



PUBLIC

SAP Build Process Automation

Process Actions

Configuration Guide



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Introduction

Purpose

This Action project contains APIs which can be used to manage process in SAP Build Process Automation. These APIs are published in SAP Build Store as action project so that it becomes easier for Citizen Developer to discover and consume them easily instead of having direct API invocations.

These APIs are added in action project:

- GET - /public/workflow/rest/v1/workflow-instances/{workflowInstanceId}
- GET - /public/workflow/rest/v1/workflow-instances/{workflowInstanceId}/execution-logs
- PATCH - /public/workflow/rest/v1/workflow-instances/{workflowInstanceId}

Action Details

Actions and their purpose

1. Retrieve all instances by query parameters - **GET** - /v1/workflow-instances

Note: The user would require WorkflowViewer role to be assigned to access this API.

Retrieves process instances by parameters.

- If no parameters are specified, all RUNNING, or ERRONEOUS instances are returned.
- Parameters for different attributes of the instance are evaluated using the logical 'and' operator.
- If multiple parameters are specified for the same attribute or a parameter is specified multiple times, results are matched using the logical 'or' operator, unless noted otherwise.
- Empty parameters are treated as if they were not given.

Input Parameters	Description
\$skip	The number of records you want to skip from the beginning. You can skip at most 4000 records. To indicate a result range that starts, for example, at 1001, combine the \$skip with the \$stop parameter. If not specified, no records are skipped. You can use this parameter only once. Refer also to the \$stop parameter
\$stop	The number of records you want to show. You can get at most 1000 records per API call. To indicate a result range that starts, for example, at 1001, combine the \$stop with the \$skip parameter. If not specified, 100 records are returned. You can use this parameter only once. Refer also to the \$skip parameter.
\$orderby	The attribute and direction by which process instances are sorted. The sort attribute and direction are separated by a space.

	<p>The parameter value is case-sensitive.</p> <p>You can only specify one ordering parameter, which contains attribute and direction.</p> <p>If sort by definitionVersion is enabled, then definitionId is also added to the sorting query.</p> <p>If not specified, the results are sorted by the 'startedAt' attribute, in descending order.</p> <ul style="list-style-type: none"> • id asc - Ascending, from A to Z case-sensitive.id desc - Descending, from Z to A case-sensitive. • definitionId asc - Ascending, from A to Z case-sensitive. • definitionId desc - Descending, from Z to A case-sensitive. • definitionVersion asc - Ascending, from A to Z case-sensitive. • definitionVersion desc - Descending, from Z to A case-sensitive. • startedAt asc - Ascending, from A to Z case-sensitive. • startedAt desc - Descending, from Z to A case-sensitive. • completedAt asc - Ascending, process instance completion or cancelation time from the oldest to the most recent, not yet COMPLETED process instances first. • completedAt desc - Descending, from the most recently COMPLETED or CANCELED process instance to the oldest ones, not yet COMPLETED process instances last. • startedBy asc - Ascending, from A to Z case-sensitive. • startedBy desc - Descending, from Z to A case-sensitive. • subject asc - Ascending, from A to Z case-sensitive, process instances without subject first. • subject desc - Descending, from Z to A case-sensitive, process instances without subject last. • businessKey asc - Ascending, from A to Z case-sensitive, process instances without business key first. • businessKey desc - Descending, from Z to A case-sensitive, process instances without business key last. <p>Available values: id asc, id desc, definitionId asc, definitionId desc, definitionVersion asc, definitionVersion desc, startedAt asc, startedAt desc, completedAt asc, completedAt desc, startedBy asc, startedBy desc, subject asc, subject desc, businessKey asc, businessKey desc</p>
\$inlinecount	<p>Specify whether the total count of the process instances, which match the search criteria, should be returned as a value of the X-Total-Count response header. To enable the header, use the 'allpages' setting. To disable the header, use the 'none' setting.</p> <p>The values are case-sensitive. Available values: allpages, none</p>
\$expand	<p>You can request custom workflow attributes to become part of the process instance output by specifying the value 'attributes' for the '\$expand' parameter.</p> <p>Otherwise, if the '\$expand' parameter is not specified, the 'attributes' field is not included in the output of the process instance. Note that labels.</p>

