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# Gplus Adapter for Microsoft Dynamics 365 Administrator's Guide

How to use the Workflow Designer

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Workflow Designer features and workings.

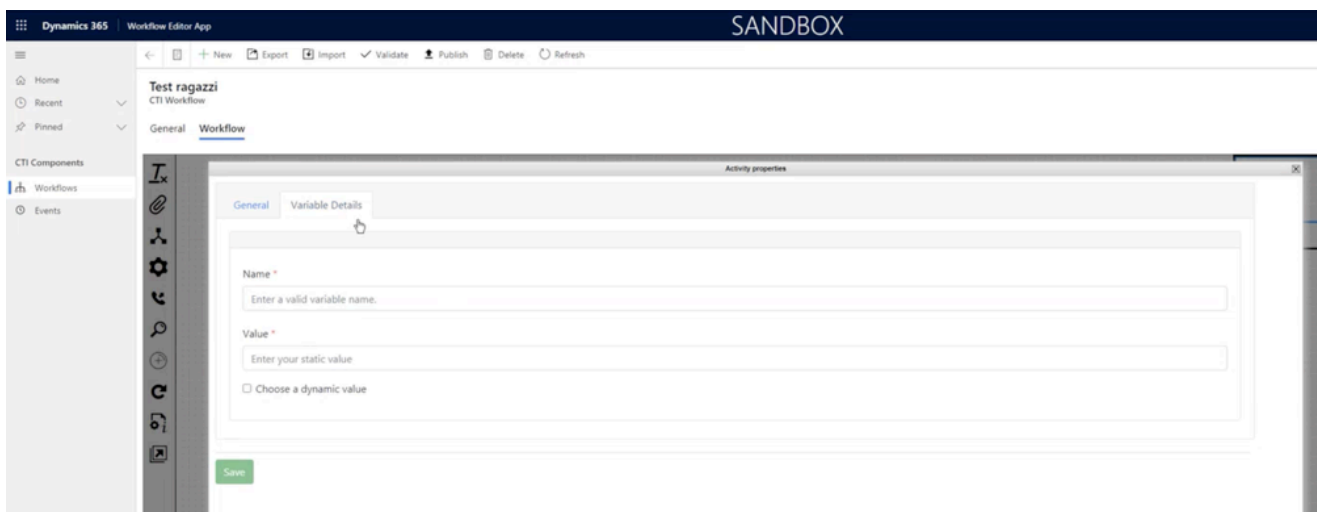
## Important

This section and all information related to the **Workflow Designer** only apply to Microsoft Dynamics 365 with **Channel Integration Framework (CIF) version 1.0**.

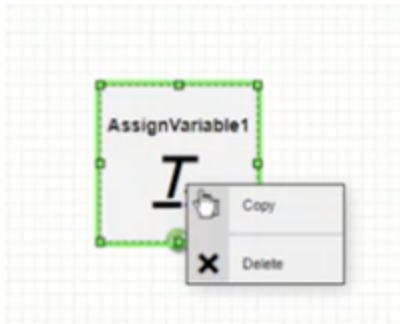
The Workflow Designer is a visualization of Workflows' components: each element is graphically rendered as a square tile, while links are in the form of arrows. Some tiles show several ports (for example true/false, 0/1/N), which can be linked to further tiles.

To start designing your Workflow, drag and drop any Activity you see in the left-side menu in the form of icons on the editor area.

When clicking a tile, it opens in a new dialog box with different tabs according to the Activity it represents. However, all tiles display the same General tab at first, where you can fill the same two fields: **Activity name** and **Description**. These names and descriptions should be helpful across your team to immediately recognize every Activity.



Right-clicking an Activity, you can duplicate it selecting **Copy** or delete it choosing **Delete**. Continue reading for in-depth information about Activities.



## Creating Workflows and Events

Before starting to use the Workflow Designer, you must get familiar with its two key elements:

- **Workflows**, where you drag and drop activities and draw their customization;
- **Events**, which exactly match events described through JavaScript and exchanged between CTI and Microsoft Dynamics 365.

If you want to design a Workflow, first you must create the related Event.

To create a new Event, click **+ New** and the related form will open. Provide a Name, a Description (optional), and a CTI Message Example, then click **Save**.

