Nintex Workflow for Project Server 2010 Help

Last updated: Friday, March 16, 2012

1 Using Nintex Workflow for Project Server 2010

1.1 Administration and Management

Project Web Application activation

Web Application activation is a step in the installation process which allows 'Nintex Workflow 2010' and 'Nintex Workflow for Project Server 2010' to operate with 'Project Server 2010'. The activating process will activate the necessary features to enable 'Nintex Workflow 2010' and 'Nintex Workflow for Project Server 2010' on the PWA sites and also register the Nintex Workflow code in the web application web.config file as authorized to run in a workflow.

Deactivating a site will deactivate the Nintex Workflow for Project Server 2010 feature, removing the UI elements from the site.

Note: If Nintex Workflow 2010 configuration database in the Database settings page is modified, the PWA site will need to be re-activated.

Manage Server Account

Activating the Manage Service Account provides the account running the 'Microsoft Project Server Queue Service 2010' access to the Nintex Workflow 2010 database. When workflows are running within this process (a part of normal operation) they will connect to the Nintex Workflow 2010 database with this account.

To find the Service Account:

- In **Central Administration**, click on **Application Management**.
- In the **Service Applications** section, click on **Manage service applications**.

- Select the **Project Server Service Application**, and in the Ribbon click on **Properties**.

- In the **Application Pool Settings** section, take note of the **Application Pool name** (i.e. SharePoint Web Service Default) that the Project Server Service Application is running on.
- Return to **Central Administration**, click on **Security**.
- In the General Security section, click on **Configure service accounts**.
- Select the **Application Pool name** from the drop-down as noted in the step above.

- Take note of the domain account configured for this application pool. This is the identity that needs to be granted access to when activating Nintex Workflow for Project Server 2010.

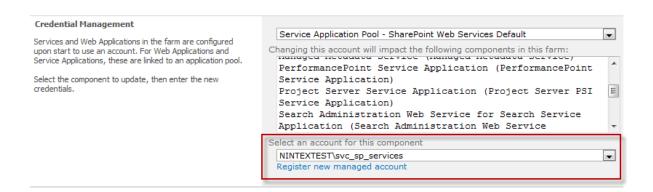Note: If the Nintex Workflow 2010 configuration database in the Database settings page is modified, you may need to repeat these configuration steps to ensure permissions are set up correctly.

Workflow failure

If a workflow fails or a proposal fails to create because of a workflow failure, the SharePoint logs will have additional information to diagnose the error. By default, the SharePoint logs are found at "C:\Program Files\Common Files\Microsoft Shared\Web Server Extensions\14\LOGS". Workflow messages will be logged with a category of "Workflow Infrastructure".

1.2 Associating a Project Server Workflow with an Enterprise Project Type

In order to use a Project Server workflow created with Nintex Workflow for Project Server 2010, the workflow must be associated to an Enterprise Project Type (EPT). A workflow can be associated with multiple EPTs. When a workflow is modified and a new version published, the EPT will be updated to use the most recent workflow definition, however any projects already undergoing a workflow process will continue to use the version of the workflow that it was started with.

To associate the workflow with an EPT:

- Navigate to the Project Web Application site, in the Quick Launch navigation, click on **Server Settings**.
- In the **Workflow and Project Detail Pages** section, click on **Enterprise Project Types**.

- Select the EPT from the list that will be associated to the workflow and in the **Name** column, click on the EPT link OR click on **New Enterprise Project Type** to create a new EPT.

- In the **Enterprise Project Type** page, locate the **Site Workflow Association** drop-down, select the the workflow that is to be associated with the EPT.

Name

Specify a name for the Enterprise Project Type. This is the name users will see while you are creating new projects in Project Center.

* Name:

Enterprise Project Type

Description

Specify a description for the Enterprise Project Type. This information will display in the tool tip when users rest the pointer on the name while creating new projects in Project Center.

Description: (max 512 characters)

Site Workflow Association

Choose a site workflow association for this Project Workflow. For the 'Site Workflow' to appear in the drop down, it has to be installed and configured on the Project Server machine.
Note: Once you select an association it cannot be changed"

Site Workflow Association:

Sample Proposal Workflow NW
Basic Branching Workflow
Sample Proposal Workflow
Sample Proposal Workflow NW
Single Step Approval
Single Step Approval Workflow
No Workflow

- Click on the **Save** button once completed.

1.3 Associating an event driven workflow

In order to start a Nintex workflow based on an event happening in Microsoft Project Server (i.e. when a project is published), an event driven workflow must be created and then associated to the specific Microsoft Project Server event. To associate an event driven workflow with a Microsoft Project Server event:

- Ensure that the workflow that is to be started when the event happens in Microsoft Project Server has been created. Refer to Creating an event driven workflow for more information.
- Navigate to the Manage Event Driven Workflows page in the Project Web App (PWA) site.
- In the ribbon, click on the **Create** button.

The **Attach a workflow to an event** dialog:

- o **Event**: Select the Project Server event to associate the workflow to. When this event occurs in Project Server, the **Workflow** specified will be started.
- o **Workflow**: Select the workflow to start when the Microsoft Project Server event happens. Only event driven workflows are listed.
- o **Description**: Additional notes about the association.
- o **Enabled**: Checking the checkbox will enable this event driven workflow association to run when the event happens.

When an event driven workflow is modified and a new version published, the Microsoft Project Server event will be updated to use the most recent workflow definition, however any event driven workflows currently in progress (have already commenced but not yet completed) will continue to use the version of the workflow that it was started with.

Note: Not all Project Server events are available when associating an event driven workflow to an event. Every event in Project Server has two corresponding handlers, one that triggers before the action has completed (e.g. ProjectPublishing) and one that triggers after the action has taken place (e.g. ProjectPublished). Workflows can only be associated to events that trigger after the action has taken place.