	as well as the order of the custom process attributes in which they are returned, are taken from the latest versions of the process definitions where these attributes are present. Available values: attributes
id	Specify the process instance ID.
definitionId	Specify the ID of the process.
definitionVersion	Specify the version of the process definition.
status	<p>Specify the status of the process instance. The values are not case-sensitive.</p> <p>The status values as required by this API have the following corresponding terms in user interfaces of SAP Build Process Automation:</p> <ul style="list-style-type: none"> • RUNNING - Running • ERRONEOUS - Error • SUSPENDED - On Hold • CANCELED - Canceled • COMPLETED – Completed <p>Available values: RUNNING, ERRONEOUS, SUSPENDED, CANCELED, COMPLETED</p>
startedAt	<p>Specify at what time the process instance was started. Supports two date formats.</p> <ol style="list-style-type: none"> 1. yyyy-MM-dd'T'HH:mm:ss.SSS'Z' 2. yyyyMMddHHmmss.SSS
startedFrom	<p>Specify the beginning (inclusive) of the time range during which a returned process was started. Supports two date formats:</p> <ol style="list-style-type: none"> 1. yyyy-MM-dd'T'HH:mm:ss.SSS'Z' 2. yyyyMMddHHmmss.SSS <p>The parameter operates on the 'startedAt' attribute of a process instance. It is combined with the following parameters, if available: 'startedUpTo' parameter using the logical 'and' operator; 'startedAt' parameter using the logical 'or' operator.</p>
startedUpTo	<p>Specify the end (inclusive) of the time range during which a returned process was started.</p> <p>Supports two date formats:</p> <ol style="list-style-type: none"> 1. yyyy-MM-dd'T'HH:mm:ss.SSS'Z' 2. yyyyMMddHHmmss.SSS <p>The parameter operates on the 'startedAt' attribute of a process instance. It is combined with the following parameters, if available: 'startedFrom' parameter using the logical 'and' operator; 'startedAt' parameter using the logical 'or' operator.</p>

completedAt	<p>Specify at what time the process instance was changed to status COMPLETED or CANCELED.</p> <p>Supports two date formats:</p> <ol style="list-style-type: none"> 1. yyyy-MM-dd'T'HH:mm:ss.SSS'Z' 2. yyyyMMddHHmmss.SSS
completedFrom	<p>Specify the beginning (inclusive) of the time range during which a returned process was changed to status COMPLETED or CANCELED.</p> <p>Supports two date formats:</p> <ol style="list-style-type: none"> 1. yyyy-MM-dd'T'HH:mm:ss.SSS'Z' 2. yyyyMMddHHmmss.SSS <p>The parameter operates on the 'completedAt' attribute of a process instance. It is combined with the following parameters, if available: 'completedUpTo' parameter using the logical 'and' operator; 'completedAt' parameter using the logical 'or' operator.</p>
completedUpTo	<p>Specify the end (inclusive) of the time range during which a returned process was changed to status COMPLETED or CANCELED.</p> <p>Supports two date formats:</p> <ol style="list-style-type: none"> 1. yyyy-MM-dd'T'HH:mm:ss.SSS'Z' 2. yyyyMMddHHmmss.SSS <p>The parameter operates on the 'completedAt' attribute of a process instance. It is combined with the following parameters, if available: 'completedFrom' parameter using the logical 'and' operator; 'completedAt' parameter using the logical 'or' operator.</p>
startedBy	Specify the user who started the process instance, in UTF-8 encoding. The user ID is at most 255 characters long.
subject	Specify the subject of the process instance, in UTF-8 encoding. The subject of a process instance is limited to 255 characters.
containsText	containsText
businessKey	Specify the business key of the process instance, in UTF-8 encoding. The business key of a process instance is limited to 255 characters.
rootInstancelId	Specify the process root instance ID. The process root instance ID is 36 characters long.
parentInstancelId	Specify the process parent instance ID. The process parent instance ID is 36 characters long or it can be null.
projectId	Specify the SAP Build Process Automation project ID of the process instance. The project ID of a process instance is limited to 255 characters.

