

Set up temporal data

Fluorine+

To compile timestamped "snapshots" of your ServiceNow data, you can configure your DataSync Agent with the **<temporal>** directive. **<temporal>** will allow you to indicate times when your record's data is/was **valid from** and when the data is/was **valid to**.

NOTE: To set up a temporal data, the table you are syncing data to must not contain any records (i.e., Temporal data cannot be captured for tables that are already being synced to a database with a DataSync Agent).



WARNING! If you have already configured an integration with a DataSync Agent and have been saving records in a database, but you would now like to **enable** or **disable** temporal replication, update the value within the **agent.xml**'s **<database>** directive to a new database. Otherwise records will not be processed properly.

Prerequisites

⚠ First, you will need to install a DataSync Agent and [create a ServiceNow dynamic share](#) with an **update** trigger or [create a ServiceNow bulk share](#).

Procedure

To set up a temporal data in a local database, follow these steps:

1

Access your agent.xml configuration file

Navigate to the directory where you saved your **agent.xml** file when installing your DataSync Agent.

2

Add the <temporal> directive

Open your **agent.xml** file in a text editing application. To use the default configurations for syncing temporal data (columns will be named **psp_valid_from** and **psp_valid_to** and the maximum **psp_valid_to** value will be **9999-01-01 01:01:01**), add the **<temporal>** self-closing tag anywhere within the **<task>** tag. An example of this **agent.xml** is shown below. Otherwise, to create custom configurations for your temporal database, see **Step #3**.

Example agent.xml for default temporal data configurations:

```
<?xml version="1.0" encoding="ISO-8859-1" standalone="no"?>
<config>
  <agent>
    <share/>
    <subscribe>
      <task instances="4">
        <task_name>test_subscribe</task_name>
        <message_connection password="encrypted:v10tU71yu8N
/EFIJH85SSBtaIt7qEEfvqiqft9VZyYE=" queue="psp.out.replicator.test" use_basic_consume="true"
user="admin">amqps://test.perspectium.net</message_connection>
        <instance_connection password="encrypted:v10tU71yu8N/EFIJH85SSPN9aF0P5
/YViVwPEVFcGW4=" user="admin">https://mycompany.service-now.com</instance_connection>
        <handler>com.perspectium.replicator.sql.SQLSubscriber</handler>
        <decryption_key>This is my decryption key for testing</decryption_key>
        <database_type>mysql</database_type>
        <database_server>localhost</database_server>
        <database_port>3306</database_port>
        <database_user>testuser</database_user>
        <database_password>testpassword</database_password>
        <database_parms>characterEncoding=UTF-8 & useSSL=false</database_parms>
        <database_column_max_size>251</database_column_max_size>
        <database>psp_repl</database>
        <temporal>
          <columns>
            <column column_type="93" column_size="32" type="from">psp_from<
/column>
            <column column_type="93" column_size="32" type="to">psp_to</column>
          </columns>
          <max_datetime>2030-12-31 00:00:00</max_datetime>
        </temporal>
      </task>
    </subscribe>
    <max_reads_per_connect>4000</max_reads_per_connect>
    <polling_interval>5</polling_interval>
    <skip_message_set_processing/>
  </agent>
</config>
```

3

Create custom configurations (optional)

- To customize your temporal database table's maximum date & time stamp in the **psp_valid_to** column, add the directive shown below within the **<temporal>** tag, replacing the **red text** with any value you would like to assign for custom configuration.

<max_datetime>2030-12-31 00:00:00</max_datetime>

NOTE: If records already exist in your temporal database table and then the **<maxdatetime>** value is changed, any records that were previously timestamped in the **psp_valid_to** column will not be updated to reflect the newly entered **<max_datetime>** value.

- You can customize the column names for the **psp_valid_from** and **psp_valid_to** columns by modifying the values within the **<column type="from">** and **<column type="to">** directives, respectively.
- As of **Fluorine Plus Patch 9 (version 4.8.9)**, you can choose to skip inserting duplicate entries by adding directive **<skip_duplicates/>** inside the **<temporal>** directive. With the **<skip_duplicates/>**, the Agent will check if the new record has the same updated (sys_updated_on) datetime as the latest record and if so, skip inserting that record into the table. In **Fluorine Plus Patch 13 (version 4.8.13)**, you can add the attribute **check_all_fields** in the **<skip_duplicates/>** directive to check the fields values if the updated time is the same from the previous share.

```
<skip_duplicates check_all_fields="true"/>
```

blocked URL NOTE: This may affect the Agent's performance as it checks with the database and does a comparison every time a message comes in.

4

Save your agent.xml file

Save the changes you made to your **agent.xml** file and close the file.

5

Confirm temporal data sharing

Log into the database that your DataSync Agent is sharing data to, and confirm that **psp_valid_from** and **psp_valid_to** timestamps are being created and that the **psp_valid_to** timestamp is updated whenever a change is made to the same record.

NOTE: By default, the primary keys for the subscribed table your database will be a composite key comprised of the **sys_id** value, **from** column value, and **to** column value.

urgency	sys_created_on	sys_id	psp_valid_from	psp_valid_to
3	2019-03-14 22:19:34	6a8a9f7fdb80330076fc7b3868961982	2019-03-14 15:48:59	2019-03-14 15:49:57
3	2019-03-14 22:19:34	6a8a9f7fdb80330076fc7b3868961982	2019-03-14 15:49:58	2019-03-14 15:56:32
1	2019-03-14 22:19:34	6a8a9f7fdb80330076fc7b3868961982	2019-03-14 15:56:33	2030-12-31 00:00:00

Value should be
when the record

Value should be the same as
the value in <max_datetime>

Similar topics

- [Get started with the DataSync for ServiceNow Agent](#)
- [Start/stop the DataSync for ServiceNow Agent](#)
- [Monitoring DataSync Agent logs](#)
- [Set up DataSync Agent to share to PostgreSQL](#)
- [Set up DataSync Agent to share to HP Vertica](#)

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