

WebSphere® Adapters
Version 7 Release 0 Feature Pack 1

*WebSphere Adapter for Lotus Domino
User Guide
Version 7 Release 0 Feature Pack 1*

IBM

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Note

Before using this information and the product it supports, read the information in "Notices" on page 9.

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This edition applies to version 7, release 0, modification 1 of IBM WebSphere Adapter for Lotus Domino and to all subsequent releases and modifications until otherwise indicated in new editions.

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WebSphere Adapter for Lotus Domino documentation

With WebSphere® Adapter for Lotus® Domino®, you can create integrated processes that include the exchange of information with an Lotus Domino server, without special coding.

What is new in this release

This version includes several new features that enhance the business flexibility, user experience, and performance of the adapter.

Complete information about other supported features is available at the WebSphere Adapter for Lotus Domino information center, http://publib.boulder.ibm.com/infocenter/dmndhelp/v7r0mx/topic/com.ibm.wsadapters.jca.domino.doc/doc/stbp_domn_welcome.html, which is periodically updated with the latest information.

WebSphere Adapter for Lotus Domino supports the following new features:

- New search query types in RetrieveAll outbound operation for retrieving documents from the Domino server.
 - Using single values such as word, number, or date values in the search field.
 - Using multiple values in the search field.
 - Specifying the text keywords in order to search documents that have rich text contents.
 - Specifying search values in multiple fields in a single search query.
- Running inbound extension manager for 32-bit Domino servers on Linux® and Solaris operating systems.

Note: In WebSphere Integration Developer, ensure that you have only one version of the adapter imported into your workspace. You can either have the adapter Fix Pack version 7.0.0.1 or Feature Pack version 7.0.1.0.

In the runtime environment, the application (EAR) should contain only one version of the embedded RAR file, either the adapter Fix Pack version 7.0.0.1 or Feature Pack version 7.0.1.0. The node level deployed adapter should also have only any one version of the adapter.

RetrieveAll operation

The RetrieveAll operation is used to retrieve the documents from the database in the Domino server that matches the values specified in the search fields.

You can specify one or more of the following criteria in the business object sent with the outbound request.

- **Document business data:** When you specify document business data in the business object, the adapter reads all the valid data from the business object. The data are represented as items in the Domino document. The adapter searches the database for documents that match these valid data. All the matching documents that can be represented using the business object are returned back as response to the calling component.

- **ParentDocumentUNID:** When you specify a valid ParentDocumentUNID in the business object, the adapter retrieves all the child documents to this parent document. All the matching documents which can be represented using the business object are returned back as response to the calling component.
- **No data set:** When you do not provide a data set in the business object, the adapter retrieves all the documents that can be represented using the business object. The adapter matches the fields in the documents with the stored values in the business object.

The retrieved documents are populated in a container business object and sent back to the calling component. The container business object has the following structure:

```
<DatabaseName><FormName>Container --> <DatabaseName><FormName> []
```

Search criteria for RetrieveAll operation

The RetrieveAll operation supports searching of documents based on the following types of search criteria that you can specify during the run time.

- **Single values:** You can specify a single value in the search criteria. For example, the adapter can retrieve documents based on the single word, number, or date specified in the search field. You can find more information about the search values that can be specified in the Number and Date type fields in the following points.
 - **Numbers:** You can specify a double digit number or an integer value as the search criteria in the Numbers type field. You can use this search function to retrieve documents where a Number type field equals to a certain value. For example, to retrieve documents where employee salary equals to "1234.56", enter the value "1234.56" in the EmployeeSalary field.
 - **Date:** You can specify a date as the search criteria in any Date type field. For example, to retrieve documents where birthday equals to "1982/11/22", enter the value "1982/11/22" in the Birthday field.

Note: The Date format depends on the client that starts the Lotus Domino adapter. The client can be JavaServer Pages (JSP), a Java™ program, or a WebSphere Integration Developer test component.

- **Multiple values:** You can specify multiple values as the search criteria for any Lotus Domino field types. This feature can be used to find the documents with the specified values at run time. For example, you can configure the adapter to retrieve documents that match any one of the words from the multiple words specified in the search criteria.
- **Text search for rich text contents:** You can specify the texts in order to search documents that have rich text contents at run time. The adapter conducts a search by using the texts specified in the RichText field of a document during the run time. During the RetrieveAll operation, all matching documents are retrieved by the adapter. The adapter supports both single and multiple text content searches for the RichText field. You can also provide wildcard suffixes, such as "*" for searching documents in the RichText field.

