

Connections

Universal Controller 7.6.x

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1 Overview

[Connections Overview](#)

2 Types of Connections

[Email Connections](#)

[Database Connections](#)

[PeopleSoft Connections](#)

[SAP Connections](#)

3 Connections Overview

Universal Controller Connections are records that provide server information required by Universal Controller.

Email Connections	Provide email server information required for the Controller to send an email.
Database Connections	Provide database server information required for running SQL tasks and Stored Procedure tasks .
SAP Connections	Provide SAP server information required for running SAP tasks .
PeopleSoft Connections	Provide PeopleSoft server information required for running PeopleSoft tasks .

4 Email Connections

4.1 Overview

Email connections provide all of the email server information necessary for Universal Controller to send emails.

Email connections are used these ways within the Controller:

- An [Email Task](#) uses the Email connection to generate emails independent of tasks.
- An [Email Notification](#) uses the Email connection to generate notifications related to tasks.
- [Agents](#), [OMS Servers](#), and [Cluster Nodes](#) use the Email connection to generate email notifications.
- [System Operations](#) use Email connections to generate system notifications.

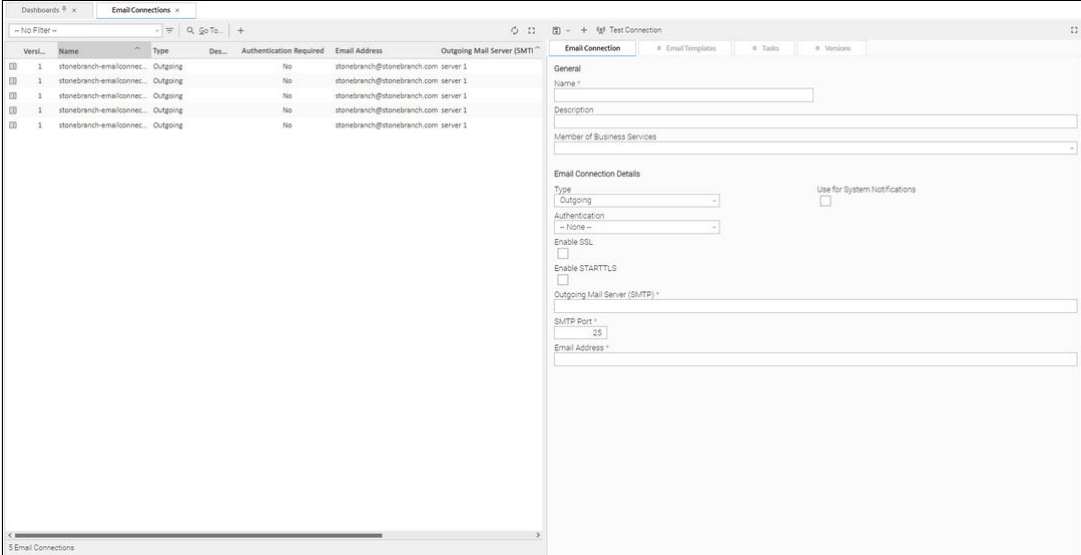


Email Connections can receive Email Notifications when:

- An [Agent](#) or [OMS Server](#) goes down or comes back up.
- A [Cluster Node](#) goes Offline or becomes Active.
- An [Email Notification](#) is associated with a task.

Note

Email Notifications on Cluster Nodes cannot be exported; therefore, they cannot be imported. You must set up new Email Notifications for Cluster Nodes whenever an [export](#) / [import](#) has been run.

4.2 Creating an Email Connection

<p>Step 1</p>	<p>From the Agents & Connections navigation pane, select System > Email Connections. The Email Connections list displays.</p> <p>Below the list, Email Connection Details for a new Email Connection displays.</p>  <p>The screenshot shows a web interface with a table of email connections. The table has columns: Ver#, Name, Type, Des., Authentication Required, Email Address, and Outgoing Mail Server (SMTP). Below the table, there is a 'New' button and a 'Details' section for a selected connection. The details section includes fields for Name, Description, Member of Business Services, Type, Authentication, Enable SSL, Enable STARTTLS, Outgoing Mail Server (SMTP), SMTP Port, and Email Address.</p>
<p>Step 2</p>	<p>Enter / select Details for a new Email Connection, using the field descriptions below as a guide.</p> <ul style="list-style-type: none"> • Required fields display an asterisk (*) after the field name. • Default values for fields, if available, display automatically. <p>To display more of the Details fields on the screen, you can either:</p> <ul style="list-style-type: none"> • Use the scroll bar. • Temporarily hide the list above the Details. • Click the  button above the list to display a pop-up version of the Details.
<p>Step 3</p>	<p>Click a  button. The Email Connection is added to the database, and all buttons and tabs in the Email Connection Details are enabled.</p>

Note

To [open](#) an existing record on the list, either:

- Click a record in the list to display its record Details below the list. (To clear record Details below the list, click the **New** button that displays above and below the Details.)
- Clicking the [Details icon](#) next to a record name in the list, or right-click a record in the list and then click **Open** in the [Action menu](#) that displays, to display a pop-up version of the record Details.
- Right-click a record in the a list, or open a record and right-click in the record Details, and then click **Open In Tab** in the [Action menu](#) that displays, to display the record Details under a new tab on the record list page (see [Record Details as Tabs](#)).

4.2.1 Email Connection Details

The following Email Connection Details is for an existing Email Connection. See the [field descriptions](#), below, for a description of all fields that display in the Email Connection Details.

- ☐ ×
Email Connection Details: stonebranch-emailconnection-01

🏠 📄 🗑️ 🗣️ Test Connection
🔄

Email Connection
● Email Templates
● Tasks
● Versions

General

Name * Version

Description

Member of Business Services

Email Connection Details

Type Use for System Notifications

Authentication

Enable SSL

Enable STARTTLS

Outgoing Mail Server (SMTP) *

SMTP Port *

Email Address *

For information on how to access additional details - such as [Metadata](#) and complete [database Details](#) - for Email Connections (or any type of record), see [Records](#).

4.2.2 Email Connection Details Field Descriptions

The following table describes the fields, buttons, and tabs that display in the Email Connection Details.

Field Name	Description
Details	This section contains detailed information about the Email Connection.
Name	Name (maximum 40 alphanumeric characters) used within the Controller to identify this resource. It is the responsibility of the user to develop a workable naming scheme for resources.

