchatlog4.nsf database" for more details)

What's new in Instant IMtegrity 4.02:

- Fixed a problem which prevented Version 4.01 from being installed on Windows 2000
- The chat GUID is now displayed on the 'Advanced' tab in each chat log document
- Fixed a problem with the IMtegrity server addin task displaying "Invalid or nonexistent document" on the server console

What's new in Instant IMtegrity 4.01:

● Image Logging

Instant IMtegrity 4 logs all images, emoticons/smileys (incl. custom emoticons) and screen shots from Lotus Sametime 7.x and 8 clients.
All images are logged in-line within the IM chat text exactly as seen by the chat sender/receiver(s).

● IM Archiving and Compliance Action Rules

Inclusion/Exclusion Rules

Instant IMtegrity 4 allows IBM Sametime administrators to easily create highly configurable, flexible and powerful rules to precisely control which Lotus Sametime messages should be included or excluded from logging based on one or more selection criteria:

- Chats containing certain words or phrases
- Chats from and to certain participants (incl. wildcards for Organizational Units)
- Participants who are members of one or more groups
- the number of chat participants per chat
- the start and/or end time of the chat

- the chat duration/length
- the amount of message lines in a chat
- the amount of words in a chat

Action Rules

Action Rules allow server administrators to automatically run predefined actions for chats matching complex selection criteria:

- Automatically tag logged chat documents with keywords to easily find/include them in a new "Tags" view
- Automatically send customized email notifications/forward chats to compliance officers
- Automatically grant addtl. reader access to logged chat documents for superiors, managers, etc.
- Automatically encrypt chat documents with the private key of one or more users

● Logging of user state changes

Instant IMtegrity 4 now logs all state changes of people joining and leaving chats. This also tells who initiated and ended a chat, as well as who joins and leaves in multi-user conference (n-way) chats.

● Optimized core chat logging engine

The core chat logging engine (stchatlog.dll) has been rewritten from scratch to reduce CPU load and memory usage for very busy servers.

● Domino Server Add-in Task for near real-time archiving

Instant IMtegrity 4 features a native Domino server add-in task dedicated to importing archive logs for near real-time archiving (configurable).

● Domino Statistics integration

Instant IMtegrity 4 provides native Domino statistics integration to allow Administrators to monitor IM archiving activity and optionally chart it graphically in the Domino Administrator Client's Server\Statistics UI.

● Periodic logging of long-running chats and persistent chatrooms

On-going, long-running chats and persistent chat rooms now get periodically logged via a customizable interval.

● Strong encryption of intermediate chat logs

For maximum security, intermediate chat logs can now be optionally encrypted on disk using strong, machine-specific RSA keys.

● Redesigned User Interface

The user interface for the chat logging database, rule configuration database and help database has been completely redesigned.

● Better serviceability

Instant IMtegrity 4 features a comprehensive diagnostics facility to allow easy troubleshooting and diagnostics, if required.

● Discontinuation of AOL proxy service

Instant IMtegrity 4 does not provide an embedded AOL IM proxy service anymore.

What's new in Instant IMtegrity 4.0:

Version 4.00 was a non-public, private beta version only.

System Requirements

In order to successfully install and operate Instant IMtegrity 4, the following requirements must be met:

Supported Operating systems :

- Microsoft Windows 2000
- Microsoft Windows XP
- Microsoft Windows 2003 Server
- Microsoft Windows 2008 Server

Supported Lotus Sametime Servers :

- Lotus Sametime Server 2.5
- Lotus Sametime Server 3
- Lotus Sametime Server 6.5.x
- Lotus Sametime Server 7.x
- Lotus Sametime Server 7.5.x
- Lotus Sametime Server 8.x

Logging of images and emoticons :

- Requires Lotus Sametime Server version 7.5.x or higher
- Requires Lotus Sametime Client 7.5x or higher

Deployment considerations before you install Instant IMtegrity

To consistently and effectively log all IBM Lotus Sametime IM chats, you need to install Instant IMtegrity on **every** Lotus Sametime server in your organization, otherwise only IM chats originating from users which are connected to a Lotus Sametime server running the Instant IMtegrity software will be logged.

Note: You need to purchase enough Instant IMtegrity licenses for all users being logged, regardless of the number of Lotus Sametime servers being used.

Upgrading from Instant IMtegrity Version 3 to Version 4

Instant IMtegrity 4 must be installed on the same computer also running the IBM Lotus Sametime server software and you must be logged in to Windows with an Administrator account.

Steps to upgrade from Version 3 to Version 4

Un-install Instant IMtegrity 3

Step 1: Shutdown the Lotus **Sametime Server** (but leave the **Domino** server running!)
Make sure that there are no chat log XML files in the IMtegrity logs directory anymore:
Check the logs directory for any remaining .XML files
If there are any, wait until Domino has imported them into the imtchatlog.nsf database. By default, imports run every 5 minutes.