1.4 Creating an event driven workflow

An event driven workflow is a workflow associated to an event(s) in Microsoft Project Server. When an event is triggered in Microsoft Project Server, the workflow associated to the event will automatically start.

Event driven workflow options are accessed from the Manage event driven workflows page in the Project Web App (PWA) site.

To create an event driven workflow:

- In the Manage event driven workflows page, click on **New**. Refer to Getting started with the Nintex Workflow designer on how to create a workflow.

When designing an event driven workflow, use the Retrieve event data action to retrieve the data that Microsoft Project Server provides to an event, when that event is triggered.

For example, when projects are published an event driven workflow can be triggered to start. To identify which specific project was published, the Retrieve event data action can be used to retrieve the GUID of the project. The project GUID can then be used to query the project that was just published to ensure that the project has been baselined or resources added are of enterprise type.

To associate an event driven workflow to a Microsoft Project Server event, refer to Associating an event driven workflow for more information.

1.5 Database setup

The **Database setup** page is used to manage any changes to the Nintex Workflow 2010 databases required for Nintex Workflow for Project Server 2010.

The page displays the version of the Nintex Workflow for Project Server components within the Nintex Workflow configuration database and content database(s).

After installing / upgrading Nintex Workflow for Project Server, if the components in any Nintex Workflow 2010 database are out of date or if the databases require an update, the component version number will be displayed in red and the **Update now** hyperlink will be available.

Click on the **Update now** link to apply the update.

1.6 Manage Connections

The **Manage connections** page provides the option for an administrator to preconfigure a Project Server connection to a Project Web App (PWA) site within the same server farm. The preconfigured connection can be used in the Update project properties and Query Project Server actions as an alternative to providing all the connection details in the action.

All available connections are listed on the **Manage connections** page.

To navigate to the **Manage connections** page:

- Navigate to **SharePoint Central Administration**.
- In the **Quick Launch**, click on **Nintex Workflow Management**, click on **Manage connections**.

To create a new Project Server connection to a PWA site:

- Navigate to the **Manage connections** page.
- In the Ribbon, click on the **New** button.

The **Add Project Server Connection** dialog:

- **Name**: The name of the Project Server connection that will be displayed when selecting a connection to use in the [Update project properties](#) or [Query Project Server](#) actions.
- **Description**: Additional notes about the Project Server connection.
- **Key**: The key is a unique identifier for this connection. It cannot be changed after the connection is created. Workflow designers will not see this value within the actions.
- **Project Server URL**: The URL to the PWA site (within the same server farm) to connect to.
- **Username**: The username to use to connect to the PWA site. Select the authentication mode to use to connect to the PWA site.

  Note: The connection must be verified before it can be used. The **Verify connection** button retrieves and stores the username's Project Server Resource GUID. The Resource GUID is used to connect to Project Server when an action is configured to use the connection. The password provided in verifying the connection is only used once to retrieve the Resource GUID and is not stored by Nintex Workflow for Project Server 2010.

  If the connection is not verified, a warning icon is displayed in the main **Manage connections** page.

- **Permissions**: Specify who has permissions to use this connection when designing a workflow.

  By default, the permission is set to "Everyone".

  If the permissions are changed, the connection will have to be verified again.

  Connections that have permissions applied will display a padlock icon in the main **Manage connections** page.

  Note: If an existing workflow is modified by a workflow designer who does not have permissions to use the connection being utilised in that workflow, the workflow designer will still be able to edit the workflow and the particular action without knowing or disrupting the connection details, however they will be unable to publish the workflow.

  They will not be able to choose connections to which they do not have permissions to use in new workflow actions.

  The permission check for a connection is performed while the workflow is being designed. Therefore, if the permissions for a pre-configured Project Server connection is changed, a workflow that is already using the connection will continue to run.

1.7 Manage event driven workflows

An event driven workflow is a workflow associated to an event(s) in Microsoft Project Server. When an event is triggered in Microsoft Project Server, the workflow associated to the event will start automatically.

The **Manage event driven workflows** page allows a workflow designer to create and associate workflows with Microsoft Project Server events, modify the workflows and its associations, and to view the workflow history.

Managing event driven workflows

To manage event driven workflows for a Project Web Application (PWA) site:

- Navigate to the PWA site.
- Activate the **Site Actions** menu, hover over **Project Server Workflow**, click on **Manage Event Driven Workflows**.

The menu ribbon

Event Association

- **Create**: Provides the options to associate a workflow to a Microsoft Project Server event. Refer to [Associating an event driven workflow](#) for more information.
- **Modify**: Selecting an existing association and clicking **Modify** will provide the options to edit the event driven workflow association.
- **Delete**: Selecting an existing association and clicking **Delete** will remove the workflow from starting when the event occurs.
- **Workflow History**: Selecting an existing association and clicking **Workflow History** will display all the currently running, completed, and cancelled & errored workflows that have been triggered for a particular Microsoft Project Server event.

Event Driven Workflow

- **New**: Clicking **New** will open the Nintex Workflow designer in the current window. Creating an event driven workflow is the same as designing all other workflows in Nintex Workflow, difference being the workflow is triggered from a Project Server event rather than a SharePoint list item or task. Refer to [Creating an event driven workflow](#) for more information.
- **Edit**: Selecting an existing association and clicking **Edit** will open the workflow associated to the event in the Nintex Workflow designer.
- **Preview**: Selecting an existing association and clicking **Preview** will open a view only mode of the workflow associated to the event.
- **Manage Workflows**: Displays a list of all event driven workflows that have been saved and published.

1.8 Manage Stage Order

Use the **Manage Stage Order** to re-order the Stages and Phases which will be displayed in the Project Server Workflow Status page.