Version	System-supplied; version number of the current record, which is incremented by the Controller very time a user updates a record. Click the Versions tab to view previous versions. For details, see Record Versioning .
Description	Description of this record. (Maximum = 255 characters.)
Member of Business Services	User-defined; Allows you to select one or more Business Services that this record belongs to. (You also can Check All or Uncheck All Business Services for this record.) You can select up to 62 Business Services for any record type, and enter a maximum of 2048 characters for each Business Service. If the Business Service Visibility Restricted Universal Controller system property is set to true, depending on your assigned (or inherited) Permissions or Roles , Business Services available for selection may be restricted.
Type	Type of Email Connection: Options: <ul style="list-style-type: none"> • Outgoing • Incoming Default is Outgoing.
Outgoing Mail Server (SMTP)	If Type is Outgoing; Name or IP address of the outgoing email server.
SMTP Port	If Type is Outgoing; Port on the machine where the outgoing email server resides.
Incoming Mail Server (IMAP)	If Type is Incoming; Name or IP address of the incoming email server.
IMAP Port	If Type is Incoming; Port on the machine where the incoming email server resides.
Enable SSL	Enables SSL/TLS connectivity for your server.
Enable STARTTLS	Enables the use of the STARTTLS command (if supported by the server) to switch the connection to a TLS-protected connection before issuing any login commands. (An appropriate trust store must be configured so that the client will trust the server's certificate.)
Email Address	If Type is Outgoing; Email address of the sender. <div style="border: 1px solid red; padding: 10px;"> <p>Warning</p> <p>If the selected sender email address is invalid, or becomes invalid at any time after you create an Email Connection, all Email Notifications that specify that Email Connection will fail, but no warning will be issued. You must click the Test Connection button to test the Email Connection, which will generate an error message in the Console.</p> </div>
Authentication	Specifies method of authentication. <ul style="list-style-type: none"> • If Type is Outgoing; – None – • Password • OAuth 2.0
User Name	If Type is Outgoing and Authentication is Password or OAuth 2.0 or Type is Incoming and Authentication is OAuth 2.0.; user name that the Controller will use to connect to the server.
Password	If Type is Outgoing and Authentication is Password; password that the Controller will use to connect to the server. (This field is cleared if the Email Connection is copied .)

OAuth Client	<p>If Authentication is OAuth 2.0, the OAuth Client used to authorize the email connection.</p> <div style="border: 1px solid green; padding: 5px; margin-top: 10px;"> <p>Click the details icon next to the OAuth Client field to create a new OAuth Client or view a selected OAuth Client's definition.</p> </div>
Use for System Notifications	<p>If Type is Outgoing; Indicates whether or not this Email Connection is to be used for system notifications.</p> <p>(This field is set to false if the Email Connection is copied.)</p> <div style="border: 1px solid yellow; padding: 5px; margin-top: 10px;"> <p>Note</p> <p>Only one Email Connection can be used for system notifications. If this field is checked in an Email Connection Details, it will appear unchecked on all other Email Connection Details. If you then check this field in another Email Connection Details, it automatically will be unchecked from the Details in which it had been checked.</p> </div>
Trash Folder	<p>If Type is Incoming; Folder to use for deleted emails.</p>
Metadata	<p>This section contains Metadata information about this record.</p>
UUID	<p>Universally Unique Identifier of this record.</p>
Updated By	<p>Name of the user that last updated this record.</p>
Updated	<p>Date and time that this record was last updated.</p>
Created By	<p>Name of the user that created this record.</p>
Created	<p>Date and time that this record was created.</p>
Buttons	<p>This section identifies the buttons displayed above and below the Email Connection Details that let you perform various actions.</p>
Save	<p>Saves a new Email Connection record in the Controller database.</p>
Save & New	<p>Saves a new record in the Controller database and redisplay empty Details so that you can create another new record.</p>
Save & View	<p>Saves a new record in the Controller database and continues to display that record.</p>
New	<p>Displays empty (except for default values) Details for creating a new record.</p>
Update	<p>Saves updates to the record.</p>

<p>Test Connection</p>	<p>After saving the record to the database, click Test Connection to run a connection test.</p> <p>If the Email Connection Type is Incoming, clicking Test Connection causes a Test Connection... pop-up dialog to display</p> <div data-bbox="598 369 1548 638" style="border: 1px solid black; padding: 5px;"> <p>Test Connection...</p> <p>Credentials <input type="text"/></p> <p>Retrieve Folder List <input type="checkbox"/></p> <p style="text-align: right;"><input type="button" value="Submit"/> <input type="button" value="Cancel"/></p> </div> <p>The following table describes the fields on the Test Connection... dialog:</p> <table border="1" data-bbox="598 728 1540 963"> <thead> <tr> <th>Field</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>Credentials</td> <td>Credentials to be used to connect to the Email server.</td> </tr> <tr> <td>Retrieve Folder List</td> <td>Enabling this field instructs the Controller to retrieve a list of all the Folders within the connected User's mailbox.</td> </tr> </tbody> </table> <div data-bbox="598 996 1540 1131" style="border: 2px solid orange; padding: 5px; margin-top: 10px;"> <p>Test Connection dialog will only show Credentials field if Authentication is Password.</p> </div>	Field	Description	Credentials	Credentials to be used to connect to the Email server.	Retrieve Folder List	Enabling this field instructs the Controller to retrieve a list of all the Folders within the connected User's mailbox.
Field	Description						
Credentials	Credentials to be used to connect to the Email server.						
Retrieve Folder List	Enabling this field instructs the Controller to retrieve a list of all the Folders within the connected User's mailbox.						
<p>Authorize</p>	<p>After saving the record to the database, click Authorize to authorize the connection.</p> <p>The Authorize button will change to Reauthorize once the Email Connection has been authorized. Reauthorize allows you to renew your consent if the access token is invalid or it has expired and cannot be refreshed.</p> <div data-bbox="598 1332 1540 1489" style="border: 2px solid orange; padding: 5px; margin-top: 10px;"> <p>The Authorize button will only be shown if Authentication is OAuth 2.0. Email Connections using OAuth 2.0 authentication need to be authorized before they can be used.</p> </div>						
<p>Copy</p>	<p>Creates a copy of this Email Connection, which you are prompted to rename.</p>						
<p>Delete</p>	<p>Deletes the current record.</p>						
<p>Refresh</p>	<p>Refreshes any dynamic data displayed in the Details.</p>						
<p>Close</p>	<p>For pop-up view only; closes the pop-up view of this Email Connection.</p>						
<p>Tabs</p>	<p>This section identifies the tabs across the top of the Email Connection Details that provide access to additional information about the Email Connection.</p> <div data-bbox="598 1870 1540 2027" style="border: 2px solid orange; padding: 5px; margin-top: 10px;"> <p>For an Agent-Only installation of Universal Controller, the Email Templates and Tasks tabs do not display.</p> </div>						

Email Templates	Provides a list of Email Templates that specify this Email Connection, and lets you create a new Email Template with its Email Connection field pre-populated with this Email Connection. This tab is enabled only if the Email Connection Type = Outgoing.
Tasks	Provides a list of Email tasks (for Outgoing Email Connections) and Email Monitor tasks (for Incoming Email Connections). It also lets you create a new Email task (from the Email Tasks list), or a new Email Monitor Task (from the Email Monitor Tasks list), with its Email Connection field pre-populated with this Email Connection.
Versions	Stores copies of all previous versions of the current record. See Record Versioning .

