

DataSync Agent configuration

Gold

The file that controls the configuration settings for Perspectium DataSync Agents is the **agent.xml** file. This file is automatically created within the Agent's **bin** directory upon installation. To make changes to the configuration settings for your DataSync Agent, open this **agent.xml** file in a text editing application and modify the directives described in the sections below.

NOTE: The directives described below are only the **essential** configurations that must be set for your DataSync Agent. For additional DataSync Agent configuration settings, see the **Similar topics** list below or browse the topics under [DataSync Agent](#).

Configuration

The Perspectium SQL Subscriber Handler uses the newest version of each of the associated JDBC driver. In a nutshell, the Perspectium SQL subscriber is configured to specify the following:

1. The **IP address** or fully qualified domain name of the Database Server
2. The **Port** which the database server is listening on
3. A **user** which has been configured to access and perform the required database operations
4. The **password** associated with the configured database user
5. The **name** of the database which will contain the replicated tables
6. Optionally, the **SID** if it's an Oracle database and a SID is required

Message batching directives (optional)

To improve the performance for your DataSync Agent, you can optionally add some batching directives that specify what constitutes a batch of messages that will trigger message processing.

To enable these functions, nest one or many of the following directives within the **agent.xml**'s **<agent>** directive:

Directive	Description
<max_reads_per_connect>	Maximum number of messages to consumer per connection interval
<max_writes_per_connect>	Maximum number of messages to produce per connection interval
<polling_interval>	Interval for how often the agent pulls from the queue (seconds) NOTE: The value needs to be 5 seconds or greater. If the value is set to less than 5 seconds, it will default to 5 seconds.
<skip_message_set_processing/>	Self-closing tag that disables Message Set posting for data shared from ServiceNow

[Click here to see where these directives are located in the agent.xml](#)

Share & subscribe

DataSync Agents can perform two main functions, **share** and **subscribe**. To enable these functions, nest one or many of the following directives within the **agent.xml**'s **<agent>** directive:

Directive	Description
<share>	An Agent configured with <share> functionality (also known as a producer) monitors static data sources and places messages from those sources into queues in the Perspectium Mesh.
<subscribe>	An Agent configured with <subscribe> functionality (also known as a consumer) monitors queues in the Perspectium Mesh and processes any messages in those queues, typically by routing those messages to a static data source. blocked URL NOTE: This is the more common use case for the DataSync Agent.

[Click here to see where these directives are located in the agent.xml](#)

Task & handler

The **<task>** directive defines a specific **<share>** or **<subscribe>** function that your DataSync Agent should perform. Multiple **<task>** directives can be nested within the **<share>** and **<subscribe>** directives, and individual configurations can be defined for each **<task>** by nesting further configuration directives (described in the following sections) within each **<task>**.

Directive	Description
<task>	Task that handles either sharing or subscribing. You can configure separate settings by defining directives within each <task> directive. You can also specify an instances attribute here and give it a value of 4 (default) so that 4 instances of your <share> or <subscribe> task can run concurrently, thus improving throughput for data processing. blocked URL NOTE: You do not need to enter a value within the <task> directive. Nest all configuration directives noted below within your each of your <task> directives.
<task_name>	Name for your <task> blocked URL NOTE: Only alphanumeric characters, numbers, and underscores are permitted as values for <task_name> .
<handler>	Name of the Java handler class. In most cases, the value for this directive will be com.perspectium.replicator.sql.SQLSubscriber .

[Click here to see where these directives are located in the agent.xml](#)

Task Configurations

Under the **<task>** directive are configurations related to the task your DataSync Agent is performing such as saving data to a database. These different configurations are as follows:

Message, instance, and schema connection

The **<message_connection>** and **<instance_connection>** directives define how your DataSync Agent connects to the Perspectium Mesh and ServiceNow instance, respectively. For your DataSync Agent to connect to your Salesforce organization, you will need to include the **<message_connection>** and **<schema_connection>** directives.