projectVersion	Specify the SAP Build Process Automation project version of the process instance. The project version of a process instance is limited to 64 characters.
Attributes. ExampleCustomAttribute	Example of a parameter that filters process instances by the value of the custom process attribute with the ID 'ExampleCustomAttribute'. You can specify parameters for other attributes in an analogous way. If you specify a parameter several times, the logical operators apply as outlined in the overall description of this API. If custom process attributes with different IDs are present in the URL, only process instances which contain all of them with the values specified will be returned as a response to the request. If a query by custom process attributes matches too many process definitions, you must limit the query further. Refer, for example, to parameter 'definitionId'.

Action Project Response Code and Description

Success Outputs	Description
200	Returns a list of process instances.

Action Project Error Response Code and Description

Error Outputs	Description
401	Unauthorized. You have not provided valid authentication credentials to access the resource
403	Access forbidden. You do not have the required permissions to access the resource.
429	You have reached the usage limits that are configured for your tenant. You are performing too many requests or consuming too many resources.
500	Internal server error. The operation you requested led to an error during execution.

2. Retrieve execution logs - **Get** - /v1/workflow-instances/{workflowInstanceId}/execution-logs

Retrieves execution logs for a given process instance.

Note: The user would require WorkflowViewer role to be assigned to access this API.

Input Parameters	Description
Accept-Language	Provide a preferred language. If a translation is available, relevant texts are returned in this language.
workflowInstanceId(required field)	The process instance ID for which the execution logs should be retrieved. The process instance ID is 36 characters long.

Action Project Response Code and Description

Success Outputs	Description
200	Returns a list of execution logs.

Action Project Error Response Code and Description

Error Outputs	Description
401	Unauthorized. You have not provided valid authentication credentials to access the resource.
403	Access forbidden. You do not have the required permissions to access the resource.
404	URL not found. Check whether the URL is correct and whether you refer to an existing process instance.
429	You have reached the usage limits that are configured for your tenant. You are performing too many requests or consuming too many resources.
500	Internal server error. The operation you requested led to an error during execution.

3. Update instance - **Patch** - /v1/workflow-instances/{workflowInstanceId}

Note: The user would require WorkflowAdmin role to be assigned to access this API.

Modifies the properties of a given process instance, for example, sets its status to CANCELED or RUNNING.

Status changes may not take effect immediately, due to asynchronous processing of the request. When you change the status to CANCELED, note the following:

- Process instances in CANCELED status are considered final, that is, no further changes are allowed. This is valid as well for other APIs and the processing according to the process definition.
- Process instances in CANCELED status stop processing as soon as the system allows.

When you are changing the status to SUSPENDED, note the following:

- Status SUSPENDED manually and temporary suspends processing.
- You can choose to suspend the specified instance or the whole cascade by setting boolean parameter "cascade". By default, the parameter is false. When set to true, the operation is cascaded to its referenced subflow instances.
- Process instances in SUSPENDED status stop processing as soon as the system allows.
- Process instances remain in SUSPENDED status until a status change to RUNNING or CANCELED is requested.
- While the Process instance status reported by the respective API might change with immediate effect, follow-up actions might only be successful, after asynchronous processing within the Process instance has stopped. To check whether asynchronous processing is ongoing, analyze the execution logs or check the process definition structure.

When you are changing the status to RUNNING, note the following:

- For process instances in ERRONEOUS status, this retries the failed activities. If these activities continue failing, the process instance automatically moves again into ERRONEOUS status.
- If the process instance had previously been suspended while in ERRONEOUS status, failed activities, such as service tasks, are retried.
- You can choose to retry or resume the specified instance or the whole cascade by setting boolean parameter "cascade". By default, the parameter is false. When set to true, the operation is cascaded to its referenced subflow instances.

When you propagate the status change to subflow instances with the 'cascade' parameter, note the following:

- The effects outlined above are appropriately applied to the subflow instances. For example, instances in a final status like CANCELED are not changed by the API.