When a Project Server workflow is published, the Stages that are used in the workflow are added to the Project Server Workflow Status page. The Stages in the workflow are ordered top to bottom moving from left to right and therefore may not appear in the desired order within the Project Server Workflow Status page for users to understand.

To re-order the Stage and Phases:

- In the Workflow Designer, in the Ribbon, click on **Workflow Settings**.
- In the **Workflow Settings** dialog, click on **Manage Stage Order**.

- In the **Manage Stage Order** dialog use the **up and down arrows** to order the Stages or Phases as required.

Manage stage display order ✕

Manage Stage Order

💾 Save   ❌ Cancel   ❓ Help

Commit   Help

⬆ ⬇	**Create**	Move stage order	
	Initial Proposal Details	⬆	⬇
	Initial Review	⬆	⬇
	Automated Rejection	⬆	⬇
	Proposal Details	⬆	⬇
	Selection Review	⬆	⬇
	Rejected	⬆	⬇
⬆ ⬇	**Select**	Move stage order	
	Proposal Selection	⬆	⬇
	Not Selected	⬆	⬇
⬆ ⬇	**Plan**	Move stage order	
	Resource Planning	⬆	⬇
	Scheduling	⬆	⬇
	Cancelled	⬆	⬇
⬆ ⬇	**Manage**	Move stage order	
	Execution	⬆	⬇
⬆ ⬇	**Finished**	Move stage order	
	Final Assessment	⬆	⬇
	Completed	⬆	⬇

Note: A Stage can only be reordered within its Phase.

The changes made only apply to the order that appears in the Project Server Workflow Status page. The changes do not alter the display or running order configured on the workflow designer canvas.

Changes are not retrospective, the existing Stage and Phase order will be shown in the Project Workflow Status page for ran or currently running workflows. Only after the workflow has been re-published and new workflow started will new Stage and Phase order be picked up and appear in the Project Server Workflow Status page.

1.9 Microsoft Office Project Server 2010 References

References for Microsoft Project Server 2010 workflow

MSDN Workflow and Demand Management
http://msdn.microsoft.com/en-us/library/ee767704.aspx

Blog: Project 2010: Introducing Demand Management
http://blogs.msdn.com/b/project/archive/2009/11/13/project-2010-introducing-demand-management.aspx

TechNet web cast: Project Server 2010 Demand Management
Part 1: #13490
Part 2: #13493
Part 3: #13491
Part 4: #13492

1.10 Project Server Workflow Security Settings

To design workflows for Project Server 2010, the user must have the following Project Server global permissions assigned:

- Change Workflow
- Manage Workflow and Project Detail Pages

Admin		
About Microsoft Project Server	☐	☐
Change Workflow	☑	☐
Clean Up Project Server Database	☐	☐
Manage Active Directory Settings	☐	☐
Manage Check-Ins	☐	☐
Manage Cube Building Service	☐	☐
Manage Enterprise Calendars	☐	☐
Manage Enterprise Custom Fields	☐	☐
Manage Exchange Integration	☐	☐
Manage Gantt Chart and Grouping Formats	☐	☐
Manage Notification and Reminders	☐	☐
Manage Project Server Backup	☐	☐
Manage Project Server Restore	☐	☐
Manage Project Web App Views	☐	☐
Manage Queue	☐	☐
Manage Security	☐	☐
Manage Server Configuration	☐	☐
Manage Server Events	☐	☐
Manage SharePoint Foundation	☐	☐
Manage Site Services	☐	☐
Manage Users and Groups	☐	☐
Manage Workflow and Project Detail Pages	☑	☐

Refer to the Nintex Workflow security settings for more information on SharePoint security requirements.

1.11 Project Server Workflows

A Project Server workflow is a workflow associated to an Enterprise Project Type.
When a new project is created based on the Enterprise Project Type, the assigned workflow will automatically begin.

Project Server workflow options are accessed from the Site Actions menu of a Project Web Access site.

To create a Project Server workflow:

- In the **Site Actions** menu, hover over **Project Server Workflow** and click on **Create Project Server workflow**. Refer to [Getting started with the Nintex Workflow designer](#) on how to create a workflow.

To associate a Project Server workflow to an Enterprise Project Type, refer to [Associating a Project Server Workflow with an Enterprise Project Type](#) for more information

To manage a Project Server workflow:

- In the **Site Actions** menu, hover over **Project Server Workflow** and click on **Manage Site Workflows**. Refer to [Managing Workflows](#) on how to manage workflows created using Nintex Workflow.

To view the Project Server workflow history:

- In the **Site Actions** menu, hover over **Project Server Workflow** and click on **View workflow history**. Refer to:
  - [Viewing Workflow History](#) on how to view the details of completed workflows.
  - [Viewing Workflow Status](#) on how to view the details of a running workflow.

Relationship to SharePoint workflow

A Project Server workflow is technically a SharePoint site workflow that contains workflow actions designed to interact with Project Server. For more information on site workflows, see the [site workflow help topic](#).

2 Workflow Actions

2.1 Change project type

This workflow action is used to change the enterprise project type (EPT) of the project that the workflow is associated with.

To use the workflow action:

- Locate the action in **Workflow Actions Toolbox** (located on the left hand-side);
  - Click on the **Category** listings to reveal the actions; *OR*
  - **Search** for the action using a keyword.
- Select the action, drag it onto the design canvas and drop it onto a design pearl.

Alternatively

- Left-clicking the pearl, mouse-over **Insert Action** and then the **Categories** to reveal the actions, click the required action from the list.

To change the settings used by the action:

- On the action's title click the down arrow to activate a drop-down
- Select **Configure**; *OR*
- Double-click the action's icon.