4.3 Copying Email Connections

4.3.1 Overview

You can make copies of all Universal Controller records, including Email Connections, using the standard method for [Copying a Record](#): selecting **Insert** on the [Action menu](#).

However, you also can use the Copy action on the Email Connections [Action menu](#) or the Copy button in the Email Connections Details.

Note

If you use the Copy action or Copy button to copy an Email Connection, the [Password](#) field is cleared and the [Use for System Notifications](#) field is set to false in the Email Connection copy.

4.3.2 Copying One or More Email Connections from an Email Connections List

Step 1	From the Agents & Connections navigation pane, select System > Email Connections to display the Email Connections list.
Step 2	Locate the Email Connection(s) you want to copy (see Filtering).

<p>Step 3</p>	<p>Copy the Email Connection(s):</p> <p>Copy One Email Connection</p> <ol style="list-style-type: none"> 1. Right-click the Email Connection Name. 2. On the Action menu, select Copy. A Copy Email Connection pop-up dialog displays. <div data-bbox="467 394 1543 719" style="border: 1px solid black; padding: 5px;"> <p>Copy Email Connection - x</p> <p>Enter a new name for the Email Connection and click Submit.</p> <p>Name *</p> <input type="text" value="stonebranch-emailconnection-01 - Copy"/> <p>Member of Business Services</p> <input type="text"/> <p style="text-align: right;"> <input type="button" value="Submit"/> <input type="button" value="Cancel"/> </p> </div> <ol style="list-style-type: none"> 3. Enter a new name for the Email Connection and, optionally, select any Business Services that you want the Email Connection assigned to. 4. Click Submit to create a copy of the Email Connection. <p>Copy Multiple Email Connections</p> <ol style="list-style-type: none"> 1. Ctrl-Click the Email Connections you want to copy. 2. Right-click any of the selected Email Connections. 3. On the Action menu, select Copy. 4. On the Confirmation pop-up that displays, click OK. The copied Email Connections are added to the list, with - Copy added as a suffix to the Email Connection Name for each Email Connection. If an Email Connection with that - Copy name already exists, another copy is not created.
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4.3.3 Copying an Email Connection from the Email Connection Details

<p>Step 1</p>	<p>Select an Email Connection from the Email Connection list. The Email Connection Details for that Email Connection displays.</p>
<p>Step 2</p>	<p>Either:</p> <ul style="list-style-type: none"> • Click the Copy button. • Right-click the Details to display the Action menu, and then click Copy. <p>A Copy Email Connection pop-up dialog displays.</p> <div data-bbox="491 1509 1543 1834" style="border: 1px solid black; padding: 5px;"> <p>Copy Email Connection - x</p> <p>Enter a new name for the Email Connection and click Submit.</p> <p>Name *</p> <input type="text" value="stonebranch-emailconnection-01 - Copy"/> <p>Member of Business Services</p> <input type="text"/> <p style="text-align: right;"> <input type="button" value="Submit"/> <input type="button" value="Cancel"/> </p> </div>
<p>Step 3</p>	<p>Enter a new name for the Email Connection and, optionally, select any Business Services that you want the Email Connection assigned to.</p>
<p>Step 4</p>	<p>Click Submit to create a copy of the Email Connection.</p>

4.3.4 Copy Permissions

To copy an Email Connection, you must have both Read [permission](#) and Copy command permission for the Email Connection you are copying, in addition to having Create permission for the copied Email Connection.

5 Database Connections

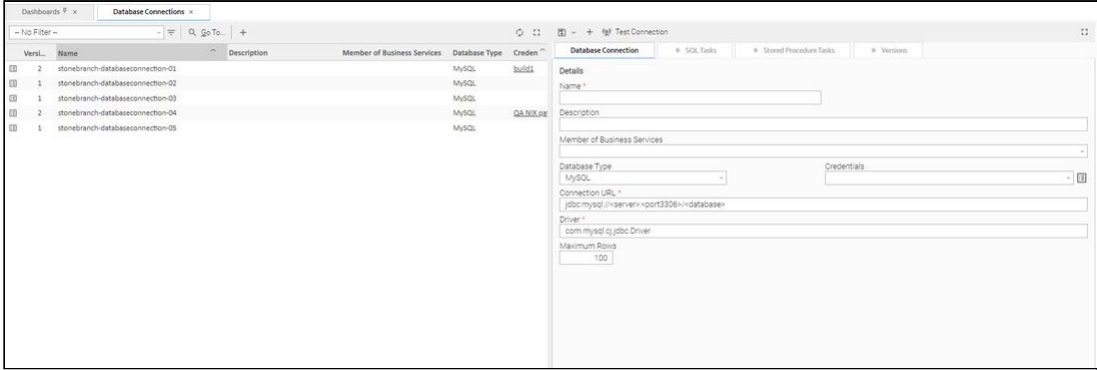


5.1 Overview

Database Connections provide all database server information required for Universal Controller to execute an [SQL task](#) or a [Stored Procedure Task](#).

Database Connections can receive Email Notifications when:

- An [Agent](#) or [OMS Server](#) goes down or comes back up.
- A [Cluster Node](#) goes Offline or becomes Active.

5.2 Creating a Database Connection

<p>Step 1</p>	<p>From the Agents & Connections navigation pane, select System > Database Connections. The Database Connections list displays.</p> <p>Below the list, Database Connection Details for a new Database Connection displays.</p> 
<p>Step 2</p>	<p>Enter / select Details for a new Database Connection, using the field descriptions below as a guide.</p> <ul style="list-style-type: none"> • Required fields display an asterisk (*) after the field name. • Default values for fields, if available, display automatically. <p>To display more of the Details fields on the screen, you can either:</p> <ul style="list-style-type: none"> • Use the scroll bar. • Temporarily hide the list above the Details. • Click the  button above the list to display a pop-up version of the Details.
<p>Step 3</p>	<p>Click a  button. The Database Connection is added to the database, and all buttons and tabs in the Database Connection Details are enabled.</p>

Note

To [open](#) an existing record on the list, either:

- Click a record in the list to display its record Details below the list. (To clear record Details below the list, click the **New** button that displays above and below the Details.)
- Clicking the [Details icon](#) next to a record name in the list, or right-click a record in the list and then click **Open** in the [Action menu](#) that displays, to display a pop-up version of the record Details.
- Right-click a record in the a list, or open a record and right-click in the record Details, and then click **Open In Tab** in the [Action menu](#) that displays, to display the record Details under a new tab on the record list page (see [Record Details as Tabs](#)).