The status values in relation to this API have the following corresponding terms in user interfaces of SAP Build Process Automation:

- RUNNING - Running
- ERRONEOUS - Error
- SUSPENDED - On Hold
- CANCELED - Canceled
- COMPLETED - Completed

Input parameter and Input Body	Description
Input Body (required field) Key: Cascade status	Specify the request body according to the given schema. The length of the request body is limited to ensure optimal operation of the service. Example Value: { "status": "CANCELED", "cascade": false }
workflowInstanceid (required field)	The ID of the process instance, which should be modified. The process instance ID is 36 characters long

Action Project Response Code and Description

Success Outputs	Description
202	The request is successful, and the properties will be changed asynchronously.

Action Project Error Response Code and Description

Error Outputs	Description
400	Incorrect format or structure of the provided request body.

401	Unauthorized. You have not provided valid authentication credentials to access the resource.
403	Access forbidden. You do not have the required permissions to access the resource.
404	URL not found. Check whether the URL is correct and whether you refer to an existing process instance.
409	The operation could not be executed because of another activity in the background. Please try again later.
422	The status provided in the request body was invalid.
429	You have reached the usage limits that are configured for your tenant. You are performing too many requests or consuming too many resources.
500	Internal server error. The operation you requested led to an error during execution.

Configuration Guide

Setup SAP Business Technology Platform Cockpit

Destination Configuration

To call these process actions, a HTTP destination is required in the SAP BTP account where the SAP Build Process Automation is subscribed.

Prerequisite: SAP Build Process Automation subscription should be enabled, and a service instance must be created with a service key. Please refer to [service instance and service key](#) page.

Create the destination:

Note: Please check if destination named **sap_process_automation_service** already exists, if not then please follow below link.

[Configure SAP Build Process Automation Destinations](#)

Action Testing –

Once the destination is setup and the Actions are customized, Actions need to be tested to confirm that the connectivity with a provider system works as expected.

To perform the test,

- open **Test** tab
- Select the destination
- Enter the needed values as header parameters and input body
- Click Test
 - Check the response.

Sample requests and response payload are shared below for reference.

1. Retrieve all instances by query parameters - **GET** - /v1/workflow-instances

Sample Request:

Key	Value
\$top	100
\$skip	0
\$orderby	startedAt desc
\$inlinecount	none

Response payload: Returns a list of process instances with all the properties included below

```
{
  "responseArray": [
    {
      "rootInstanceId": "abcd1234",
      "startedBy": "xyz@abc.com",
      "definitionVersion": "7",
      "subject": "TestForm",
      "businessKey": "",
      "startedAt": "2023-08-07T05:56:40.123Z",
      "id": "1234abcd",
      "projectId": "test",
      "status": "ERRONEOUS",
      "definitionId": "test",
      "projectVersion": "1.1.9",
      "applicationScope": "own"
    }
  ]
}
```

2. Retrieve execution logs - **Get** - /v1/workflow-instances/{workflowInstanceId}/execution-logs

Sample Request:

Key	Value
-----	-------

workflowInstanceId(required)	Example: Abcd1234 Note: this workflowInstanceId can be visible in previous get call (Get workflow Instances) result payload
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Response payload: Returns a list of execution logs with below properties.

```
"responseArray": [
  {
    "referenceInstanceId": "abcd1234",
    "id": "abcs",
    "type": "WORKFLOW_STARTED",
    "userId": "xyz@abc.com",
    "timestamp": "2023-08-07T05:56:40.143Z"
  }
]
```

3. Update instance - **Patch** - /v1/workflow-instances/{workflowInstanceId}

Sample Request:

Key	Value
workflowInstanceId(required)	Abcd1234
cascade	False (By default, the parameter is false. When set to true, the operation is cascaded to its referenced subflow instances.)
status	CANCELED

Response payload: Status had been updated successful, and the properties will be changed asynchronously.

```
{}
```

This response is success with 202 code.

Support

There is no support available for template content. If you experience general issues with Action Project, raise an incident via SAP Support Portal on **CA-AP-ACT** component.

For additional information about Actions refer to the [Help](#) Page
www.sap.com