Search using multiple fields

You can specify search values in more than one field. In this configuration, the adapter uses the logical AND operator to group the search strings. For instance,

you can specify a single value, multiple values, RichText, or ParentDocumentUNID in different fields. The adapter returns only that search content that matches all the specified criteria.

Note:

When there is a processing error, the RetrieveAll operation might throw the InvalidParentDocumentFault or the MatchesExceededLimitFault fault. The InvalidParentDocumentFault fault can occur when an invalid ParentDocumentUNID is specified in the interaction specification. The MatchesExceededLimitFault fault can occur when the matching documents exceed the specified MaxRecords value. For more information about these business faults, see http://publib.boulder.ibm.com/infocenter/dmndhelp/v7r0mx/topic/com.ibm.wsadapters.jca.domino.doc/env/doc/rbp_domn_faults.html.

Support for monitoring operations on the Domino server

When you work with a document in the Domino database, you can configure the WebSphere Adapter for Lotus Domino (WALD) inbound extension manager to monitor the corresponding events on the Domino server. The adapter supports the monitoring of create, update, and delete events in the event directory of the Domino database. When the inbound extension manager is deployed, the adapter is able to monitor the events in the Domino database. You can further view the generated events and verify the deployment of the inbound extension manager.

Inbound extension manager

During inbound processing, the WebSphere Adapter for Lotus Domino (WALD) inbound extension manager monitors the operations on the Domino server. Whenever you create, update, or delete a document from the Domino database, the inbound extension manager generates corresponding events containing the operation information.

The WALD inbound extension manager is a dynamic linked library that monitors the create, update, and delete events on the Domino server. The extension manager is deployed on the Domino server. You configure the extension manager according to the operating system on which the Domino server is run. You require the waldinbound.nsf (event table and configuration table database) and the operating system-specific library files in the Domino database to configure the extension manager. The dynamic linked library file monitors the create, update, and delete events in the event directory.

Table 1. Required library files for different operating systems

File name	Operating system
waldinbound.dll	Windows®
libwaldinbound_r.a	AIX®
libwaldinbound.so	Linux
libwaldinbound.so	Solaris

Operating systems supported by WALD inbound extension manager

The extension manager libraries required to support 32-bit Domino server on specific operating systems are shown in Table 2.

Table 2. WALD inbound extension manager libraries for 32-bit Domino on supported operating systems.

Domino server	Library directory after installation	Library file name
32-bit Domino on Microsoft® Windows	dependencies/win32	waldinbound.dll
32-bit Domino on IBM® AIX	dependencies/aix32	libwaldinbound_r.a
32-bit Domino on Novell SUSE Linux Enterprise Server	dependencies/suse32	libwaldinbound.so
32-bit Domino on Red Hat Enterprise Linux	dependencies/redhat32	libwaldinbound.so
32-bit Domino on Solaris Operating System	dependencies/solaris32	libwaldinbound.so

Note: The current version of WALD inbound extension manager does not support the 64-bit Domino server.

For detailed information about the deployment and configuration information of the WALD inbound extension manager, see the topic “Deployment and configuration of the WALD inbound extension manager.” After you configure the inbound extension manager, see the topic “View and verify the deployment of the WALD inbound extension manager” on page 6 to verify the extension manager configuration.

Deployment and configuration of the WALD inbound extension manager

The adapter provides for deployment and configuration of the WALD inbound extension manager on the Domino server. When you deploy the extension manager, the adapter is able to monitor the create, update, and delete events in the Domino database.

Deployment of the inbound extension manager

You can deploy the inbound extension manager on Windows, AIX, Linux, and Solaris systems. After you deploy the required files, you can monitor the events in the specified databases in the Domino server.

The following steps describe how to deploy the required files for extension manager on the different operating systems.

1. Copy the required library file into the Domino server installation directory. See Table 1 to know the operating system-specific library files.

