

API for System External Apps

Overview

The API for System External Apps allows a defined external app to make calls to an ongoing system configuration. This API is an optional feature activated with the [license](#).

API General Info

Request and Response Content Type

Requires data or returns data/error in `json` format (`application/json`).

Successful Responses

Response Codes

- **200** - The request was executed successfully and the server returned some data. The return content type is specified inside a response header called content-type. Example content types are application/xml, and application/zip.

Error Responses

If the API call resulted in an error then the error code will be returned along with the json error object in the response body. The error object contains the attributes listed below:

- **status** - processing status, `exception` means processing is aborted
- **type** - type of the error
- **message** - message containing details of the related error

```
Example
```

```
{
  "status": "Exception",
  "type": "Invalid Argument",
  "message": "Expired sessionId value"
}
```

Response Codes

- **400** - The request contains invalid parameters or there are invalid settings. Consult the error message and/or check Administration for invalid settings.
- **500** - Unknown error occurred while processing the request. Consult the CPQ logs for more information.

Authentication

Authentication is done by passing a session token as URL parameter (`sessionId`). The token has a limited validation period (equal to CPQ session timeout). In case of long processing operations, it can be renewed (replaced).

Endpoints by Category

Session

POST /api/external-step-renderer/renew-session/[sessionId]

Renew session token. A valid token must be used. The new token is returned in json body.

Parameter	Type	Description
sessionId	String	Session token

Parameter	Type	Description
<i>result</i>	RenewSessionTokenOutput	Object containing new session token

System Configuration

GET /api/external/getNetworkConfigurationModelJS?sessionId=[sessionId]

The returned JS file calls a method `registerTactonNetworkModel(networkModel)`, which must be implemented in order to access the system model definition.

Parameter	Type	Description
<i>sessionId</i>	String	Session token
<i>networkState</i>	JS file	System Model Definition

Messages

Communication with the system is performed using the [Window.postMessage API](#).

postMessage({action:"getNetworkState"}, "")**

Parameter	Type	Description
<i>action</i>	String	getNetworkState
<i>networkState</i>	Json String	Current System State

postMessage({action:"addNode",nodeTypeName: *nodeTypeName*,attributeValues: *attributeValues*,json: ExternalVariantInput }, "")**

Not available for External Panels.

Parameter	Type	Description
<i>action</i>	String	addNode
<i>nodeTypeName</i>	String	Node Type to be added
<i>attributeValues</i>	Map	attribute values for node
json	JSON String	External variant definition
<i>networkState</i>	JSON String	Current System State
<i>error</i>	String	Error message

postMessage({action:"deleteNode",id: *nodeIdToBeDeleted* }, "")**

Not available for External Panels.

Parameter	Type	Description
<i>action</i>	String	deleteNode
<i>id</i>	String	Node Id to be deleted
<i>networkState</i>	JSON String	Current System State
<i>error</i>	String	Error message

postMessage({action:"changeNode",id: *nodeIdToBeChanged*,attributeValues: *attributeValues*,json: ExternalVariantInput }, "")**

Not available for External Panels.

Parameter	Type	Description
action	String	changeNode
id	String	Node Id to be changed
attributeValues	Map	attribute values for node
json	JSON String	External variant definition
<i>networkState</i>	JSON String	Current System State
<i>error</i>	String	Error message

postMessage({action: "link",id1: **sourceNodeId** ,port1: **sourceNodePortName** ,id2: **targetNodeId** ,port2: **targetNodePortName** }, "**")

Not available for External Panels.

Parameter	Type	Description
action	String	link
id1	String	Source node Id
port1	String	Source node port Node
id2	String	Target node Id
port2	String	Target node port Node
<i>networkState</i>	JSON String	Current System State
<i>error</i>	String	Error message

postMessage({action: "unlink",id1: **sourceNodeId** ,port1: **sourceNodePortName** ,id2: **targetNodeId** ,port2: **targetNodePortName** }, "**")

Not available for External Panels.