5.3 Database Connection Details

The following Database Connection Details is for an existing Database Connection. See the [field descriptions](#), below, for a description of all fields that display in the Database Connection Details.

The screenshot shows a window titled "Database Connection Details: stonebranch-databaseconnection-01". It has a toolbar with icons for home, refresh, delete, and a "Test Connection" button. Below the toolbar are four tabs: "Database Connection" (selected), "SQL Tasks", "Stored Procedure Tasks", and "Versions". The main area is labeled "Details" and contains the following fields:

- Name ***: stonebranch-databaseconnection-01
- Version**: 2
- Description**: (empty text box)
- Member of Business Services**: (empty dropdown menu)
- Database Type**: MySQL (dropdown menu)
- Credentials**: build1 (dropdown menu with a search icon)
- Connection URL ***: jdbc:mysql://<server>:<port3306>/<database>
- Driver ***: com.mysql.jdbc.Driver
- Maximum Rows**: 100

For information on how to access additional details - such as [Metadata](#) and complete [database Details](#) - for Database Connections (or any type of record), see [Records](#).

5.4 Database Connection Details Field Descriptions

The following table describes the fields, buttons, and tabs that display in the Database Connection Details.

Field Name	Description
Details	This section contains detailed information about the Database Connection.
Name	Name (maximum 40 alphanumeric characters) used within the Controller to identify this resource. It is the responsibility of the user to develop a workable naming scheme for resources.

Version	System-supplied; version number of the current record, which is incremented by the Controller every time a user updates a record. Click the Versions tab to view previous versions. For details, see Record Versioning .
Description	Description of this record. (Maximum = 255 characters.)
Member of Business Services	<p>User-defined; Allows you to select one or more Business Services that this record belongs to. (You also can Check All or Uncheck All Business Services for this record.)</p> <p>You can select up to 62 Business Services for any record type, and enter a maximum of 2048 characters for each Business Service.</p> <p>If the Business Service Visibility Restricted Universal Controller system property is set to true, depending on your assigned (or inherited) Permissions or Roles, Business Services available for selection may be restricted.</p>
Database Type	<p>Type of database.</p> <p>Options:</p> <ul style="list-style-type: none"> • MySQL • MS SQL Server • Oracle • DB2 • Sybase SQL Anywhere • Other <div style="border: 1px solid orange; padding: 10px; margin-top: 10px;"> <p>Note</p> <p>When using the database type Other, you will need to source the JDBC driver from your database vendor. Simply place the JDBC driver .jar file into the <code>\$CATALINA_HOME/webapps/uc/WEB-INF/lib</code> directory and restart Tomcat. Format the Connection URL and Driver fields per the database vendor's documentation.</p> </div> <div style="border: 1px solid orange; padding: 10px; margin-top: 10px;"> <p>Note</p> <p>Customers have reported difficulty establishing secure SQL connections using the jTDS open source JDBC driver for Microsoft SQL Server (Driver=net.sourceforge.jtds.jdbc.Driver) when SSL/TLS is enabled on the server. We have received feedback that the issue can be resolved by installing a patched version of the jTDS driver from bug report https://sourceforge.net/p/jtds/bugs/725/. Stonebranch only bundles the official jTDS release, currently 1.3.1, with the Universal Controller.</p> <p>We do not include unofficial patches, and if you decide to use them, you do so at your own risk.</p> </div>
Credentials	Credentials for this Database Connection. Click the Details icon to create a new Credentials record, or select an existing Credentials record from the drop-down list.

Connection URL	URL of the database. Variables supported. <div style="border: 1px solid orange; padding: 5px; margin: 10px 0;"> Variables might not resolve correctly if the user does not have Read Permission on the variable. </div> If you are using a MySQL database and want the ability to issue multiple SQL commands from a single task, you need to enable this by appending the following string to the end of the connection string: <div style="border: 1px solid gray; padding: 5px; margin: 10px 0;"> ?allowMultiQueries=true </div> For example: <div style="border: 1px solid gray; padding: 5px; margin: 10px 0;"> jdbc:mysql://localhost:3306/uc? allowMultiQueries=true </div>
Driver	Name of the JDBC driver.
Maximum Rows	If necessary, specifies a limit to the number of rows you want returned by the SQL statement.
Metadata	This section contains Metadata information about this record.
UUID	Universally Unique Identifier of this record.
Updated By	Name of the user that last updated this record.
Updated	Date and time that this record was last updated.
Created By	Name of the user that created this record.
Created	Date and time that this record was created.
Buttons	This section identifies the buttons displayed above and below the Database Connection Details that let you perform various actions.
Save	Saves a new Database Connection record in the Controller database.
Save & New	Saves a new record in the Controller database and redisplay empty Details so that you can create another new record.
Save & View	Saves a new record in the Controller database and continues to display that record.
New	Displays empty (except for default values) Details for creating a new record.
Update	Saves updates to the record.
Test Connection	After saving the record to the database, click Test Connection to run a connection test.
Copy	Creates a copy of this Database Connection, which you are prompted to rename.
Delete	Deletes the current record.

Refresh	Refreshes any dynamic data displayed in the Details.
Close	For pop-up view only; closes the pop-up view of this Database Connection.
Tabs	This section identifies the tabs across the top of the Database Connection Details that provide access to additional information about the Database Connection.
SQL Tasks	Lists all SQL tasks that are using this Database Connection.
Stored Procedure Tasks	Lists all Stored Procedure tasks that are using this Database Connection.
Versions	Stores copies of all previous versions of the current record. See Record Versioning .

5.5 Copying Database Connections

5.5.1 Overview

You can make copies of all Universal Controller records, including Database Connections, using the standard method for [Copying a Record](#): selecting **Insert** on the [Action menu](#).

However, you also can use the Copy action on the Database Connections [Action menu](#) or the Copy button in the Database Connections Details.

5.5.2 Copying One or More Database Connections from a Database Connections List

Step 1	From the Agents & Connections navigation pane, select System > Database Connections to display the Database Connections list.
Step 2	Locate the Database Connections(s) you want to copy (see Filtering).