Step 2: Shutdown the Lotus **Domino** server

Step 3: Un-install "IMtegrity OS Components for Windows 2000,XP,2003"
(When prompted to reboot the system, it is safe to choose "Later". You only need to reboot the system after you *finished* the upgrade)

Step 4: Un-install "Instant IMtegrity 3"
Depending on what version of IMtegrity 3 you have currently installed, you might or might not get prompted to reboot.
(When prompted to reboot the system, it is safe to choose "Later". You only need to reboot the system after you *finished* the upgrade)

Install Instant IMtegrity 4

Step 5: Install "Instant IMtegrity 4"
(Note: There is no "OS Components" installer anymore in version 4. All required files are now integrated into a single installer in version 4)

Unpack the IMtegrity 4 ZIP file which contains the installer
Run SETUP.EXE
Click "Next" at the splash screen
Click "Next" at the welcome page
Read the license agreement and click "Next" if you accept it
Select the target installation folder and click "Next"
Click "Next" to start the installation
Click "Close" to exit the installer

Step 6: When prompted to reboot the system, click "Yes"
It is **required** to reboot the system at this time. IM chats will not be logged until the system has rebooted.

Installing IMtegrity Version 4

Instant IMtegrity 4 must be installed on the same computer also running the IBM Lotus Sametime server software and you must be logged in to Windows with an Administrator account.

Note: If you currently have IMtegrity Version 3.x installed, you need to un-install it first. See topic " *Upgrading from Instant IMtegrity Version 3 to Version 4"*

Steps to install Version 4

Step 1: Unpack the IMtegrity 4 ZIP file which contains the installer
Run SETUP.EXE
Click "Next" at the splash screen
Click "Next" at the welcome page
Read the license agreement and click "Next" if you accept it
Select the target installation folder and click "Next"
Click "Next" to start the installation
Click "Close" to exit the installer

Step 2: When prompted to reboot the system, click "Yes"
It is required to reboot the system at this time. IM chats will not be logged until the system has rebooted.

Changes performed by the Instant IMtegrity 4 Installer

The Instant IMtegrity 4 installer performs the following changes to your Lotus Domino /Sametime server:

- Deploys the "imtconfig.exe" program into your selected installation directory

- Deploys the "nimtegrity.exe" server add-in task into the Domino program directory

- Deploys the "stchatlog.dll" file into the Domino program directory

- Deploys the "stfilelog.dll" file into the Domino program directory

- Deploys the "imtchatlog4.ntf" and "imtconfig.ntf" templates into the Domino data directory

- Deploys the "imthelp4.nsf" database into the Domino data\help directory

- Creates a "\logs" subdirectory inside the selected installation directory

- Creates a new chat log database named "imtchatlog**4**.nsf" ("Instant IMtegrity 4 Chat Logs") in the Domino data directory
Note: All existing chats from the previous version 3 can still be found in the "imtchatlog.nsf" database
Note: The newly created imtchatlog**4**.nsf database now has a **unique** replica ID and will not replicate anymore with other chat log databases by default.
To create a domain-specific replica ID, see topic *"Creating a domain-wide replica ID for the imtchatlog4.nsf db to enable replication"*

- Creates a new configuration database named "imtconfig.nsf" ("Instant IMtegrity Configuration")
Note: The newly created imtconfig.nsf database has a domain-specific replica ID and automatically replicates between all Sametime servers

- Disables the scheduled import agent in the previous version 3 "imtchatlog.nsf" database (if found)

- Adds the new imtegrity server add-in task to the SERVERTASKS= line in the server's notes.ini file

- Automatically loads the imtegrity server add-in task into the Domino server

- Sets chat logging mode to "strict" in the Sametime configuration database "stconfig.nsf" (in the "CommunityServices" document)

Importing existing 3.x chat log databases into the new imtchatlog 4.nsf database

When you install Instant IMtegrity 4, the installer creates a new imtchatlog4.nsf database.
If you are upgrading from IMtegrity 3.x and want to consolidate your existing chat logs from the previous imtchatlog.nsf database into the new imtchatlog4.nsf database, you can use the new import feature introduced with version 4.03:

To import existing 3.x chat logs:

- Open the new imtchatlog4.nsf database with a Lotus Notes Client
- Select "Actions\Import Instant IMtegrity V3 Database..." from the menu bar
- Click the "Browse..." button
- Select the previous 3.x Instant IMtegrity chat log database you want to import from.
- Click "OK"

Note:

- You need at least Author ACL access and the "Create documents" ACL priviledge in the imtchatlog4.nsf database you want to import into.
- You need at least Reader ACL access and the "[ReadEverything]" ACL role in the V3 imtchatlog.nsf database you want to import from.
- AOL chat logs will not be imported; the importer will ignore them. Only Lotus Sametime chat logs will be imported.
- The importer is smart about importing chat logs only once. If you attempt to re-import from a database you previously already imported, the importer will ignore already imported chat logs to avoid duplicates.