For more information on the other options in the drop-down, please refer to the [Getting started with the Nintex Workflow designer](#).

By changing the EPT of the current project:

- The currently running workflow will be terminated and the new workflow (corresponding to the new enterprise project type, if available) will start from the first stage. A workflow cancellation notification will be sent if configured in the Site Settings. For more information on setting workflow cancellation notification, refer to [Managing workflow error notification settings](#).
- Project data saved to this point will not be lost. The project data may not be directly visible depending on the status of the new workflow.

Options within this action

Enterprise Project Type

Set the enterprise project type (EPT) of the current project.

2.2 Compare project property

This workflow action can be used to compare a project property with a specified value. It will return true/false based on the comparison outcome.

To use the workflow action:

- Locate the action in **Workflow Actions Toolbox** (located on the left hand-side);
    - o Click on the **Category** listings to reveal the actions; *OR*
    - o **Search** for the action using a keyword.
- Select the action, drag it onto the design canvas and drop it onto a design pearl.

Alternatively

- Left-clicking the pearl, mouse-over **Insert Action** and then the **Categories** to reveal the actions, click the required action from the list.

To change the settings used by the action:

- On the action's title click the down arrow to activate a drop-down
- Select **Configure**; *OR*
- Double-click the action's icon.

For more information on the other options in the drop-down, please refer to the [Getting started with the Nintex Workflow designer](#).

Configure Action - Compare project property

General

Save	Cancel	Action	Labels	Common	Variables	Help
Commit		Settings			Variables	Help

Project property *   Please select ▾

Comparison operator *   ▾

Value *   Equals   Value ▾

Wait until value is set   ☐

Wait for the property to contain a value before doing the comparison.

Store result in *   ▾

Options within this action

Project property

The project property field to use for the comparison. To specify a custom value or to use the insert reference function, select **'Other value...'**.

Comparison operator

The condition for the comparison to be made between the **Project property** for the current project and the value.

Value

Enter the value manually or use Lookups to reference variables and reference fields.

Wait until value is set

Selecting this option causes the action to pause if the value is blank, until a user fills in the value for the **Project property** and presses the Submit button.

Store result in

The workflow variable that will store the result of the **Comparison**. The dropdown list will present the available Yes/No workflow variables and the stored value will reflect the result of the comparison.

To create a variable, click the **Variables** button. For more information, see Workflow variables.

2.3 Publish project

This workflow action is used to publish the project that the workflow is associated with.

To use the workflow action:

- Locate the action in **Workflow Actions Toolbox** (located on the left hand-side);
  - Click on the **Category** listings to reveal the actions; *OR*
  - **Search** for the action using a keyword.
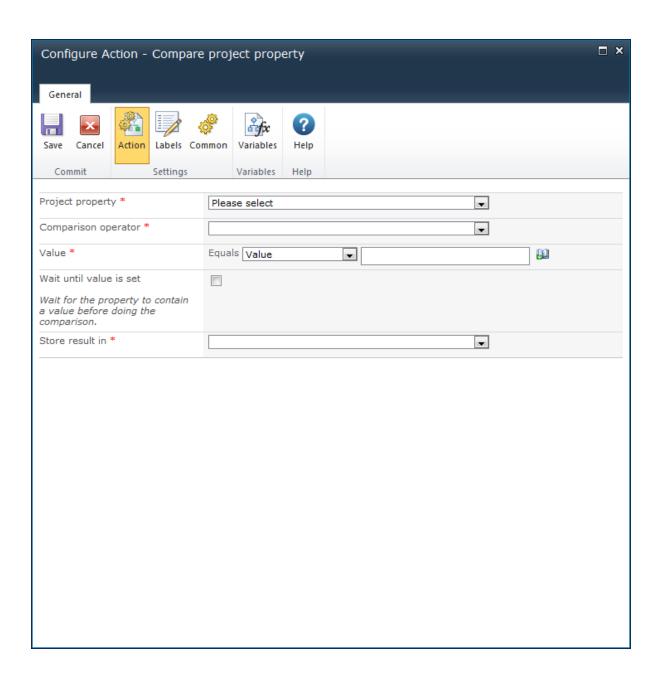- Select the action, drag it onto the design canvas and drop it onto a design pearl.

Alternatively

- Left-clicking the pearl, mouse-over **Insert Action** and then the **Categories** to reveal the actions, click the required action from the list.

To change the settings used by the action:

- On the action's title click the down arrow to activate a drop-down
- Select **Configure**; *OR*
- Double-click the action's icon.

For more information on the other options in the drop-down, please refer to the [Getting started with the Nintex Workflow designer](#).

Options within this action

Perform full publish
Removes any previous data saved for this project in the Published database before saving.

Wait for job completion
This option ensures that the workflow waits until the publish job is completed before moving onto the next step in the workflow. Project Server adds jobs to a queue, therefore a few minutes can elapse before a job has finished.

2.4 Query Project Server

This workflow action will retrieve data from Microsoft Project Server 2010 using the Project Server Interface (PSI).

Note: This action provides a direct interface to PSI methods that query or read data from Project Server. Familiarity with the PSI and Project Server data
structure methods is recommended when using this action.

To use the workflow action:

- Locate the action in **Workflow Actions Toolbox** (located on the left hand-side);
  - o Click on the **Category** listings to reveal the actions; *OR*
  - o **Search** for the action using a keyword.
- Select the action, drag it onto the design canvas and drop it onto a design pearl.

Alternatively

- Left-clicking the pearl, mouse-over **Insert Action** and then the **Categories** to reveal the actions, click the required action from the list.

To change the settings used by the action:

- On the action's title click the down arrow to activate a drop-down
- Select **Configure**; *OR*
- Double-click the action's icon.