<p>Step 3</p>	<p>Copy the Database Connection(s):</p> <p>Copy One Database Connection</p> <ol style="list-style-type: none"> 1. Right-click the Database Connection Name. 2. On the Action menu, select Copy. A Copy Database Connection pop-up dialog displays. <div data-bbox="459 394 1549 721" style="border: 1px solid black; padding: 5px;"> <p>Copy Database Connection - x</p> <p>Enter a new name for the Database Connection and click Submit.</p> <p>Name * <input type="text" value="stonebranch-databaseconnection-01 - Copy"/></p> <p>Member of Business Services <input type="text"/></p> <p style="text-align: center;"> <input type="button" value="Submit"/> <input type="button" value="Cancel"/> </p> </div> <ol style="list-style-type: none"> 3. Enter a new name for the Database Connection and, optionally, select any Business Services that you want the Database Connection assigned to. 4. Click Submit to create a copy of the Database Connection. <p>Copy Multiple Database Connections</p> <ol style="list-style-type: none"> 1. Ctrl-Click the Database Connections you want to copy. 2. Right-click any of the selected Database Connections. 3. On the Action menu, select Copy. 4. On the Confirmation pop-up that displays, click OK. The copied Database Connections are added to the list, with -Copy added as a suffix to the Database Connection Name for each Database Connection. If a Database Connection with that - Copy name already exists, another copy is not created.
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5.5.3 Copying a Database Connection from the Database Connection Details

<p>Step 1</p>	<p>Select a Database Connection from the Database Connections list. The Database Connection Details for that Database Connection displays.</p>
<p>Step 2</p>	<p>Either:</p> <ul style="list-style-type: none"> • Click the Copy button. • Right-click the Details to display the Action menu, and then click Copy. <p>A Copy Database Connection pop-up dialog displays.</p> <div data-bbox="491 1615 1549 1933" style="border: 1px solid black; padding: 5px;"> <p>Copy Database Connection - x</p> <p>Enter a new name for the Database Connection and click Submit.</p> <p>Name * <input type="text" value="stonebranch-databaseconnection-01 - Copy"/></p> <p>Member of Business Services <input type="text"/></p> <p style="text-align: center;"> <input type="button" value="Submit"/> <input type="button" value="Cancel"/> </p> </div>
<p>Step 3</p>	<p>Enter a new name for the Database Connection and, optionally, select any Business Services that you want the Database Connection assigned to.</p>

Step 4

Click **Submit** to create a copy of the Database Connection.

5.5.4 Copy Permissions

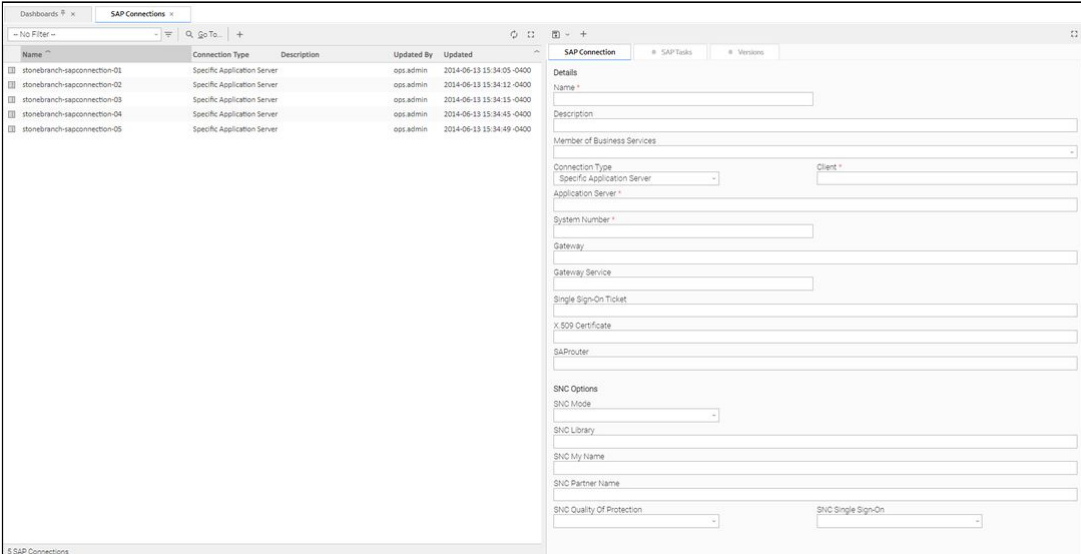


To copy a Database Connection, you must have both Read [permission](#) and Copy command permission for the Database Connection you are copying, in addition to having Create permission for the copied Database Connection.

6 SAP Connections

6.1 Overview

SAP Connections provide all the SAP server information necessary for Universal Controller to execute an [SAP Task](#) on an SAP system. These instructions assume the user is familiar with SAP.

6.2 Creating an SAP Connection

<p>Step 1</p>	<p>From the Agents & Connections navigation pane, select System > SAP Connections. The SAP Connections list displays.</p> <p>Below the list, SAP Connection Details for a new SAP Connection displays.</p>  <p>The screenshot shows a dashboard with a table of SAP Connections. The table has columns for Name, Connection Type, Description, Updated By, and Updated. Below the table, there is a detailed view for a new SAP Connection with various fields for configuration, including Name, Description, Connection Type, System Number, Gateway, and SNC Options.</p>
<p>Step 2</p>	<p>Enter / select Details for a new SAP Connection, using the field descriptions below as a guide.</p> <ul style="list-style-type: none"> • Required fields display an asterisk (*) after the field name. • Default values for fields, if available, display automatically. <p>To display more of the Details fields on the screen, you can either:</p> <ul style="list-style-type: none"> • Use the scroll bar. • Temporarily hide the list above the Details. • Click the  button above the list to display a pop-up version of the Details.
<p>Step 3</p>	<p>Click a  button. The SAP Connection is added to the database, and all buttons and tabs in the SAP Connection Details are enabled.</p>

Note

To [open](#) an existing record on the list, either:

- Click a record in the list to display its record Details below the list. (To clear record Details below the list, click the **New** button that displays above and below the Details.)
- Clicking the [Details icon](#) next to a record name in the list, or right-click a record in the list and then click **Open** in the [Action menu](#) that displays, to display a pop-up version of the record Details.
- Right-click a record in the a list, or open a record and right-click in the record Details, and then click **Open In Tab** in the [Action menu](#) that displays, to display the record Details under a new tab on the record list page (see [Record Details as Tabs](#)).

