

Tutorial : Event Driven Workflow



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Tutorial : Event Driven Workflow

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About this tutorial

Event driven workflows provide the ability to associate Nintex workflows with Microsoft Project Server events. Nintex workflows can be started based on events that happen within Project Server.

This tutorial will describe how to retrieve the enterprise resources that have a Booking Type of Proposed, which have been added as a resource to the project plan every time it is published.

After completion of this tutorial, you will know how to create an event driven workflow, use the *Retrieve event data* action within the workflow, and associate the workflow to a Microsoft Project Server event.

This tutorial assumes the user has basic knowledge of designing workflows in Project Server using Nintex Workflow for Project Server 2013. If not, please refer to tutorials available at <u>connect.nintex.com</u> for more information.



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Getting Started

Open Nintex Workflow for Project Server 2013 workflow designer and create a new event driven workflow.

- 1. Navigate to the **Project Web App** (PWA) site.
- 2. Click on the Settings icon, is > Nintex Workflow for Project Server > Manage Event Driven Workflows.

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	Nint	ex Workflow 2013	
Create Demand Management	Nint	ex Workflow for Project Server 🕨	
Workflow	Gett	ing Started	
Manage Demand Management Workflows	PWA	A Settings	
View Demand Management Workflow History			
Manage Event Driven Workflows			

3. In the Manage Event Driven Workflows Ribbon, click the **New** button to open the workflow designer.



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BROWSE MANAGE EVENT DRIVEN WORKFLOWS							
Create Modify	Delete	Workflow History	New	Edit	Preview	Manage Workflows	? Help
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New							
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Configure the workflow's settings and give the workflow a **Title** and **Description**.

4. In the Nintex Workflow 2013 Ribbon, click on the Workflow Settings button.

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File						Import/	/Export	Settings		View		Help	

- 5. In the Title, type "Get Proposed Enterprise Resources".
- 6. In the **Description**, type "This workflow will retrieve a list of enterprise resources with a booking type of proposed from the project plan".
- 7. Click Save when completed.



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Workflow Se	ttings						×	
WORKFLOW SE	TTINGS							
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Title and descrip	otion							
Title *		Get Proposed Enterpris	e Resour	ces				
Description		This workflow will retrie booking type of propo				ces with a		
Workflow option	ns							
Publish without v	validation							
Enable custom history messages		\checkmark						
Expected workflow duration		Click here to configure						
Task list		Workflow Tasks		~				
History list		NintexWorkflowHistory						



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Designing the Check Baseline Workflow

The event driven workflow will be associated with the Project Published event.

In order to identify which project was published, the *Retrieve event data* action will be added to the workflow to provide that information.

- 1. Navigate to the **Workflow Actions** toolbox and click the **Project Server** category to display the workflow actions specific to Project Server.
- 2. Drag and drop a **Retrieve event data** action onto the design canvas.
- 3. In the Retrieve event data drop-down menu, click Configure.
 - a. In the Event field, select Project; Published and Property
 - b. In the Data to retrieve field, select ProjectGuid and click Add.

Configure Ac	Configure Action - Retrieve event data							×
GENERAL								
Save Cancel	Action Labels	Common Variables	? Help					
Commit	Settings	Variables	Help					
Event *		Project Published			>			
		● Property ○ D	ataset					
Data to retrieve		ProjectGuid			Add			

Create a workflow variable to store the ProjectGuid.

- 4. In the Retrieve event data Ribbon, select Variables.
- 5. In the **Workflow Variables** dialog box, click **New.**
 - a. In the **Name** box, enter "ProjectGUID".
 - b. In the **Type** field, select **Single line of text**.

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c. Click Save and Close.



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6. In the ProjectGuid (Guid) field, select the workflow variable ProjectGUID. Click Save.

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Da	ata to retrieve			Please	select		Add	
Pr	ojectGuid (Gui	d)		Project	Guid		V	×

The next section describes the steps required to query the published project plan to retrieve list enterprise resources with a booking type of proposed.

- 7. Drag and drop a Query Project Server action onto the design canvas.
- 8. Configure the following settings:
 - a. In the **Project server connection** field, select **Configure new connection**.
 - b. Specify the connection details to your Project Web App (PWA) site in the Project Server connection fields. Click on Verify connection.