You can provide one of the following **Events triggered by the Adapter**:

Event	Description
onEventRingingInbound	An inbound call enters (before the Agent accepts the interaction).
onEventEstablishedInbound	The Agent accepts an inbound call and the

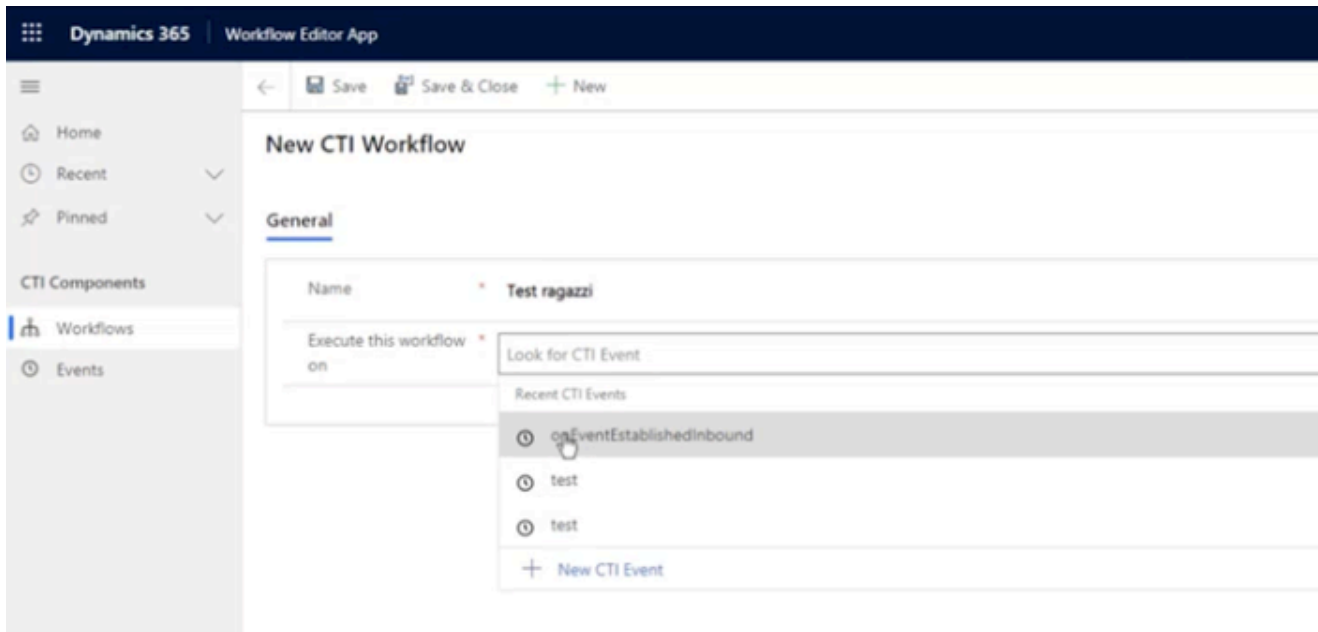
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Event	Description
	connection with the caller is established.
onEventReleasedInbound	The Agent ends an inbound call but can still add notes or modify details.
onEventMarkDoneInbound	The Agent totally completes an inbound call and the interaction is deleted from the widget.
onEventDialingOutbound	The Agent launches an outbound call (before the connection with the Contact is established).
onEventEstablishedOutbound	The Contact accepts an outbound call performed by the Agent and the connection is established.
onEventReleasedOutbound	The Agent (or the Contact) ends an outbound call but can still add notes or modify details.
onEventMarkDoneOutbound	The Agent totally completes an outbound call and the interaction is deleted from the widget.
onBeforeOutboundCallStart	Event triggered before an outbound call starts, which means before the onEventDialingOutbound event. Can be leveraged to dial numbers in a different format than the one saved on the CRM or attach custom CRM data before the outgoing call is effectively started.