For more information on the other options in the drop-down, please refer to the [Getting started with the Nintex Workflow designer](#).

Options for this action

Project Server connection

Select an available connection or configure a new connection to a Project Web App (PWA) site within the same server farm. An administrator can preconfigure a connection to a PWA site(s) in the [Manage Connections](#).

If configuring a new connection:

- **Project Server URL**: The URL to the PWA site (within the same server farm) to connect to.
- **Username**: The username to use to connect to the PWA site with.
- **Password**: The password for the username specified.
- **Authentication**: Select the authentication mode to use to connect to the PWA site.

Method

Select the PSI web service type and the specific method in which to retrieve the data from. The return type of the method is displayed under the method name.

Input parameters

Some PSI methods allow input parameters to be specified. Depending on the method, the input parameters may or may not need to be specified for the method to return relevant data. The data type of each parameter is displayed next to the parameter name. Hover the mouse cursor over the data type name to see further details.

Filter

If the PSI method returns a data set, a list of tables contained in the data set is presented and one table can be chosen to query. Some data sets only contain a single table. A filter is then configured to determine which rows of the data table are to be returned. The store results section is used to determine which columns of the selected rows should be stored into variables. If the filter evaluates to more than one row, Collection variables must be used to retrieve the value from each row, otherwise only the value from the first row that matches the filter will be stored. Please note that a table in a Project Server data set does not always contain values in every column, it is dependent on which PSI method is being called.

Filters are evaluated in order from the first filter sequentially down to the last filter.

Store results

The results returned can either be a single value or a collection of values which can then be stored in a collection variable.

2.5 Read project property

This workflow action can be used to retrieve the specified project property and store the value into a workflow variable.

To use the workflow action:

- Locate the action in **Workflow Actions Toolbox** (located on the left hand-side);
  - Click on the **Category** listings to reveal the actions; *OR*
  - **Search** for the action using a keyword.
- Select the action, drag it onto the design canvas and drop it onto a design pearl.

Alternatively

- Left-clicking the pearl, mouse-over **Insert Action** and then the **Categories** to reveal the actions, click the required action from the list.

To change the settings used by the action:

- On the action's title click the down arrow to activate a drop-down
- Select **Configure**; *OR*
- Double-click the action's icon.

For more information on the other options in the drop-down, please refer to the Getting started with the Nintex Workflow designer.

Configure Action - Read project property

General

Save | Cancel | Action | Labels | Common | Variables | Help

Commit | Settings | Variables | Help

Project property *   Please select

Store result in *

Options within this action

Project property

The project property field to retrieve the value from. To specify a custom value or to use the insert reference function, select **'Other value...'**.

Store result in

Select the workflow variable to store the value retrieved from the project property selected for the current project.

Note: The workflow action will try to convert the retrieved value into the selected variable data type.

2.6 Read project security group

This workflow action can be used to retrieve the users who are members of a Project Server security group.

To use the workflow action:

- Locate the action in **Workflow Actions Toolbox** (located on the left hand-side);
    - Click on the **Category** listings to reveal the actions; *OR*
    - **Search** for the action using a keyword.
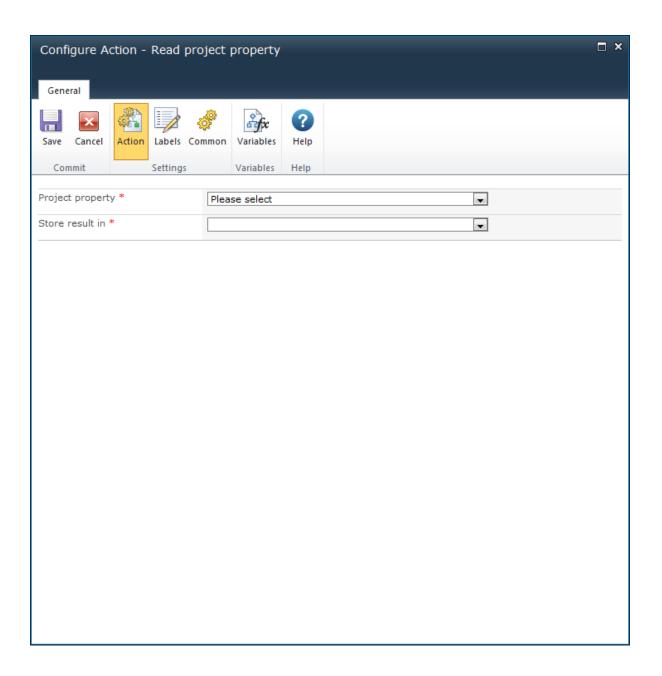- Select the action, drag it onto the design canvas and drop it onto a design pearl.

Alternatively

- Left-clicking the pearl, mouse-over **Insert Action** and then the **Categories** to reveal the actions, click the required action from the list.

To change the settings used by the action:

- On the action's title click the down arrow to activate a drop-down
- Select **Configure**; *OR*
- Double-click the action's icon.

For more information on the other options in the drop-down, please refer to the Getting started with the Nintex Workflow designer.

Configure Action - Read project security group

General

Save	Cancel	Action	Labels	Common	Variables	Help

Commit | Settings | Variables | Help

Group name * | Please select ▼

Apply department filter to results | ☐

Determine whether the results should only include users who are in the same department as the current project.

Store result in * | ▼

Options within this action

Group name

The Project Server security group field to retrieve a list of all the users from. To specify a custom value or to use the [insert reference function](#), select **'Other value...'**.

Apply department filter to results

Selecting this option will filter out any users who are not in the same department as the current project. The department of the current project is specified when the project is created.

Store result in

Select the [workflow variable](#) to store the users retrieved from the specified project server security group. To create a variable, click the Variables button.