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Note: For more information on the Project Server connection and how to create a new Project Server connection to a PWA site, refer to the Help Files included in the product.

- c. In the Method field, select Project; ReadProject.
- d. In the projectUid (Guid) field, select the Insert reference function. In the Workflow Variables tab, locate the ProjectGUID variable. Click OK.
- e. In the dataStore (DataStoreEnum enum) field, select PublishedStore.
- f. In the Table field, select ProjectResource.

Configure Action - Query Project Server						
GENERAL						
Save Cancel Action Labels Common	Variables Run Now Help					
Commit Settings	Variables Run Now Help					
Project Server connection *	PWA					
Method *	Project 🗸					
	ReadProject 🗸					
	Data type returned: ProjectDataSet					
Input parameters						
projectUid (Guid)	ProjectGuid					
dataStore (DataStoreEnum enum)	PublishedStore 🗸					
Filter						
Table	ProjectResource 🗸					
	- Add column to filter					

- 9. In the Filter section, click on Add column to filter.
- 10. Configure the following settings:
 - a. In the Where the column field, select RES_BOOKING_TYPE and Equals.
 - b. In the third Where the column box, type "1".

c. Click on Add column to filter.



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Configure Action - Query Project Server							
GENERAL							
Save Cancel Action Labels Common	Variables Run Now Help						
Commit Settings	Variables Run Now Help						
Project Server connection *	PWA]					
Method *	Project 🗸]					
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	Data type returned: ProjectDataSet	Data type returned: ProjectDataSet					
Input parameters							
projectUid (Guid)	ProjectGuid						
dataStore (DataStoreEnum enum)	PublishedStore 🗸]					
Filter							
Table	ProjectResource 🗸]					
Where the column	RES_BOOKING_TYPE] ×					
	Equals]					
	1] 🗗					
Add column to filter							

- d. Select And in the drop-down menu.
- e. In the Where the column field, select RES_IS ENTERPRISE_RESOURCE and Equals.
- f. In the third Where the column box, type "True".



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Configure Action - Query Project	Configure Action - Query Project Server							
GENERAL								
Save Cancel Action Labels Common	Variables Run Now Help							
Commit Settings	Variables Run Now Help							
Project Server connection *	PWA	^						
Method *	Project 🗸							
	ReadProject 🗸							
	Data type returned: ProjectDataSet							
Input parameters								
projectUid (Guid)	ProjectGuid							
dataStore (DataStoreEnum enum)	PublishedStore							
Filter								
Table	ProjectResource 🗸							
Where the column	RES_BOOKING_TYPE	×						
	Equals							
	1							
	And 🔽							
Where the column	RES_IS_ENTERPRISE_RESOURCE	×						
	Equals							
	True							
	Add column to filter							

Create a workflow variable to store the list of resources that match the query configured above.

- 11. Select Variables in the Query Project Server Ribbon and select New.
 - a. In the **Name** box, type "ProjectResourcesGUID".
 - b. In the Type field, select Collection. Click Save and Close.



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Close Commit	New New	Delete Modify Actions	? Help	
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F	ProjectGu	iid		Single line of text
F	ProjectRe	sourcesGUID		Collection

- 12. In the Select column field, select RES_UID and click Add.
- 13. In the **RES_UID** field, select the **ProjectResourcesGUID** variable to store the list of resources that are returned by the query.
- 14. Click Save.



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Configure Action - Query Project Server					
GENERAL					
Save Cancel Action Labels Common	Variables Run Now Help				
Commit Settings	Variables Run Now Help				
projectUid (Guid)	ProjectGuid		^		
dataStore (DataStoreEnum enum)	PublishedStore	\checkmark			
Filter					
Table	ProjectResource	\checkmark			
Where the column	RES_BOOKING_TYPE	~	×		
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Where the column	RES_IS_ENTERPRISE_RESOURCE	×			
	Equals				
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🖶 Add column to filter					
Store results *					
Select column	Please select	Add			
ProjectResource					
RES_UID ProjectResourcesGUID					
Error handling			@ ~		

Next, retrieve and log the display name for each resource GUID that is in the ProjectResourcesGUID collection workflow variable in the workflow history list.

Create a workflow variable to store the individual Resource GUID of each resource from the ProjectResourcesGUID collection variable.

