



# ODBC Connector

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## Release Notes

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# New in this Release

This section lists the enhancements to ODBC Connector version 11.6.0.

- The connector can generate documents without a template, so you no longer have to create a template or set the `Template` configuration parameter in your fetch tasks. Without a template, the connector creates documents where the names of metadata fields match the names of the columns in the database. A template is still required if you want to run queries against one or more sub-tables, or customize the documents that are created.
- The configuration parameter `DisableProgressReporting` has been added. To generate a progress report the connector must query the database, to find information such as the number of rows it has to process. If you prefer not to send these queries, you can now disable progress reporting.
- The connector supports progress reporting for the `collect` fetch action.
- The connector can index information directly into IDOL Server, a Vertica Database, or a MetaStore.
- Asynchronous action queues can be stored in an external database hosted on a database server, so that several installations of the component can share action queues.
- The `DeleteQueuedRequestsWhenServerStarts` and `DeleteProcessingRequestsWhenServerStarts` configuration parameters have been added. These parameters specify whether to remove queued and processing requests from asynchronous action queues when the server starts.
- The server requires less time to start when it is started for the first time and asynchronous action queues are stored in internal datastores.
- The connector includes Lua 5.3.0.
- The connector supports the `LuaDebug` action, which provides features for debugging your Lua scripts. The `LuaDebug` action can display the content of a script, and set and remove breakpoints in a script. When a script is paused at a breakpoint, it can return the values of the local variables, return the current call stack, and either step over lines of code or resume running the script. The connector also includes an example XSL template that transforms the output of the `LuaDebug` action. The template is named `LuaDebug` and can be found in the `acitemplates` folder.
- Asynchronous action queues can be stored in memory. This can improve performance in some cases.
- The connector supports the configuration parameter `IngestSourceConnectorFields`. If you set this to `TRUE` the connector adds fields to each document that identify the connector and fetch action that retrieved the document.
- The response to `action=queueInfo&queueName=fetch&queueAction=getStatus` indicates whether a fetch task has been paused by performance monitoring.
- The connector supports the actions `PauseSchedules` and `ResumeSchedules`, which pause and resume the starting of scheduled tasks.
- The `QueueInfo` action (`&QueueAction=pause`) can pause and resume single actions instead of an entire action queue. You can use this feature to pause specific fetch tasks.
- Field standardization supports new rules for standardizing documents. For example, you can delete fields that you do not need by using a regular expression to match field names.

- The connector provides additional statistics about the work it has completed, for example the number and frequency of ingest-adds, ingest-updates, and ingest-deletes. You can view these statistics through the `GetStatistics` service action. The connector also includes an XSL template that you can use to transform the output of the `GetStatistics` action and visualize the statistics.
- The `LogTypeCSVs` configuration parameter supports additional options for customizing logging. You can now create a separate log file for a fetch task or fetch action.
- The connector generates events to alert you when an asynchronous action queue becomes full, becomes empty, and when the queue size passes certain thresholds. You can handle these events with any of the existing event handlers.
- The connector can assign a priority to documents retrieved by a fetch task so that when they are ingested they are processed before documents retrieved by other tasks or other connectors. To use this feature set the new configuration parameter `IngestPriority`.
- The connector supports the following Lua functions:
  - New functions and classes for parsing and manipulating JSON. The new functions are `parse_json`, `parse_json_array`, and `parse_json_object`. The new classes are `LuaJsonArray`, `LuaJsonObject`, and `LuaJsonValue`.
  - Functions related to sending HTTP requests and processing responses. These functions are provided by the `LuaHttpRequest` and `LuaHttpResponse` classes.
  - `delete_path`, which deletes an empty directory.
  - `deleteFieldByPath`, which you can call on a `LuaDocument` or `LuaField` object to delete fields or sub-fields that match a specified path.
  - `extract_date`, which searches a string for a date and returns the date.
  - `get_log_service`, and the new class `LuaLogService`. You can use these when you want to write log messages to a custom log file (instead of the standard ACI server log files).
  - `getFieldsByRegex`, which you can call on a `LuaDocument` or `LuaField` object to get fields or sub-fields where the name or path of the field or sub-field matches a regular expression.
  - `insertJson`, which you can call on a `LuaDocument` or `LuaField` object to add metadata from a `LuaJsonArray`, `LuaJsonObject`, or a JSON string to the document.
  - `LuaConfig:new`, which is the constructor that creates a new `LuaConfig` object.
  - `LuaDocument:new`, which is the constructor that creates a new `LuaDocument` object.
  - `removeSection`, which is available on `LuaDocument` objects and removes a specified document section.
  - `parse_document_csv`, `parse_document_idx`, and `parse_document_xml`. These functions parse CSV, IDX, or XML files into documents and call a function on each document. `parse_document_idx` and `parse_document_xml` can also parse a string or file that contains a single document and return a `LuaDocument` object.
  - `script_path`, which returns the path and file name of the script that is running.
- The `SystemLimits` action has been added. This action returns information about system limits, such as the maximum number of open file handles, and the maximum map count (on Linux), which can affect the server.
- The server now logs the `ActionID` that it generates for an action that was sent without the `ActionID` parameter.