The results can be stored in a text variable (semicolon delimited list) or a collection.

2.7 Retrieve event data

This workflow action provides the ability to retrieve information that is provided by Microsoft Project Server when an event is triggered. This workflow action can only be used in [event driven workflows](#).

For example, when projects are published an event driven workflow can be triggered to start. To identify which specific project was published, the **Retrieve event data** action can be used to retrieve the GUID of the project. The project GUID can then be used to query the project that was just published to ensure that the project has been baselined or resources added are of enterprise type.

Depending on the event triggered in Microsoft Project Server, specific information is included which can be obtained using the Retrieve event data action.

To use the workflow action:

- Locate the action in **Workflow Actions Toolbox** (located on the left hand-side);
  - Click on the **Category** listings to reveal the actions; *OR*
  - **Search** for the action using a keyword.
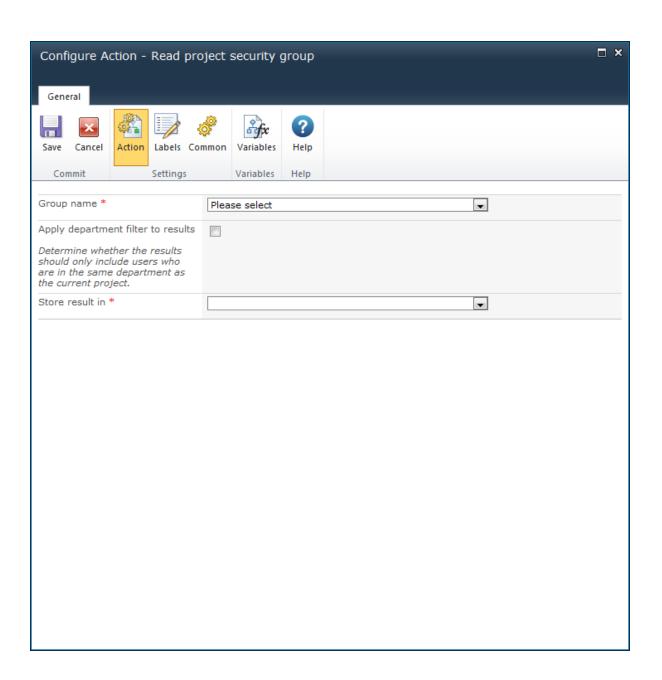- Select the action, drag it onto the design canvas and drop it onto a design pearl.

Alternatively

- Left-clicking the pearl, mouse-over **Insert Action** and then the **Categories** to reveal the actions, click the required action from the list.

To change the settings used by the action:

- On the action's title click the down arrow to activate a drop-down
- Select **Configure**; *OR*
- Double-click the action's icon.

For more information on the other options in the drop-down, please refer to the [Getting started with the Nintex Workflow designer](#).

Options for this action

Event

Select the Microsoft Project Server event type and the specific event in which to retrieve the data from.

Select the type of data to retrieve by selecting **Property** or **Dataset**. A single Retrieve event data action cannot retrieve both the property data and dataset data within a single action; separate actions are required to achieve this.

Note: The options for the type of data (i.e. Property, Dataset) that can be retrieved is dependent on the Microsoft Project Server event selected.

Data to retrieve

Select the data to be retrieved. More than one data to retrieve can be selected. When a data is selected, a **store to variable** field is added to the dialog to allow a workflow variable to be specified. To remove a data to retrieve, click on ✕.

If the action is retrieving data from a data set, a list of tables contained in the data set is presented and one table can be chosen to query. Some data sets only contain a single table. A filter can then be configured to determine which rows within the table are to be returned.

Note: Filters are evaluated in order from the first filter sequentially down to the last filter.

The store results section is used to determine which columns of the selected rows should be stored into variables. If the filter evaluates to more than one row, collection variables must be used to retrieve the value from each row, otherwise only the value from the first row that matches the filter will be stored.

Note: A table in a Project Server data set does not always contain values in every column, it is dependent on which event is being used.

2.8 Set project stage

This workflow action can be used to move the project to the next stage.

To use the workflow action:

- Locate the action in **Workflow Actions Toolbox** (located on the left hand-side);
  - Click on the **Category** listings to reveal the actions; *OR*
  - **Search** for the action using a keyword.
- Select the action, drag it onto the design canvas and drop it onto a design pearl.

Alternatively

- Left-clicking the pearl, mouse-over **Insert Action** and then the **Categories** to reveal the actions, click the required action from the list.

To change the settings used by the action:

- On the action's title click the down arrow to activate a drop-down
- Select **Configure**; *OR*
- Double-click the action's icon.

For more information on the other options in the drop-down, please refer to the [Getting started with the Nintex Workflow designer](#).

Configure Action - Set project stage

General

| Save | Cancel | Action | Labels | Common | Variables | Help |

Commit   Settings   Variables   Help

Stage *

Always wait

Determines whether this action should always wait for a submit command at this stage even if there is no required fields.

Create project stage

Options within this action

Stage

Sets the project to the specified **Stage**.

Note: Once the project is at this **Stage**, any Project Detail Pages (PDP) associated with the stage will be made available for users to complete.

> PDP's containing 'required' fields - when Submit is clicked Project Server will check if the PDP's with required fields have been completed, if so the workflow will move to the next stage, if not the workflow will wait.

> PDP's containing no 'required' fields - the workflow will pass through a Stage where there are PDP's with no 'required' fields, unless the Always wait option has been ticked in which case it will stop and wait until the user clicks Submit before moving to the next stage (see below).

The 'Status Info' column on the Project Server workflow status stages view is automatically updated when this action begins executing.

Important: Each **Stage** can only be used once in a workflow. The workflow will fail to publish if a **Stage** is used more than once.