Parameter	Type	Description
action	String	unlink
id1	String	Source node Id
port1	String	Source node port Node
id2	String	Target node Id
port2	String	Target node port Node
<i>networkState</i>	JSON String	Current System State
<i>error</i>	String	Error message

postMessage({actions: [{}, {}], "**")

This API supports bulk actions for **addNode** , **changeNode** and **deleteNode** . This API does not support **link** and **unlink** actions. Not available for External Panels.

Parameter	Type	Description
actions	Array	List of actions to perform. Each action is an object.
<i>networkState</i>	JSON String	Current System State

Parameter	Type	Description
<i>addedNodes</i>	Array	Added Node Names
<i>changedNodes</i>	Array	Changed Node Names
<i>deletedNodes</i>	Array	Deleted Node Names

Example

```

postMessage( { actions: [
  {action:"addNode",nodeTypeName:`nodeTypeName`,attributeValues:`attributeValues`,json:`ExternalVari`,
  {action:"changeNode",id:`nodeIdToBeChanged`,attributeValues:`attributeValues`,json:`ExternalVari`,
  {action:"deleteNode",id:`nodeIdToBeDeleted`},
], "*" )

```

API response

```

{
  networkState:{},
  addedNodes:[],
  changedNodes:[],
  deletedNodes:[],
}

```

postMessage({ action: "showBar", target: target }, "")**

This API makes one or both of the side panels of system configuration visible. Not available for External Panels.

Parameter	Type	Description
action	String	showBar
target	String	Optional parameter. Accepted values are "left", "right", or "both". If not provided, defaults to showing the "right" sidebar.

postMessage({ action: "hideBar", target: target }, "")**

This API makes one or both of the side panels of system configuration hidden. Not available for External Panels.

Parameter	Type	Description
action	String	showBar
target	String	Optional parameter. Accepted values are "left", "right", or "both". If not provided, defaults to hiding the "right" sidebar.

postMessage({ action: "close" }, "")**

This API closes the external App. It is not supported when rendering external app as a system configuration step. Not available for External Panels.

postMessage({ action: "enableAppFullscreen" }, "")**

This API makes the external App container to enter fullscreen mode.

postMessage({ action: "disableAppFullscreen" }, "")**

This API makes the external App container to exit fullscreen mode.


Data Types by Category

Session

RenewSessionTokenOutput

A post renew session token output.

```
{
  "sessionId": "c03f02db1e6eb93ac623b2dc5f3f76e88ebd3199fa43b1bcma690b10c9f24d7baeea9746895c15be558d5af13"
}
```



External Variant

ExternalVariantInput

This input represents a new variant, which does not exist in Tacton CPQ administration. It must however belong to an existing module and conform to its structure.

```

{
  "moduleName": "FrameModule",
  "name": "Custom frame",
  "description": "Custom frame model",
  "descriptionTranslations": {
    "de": "Benutzerdefiniertes Rahmenmodell"
  },
  "qty": 1.0,
  "features": [
    {
      "name": "color",
      "value": "red"
    }
  ],
  "elementCosts": [
    {
      "elementName": "Painting",
      "qty": 2,
      "description": "Painting in red",
      "descriptionTranslations": {
        "de": "Lackierung in Rot"
      },
      "categoryCosts": [
        {
          "categoryName": "default",
          "cost": 330,
          "currencyCode": "SEK",
          "description": "Painted in Sweden",
          "descriptionTranslations": {
            "de": "Gemalt in Schweden"
          },
          "features": [
            {
              "name": "extra",
              "value": "yes"
            }
          ]
        }
      ]
    }
  ],
  "categoryCosts": [
    {
      "categoryName": "default",
      "cost": 100,
      "currencyCode": "EUR",
      "description": "Extra cost for custom painting",
      "descriptionTranslations": {
        "de": "Aufpreis für individuelle Lackierung"
      },
      "features": [
        {
          "name": "extra",
          "value": "yes"
        }
      ]
    }
  ]
}

```