6.2.1 SAP Connection Details

The following SAP Connection Details is for an existing SAP Connection. See the [field descriptions](#), below, for a description of all fields that display in the SAP Connection Details.

SAP Connection Details: stonebranch-sapconnection-01
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SAP Connection
SAP Tasks
Versions

Details

Name * Version

Description

Member of Business Services

Connection Type Client *

Application Server *

System Number *

Gateway

Gateway Service

Single Sign-On Ticket

X.509 Certificate

SAProuter

SNC Options

SNC Mode

SNC Library

SNC My Name

SNC Partner Name

SNC Quality Of Protection SNC Single Sign-On

For information on how to access additional details - such as [Metadata](#) and complete [database Details](#) - for SAP Connections (or any type of record), see [Records](#).

6.2.2 SAP Connection Details Field Descriptions

The following table describes the fields, buttons, and tabs that display in the SAP Connection Details.

Field Name	Description
Details	This section contains detailed information about the SAP Connection.

Name	Name (maximum 40 alphanumeric characters) used within the Controller to identify this resource. It is the responsibility of the user to develop a workable naming scheme for resources.
Version	System-supplied; version number of the current record, which is incremented by the Controller every time a user updates a record. Click the Versions tab to view previous versions. For details, see Record Versioning .
Description	Description of this record. (Maximum = 255 characters.)
Member of Business Services	User-defined; Allows you to select one or more Business Services that this record belongs to. (You also can Check All or Uncheck All Business Services for this record.) You can select up to 62 Business Services for any record type, and enter a maximum of 2048 characters for each Business Service. If the Business Service Visibility Restricted Universal Controller system property is set to true, depending on your assigned (or inherited) Permissions or Roles , Business Services available for selection may be restricted.
Connection Type	Type of SAP connection. Options: <ul style="list-style-type: none"> • Specific Application Server Connection to a specific SAP application server (type A RFC connection). • Load Balancing Connection to an SAP system where the application server is determined by load balancing (type B RFC connection).
Application Server	If Connection Type = Specific Application Server; ASHOST parameter; Host name of an SAP application server. If the path to the server goes through SAP routers, prefix the host name with the SAP router string.
Client	CLIENT parameter; SAP Client number. This field is not required if Connection Type is Load Balancing . <div style="border: 1px solid orange; padding: 5px;"> <p>Note</p> <p>Originally, the Client field was not available for a Load Balancing Connection Type; therefore, you may have applied the CLIENT parameter on each SAP task as an SAP Command option or used a "destination" connection via the <code>sapnwrfc.ini</code> file. For this reason, the Client field is optional when the Connection Type is Load Balancing even though, normally, you would want to specify it.</p> </div>
System Number	If Connection Type = Specific Application Server; SYSNR parameter.
Gateway	If Connection Type = Specific Application Server; GWHOST parameter; Host name of the SAP gateway.
Gateway Service	If Connection Type = Specific Application Server; GWSERV parameter; Service name of the SAP gateway.
System ID	If Connection Type = Load Balancing; R3NAME/SYSID parameter; System ID of the SAP system to which you want to connect.
Message Server	If Connection Type = Load Balancing; MSHOST parameter; Host name of the message server.
Group	If Connection Type = Load Balancing; GROUP parameter; Application servers group name.

Use Symbolic Names	<p>If Connection Type = Load Balancing; USE_SYMBOLIC_NAMES parameter; Specification for whether or not to use symbolic service names.</p> <p>Options:</p> <ul style="list-style-type: none"> • No • Yes
Single Sign-On Ticket	Path to a file that contains the actual value for the MYSAPSSO2 parameter.
X.509 Certificate	Path to a file that contains the actual value for the X509CERT parameter.
SAProuter	SAPROUTER parameter.
SNC Options	This section contains detailed information about the SAP Secure Network Communications (SNC).
SNC Mode	<p>SNC_MODE parameter; Specification for whether or not SNC is activated.</p> <p>Options:</p> <ul style="list-style-type: none"> • Off • On
SNC Library	SNC_LIB parameter; Path to the third-party security library for SNC.
SNC My Name	SNC_MYNAME parameter; Token/identifier representing the external RFC program.
SNC Partner Name	SNC_PARTNERNAME parameter; Token/identifier representing the back-end system.
SNC Quality of Protection	<p>SNC_QOP parameter; Quality of protection level.</p> <p>Options:</p> <ul style="list-style-type: none"> • Authentication Only • Integrity Protection • Privacy Protection • Default Protection • Maximum Protection
SNC Single Sign-On	<p>SNC_SSO parameter; Specification for whether or not to use single sign-on for SNC.</p> <p>Options:</p> <ul style="list-style-type: none"> • No • Yes
Buttons	This section identifies the buttons displayed above and below the SAP Connection Details that let you perform various actions.
Save	Saves a new SAP Connection record in the Controller database.
Save & New	Saves a new record in the Controller database and redisplay empty Details so that you can create another new record.
Save & View	Saves a new record in the Controller database and continues to display that record.
New	Displays empty (except for default values) Details for creating a new record.
Update	Saves updates to the record.
Copy	Creates a copy of this SAP Connection, which you are prompted to rename.
Delete	Deletes the current record.
Refresh	Refreshes any dynamic data displayed in the Details.

Close	For pop-up view only; closes the pop-up view of this SAP Connection.
Tabs	This section identifies the tabs across the top of the SAP Connection Details that provide access to additional information about the SAP Connection.
SAP Tasks tab	Lists all SAP tasks that use this SAP connection.
Versions tab	Stores copies of all previous versions of the current record. See Record Versioning .

6.3 Copying SAP Connections

6.3.1 Overview

You can make copies of all Universal Controller records, including SAP Connections, using the standard method for [Copying a Record](#): selecting **Insert** on the [Action menu](#).

However, you also can use the Copy action on the SAP Connections [Action menu](#) or the Copy button in the SAP Connections Details.

6.3.2 Copying One or More SAP Connections from an SAP Connections List

Step 1	From the Agents & Connections navigation pane, select System > SAP Connections to display the SAP Connections list.
Step 2	Locate the SAP Connections(s) you want to copy (see Filtering).