Creating a domain-wide replica ID for the imtchatlog 4.nsf db to enable replication

When you install Instant IMtegrity 4, the installer creates the imtchatlog4.nsf database with a **unique** replica ID.
This means that if you install Instant IMtegrity on multiple servers, the imtchatlog4.nsf databases between these servers do **not** replicate by default.

If you prefer to have a common, replicated imtchatlog4.nsf between all Sametime servers, you can use the Instant IMtegrity Configuration tool ("imtconfig.exe") to set each imtchatlog4.nsf database automatically to a common, domain-wide replica ID to enable replication.

To set a domain-wide replica ID for imtchatlog 4.nsf:

- Open a command prompt window

- Change into the Instant IMtegrity installation folder

- Run `imtconfig.exe /SetLogDomainReplicaID`

Note: You need to perform the above steps on all servers you want to include in the replication of imtchatlog4.nsf

Configuration Overview

Automatic configuration out of the box

The Instant IMtegrity 4 installer configures the server automatically with default configuration settings, so that all server-based chat logging takes place automatically after installation and reboot of the system. There is no client-side configuration necessary, all chats are logged directly on the server.

By default, Lotus Sametime chats will be automatically logged into the \logs subfolder inside your Instant IMtegrity program folder as XML files and from there imported by the IMtegrity Importer (a Domino server add-in task new in Version 4) into the IMtegrity chat log database (imtchatlog4.nsf) once a minute. You can setup rules in the Instant IMtegrity Configuration db ("imtconfig.nsf") to control which IM chats should be imported into the imtchatlog4.nsf database, and which ones should be ignored and discarded, and you can change the import interval of the server add-in task via a TELL command on the server console.

In order to have the chat logs available in the searchable Instant IMtegrity Chat Log database (imtchatlog4.nsf), you must enable the **XML** file format as a log format, as only XML files will be imported. Plain text files will not be imported. The text file option is merely provided as a convenience feature so that you do not have to manually write XML transformations to obtain the plain text content of the chat logs.

By default, after the XML files have been imported, they will be deleted from the \logs subfolder.
To keep these XML files, you can enable the "Store XML files as attachments" feature in the imtconfig.exe tool.
Once enabled, all XML files will be stored as attachments with the respective log documents inside the IMtegrity chat log database.

- System configuration changes are made with the Instant IMtegrity Configuration application ("imtconfig.exe")

- Rule configuration changes are made in the Instant IMtegrity Configuration database ("imtconfig.nsf")

- Server add-in task configuration changes are made via TELL commands on the server console ("> tell imtegrity help")

Note: Some configuration changes you make in the Instant IMtegrity configuration tool ("imtconfig.exe") require that you restart the "Sametime Chat Logging" service. In this case the configuration tool will prompt you, updates will not be picked up until the service has been stopped and restarted.
All other configuration changes will automatically take effect immediately.

Using the IMtegrity Domino server add -in task

Instant IMtegrity 4 features a new Domino server add-in task ("IMtegrity Importer") which takes care of importing the XML chat logs into the imtchatlog4.nsf database.
(Instant IMtegrity 3 used the Domino Agent Manager to run a scheduled import agent every 5 minutes).

By default, the installer automatically adds the IMtegrity Importer task to the SERVERTASKS= line in your servers notes.ini file and starts the task.
By default, the IMtegrity Importer task imports chat logs every **60** seconds.
By default, the IMtegrity Importer task processes **all** chat log files which are ready for import at the time of the run interval.
To configure how many chat log files should be processed, see "Limiting the number of log files per import" for mode details.

Adjusting the log import interval

To see the current import interval, enter the following console command:
```
> tell imtegrity interval
```

Note: You can also see the current import interval with the `> show tasks` command.
```
> show tasks

HTTP Server          Listen for connect requests on TCP Port:80
Agent Manager        Executive '1': Idle
Sametime Server      Running
IMtegrity Importer   Idle, importing every 10 seconds
Directory Indexer    Idle
Agent Manager        Idle
```

To change the import interval (for example, to 2 minutes = 120 seconds), enter the following console command:
```
> tell imtegrity INTERVAL 120
```

This changes the import interval to 120 seconds.

Note: It is not recommend to set the import interval to less than 5 seconds due to the load/overhead placed on the system.