Table 3. Required library files

Library files	Supported operating systems
waldinbound.dll	Windows
libwaldinbound_r.a	AIX
libwaldinbound.so	Linux Solaris

2. Edit the notes.ini file in your Domino directory and add the required line as given in Table 2.

Table 4. Add the extension manager line as per the operating system

Extension manager lines	Supported operating systems
EXTMGR_ADDINS=waldinbound	Windows
EXTMGR_ADDINS=libwaldinbound_r.a	AIX
EXTMGR_ADDINS=libwaldinbound.so	Linux Solaris

3. Copy the waldinbound.nsf file into your Domino data directory.
4. Restart the Domino server.

Note: You must restart the Domino server each time you update these files:

- waldinbound.dll
 - libwaldinbound_r.a
 - libwaldinbound.so
 - waldinbound.nsf
5. Click **ConfigurationView** in the left pane to edit the databases that are to be monitored.
 6. Click **EventView** in the left pane to see the generated events.

Configuration of the inbound extension manager

You can configure the inbound extension manger by setting up different configuration parameters. The steps here describe the process of setting up the configuration parameters.

1. Open the waldinbound.nsf database in the Domino server through Lotus Notes®.
2. Click **ConfigurationView**.
3. Click **Edit Document** to edit the existing configuration of the WALD inbound extension manager. The parameters available for configuration are described in Table 3.

Table 5. Configuration parameters for WALD inbound extension manager

Configuration parameter	Description
Connector ID	The connector ID item that is used as the value of Connector ID field of the generated event.
Database Paths	The database paths that are monitored by the WALD inbound extension manager. The semicolon; is used as separator between different database paths. You can use either comma or semicolon as a separator to add another database.

Table 5. Configuration parameters for WALD inbound extension manager (continued)

Configuration parameter	Description
Event Types	<p>The event types that are monitored by the WALD inbound extension manager. The event types can be:</p> <ul style="list-style-type: none"> • Create • Update • Delete <p>You can configure the event monitoring by selecting the required events types.</p>
Log Level	<p>The type of information that is logged during the WALD inbound processing. The log level can be:</p> <ul style="list-style-type: none"> • NONE • ERROR • INFO • DEBUG

4. Save the document. The configuration settings take effect immediately after you save the configuration document.

View and verify the deployment of the WALD inbound extension manager

After you have deployed the inbound extension manager, you can view and verify its deployment to check if the extension manager is correctly configured to monitor the events in the Domino server.

View the events

Complete the following steps to view and browse the generated events of the waldinbound.nsf database.

1. Open the application (database) waldinbound.nsf in the Domino server through Lotus Notes.
2. Click **EventView** in the left pane to see the list of all the generated events before the events are fetched by a run time inbound application using the WebSphere Adapter for Lotus Domino.

Verify the deployment

You can verify the deployment of the extension manager after deploying the dependency files (waldinbound.dll, libwaldinbound_r.a, or libwaldinbound.so) and waldinbound.nsf files on the Domino server. To verify the deployment, follow these steps:

1. Open the application (database) waldinbound.nsf in the Domino server through Lotus Notes.
2. Click **ConfigurationView** in the left pane.

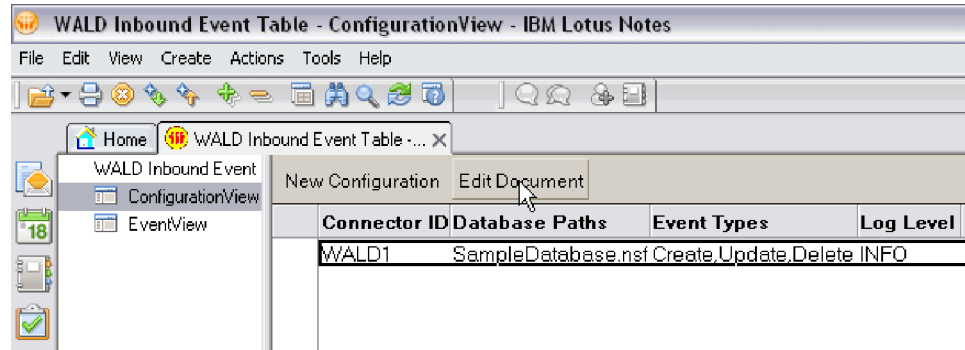


Figure 1. Editing the WALD inbound event table logging configuration

3. Click **Edit Document** to edit the configuration document.
4. Change the **Log Level** to INFO or DEBUG level.
5. Check the log messages by reading the **Configuration Profile** printed on the Domino server console.

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