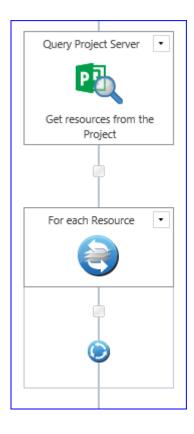
- 8. In the Nintex Workflow 2013 Ribbon, select the **Workflow Settings** drop-down menu and click on **Variables**.
- 9. In the Workflow Variables dialog box, click New.
 - a. In the Name box, type "ResourceGUID".
 - b. In the Type field, select Single line of text. Click Save and Close.





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Name		10113	nep	Туре	
Proje	ctGuid			Single line of text	
Proje	ctResources	GUID		Collection	
Resou	urceGUID			Single line of text	

10. Drag and drop a For each action onto the design canvas.



11. Configure the following settings:

- a. In the Target collection field, select ProjectResourcesGUID.
- b. In the Store result in field, select ResourcesGUID.

c. Click Save.



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Configure Act	Configure Action - For each						×
GENERAL							
Save Cancel	Action Labels	Ç Common	Variables	? Help			
Commit	Settings		Variables	Help			
Target collection	*	Project	Resources	GUID	×		
Store result in *		Resour	ceGUID		\checkmark		
Index					×		
Stop processing							
When this variable is not process any more					\checkmark		

12. Drag and drop a Query Project Server action within the For each action that was just configured.

For each Resource 🔹
Query Project Server 🔹
2
Get the resource's display
name
۲

13. Configure the following settings:

- d. In the **Project Server Connection** field, select **Configure new connection**.
- e. Specify the connection details to your Project Web App (PWA) site in the Project Server connection fields. Click on **Verify connection**.





Note: For more information on the Project Server connection, refer to the Help Files included in the product.

- f. In the Method field, select Resource; ReadResource.
- g. In the **resourceUid (Guid)**, select the **Insert reference** icon. In the **Workflow Variables** tab, locate the **ResourcesGUID** variable. Click **OK**.
- h. In the Table field, select Resources.

Configure Action - Query Project Server				
GENERAL				
Save Cancel	Variables Run Now Help			
Commit Settings	Variables Run Now Help			
Project Server connection *	PWA			
Method *	Resource			
	ReadResource			
	Data type returned: ResourceDataSet			
Input parameters				
resourceUid (Guid)	ResourceGUID			
Filter				
Table	Resources			
	Add column to filter			
Store results *				
Select column	Please select 🖌 🖌			
Error handling		0		

Create a workflow variable to be used for storing the resource name of the query configured above.

14. In the Query Project Server Ribbon, select Variables.

- 15. In the Workflow Variables dialog box, click New.
 - a. In the Name box, type "ResourceName".
 - b. In the **Type** field, select **Single line of text**.





c. Click Save and Close.

Workflow Va	riables			×
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Close New	Delete Modify	? Help		
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Name			Туре	
Project	Guid		Single line of text	
ProjectResourcesGUID			Collection	
ResourceGUID			Single line of text	
ResourceName			Single line of text	

- 16. In the Select column, select RES_NAME and click Add.
- 17. In the **RES_NAME** field, select the **ResourceName** variable. This will store the name of the resource that is returned by the query.
- 18. Click Save.



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GENERAL Image: Server connection * Project Server connection * PVA Method * Resource ReadResource Data type returned: ResourceDataSet Filter Table ResourceS Store results * Select column Please select Add Add Add Add Add Add Add A	Configure Action - Query Project Server						
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Project Server connection * PWA ▼ Method * Resource ▼ ReadResource ▼ Data type returned: ResourceDataSet Input parameters resourceUid (Guid) ResourceGUID Filter * Table Resources ▼ & Add column to filter * Store results * Select column Please select ✓ Add RES_NAME ResourceName ✓ Add		Variables Run Help					
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Store results * Select column Please select Add Resources RES_NAME ResourceName	Table	Resources 🗸					
Select column Please select Add Resources RES_NAME ResourceName X		🖶 Add column to filter					
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RES_NAME ResourceName	Select column	Please select 🖌 Add					
	Resources						
	RES_NAME	ResourceName					
Error handling	Error handling		0				

The next step is to log the Resource Name in the workflow history list.