Available TELL command line options

The server add-in task supports a variety of TELL commands to configure it at run-time:

```
> tell imtegrity HELP          lists the available command line options
> tell imtegrity VERSION       shows the current version and build date
> tell imtegrity INTERVAL      shows the current import interval
> tell imtegrity INTERVAL n    sets the import interval to "n" seconds
> tell imtegrity PAUSE         temporarily pauses the importer
> tell imtegrity RESUME        resumes previously paused imports
> tell imtegrity IMPORT        performs a one time manual import (useful when in PAUSE
mode)
```

Note: The PAUSE, RESUME and IMPORT mode are only useful for troubleshooting purposes and when working with Instant Technologies Customer support.

Using the Instant IMtegrity Configuration Tool   ("imtconfig.exe")

The Instant IMtegrity Configuration tool is used to view or edit the following configuration options :

- **Log all instant messages :**

  Select this option to capture all Lotus Sametime chats. If this option is disabled, no chats will be logged.
  Changing this option requires a restart of the Sametime Chat Logging Service

  - **Save chat transcript logs in this folder :**

    Provide a valid folder path where the log files should be temporarily stored. The Instant IMtegrity Importer server add-in task will import log files from this folder only .
    Changing this option requires a restart of the Sametime Chat Logging Service

  - **File format :**

    - **XML:**
      Select this option to save chat logs in XML format. This is the default selection and is required for Lotus Notes database storage (imtchatlog4.nsf).
      Changing this option requires a restart of the Sametime Chat Logging Service

      - **Encrypt XML content :**
        Select this option to optionally encrypt the content of the XML log files on disk . See for more details.

        Note: logged image files will not be encrypted .
        Changing this option requires a restart of the Sametime Chat Logging Service

    - **Plain Text :**
      Select this option if you also want to store the chat logs in plain text format, for example to import them into word processors, etc.

      Note: The Instant IMtegrity Importer server add-in task does not use nor require the plain text log format.
      Changing this option requires a restart of the Sametime Chat Logging Service

  - **Commit long -running chat logs to disk every n minutes :**

    Select how often long-running chats should be periodically flushed to disk so that they appear sooner in the Instant IMtegrity chat log database ("imtchatlog4.nsf").
    The default selection is "0" which means ongoing chats will not get imported until they have ended.
    It is recommended to only enable this option if you have a need to log persistent chat rooms (which can last indefinitely and therefore never really end) or similar applications .
    Changing this option requires a restart of the Sametime Chat Logging Service

  - **Enable IMtegrity diagnostic output to   "<domino>\trace\imtegrity .txt":**

    It is highly recommended to **not** enable this option unless specifically requested by Instant Technologies Customer Support to help troubleshoot any potential problems . Enabling this option will write extensive diagnostic output to the 'imtegrity .txt' file in the Domino program\trace folder.
    Depending on how busy the server is, this file can grow very large very quickly, and also reduce performance of the IBM Sametime server itself.
    Changing this option requires a restart of the Sametime Chat Logging Service

- **Log all file transfers :**

  Select this option to capture all Lotus Sametime file -transfers.
  Changing this option requires a restart of both the Domino and Sametime Server

- **Save file transfers in this folder :**

  Provide a valid folder path where the transfered files should be temporarily stored . The Instant IMtegrity Importer server add-in task will import log files from this folder only .
  Changing this option requires a restart of both the Domino and Sametime Server

- **Store XML files as attachments in log documents :**

  Select this option to keep the original XML log file as an attachment inside each chat log document in the Instant IMtegrity Chat Log database.
  This option is selected by default.

  Note: If the option "Encrypt XML content" is enabled, it is recommended to disable storing XML files as attachments, because the encrypted XML files cannot be decrypted by anyone other than the Instant IMtegrity Importer server add-in task itself.
  Changing this option takes place immediately at the next import interval

- **Store transfered files as attachments in log documents :**

  Select this option to keep the file transfers as attachments inside a chat log document in the Instant IMtegrity Chat Log database.
  This option is selected by default.

- **Update full text index of database after each import :**

  Select this option to force an immediate update to the full text index of the Instant IMtegrity Chat log database every time new chats have been imported.
  For performance reasons, we recommend that you leave this option disabled . The Lotus Domino server will automatically update the full text index on an hourly schedule anyway . This option is disabled by default.
  Changing this option takes place immediately at the next import interval

- **When importing XML files, log :**
  Changing this option takes place immediately at the next import interval

  - **Nothing:**
    Select this option to prevent any server console / log file output during imports.

  - **Errors only :**
    Select this option to only log import errors to the server console / log file.

  - **Summary:**
    Select this option to show possible errors and a summary of how many logs/messages have been imported each time an import runs.
    If no new log files are found, nothing will be logged. This option is the default.

  - **Details:**
    Same as Summary, but additionally shows import activity each time an import runs.