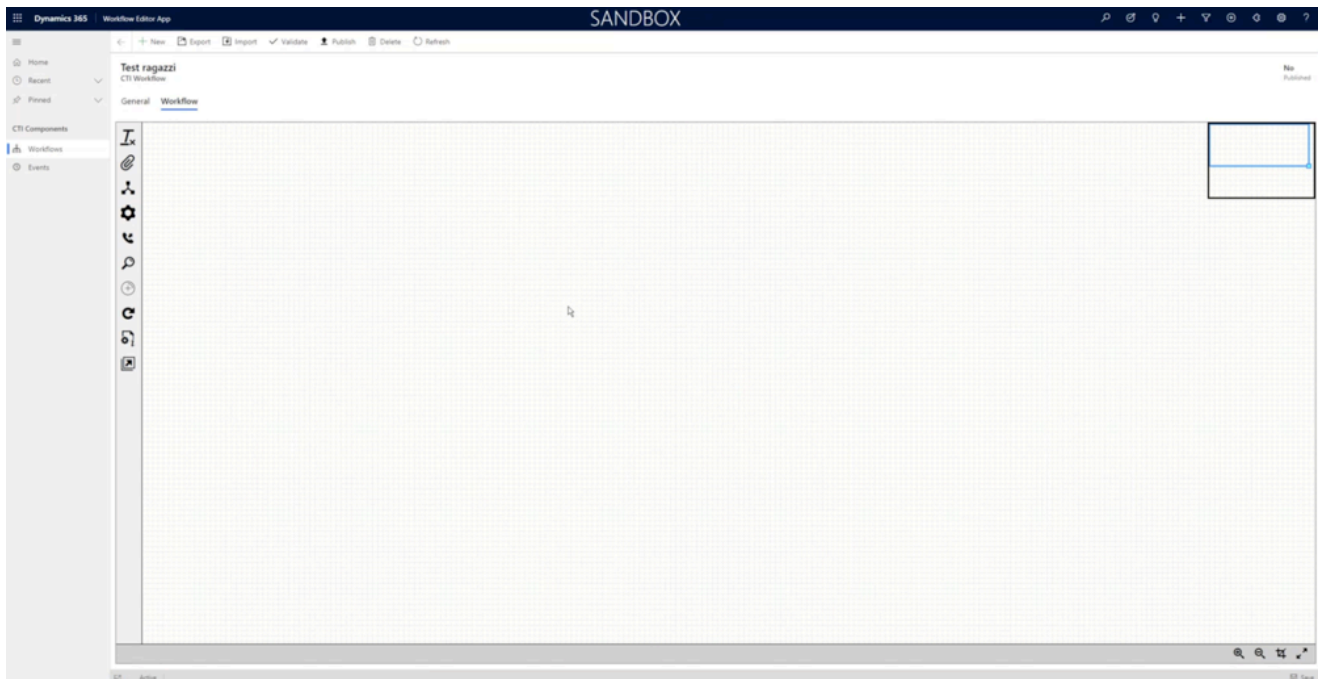
### Important

To activate the **onBeforeOutboundCallStart** event, you have to add "CustomWorkflowMakeCall" and set it to "true" when filling out the Workflow Designer's Custom Parameters field. In the case this parameter is missing or set to false, the onBeforeOutboundCallStart event will not be generated.

Once you have created the Event, you can proceed with an associated Workflow. To begin, click **+ New**, provide a Name and choose the associated Event.



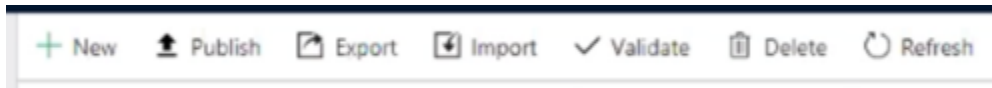
When you click **Save**, the Editor appears and displays the Workflow Editor area, where you can drag and drop the Activities. You can now start and design your Workflow.



After designing a Workflow, you can test its functioning with The Workflow Debugger.

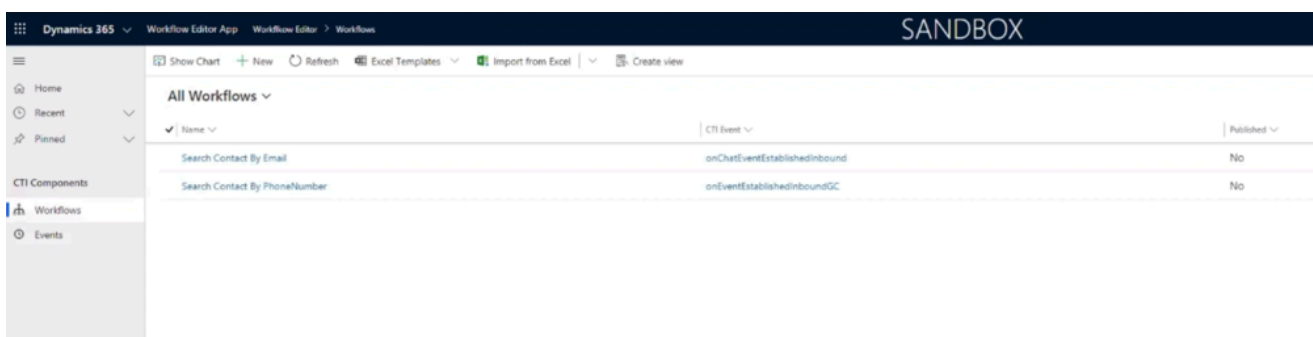
## The ribbon menu

When you open the actual Workflow Designer, a horizontal menu appears on top of the window: it is the ribbon menu, which displays all actions that can be performed with the Workflow you are designing.



Name	Description
Export	Exports a designed Workflow as an XML file.
Import	Imports Workflows previously saved as XML files. The Workflow will directly appear in the Workflow Designer.
Validate	Checks that the Workflow is logically accurate and ready to be published. The outcome is displayed in a dialog box.
Publish	Publishes the Workflow in the production stage: if the related Event happens, the Workflow is effectively run.
Delete	Deletes the Workflow. It is only displayed while the Workflow is still unpublished.
Unpublish	Unpublishes the Workflow from the production stage. It is only displayed after its publication.
Refresh	Refreshes the Workflow Designer.