Always wait

Selecting this option determines whether this action should always wait for a Submit command at this Stage even if there are no required fields within the PDP's.

Create project stage

This allows the creatation of a new custom **Stage** while designing the workflow.

Note: Once a new Stage has been created, the refresh button must be clicked before it will appear in the Stage option.

2.9 Set status information

This workflow action can be used to set the State or Status Information for the current (or a previous) Stage.

To use the workflow action:

- Locate the action in **Workflow Actions Toolbox** (located on the left hand-side);
  - Click on the **Category** listings to reveal the actions; *OR*
  - **Search** for the action using a keyword.
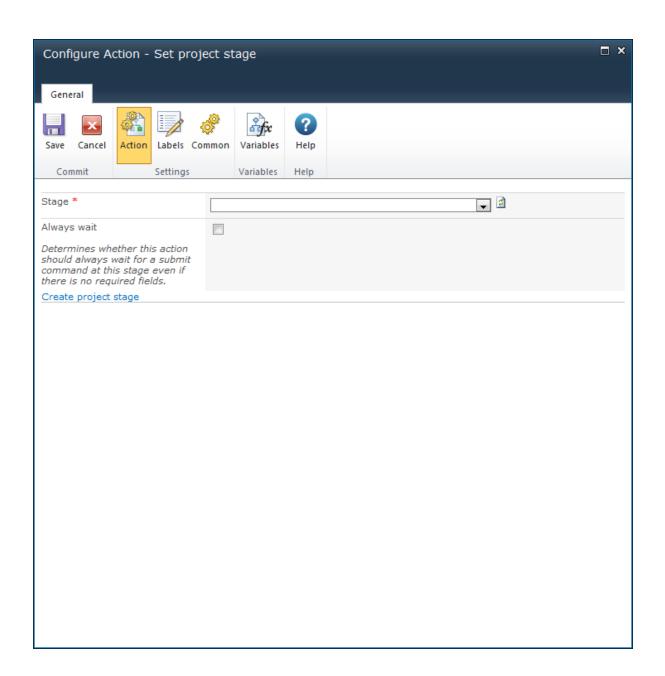- Select the action, drag it onto the design canvas and drop it onto a design pearl.

Alternatively

- Left-clicking the pearl, mouse-over **Insert Action** and then the **Categories** to reveal the actions, click the required action from the list.

To change the settings used by the action:

- On the action's title click the down arrow to activate a drop-down
- Select **Configure**; *OR*
- Double-click the action's icon.

For more information on the other options in the drop-down, please refer to the [Getting started with the Nintex Workflow designer](#).

Options within this action

Stage

Select the **Stage** for which the **State** or **Status Information** are to be set.

Note: The action does not contain validation to prevent a workflow designer from selecting a State or Status Information that has not been reached, as a result if the action tries to set the State or Status Information of a Stage that has not yet been reached in the workflow, the workflow will error. See Viewing workflow status for more information on viewing workflow errors.

State

Select the required State for the project Stage.

Note: The State column can only be set for the current Stage. The **State** option must be left as **Leave current state** when updating a previously completed **Stage**.

Status information

Updates the 'Status Information' column in the Project Server workflow status for the current (or a previous) stage.

Specify the **Status information** to be displayed by manually entering the value or use the insert reference feature.

This text also displays in Project Server on the main section on the 'Workflow Status' page of the current project under the heading 'Workflow Stage Status'.

Select the **Append to existing status** option to add to the existing state information. The Status Information is also updated automatically by the Set project stage action. If this option is not selected the Status Information added by the Set project stage action will be overwritten.

2.10 Update project properties

This workflow action can be used to update the value of a specified project property or custom field for a project in Microsoft Project Server. This action is different from the Update project property action as it can be used in all workflow types (site, list, event driven) including Project Server workflows.
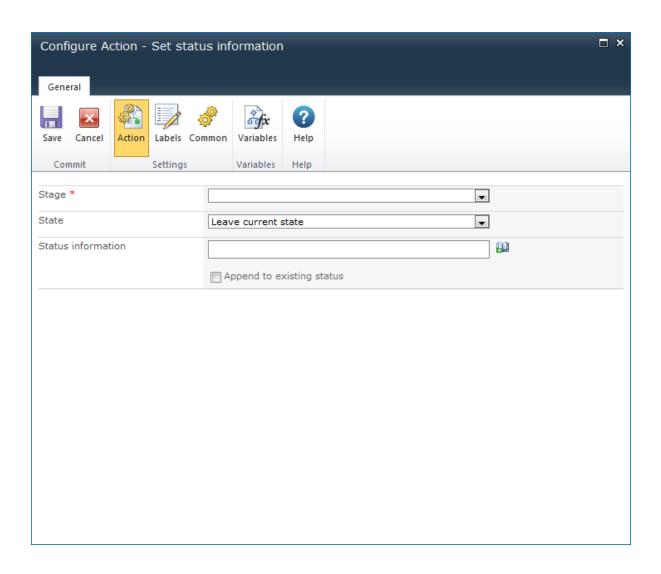
To use the workflow action:

- Locate the action in **Workflow Actions Toolbox** (located on the left hand-side);
    - Click on the **Category** listings to reveal the actions; *OR*
    - **Search** for the action using a keyword.
- Select the action, drag it onto the design canvas and drop it onto a design pearl.

Alternatively

- Left-clicking the pearl, mouse-over **Insert Action** and then the **Categories** to reveal the actions, click the required action from the list.

To change the settings used by the action:

- On the action's title click the down arrow to activate a drop-down
- Select **Configure**; *OR*
- Double-click the action's icon.

For more information on the other options in the drop-down, please refer to the [Getting started with the Nintex Workflow designer](#).