  - **Debug:**
    Extensive and verbose logging only intended to aid troubleshooting. For performance reasons, we recommend that you leave this option disabled.

- **If import errors occur, send mail to :**

  Select this option to have Instant IMtegrity send an email to the provided email address, if it detects any errors during imports. The email will include the type and possible cause of the error and the file name of the particular chat log causing the error.
  The email address can be either in Lotus Notes format or internet RFC 821 format.

- **Sametime Chat Logging Service :**

  This Windows service provides the logging for IBM Lotus Sametime chats. This service got automatically installed by the Lotus Sametime server installer.

  - **Start Service :** Starts the Windows service
  - **Stop Service :** Stops the Windows service

Using the Instant IMtegrity Configuration Database   ("imtconfig.nsf")

Use the Instant IMtegrity Configuration database ("imtconfig.nsf") to view, create and edit inclusion rules, exclusion rules and action rules.

See topic *"Rules Overview"*

Committing long-running chat logs periodically to disk

Instant IMtegrity 4 now supports periodic logging of long, on-going IM chats and flushes them to disk every x minutes (configurable).
You can change the interval in Instant IMtegrity Configuration tool ("imtconfig.exe")

This feature was added especially for the "Instant Team Sessions" product where chats can go on for a very long time and never really "end", but is also useful in general for all long-winded chats. Previously, in Instant IMtegrity 3, a chat would not get imported at all until it was completely done. Now, a chat appears as on-going in the imtchatlog4.nsf database as soon as the flush interval has been reached, and gets gradually assembled until complete.

Note: Periodic logging is only supported for XML files.

Encryption of intermediate XML chat log files

Instant IMtegrity 4 now allows administrators to encrypt all intermediate XML chat logs on disk using strong RSA encryption.
You can enable encryption via the Instant IMtegrity Configuration tool ("imtconfig.exe")

Details :

When the option "Encrypt XML content" is enabled, textual content inside of each XML log file is encrypted via a machine-specific 128 bit RSA RC4 key.
The server creates an asymmetric RSA public and private key pair once (at first start-up) and a random 128 bit RC4 symmetric encryption key (every time on service start). All names and IM chat messages in each XML log file are then encrypted using that RC4 key. The RC4 key itself is then encrypted using the server's machine specific public key and stored in the XML log file itself .

At import time, that RC4 key is decrypted using the server's machine-specific private key and is then used to decrypt the actual XML log file content.
128 bit RSA RC4 keys are sufficiently complex for this purpose, and the private key required to decrypt the content is only available on the very same server, so decryption can only take place on that particular server, means 'stealing' the files and trying to decrypt them elsewhere won't work .

Performance implications :

Encryption is fairly fast, since the most computationally "expensive" operation of creating a set of private/public keys is done only once at server start up .
Also, symmetric encryption using RC4 keys of small content (IM user names and chat messages) is extremely fast (and this is where the server spends most of it's time, encrypting names and messages passing through the server).

The RC4 key then sealed with the public key only once when Instant IMtegrity stores /saves the XML chat log file.
In comparison, public key operations are ca . 1000 times slower than symmetric key operations, so since Instant IMtegrity 4 is doing this only once (and only on the RC4 key itself, rather than on the entire chat message), it's very fast.

Limiting the number of log files per import

By default, the IMtegrity Importer task processes **all** chat log files which are ready for import at the time of the run interval.
To configure how many chat log files should be processed, you can configure the notes.ini variables listed below.

Note: It is recommended to **not** configure these variables unless specifically requested by Instant Technologies Customer Support.
Configuring these variables with low values on busy servers might result in the IMtegrity importer task never being able to "catch up" with importing all chat log files.

notes.ini variables :

imtegrity_maxSingleLogs=   the max number of 'single' log files to be imported per import run
imtegrity_maxStartLogs=   the max number of 'start' log files to be imported per import run
imtegrity_maxPartLogs=   the max number of 'part' log files to be imported per import run
imtegrity_maxFinalLogs=   the max number of 'final' log files to be imported per import run
imtegrity_maxFileLogs=   the max number of 'file' log files to be imported per import run

Rules Overview

Instant IMtegrity 4 has a highly configurable, flexible and powerful rules engine which supports 3 different types of rules:

Inclusion Rules determine which Lotus Sametime chat messages should be imported into the chat log database.
Exclusion Rules determine which Lotus Sametime chat messages should *not* be imported.
Action Rules can automatically run predefined actions for chats matching one or more selection criteria.

By default, no Inclusion or Exclusion Rules exist, and all chat log files will be imported.
Note: Action Rules are evaluated and executed **even** if a log file is excluded from being imported as a result of Inclusion or Exclusion Rules.