- You can now merge an external configuration file into the ODBC Connector configuration file. You can merge in a whole external file, a section, or a single parameter.
- The `ShowPermissions` action now shows the rules that define whether a particular origin IP has a particular type of permission. This information is returned only if you send the `ShowPermissions` action from a client that belongs to the admin authorization role.
- The `SSLMethod` configuration parameter now supports `TLSv1.2`.
- The `SSLCipherSuite` configuration parameter has been added. You can use this parameter to set an explicit list of ciphers to allow, or to disallow specific ciphers.
- The `SSLMethod` configuration parameter option `SSLV23` has been renamed to `Negotiate`. This option means that the server uses the highest available protocol in its SSL/TLS connections. The `SSLV23` name is still available, but might be deprecated in future.
- You can now configure action authorization more flexibly. The `[AuthorizationRoles]` configuration section has been added. You can add subsections to create roles, which can use a combination of existing roles (equivalent to the existing `AdminClients`, `QueryClients`, and so on), or a specific set of actions. For each role, you can specify the client IPs and hosts, SSL identities, and GSS principals to use to identify users that have particular permissions to run actions.

If you want to use only SSL and GSS authorization, you can disable the client settings by setting the appropriate client configuration parameters to `""`. For example, `AdminClients=""` disables client authorization for administrative actions, and ensures that users must meet the SSL or GSS requirements.

- You can now set `SSLCertificate` to be a chain certificate in PEM format (consisting of the end-entity certificate, any intermediate certificates, and ending with the root CA certificate). This option allows a complete certificate to be returned to the connected peer.
- You can now set `SSLCheckCertificate` to `False` even when `SSLCACertificate` or `SSLCACertificatePath` are set. This allows the component to fill in any chain required for the `SSLCertificate` by using the certificates that you specify in `SSLCACertificate` and `SSLCACertificatePath`, without requiring a certificate from the connected peer.
- The `GSSAPILibrary` configuration parameter has been added to the `[Paths]` section. You can set this parameter to the path to the GSSAPI shared library or DLL that the application uses. Depending on your system configuration, ODBC Connector attempts to detect the appropriate library to use. However, if you use Kerberos or GSSAPI security in your setup, Micro Focus recommends that you set an explicit value for this parameter.
- All ACI server ports now support the `Expect: 100-continue` HTTP header. Previously, third-party client applications that used this header (for example, using the `cURL` utility with the `-F` option to POST form data) could experience increased latency when communicating with ODBC Connector.
- You can now configure your authorization role `SSLIdentities` to identify clients by using an email address in the certificate `subjectAltName`. You can use an optional tag for each SSL identity to specify whether it is a **dns** or **email** type identity. If there is no tag, the server treats it as **dns** type. For example:

```
SSLIdentities=email:user@example.com,dns:admin.example.com,webapp.example.com
```

- When using GSS security, you can now configure the service to allow clients to authenticate to any service principal in the service's keytab, rather than requiring a single principal. You use this option by setting the `GSSServiceName` configuration parameter to an asterisk (\*).

## Resolved Issues

This section lists the resolved issues in ODBC Connector version 11.6.0.

- The Lua functions `send_aci_action` and `send_aci_command` ignored SSL parameters.
- In some circumstances, log messages related to ingestion could be repeated excessively frequently.
- The `ShowPermissions` action did not return details for `ProxyClients`, `ServiceStatusClients`, and `ServiceControlClients` if these values were not explicitly set in the configuration file.
- The connector would not retrieve a license from a License Server with SSL enabled.
- The `GetLicenseInfo` action did not return the correct value for the `<autn:expirydays>` tag.
- The `GetVersion` action could incorrectly report the operating system on Microsoft Windows 10 and Microsoft Windows Server 2016.
- License related messages in the event log would appear from a different source to other messages.
- The `LogSysLog` logging configuration option did not output event logs.



# Supported Operating System Platforms

The following operating system platforms are supported by ODBC Connector 11.6.0.

- Windows x86 64
- Linux x86 64
- Solaris x86 64
- Solaris SPARC 64

The most fully tested versions of these platforms are:

## **Windows**

- Windows Server 2012 x86 64
- Windows 7 SP1 x86 64
- Windows Server 2008 R2 x86 64
- Windows Server 2008 SP2 x86 64

## **Linux**

For Linux, the minimum recommended versions of particular distributions are:

- Red Hat Enterprise Linux (RHEL) 6
- CentOS 6
- SuSE Linux Enterprise Server (SLES) 10
- Ubuntu 14.04
- Debian 7

## **Solaris**

- Solaris 10
- Solaris 11

# Notes

- The configuration parameters `IdolOnDemandApiKey`, `IdolOnDemandDuplicateMode`, `IdolOnDemandIndexName`, and `IdolOnDemandMaxRetries` have been renamed to `HavenOnDemandApiKey`, `HavenOnDemandDuplicateMode`, `HavenOnDemandIndexName`, and `HavenOnDemandMaxRetries`.
- The Lua function `get_log(config, logstream)` has been deprecated. Micro Focus recommends that you use the new function `get_log(log_type)` instead.
- The Lua function `string_uint_less` has been removed.
- The following configuration parameters, for action authorization by client IP address, have been deprecated:
  - `[Server] AdminClients`
  - `[Server] QueryClients`
  - `[Service] ServiceControlClients`
  - `[Service] ServiceStatusClients`

You can now use the `[AuthorizationRoles]` configuration section to set up authorization for your servers more flexibly. These configuration parameters are still available for existing implementations, but they might be incompatible with new functionality. The parameters might be deleted in future.

# Documentation

The following documentation was updated for this release.

- *ODBC Connector Administration Guide*
- *ODBC Connector Reference*