Options within this action

Project Server connection

Select an available connection or configure a new connection to a Project Web App (PWA) site within the same server farm. An administrator can preconfigure a connection to a PWA site(s) in the Manage Connections.

If configuring a new connection:

- **Project Server URL**: The URL to the PWA site (within the same server farm) to connect to.
- **Username**: The username to use to connect to the PWA site with.
- **Password**: The password for the username specified.
- Authentication: Select the authentication mode to use to connect to the PWA site.

Project name

Specify the name of the project in which to update the value of a specified project property or custom field.

Note: If using this action within a Project Server workflow, use the insert reference function, and select Context Item Display Name to get the name of the project that the workflow is currently running on.

Publish after update

This option publishes the project after the project property or custom field is updated.

Wait for job completion

This option ensures that the workflow waits until the publish job is completed before moving onto the next step in the workflow. Project Server adds jobs to a queue, therefore a few minutes can elapse before a job has finished.

Project property

Select the project property or custom field to be updated. More than one project property or custom field can be selected. When a project property is selected, a context data lookup for the selected project property is added to the dialog to allow a value to be specified. The context data lookup also allows a value for a project property to be removed by selecting 'Remove Value'.

To remove a project property that has been selected, click on ✕ .

Note: If a project property's Behaviour is set as 'Behaviour controlled by workflow'; the property will not be updated by the Nintex Workflow.

2.11 Update project property

This workflow action can be used to update the value of a specified project property or custom field.

To use the workflow action:

- Locate the action in **Workflow Actions Toolbox** (located on the left hand-side);
  - Click on the **Category** listings to reveal the actions; *OR*
  - **Search** for the action using a keyword.
- Select the action, drag it onto the design canvas and drop it onto a design pearl.

Alternatively

- Left-clicking the pearl, mouse-over **Insert Action** and then the **Categories** to reveal the actions, click the required action from the list.

To change the settings used by the action:

- On the action's title click the down arrow to activate a drop-down
- Select **Configure**; *OR*
- Double-click the action's icon.

For more information on the other options in the drop-down, please refer to the Getting started with the Nintex Workflow designer.

Configure Action - Update project property

General

Save	Cancel	Action	Labels	Common	Variables	Help
Commit		Settings			Variables	Help

Project property *	Please select
Operation	◉ Update value ○ Remove value
Value *	Equals [Value ▾] [ ]
Max retries *	Equals [Value ▾] [5]
If the maximum retries is exceeded the field will not be updated.	

Options within this action

Project property

The project property field required to be updated for the current project. To specify a custom value or to use the insert reference function, select **'Other value...'**.

There are a number of field types in Project Server, including Lookup tables. This action updates each field type.

Operation

Select one of the following options:

Update value - updates the value of the specified project property.

Remove value - removes the value of the specified project property.

Value

Enter the value manually or use Lookups to reference variables and context data.

Max retries

The maximum number of times that the workflow action will try to update the project property. If the maximum retries is exceeded, the field will not be updated.

Note: The new value is only committed when the project is next submitted.

2.12 Wait for check in

This workflow action can be used to instruct the workflow to wait for the current project to be checked in before continuing to the next actions in the workflow.

To use the workflow action:

- Locate the action in **Workflow Actions Toolbox** (located on the left hand-side);
  - Click on the **Category** listings to reveal the actions; *OR*
  - **Search** for the action using a keyword.
- Select the action, drag it onto the design canvas and drop it onto a design pearl.

Alternatively

- Left-clicking the pearl, mouse-over **Insert Action** and then the **Categories** to reveal the actions, click the required action from the list.

To change the settings used by the action:

- On the action's title click the down arrow to activate a drop-down
- Select **Configure**; *OR*
- Double-click the action's icon.

For more information on the other options in the drop-down, please refer to the [Getting started with the Nintex Workflow designer](#).

The workflow will wait at this action until the project is 'Checked In'.

Note: There are no options to configure within this workflow action.

2.13 Wait for commit

This workflow action can be used to instruct the workflow to wait for the current project to be committed before continuing to the next actions in the workflow.

To use the workflow action:

- Locate the action in **Workflow Actions Toolbox** (located on the left hand-side);
    - Click on the **Category** listings to reveal the actions; *OR*
    - **Search** for the action using a keyword.
- Select the action, drag it onto the design canvas and drop it onto a design pearl.

Alternatively

- Left-clicking the pearl, mouse-over **Insert Action** and then the **Categories** to reveal the actions, click the required action from the list.

To change the settings used by the action:

- On the action's title click the down arrow to activate a drop-down
- Select **Configure**; *OR*
- Double-click the action's icon.

For more information on the other options in the drop-down, please refer to the Getting started with the Nintex Workflow designer.

The workflow will wait at this action until the project is 'Committed' after running through the 'Portfolio Analyses' section of Project Server.

Note: There are no options to configure within this workflow action.

2.14 Wait for submit

This workflow action can be used to instruct the workflow to wait for the current project to be submitted before continuing to the next actions in the workflow.

To use the workflow action:

- Locate the action in **Workflow Actions Toolbox** (located on the left hand-side);
  - o Click on the **Category** listings to reveal the actions; *OR*
  - o **Search** for the action using a keyword.
- Select the action, drag it onto the design canvas and drop it onto a design pearl.

Alternatively

- Left-clicking the pearl, mouse-over **Insert Action** and then the **Categories** to reveal the actions, click the required action from the list.

To change the settings used by the action:

- On the action's title click the down arrow to activate a drop-down
- Select **Configure**; *OR*
- Double-click the action's icon.

For more information on the other options in the drop-down, please refer to the [Getting started with the Nintex Workflow designer](#).

The workflow will wait at this action until the project is 'Submitted'.

Note: There are no options to configure within this workflow action.