Directive	Required attributes	Description				
<message_connection>	user = Perspectium Mesh username	Perspectium Mesh URL				
	password = Perspectium Mesh password blocked URL NOTE: You can optionally base64 encode this password, and include the base64 encoded string after encrypted: for this attribute's value.	e.g., https://mymesh.perspectium.net				
	queue = Perspectium Mesh queue name	NOTE: Depending on which Integration Mesh you are connecting to, https or amqps may be the only connection available. Contact Perspectium Support for more information.				
	The use_basic_consume attribute will depend on the type of messaging protocol you will be using. e.g., https://mymesh.perspectium.net <table><tr><th>Protocol</th><th>Value</th></tr><tr><td>HTTPS</td><td>use_basic_consume = false</td></tr><tr><td>AMQPS</td><td>use_basic_consume = true</td></tr></table>		Protocol	Value	HTTPS	use_basic_consume = false
Protocol	Value					
HTTPS	use_basic_consume = false					
AMQPS	use_basic_consume = true					
<instance_connection>	user = ServiceNow instance username NOTE: This ServiceNow username must have the perspectium role assigned in order to access ServiceNow table schemas.	ServiceNow instance URL				
	password = ServiceNow instance password blocked URL NOTE: You can optionally encrypt this password by entering encrypt: followed by the password for this attribute's value. For example, "encrypt:password1". This will encrypt the password the first time the Agent is run and change the attribute's value to "encrypted:<encrypted_password>" to indicate as such.	e.g., https://myinstance.service-now.com				
<schema_connection>	user = Salesforce org username	Salesforce org URL				

password = Salesforce org password blocked URL NOTE: You can optionally encrypt this password by entering encrypt: followed by the password for this attribute's value. For example, "encrypt:password1". This will encrypt the password the first time the Agent is run and change the attribute's value to "encrypted: <encrypted_password>" to indicate as such.	e.g., https://login.salesforce.com/services/oauth2/token
client_id = Salesforce Consumer Key for the Perspectium Replicator app	
client_secret = Salesforce Consumer Secret for the Perspectium Replicator app	

Encryption key & decryption key

The **<encryption_key>** directive is used with **<share>** tasks to encrypt data that is being shared from a static data source to an application. The **<decryption_key>** directive is used with **<subscribe>** tasks to decrypt data that was encrypted by a sharing application. The value for the **<encryption_key>** directive should match the subscribing application's decryption key, and the value for the **<decryption_key>** direction should match the sharing application's encryption key.

Directive	Description
<encryption_key>	Encryption key used to encrypt data being shared from a static data source to an application
<decryption_key>	Decryption key used to decrypt data being shared from an application

Database

There are several directives related to your static data source, or database, that the DataSync Agent connects to. For more information on how to configure your database information in the **agent.xml** configuration file, see [Perspectium SQL Replicator Agent Configuration Guide](#).

Directive	Description																				
<database_type>	<p>Type of database you are syncing your data to. Supported databases and associated values for the <database_type>:</p> <table> <tr> <th>Supported database</th><th>Value to enter for <database_type></th></tr> <tr> <td>Oracle</td><td>oracle</td></tr> <tr> <td>MS SQL Server</td><td>sqlserver</td></tr> <tr> <td>MySQL</td><td>mysql</td></tr> <tr> <td>Snowflake</td><td>snowflake</td></tr> <tr> <td>SAP Hana</td><td>hana</td></tr> <tr> <td>Amazon Redshift</td><td>redshift</td></tr> <tr> <td>IBM DB2</td><td>db2</td></tr> <tr> <td>HP Vertica</td><td>vertica</td></tr> <tr> <td>PostgreSQL</td><td>postgres</td></tr> </table>	Supported database	Value to enter for <database_type>	Oracle	oracle	MS SQL Server	sqlserver	MySQL	mysql	Snowflake	snowflake	SAP Hana	hana	Amazon Redshift	redshift	IBM DB2	db2	HP Vertica	vertica	PostgreSQL	postgres
Supported database	Value to enter for <database_type>																				
Oracle	oracle																				
MS SQL Server	sqlserver																				
MySQL	mysql																				
Snowflake	snowflake																				
SAP Hana	hana																				
Amazon Redshift	redshift																				
IBM DB2	db2																				
HP Vertica	vertica																				
PostgreSQL	postgres																				
<database_server>	URL for your database. If your database is installed on your local machine, set this value to localhost .																				
<database_port>	Port number for your database																				
<database_user>	Username used to connect to your database																				
<database_password>	Password used to connect to your database																				
<database_parms>	<p>(Optional) Can be used to pass additional parameters to the database server during establishment of the connection</p> <p>For MySQL, this directive will have a default value of autoReconnect=true & characterEncoding=UTF-8 & useSSL=false.</p> <p>NOTE: It is recommended that spaces are added between each parameter. Failing to do this may cause the agent to not connect to MySQL properly.</p>																				
<database>	Name of your database																				
<database_column_max_size>	Maximum size of an object that can appear in your database's columns																				
<database_static_column_size>	<p>Prevents altering the size of an object in your database's columns</p> <p>WARNING: This directive may cause data to be truncated</p>																				
<database_sid>	<p>SID used for your Oracle database</p> <p>NOTE: This directive is required for DataSync integrations to an Oracle database only.</p>																				