To verify your Workflow's publication status, go into **Workflows** and make sure to be on the **All Workflows** view. In the table, you will see the name, associated Event, and publication status for each Workflow.

A screenshot of the Dynamics 365 Workflow Editor interface. The top bar shows 'Dynamics 365', 'Workflow Editor App', 'Workflow Editor', and 'Workflow'. The left sidebar has 'Home', 'Recent', 'Pinned', 'CTI Components', 'Workflows' (selected), and 'Events'. The main area is titled 'All Workflows' and contains a table with columns 'Name', 'CTI Event', and 'Published'. The table lists two workflows: 'Search Contact By Email' with event 'onChatEventEstablishedInbound' and status 'No', and 'Search Contact By PhoneNumber' with event 'onEventEstablishedInboundGC' and status 'No'. The top right of the main area says 'SANDBOX'.











### Important

When you save a Workflow, there is no automatic check on its name. Be careful: you can create several Workflows with the **same name** associated with the **same Event**.

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## The Activity menu

The Workflow Designer Activities can be divided into generic and CRM-specific:

Icon	Name	Type of Activity	Description
	Create a Workflow variable	Generic	Creates a variable.
	Attach information to the current interaction	Generic	Performs an attached-data operation.
	Evaluate a Boolean condition	Generic	Inserts a branch (IfThenElse).
	Run a generic JavaScript code	Generic	Allows to insert your JavaScript code and choose the wanted number of ports.
	Start an outbound call	CRM-specific	Allows starting an outbound call (equals MakeCall).
	Search for a CRM record	CRM-specific	Performs a search within Microsoft Dynamics 365.
	Create a CRM record	CRM-specific	Creates a record of whichever wanted Entity within Dynamics.
	Update a CRM record	CRM-specific	Updates a record of whichever existing Entity within Dynamics.
	Get information from a specific CRM record using its identifier	CRM-specific	Obtains all wanted information about an exiting record within Dynamics.
	Display a CRM record	CRM-specific	Runs the screen-pop of a Dynamics form.

**Create a Workflow variable.** Creates a variable. You can define a variable precisely as if you were coding and choose to assign it a:

- **static value:** fixed value in the data field, which will appear on every record that references the rule;
- **dynamic value:** data value that varies depending on the current record running the Workflow rule.

See all available dynamics value types in the table at the bottom of this page.

### Important

**Variables** are crucial because, once they have been defined, they are available within the Workflow for any Activity to use them.



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**Attach information to the current interaction.** Performs an attached-data operation, enriching the current interaction record with additional information. This can be used for Genesys reporting and when the interaction is transferred to another agent.

**Evaluate a Boolean condition.** Inserts a branch (IfThenElse). The value you assign to this variable can return a true value (condition verified, green port) or a false one (condition not verified, red port). Therefore, it divides the Workflow into two branches. You need three elements for every condition: left operand, JS operator, right operand. Multiple conditions are allowed (and/or).

**Run a generic code.** Allows you to insert your JavaScript code and choose the wanted number of ports. This Activity is essential for all those cases too complicated to be satisfied by standard Activities. Since it is based on JavaScript code, it is more likely to be used by developers.

**Start an outbound call.** Allows starting an outbound call (equals MakeCall). It enables an outgoing call on the API made available by the Gplus Adapter. The involved telephone number can be static or dynamic. It can be used to run a custom flow or attach data before the call is performed.

**Search for a CRM record.** Performs a search within Microsoft Dynamics 365. This Activity creates output Workflow parameters and can have different ports: 0 (no match), 1 (single match), N (multiple matches). Therefore, Workflow parameters not only depend on the Activity but also on the exit port. Multiple conditions are allowed (and/or). You can even manually insert your search filter in the form of a JavaScript code. For further information, check the page that Microsoft dedicated to the topic.

**Create a CRM record.** Creates a record of whichever wanted Entity within Dynamics (for example Phone Call, Task, Email). This Activity creates output Workflow parameters and allows chaining.

**Update a CRM record.** Updates a record of whichever existing Entity within Dynamics (for example after releasing a call, it can update its duration). It requires the Entity unique identifier to perform the update.

**Get information from a specific CRM record using its identifier.** Obtains all wanted information about an existing record within Dynamics. If the record's unique identifier is available, you can get all the wanted information about it.

**Display a CRM record.** Runs the screen-pop of the wanted Dynamics form.

Here you can find a list of dynamic value types available in the Workflow Designer:

Type	Description
CTI Attachdata	Value of a Property in a specific JSON section.
CTI Property	Value of any Property within the JSON.
Workflow parameter	Output value of a Workflow.
Workflow variable	Value of another variable defined within a Workflow.
Global parameter	Values always available within a CRM (for example current user ID, language)
Custom JavaScript code	All other values (to be described through JavaScript code).

After designing a Workflow, you can test its functioning with The Workflow Debugger.