<p>Step 3</p>	<p>Copy the SAP Connection(s):</p> <p>Copy One SAP Connection</p> <ol style="list-style-type: none"> 1. Right-click the SAP Connection Name. 2. On the Action menu, select Copy. A Copy SAP Connection pop-up dialog displays. <div data-bbox="470 398 1540 716" style="border: 1px solid gray; padding: 5px;"> <p>Copy SAP Connection - x</p> <p>Enter a new name for the SAP Connection and click Submit.</p> <p>Name *</p> <input type="text" value="stonebranch-sapconnection-01 - Copy"/> <p>Member of Business Services</p> <input type="text"/> <p style="text-align: right;"> <input type="button" value="Submit"/> <input type="button" value="Cancel"/> </p> </div> <ol style="list-style-type: none"> 3. Enter a new name for the SAP Connection and, optionally, select any Business Services that you want the SAP Connection assigned to. 4. Click Submit to create a copy of the SAP Connection. <p>Copy Multiple SAP Connections</p> <ol style="list-style-type: none"> 1. Ctrl-Click the SAP Connections you want to copy. 2. Right-click any of the selected SAP Connections. 3. On the Action menu, select Copy. 4. On the Confirmation pop-up that displays, click OK. The copied SAP Connections are added to the list, with - Copy added as a suffix to the SAP Connection Name for each SAP Connection. If an SAP Connection with that - Copy name already exists, another copy is not created.
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6.3.3 Copying an SAP Connection from the SAP Connection Details

<p>Step 1</p>	<p>Select an SAP Connection from the SAP Connections list. The SAP Connection Details for that SAP Connection displays.</p>
<p>Step 2</p>	<p>Either:</p> <ul style="list-style-type: none"> • Click the Copy button. • Right-click the Details to display the Action menu, and then click Copy. <p>A Copy SAP Connection pop-up dialog displays.</p> <div data-bbox="486 1512 1540 1825" style="border: 1px solid gray; padding: 5px;"> <p>Copy SAP Connection - x</p> <p>Enter a new name for the SAP Connection and click Submit.</p> <p>Name *</p> <input type="text" value="stonebranch-sapconnection-01 - Copy"/> <p>Member of Business Services</p> <input type="text"/> <p style="text-align: right;"> <input type="button" value="Submit"/> <input type="button" value="Cancel"/> </p> </div>
<p>Step 3</p>	<p>Enter a new name for the SAP Connection and, optionally, select any Business Services that you want the SAP Connection assigned to.</p>
<p>Step 4</p>	<p>Click Submit to create a copy of the SAP Connection.</p>

6.3.4 Copy Permissions

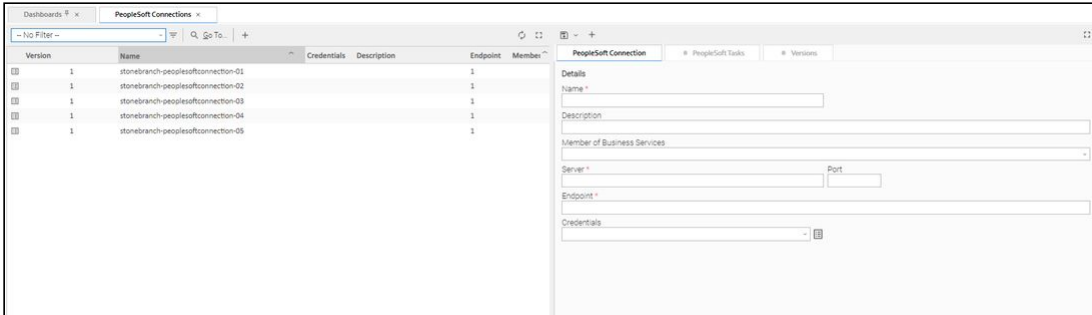


To copy an SAP Connection, you must have both Read [permission](#) and Copy command permission for the SAP Connection you are copying, in addition to having Create permission for the copied SAP Connection.

7 PeopleSoft Connections

7.1 Overview

PeopleSoft Connections provide all the PeopleSoft server information necessary for Universal Controller to execute a [PeopleSoft task](#) on a PeopleSoft system. These instructions assume the user is familiar with PeopleSoft.

7.2 Creating a PeopleSoft Connection

<p>Step 1</p>	<p>From the Agents & Connections navigation pane, select System > PeopleSoft Connections. The PeopleSoft Connections list displays.</p> <p>To the right of the list, PeopleSoft Connection Details for a new PeopleSoft Connection displays.</p>  <p>The screenshot shows a web interface with a table of connections and a details form. The table has columns for Version, Name, Credentials, Description, Endpoint, and Member. The details form includes fields for Name, Description, Member of Business Services, Server, Port, Endpoint, and Credentials.</p>
<p>Step 2</p>	<p>Enter / select Details for a new PeopleSoft Connection, using the field descriptions below as a guide.</p> <ul style="list-style-type: none"> • Required fields display an asterisk (*) after the field name. • Default values for fields, if available, display automatically. <p>To display more of the Details fields on the screen, you can either:</p> <ul style="list-style-type: none"> • Use the scroll bar. • Temporarily hide the list above the Details. • Click the  button above the list to display a pop-up version of the Details.
<p>Step 3</p>	<p>Click a  button. The PeopleSoft Connection is added to the database, and all buttons and tabs in the PeopleSoft Connection Details are enabled.</p>

Note

To [open](#) an existing record on the list, either:

- Click a record in the list to display its record Details below the list. (To clear record Details below the list, click the **New** button that displays above and below the Details.)
- Clicking the [Details icon](#) next to a record name in the list, or right-click a record in the list and then click **Open** in the [Action menu](#) that displays, to display a pop-up version of the record Details.

- Right-click a record in the a list, or open a record and right-click in the record Details, and then click **Open In Tab** in the [Action menu](#) that displays, to display the record Details under a new tab on the record list page (see [Record Details as Tabs](#)).

7.2.1 PeopleSoft Connection Details

The following PeopleSoft Connection Details is for an existing PeopleSoft Connection. See the [field descriptions](#), below, for a description of all fields that display in the PeopleSoft Connection Details.

The screenshot shows a web browser window titled "PeopleSoft Connection Details: stonebranch-peoplesoftconnection-01". The interface includes three tabs: "PeopleSoft Connection" (selected), "PeopleSoft Tasks", and "Versions". Under the "Details" section, the following fields are visible:

- Name ***: A text input field containing "stonebranch-peoplesoftconnection-01".
- Version**: A numeric input field containing "1".
- Description**: An empty text input field.
- Member of Business Services**: A dropdown menu.
- Server ***: A text input field containing "upps.stone.branch".
- Port**: An empty numeric input field.
- Endpoint ***: A text input field containing "upps.stone.branch:8080".
- Credentials**: A dropdown menu with a list icon to its right.

For information on how to access additional details - such as [Metadata](#) and complete [database Details](#) - for PeopleSoft Connections (or any type of record), see [Records](#).

7.2.2 PeopleSoft Connection Details Field Descriptions

The following table describes the fields, buttons, and tabs that display in the PeopleSoft Connection Details.