Rule evaluation order :

All enabled rules are evaluated for each chat log file to be imported in the following order:

Step 1: Inclusion Rules

- If no enabled inclusion rule(s) exist, the log file is considered eligible for import, and evaluation continues with *Step 2: Exclusion Rules*

- If one or more enabled inclusion rule(s) exist, the log file must satisfy at least one enabled inclusion rule for the current server to be considered eligible for import.
If so, evaluation then continues with *Step 2: Exclusion Rules*

- If not at least one enabled rule for the current server is satisfied by the log file, it will be deleted and not be imported, but evaluation continues with *Step 3: Action Rules*

Step 2: Exclusion Rules

- If no exclusion rule(s) exist, the log file is considered eligible for import, and evaluation continues with *Step 3: Action Rules*

- If one or more enabled exclusion rule(s) exist, and if the log file satisfies at least one enabled exclusion rule, it will be deleted and not be imported, but evaluation continues with *Step 3: Action Rules*

- If not a single enabled exclusion rule is satisfied by the log file, it will be considered eligible for import, and evaluation continues with *Step 3: Action Rules*

Step 3: Action Rules

Action Rules are evaluated and executed **even** if a log file is excluded from being imported as a result of Inclusion or Exclusion Rules.

Note: Certain Action Rules have no effect if the log file is not being imported.

- For example, if a log file is excluded from import but matches an Action Rule with an action to "Tag" the chat, the tag will be lost, because the chat log will not be saved.

- However, an Action Rule with an action to "Send an Email Notification" will still send the chat log as an email, even though it won't be saved in the chat log database (and the email notification will include a comment indicating that the log is not saved).

Inclusion Rules

Inclusion Rules determine which Lotus Sametime chat logs should be imported into the chat log database ("imtchatlog4.nsf"):

- If no enabled inclusion rule(s) exist, the log file is considered eligible for import, and evaluation continues with *Exclusion Rules.*

- If one or more enabled inclusion rule(s) exist, the log file must satisfy at least one enabled inclusion rule for the current server to be considered eligible for import .
  If so, evaluation then continues with *Exclusion Rules.*

- If not at least one enabled rule for the current server is satisfied by the log file, it will be deleted and not be imported, but evaluation continues with *Action Rules.*

Exlusion Rules

Exclusion Rules determine which Lotus Sametime chat messages should *not* be imported into the chat log database ("imtchatlog4.nsf"):

- If no exclusion rule(s) exist, the log file is considered eligible for import, and evaluation continues with *Action Rules*

- If one or more enabled exclusion rule(s) exist, and if the log file satisfies at least one enabled exclusion rule, it will be deleted and not be imported, but evaluation continues with *Action Rules*

- If not a single enabled exclusion rule is satisfied by the log file, it will be considered eligible for import, and evaluation continues with *Action Rules*

Action Rules

Action Rules can automatically run pre-defined actions for chats matching one or more selection criteria.

Action Rules are evaluated and executed **even** if a log file is excluded from being imported as a result of Inclusion or Exclusion Rules.

Note: Certain Action Rules have no effect if the log file is not being imported.

- For example, if a log file is excluded from import but matches an Action Rule with an action to "Tag" the chat, the tag will be lost, because the chat log will ultimately not be saved.

- However, an Action Rule with an action to "Send an Email Notification" will still send the chat log as an email, even though it won't be saved in the chat log database
(In this case, the email notification will include a comment indicating that the log wasn't saved).

Rule Server(s)

You need to specify at least one Domino server name for this rule to run on.
By default, the field contains the the current Domino server name.

Note: If you operate multiple Lotus Sametime servers, it is highly recommended to include all server names for consistent rule coverage across all your servers.

Note: Domino group names such as "LocalDomainServers" are currently **not** supported, you need to list all servers individually.

Rule Criteria "Messages contain these phrases "

- **Any of these :**

  At least one listed word must be found and match in the IM chat text to satisfy the criteria

- **All of these :**

  All listed words must be found and match in the IM chat text to satisfy the criteria

  The word **car** also matches **racecar** and **carmaker**

[Wildcards](#) are supported:

  F??bar matches **Foobar** (and **SuperFooBar**)
  F?bar does not match **Foobar**, but matches **Fobar**

  F*bar matches both **Foobar** and **Fobar**

You do NOT need to surround keywords with wildcards (like *car*) to find combinations like "racecar" or "carmaker".
If you list the word **car** , IMegrity implicitely searches for ***car*** anyway.

Note: To find only "car", but not "racecar" or "carmaker", enter the word surrounded with spaces

Note: Only the IM chat content (not the user names) will be searched for matching words .