19. Drag and drop a Log in history list action within the For each action below the Query Project Server action.

- 20. Configure the following settings:
 - a. Click the Insert Reference icon.
 - b. In the Workflow Variables tab, locate the ResourceName variable.
 - c. Click OK and Save.



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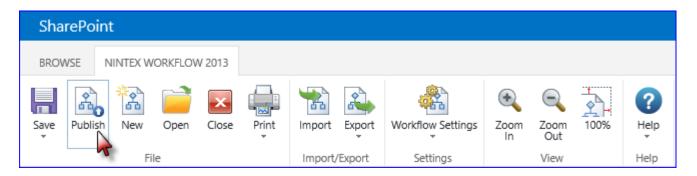


Configure Ac	Configure Action - Log in history list 🗖 🗙					
GENERAL						
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Commit	Settings	Variables	Help			
				Insert Reference 🖑		
{WorkflowVariab	le:ResourceName}					

Publish the workflow

The capabilities available will depend on the version of Nintex Workflow 2013 which is installed and licensed on the farm.

21. In the Nintex Workflow 2013 Ribbon, click Publish.



22. In the Set Title & Description dialog, click Submit and then OK.

23. In the Nintex Workflow 2013 Ribbon, click Close.



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Associating the Event Driven Workflow with a Microsoft Project Server event

The event driven workflow created in the section above must now be associated to the Project-Published event so that the workflow is automatically started when a Project-Published event occurs in Microsoft Project Server.

- 1. Navigate to the Project Web App (PWA) site.
- 2. Select the Settings icon, 🔯 > Nintex Workflow for Project Server > Manage Event Driven Workflows.
- 3. In the Manage Event Driven Workflows Ribbon, click Create.

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*	2	X	2	**	2	2		?	
Create	Modify	Delete	Workflow History	New	Edit	Preview	Manage Workflows	Help	
	Event Association Event Driv			en Workfl	ow	Help			

- 4. In the Associate a workflow to an event dialog, configure the following settings:
 - a. In the **Event** field, select **Project; Published**.
 - b. In the Workflow field, select Get Proposed Enterprise Resources.
 - c. In the **Description** field, type "Get proposed enterprise resources in the project plan".
 - d. Click Save when completed.



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Associate a workflow to	o an event	×
EVENT DRIVEN WORKFLOW ASSOC	TIATION	
Save Cancel Help		
Commit Help		
Adding a new event drive	en workflow association may require a few minutes to take effect.	~
Event * Workflow * Description	Project Image: Constraint of the project plan. Published Image: Constraint of the project plan. Get proposed enterprise resources in the project plan.	
Enabled		`

Next Steps

Quick steps to run the workflow:

- 1. Create a project plan and build the team for the project using enterprise resources.
- 2. Ensure that the resources' Booking Type is set to Proposed.

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- 3. Publish the project plan to Microsoft Project Server. (Note: The workflow will start when the publish job for this project has been completed.)
- 4. Open the Workflow History of the event driven workflow association:
 - a. Navigate to the **Project Web App** (PWA) site. Click on the **Settings** icon, **Project Server > Manage Event Driven Workflows.**
 - b. In the Project section, select the Get Proposed Enterprise Resources event from the list.
 - c. In the Manage Event Driven Workflows Ribbon, select Workflow History.



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BROWSE MANAGE EVENT DRIVEN W	RKFLOWS	
Create Modify Delete Workflow History	v Edit Preview Manage Help Workflows	
Event Association	Event Driven Workflow Help	
Projects	Project	
Approvals	Event Workflow	
Tasks	Published Get Proposed Enterprise Resource	s
Resources		

- 5. In the **Completed Workflows** section, click the link of the workflow that was most recently completed.
- 6. In the Workflow Information box, select Click here to show detailed view.

SharePoint			
BROWSE			
Projects	Project Web		Get Proposed Enterprise Resources
Approvals Tasks	Workfl	ow Information	
	<u> </u>		
Resources	Item:	Event driven workflow	
Reports	Workflow:	Get Proposed Enterprise Resources	Retrieve event data
	Initiator:	NWPS13-SPSiteAdmin	- A
EDIT LINKS	Started:	2/5/2013 9:04 AM	
	Status:	Completed 2/5/2013 9:04 AM	
		Click here to show detailed view	
			Query Project Server
			P

7. The list of the proposed enterprise resources will be displayed in the Workflow Messages section.



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