Field Name	Description
Details	This section contains detailed information about the PeopleSoft Connection.
Name	Name (maximum 40 alphanumeric characters) used within the Controller to identify this resource. It is the responsibility of the user to develop a workable naming scheme for resources.
Version	System-supplied; version number of the current record, which is incremented by the Controller every time a user updates a record. Click the #Versions tab to view previous versions. For details, see Record Versioning .
Description	Description of this record. (Maximum = 255 characters.)

Member of Business Services	<p>User-defined; Allows you to select one or more Business Services that this record belongs to. (You also can Check All or Uncheck All Business Services for this record.)</p> <p>You can select up to 62 Business Services for any record type, and enter a maximum of 2048 characters for each Business Service.</p> <p>If the Business Service Visibility Restricted Universal Controller system property is set to true, depending on your assigned (or inherited) Permissions or Roles, Business Services available for selection may be restricted.</p>
Server	Host name of the Name or IP address of the PeopleSoft application server.
Port	Port number for the PeopleSoft application server.
Endpoint	Web service endpoint for the PROCESSREQUEST service.
Credentials	<p>Credentials for the PeopleSoft connection.</p> <div style="border: 1px solid orange; padding: 10px; margin-top: 10px;"> <p>Note</p> <p>Either the PeopleSoft Connection or the PeopleSoft task using that connection must specify PeopleSoft Credentials. If a PeopleSoft task using this PeopleSoft Connection specifies PeopleSoft Credentials, those PeopleSoft task credentials override the PeopleSoft Connection credentials.</p> </div>
Metadata	This section contains Metadata information about this record.
UUID	Universally Unique Identifier of this record.
Updated By	Name of the user that last updated this record.
Updated	Date and time that this record was last updated.
Created By	Name of the user that created this record.
Created	Date and time that this record was created.
Buttons	This section identifies the buttons displayed above and below the PeopleSoft Connection Details that let you perform various actions.
Save	Saves a new PeopleSoft Connection record in the Controller database.
Save & New	Saves a new record in the Controller database and redisplay empty Details so that you can create another new record.
Save & View	Saves a new record in the Controller database and continues to display that record.
New	Displays empty (except for default values) Details for creating a new record.
Update	Saves updates to the record.
Copy	Creates a copy of this PeopleSoft Connection, which you are prompted to rename.
Delete	Deletes the current record.
Refresh	Refreshes any dynamic data displayed in the Details.
Close	For pop-up view only; closes the pop-up view of this PeopleSoft Connection.

Tabs	This section identifies the tabs across the top of the PeopleSoft Connection Details that provide access to additional information about the PeopleSoft Connection.
PeopleSoft Tasks tab	Lists all PeopleSoft tasks that use this PeopleSoft connection.
Versions tab	Stores copies of all previous versions of the current record. See Record Versioning .

7.3 Copying PeopleSoft Connections

7.3.1 Overview

You can make copies of all Universal Controller records, including PeopleSoft Connections, using the standard method for [Copying a Record](#): selecting **Insert** on the [Action menu](#).

However, you also can use the Copy action on the PeopleSoft Connections [Action menu](#) or the Copy button in the PeopleSoft Connections Details.

7.3.2 Copying One or More PeopleSoft Connections from a PeopleSoft Connections List

Step 1	From the Agents & Connections navigation pane, select System > PeopleSoft Connections to display the PeopleSoft Connections list.
Step 2	Locate the PeopleSoft Connections(s) you want to copy (see Filtering).

<p>Step 3</p>	<p>Copy the PeopleSoft Connection(s):</p> <p>Copy One PeopleSoft Connection</p> <ol style="list-style-type: none"> 1. Right-click the PeopleSoft Connection Name. 2. On the Action menu, select Copy. A Copy PeopleSoft Connection pop-up dialog displays. <div data-bbox="459 394 1544 719" style="border: 1px solid gray; padding: 5px;"> <p>Copy PeopleSoft Connection — ×</p> <p>Enter a new name for the PeopleSoft Connection and click Submit.</p> <p>Name *</p> <input type="text" value="stonebranch-peoplesoftconnection-01 - Copy"/> <p>Member of Business Services</p> <input type="text"/> <p style="text-align: right;"> <input type="button" value="Submit"/> <input type="button" value="Cancel"/> </p> </div> <ol style="list-style-type: none"> 3. Enter a new name for the PeopleSoft Connection and, optionally, select any Business Services that you want the PeopleSoft Connection assigned to. 4. Click Submit to create a copy of the PeopleSoft Connection. <p>Copy Multiple PeopleSoft Connections</p> <ul style="list-style-type: none"> ▪ Ctrl-Click the PeopleSoft Connections you want to copy. ▪ Right-click any of the selected PeopleSoft Connections. ▪ On the Action menu, select Copy. ▪ On the Confirmation pop-up that displays, click OK. The copied PeopleSoft Connections are added to the list, with - Copy added as a suffix to the PeopleSoft Connection Name for each PeopleSoft Connection. If a PeopleSoft Connection with that - Copy name already exists, another copy is not created.
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7.3.3 Copying a PeopleSoft Connection from the PeopleSoft Connection Details

<p>Step 1</p>	<p>Select a PeopleSoft Connection from the PeopleSoft Connections list. The PeopleSoft Connection Details for that PeopleSoft Connection displays.</p>
<p>Step 2</p>	<p>Either:</p> <ul style="list-style-type: none"> • Click the Copy button. • Right-click the Details to display the Action menu, and then click Copy. <p>A Copy PeopleSoft Connection pop-up dialog displays.</p> <div data-bbox="491 1469 1544 1787" style="border: 1px solid gray; padding: 5px;"> <p>Copy PeopleSoft Connection — ×</p> <p>Enter a new name for the PeopleSoft Connection and click Submit.</p> <p>Name *</p> <input type="text" value="stonebranch-peoplesoftconnection-01 - Copy"/> <p>Member of Business Services</p> <input type="text"/> <p style="text-align: right;"> <input type="button" value="Submit"/> <input type="button" value="Cancel"/> </p> </div>
<p>Step 3</p>	<p>Enter a new name for the PeopleSoft Connection and, optionally, select any Business Services that you want the PeopleSoft Connection assigned to.</p>
<p>Step 4</p>	<p>Click Submit to create a copy of the PeopleSoft Connection.</p>

7.3.4 Copy Permissions

To copy a PeopleSoft Connection, you must have both Read [permission](#) and Copy command permission for the PeopleSoft Connection you are copying, in addition to having Create permission for the copied PeopleSoft Connection.