Rule Criteria "Participants names match "

- **Any of these :**

    At least one listed participant must be involved in the IM to satisfy the criteria

- **All of these :**

    All listed participants must be involved in the IM to satisfy the criteria

You can specify abbreviated names, canonicalized names or simple names

Peyton matches **Peyton McManus /Instant/US** but not **Lisa McManus /Instant/US**
Manus matches **Peyton McManus /Instant/US** and **Lisa McManus /Instant/US**
on matches both **M**on**ique Leyda /Instant/US** and **Peyt**on **McManus/Instant/US**
Lisa McManus does not match **Peyton McManus /Instant/US**

/O=US matches everyone in the /US country certifier name space
CN=Peyton McManus matches **Peyton McManus /Instant/US**

[Wildcards](#) are supported.

Note: You do NOT need to surround keywords with * wildcards
        If you list the name **/Instant** , IMegrity implicitly searches for ***/Instant*** anyway.

Note: Instant IMtegrity first checks matches for abbreviated names, then canonical names
        (ie. Peyton McManus/Instant/US), then for canonicalized names (ie. CN=Peyton
        McManus/O=Instant/C=US)

Note: IMtegrity processes matches in the order they are listed in the rule. This is relevant in
particular when using wildcards.

Rule Criteria "Directory lookup matches "

- **Any participants :**

    At least one chat participant must have a field/value match in his/her person record in the directory to satisfy the criteria

- **All participants :**

    All chat participants must have a field/value match in their person records in the directory lookup to satisfy the criteria

Wildcards are supported for value matches.

Advanced lookup options :

These options directly impact on how the directory lookup is performed. These options directly correspond with Domino's NameLookup API which is used to perform the directory lookups.
By default, the keyword [NoUpdate] is implicitly used by default. Optionally, you can add these additional flags:

- **[NoSearching]**

    Searches only the first Domino Directory containing the "($Users)" view, which is the local names.nsf database on the Domino server.
    This keyword specifies to not retrieve values from the mail server's directory .

- **[Exhaustive]**

    Searches all Domino Directories listed in the NAMES variable in notes .ini or configured via Directory Assistance.
    This keyword returns values from the local names.nsf database on the Domino server as well as the mail server's directory. If the mail server is unavailable, it retrieves values from the current name server. If you are using LDAP, it also retrieves values from the LDAP directory.

- **[TrustedOnly]**

    Searches only those Domino Directories that contain trust information.

Action Rule Email Notification "Custom subject"

If no custom subject is specified, the default subject will be **Match found for rule "<RuleName>"**
For example, if you have an action rule named "Compliance Alert", then the subject line will be:
Match found for rule "Compliance Alert "

To override the default subject, you can specify a custom subject.
The custom subject can also include actual field values from the current log file being processed by the action rule.
(See "Action Rule Keyword Expansion" for details)

Action Rule Email Notification "Custom sender name" and "Custom SMTP from address"

- ## Custom sender name

  If no custom sender name is specified, the default sender name will be **IMtegrity Notification**

  To override the default sender name, you can specify a custom sender name.
  The custom sender name can also include actual field values from the current log file being processed by the action rule.
  (See "Action Rule Keyword Expansion" for details)

- ## Custom SMTP from address

  If no custom SMTP from address is specified, the default from address will be
  do-not-reply@imtegrity .com

  It is highly recommended that you:
    - specify your own custom SMTP address if you send SMTP email notifications
    - use a RFC 822 address which matches the custom sender name above.

  Doing so will ensure a consistent sender address in both the "sender" and "from" SMTP headers.

  For example, if you use **Chat Notifications** as the custom sender name,
  you should use **Chat Notifications <notifications@yourDomain .com>** as the custom SMTP from address.

  Note: If you do not use a 'friendly name' portion in the custom SMTP from address (for example, you only use **notifications@yourDomain .com**)
  and if you do not use a custom sender name, then the SMTP "From" field will be
  IMtegrity Notification <notifications@yourDomain .com>
  (Because no custom sender name is specified, so the default sender name will be used in combination with the custom SMTP from address part).

  Note: Custom SMTP from addresses are only relevant for SMTP emails.
  If your notification emails are sent as NRPC emails to another Notes recipient or mail-in database,
  you do not need to specify a custom SMTP from address.

Action Rule Email Notification "Include fields as SMTP X -Headers"

If this option is enabled, then all fields specified in the "Copy fields from chat log to email" option will be included as custom X-Headers if the notification email is sent via SMTP.

The X-Headers have the following format: **X-IMtegrity -<field name> :<field value (s)>**

For example, if you chose to include the field `ChatGUID` and enable this option, then the following X-Header will be included in SMTP emails :
`X-IMtegrity-ChatGUID: 42d39820-ea24-449a-92e1-0d6dbbde50d7`

Note: Multi-value items include their field values separated by a semicolon .
Note: If no fields are specified in the "Copy fields from chat log to email" option, then this option is ignored (no X-Headers will be included).
Note: X-Headers will only be included if the mail router is configured to send SMTP emails and /or at least one recipient is an internet RFC 822 address.