<byte_padding>	<p>(Optional) Can be used for multi-byte characters by multiplying the size of the columns. Adding an integer to this directive will create columns X times larger.</p> <p>NOTE:</p> <ul style="list-style-type: none"> This directive defaults to 3. Make sure your database is using the correct character set.
<column_sort>	<p>Sorts your database's columns in a specified order.</p> <p>NOTE:</p> <ul style="list-style-type: none"> Currently, this directive only supports alphabetical order. Value should be set to alpha. Temporal columns will always be first.
<sql_retries>	<p>(Optional) Can be used to configure the number of times the DataSync agent will retry after a SQLException.</p> <p>NOTE: This directive defaults to 3.</p>
<sql_retries_delay>	<p>(Optional) Can be used to configure how many milliseconds the DataSync agent will wait between retries.</p> <p>NOTE: This directive defaults to 250.</p>

Data Guarantee

These directives configure how the DataSync agent works with [Data Guarantee](#).

Directive	Description
<receipt_send_interval>	<p>(Optional) Indicates the number of seconds in which the Agent will regularly send receipts back to the sharing/publishing instance.</p> <p>NOTE: This directive defaults to 1800.</p>
<ack_batch_size>	<p>(Optional) Can be used to specify the maximum size of acknowledged receipt messages per batch.</p> <p>blocked URL NOTE: This directive defaults to 1000</p>
<error_batch_size>	<p>(Optional) Can be used to specify the maximum size of error receipt messages per batch.</p> <p>blocked URL NOTE: This directive defaults to 1000</p>
<skip_report/>	<p>(Optional) Adding the self-closing skip_report tag stops the Agent from sending message receipts back to the ServiceNow instance you are sharing from. This option will also turn off the Agent performance reporting as well.</p>

Example basic agent.xml configuration

The example below shows some of the basic configurations that must be set for a Perspective DataSync Agent. For additional DataSync Agent configuration settings, see the **Similar topics** list below or browse the topics under [DataSync Agent](#).

```
<?xml version="1.0" encoding="ISO-8859-1" standalone="no"?>
<config>
  <agent>
    <max_reads_per_connect>4000</max_reads_per_connect>
    <polling_interval>5</polling_interval>
    <skip_message_set_processing/>
    <share/>
    <subscribe>
      <task instances="4">
        <task_name>datasyncforservicenow_to_mysql_subscribe</task_name>
        <message_connection password="encrypted:v10tU71yu8N/EFIJH85SSBtaIt7qEEfvqiqrt9VZyYE=" queue="psp.out.replicator.testqueue" user="admin" use_basic_consume="false">https://testperspectium.net</message_connection>
        <instance_connection password="encrypted:v10tU71yu8N/EFIJH85SSPN9aF0P5/YViVwPEVFcGW4=" user="test.user">https://myinstance.service-now.com</instance_connection>
        <handler>com.perspectium.replicator.sql.SQLSubscriber</handler>
        <decryption_key>The cow jumped over the moon</decryption_key>
        <database_type>mysql</database_type>
        <database_server>localhost</database_server>
        <database_port>3306</database_port>
        <database_user>root</database_user>
        <database_password>encrypted:v10tU71yu8N/EFIJH85SSMoilKLTeJHQRnZPJ7c5tFU=</database_password>
        <database_parms>autoReconnect=true & characterEncoding=UTF-8 & useSSL=false</database_parms>
        <database_column_max_size>251</database_column_max_size>
        <database_static_column_size/>
        <database>psp_repl</database>
        <byte_padding>4</byte_padding>
        <column_sort>alpha</column_sort>
      </task>
    </subscribe>
  </agent>
</config>
```

Similar topics

- [Set up DataSync Agent to share to HP Vertica](#)
- [Set up DataSync Agent to share to MySQL](#)
- [Set up DataSync Agent to share to PostgreSQL](#)
- [Set up DataSync Agent to share to Snowflake](#)
- [Set up DataSync Agent to share to IBM DB2](#)

Contact Perspectium Support



US: 1 888 620 8880

UK: 44 208 068 5953

support@perspectium.com