Action Rule Keyword Expansion

You can include actual field values from the current log file being processed by the action rule.
To include such field values, include the fieldname surrounded by `{% %}, {$ $} or {# #}` in your custom text.

For example, the start of each chat is stored in a field named "ChatStart" in each chat log document.
To include the value of this ChatStart field, use `{%ChatStart%}` in your custom text, like so:
`Chat started at {%ChatStart%}`

- **Multi-value handling:**

  If the field name you specify contains multiple values, they will be concatenated using a comma.
  For example, if you include the field name `{%ListUserNames%}`, the list of all user names will be concatenated like so:
  `CN=John Taylor/O=Instant/C=US, CN=Peyton McManus/O=Instant/C=US`

  As of IMtegrity 4.10, you can use the list subscript operator `[]` to refer to a specific element in a multi-value field.
  A subscript consists of a numeric value in square brackets, like **[0]**. The first element of a list is subscript **[0]**
  A subscript that is less than [0] or that is greater than the number of elements in the list will return an empty string.

  For example, if the multi-value field `ListUserNames` contains the values `CN=John Taylor/O=Instant/C=US` and `CN=Peyton McManus/O=Instant/C=US`
  `{%ListUserNames[0]%}`   will return `"CN=John Taylor/O=Instant/C=US"`
  `{%ListUserNames[1]%}`   will return `"CN=Peyton McManus/O=Instant/C=US"`
  `{%ListUserNames[2]%}`   will return `""`
  `{%ListUserNames[-1]%}`   will return `""`

- **Abbreviated name formatting :**

  To format names in abbreviated mode, use `$` instead of `%`
  For example, if you include the field name `{$ListUserNames$}`, the abbreviated list of all user names will be concatenated like so:
  `John Taylor/Instant/US, Peyton McManus/Instant/US`

- **GMT time zone conversion for date-time fields:**

  To normalize date-time field values into GMT, use `#` instead of `%`
  For example, if you include the field name `{#ChatStart#}`, the date-time value will be converted into GMT and suffixed with "GMT".

Note: You can refer to non-names fields using the `$` instead of the `%` char; the results will be the same.

      The only difference between `$` and `%` is that fields of type "Reader", "Author" or "Names" are abbreviated if `$` is used.

Note: You can refer to non-datetime fields using the `$` instead of the `#` char; the results will be the same.

      The only difference between `$` and `#` is that DateTime fields are normalized from the local timezone to GMT if `#` is used.

Note: If the field name specified does not exist in the chat log document, it will be replaced with an empty string.

For example, if you use `The %Lazy% Dog` in your custom text, the actual text will be just
`The Dog`
because the field "Lazy" does not exist in the chat log documents.

Using wildcards

Wildcard:	Matches:
?	Any one character
#	Any one digit from 0 through 9
*	Any number of characters (zero or more)
[*characters*]	Any one of the *characters* in the list or range specified here
[!*characters*]	Any one character not included in the list or range of *characters* specified here

Matching characters in a list

To match characters in a list, enclose the characters between square brackets with no spaces or other delimiters between characters (unless you want the space character to be part of the list). For example, [1, 2, 3, A, B, C] represents the characters 1, comma, space, 2, 3, A, B, and C (the redundant occurrences of the space and comma are ignored). But [123ABC] represents the characters 1, 2, 3, A, B, and C (with no space or comma character).

Matching characters in a range

To match characters in a range, separate the lower and upper bounds with a hyphen, as in [1-5]. Always specify the range in ascending sort order (A-Z rather than Z-A).
When you specify multiple ranges, you don't have to separate them with anything: for example, [1-5A-C] contains the ranges 1-5 and uppercase A-C.
A range specified in ascending order will produce a valid pattern string.

Matching special characters

To match one of these characters, include it in a *characters* list:

- Hyphen (**-**)
- Question mark (**?**)
- Asterisk (*****)
- Number sign (**#**)
- Open bracket (**[**)

Be sure to place the hyphen at the beginning of the list; if you're using the [!*characters*] format, the hyphen immediately follows the exclamation point, as in [!-123]. The other characters can appear anywhere in the *characters* list. For example, [-?A-Z] matches the hyphen, the question mark, and any uppercase letter from A through Z.

To match one of these characters, place the character anywhere within your wildcard specification except in a *characters* list or range:

- Comma (**,**)
- Close bracket (**]**)
- Exclamation mark (**!**)

For example, !,[1-6] matches the exclamation point, the comma, and any digit from 1 through 6.