

Integration Package Documentation: Figaf ServiceNow Integration

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Contents

- Contents 2
- 1. Package Overview 3
- 2. Prerequisites 3
- 3. Integration Flows..... 4
 - 3.1. Search ServiceNow Issues 4
 - 3.1.1. Configuration: 4
 - 3.1.2. Using the IFlow..... 5
 - 3.2. Update ServiceNow tasks 6
 - 3.2.1. Configuration: 6
 - 3.2.2. Options: 7
 - 3.2.3. Using the IFlow..... 9
 - 3.3. Update Figaf Transport from ServiceNow 10
 - 3.3.1. ServiceNow Setup 10
 - 3.3.2. Configuration (Integration Suite): 12
- 4. Deployment and General Setup 14

1. Package Overview

This integration package facilitates communication and process automation between the Figaf DevOps tools and ServiceNow. It enables organizations to synchronize ticket and transport information, automating ServiceNow tasks updates based on Figaf events, and providing utilities for querying ServiceNow data.

The package currently includes the following key integration flows (iFlows):

- **Search ServiceNow Task:** Provides an endpoint to search for ServiceNow tasks based on specified criteria, called by Figaf.
- **Update ServiceNow Task:** Processes webhook events from Figaf to update corresponding ServiceNow tasks from a Virtual Task Board (Freedom Board).
- **Update Figaf Transport from ServiceNow:** Allows ServiceNow events to trigger imports in Figaf.
- This document provides details on the configuration and functionality of each iFlow.

2. Prerequisites

- SAP Integration Suite (CPI) tenant.
- Access to a Figaf instance with webhook capabilities.
- Access to a ServiceNow instance, with a Virtual Task Board (freedom board).
- Necessary authorizations in both Figaf and ServiceNow for the integration user.
- User Credentials artifact must be deployed on the CPI tenan (ex: ServiceNow_BasicAuth, containing a ServiceNow user and password, with admin user role).

3. Integration Flows

3.1. Search ServiceNow

Provides an endpoint for Figaf (or other systems) to query ServiceNow and retrieve essential field data (key, summary, description, status) for tasks.

3.1.1. Configuration (from iFlow's "Configure")

Sender Details:

Configure "Search ServiceNow Tasks"

Sender Receiver More

Sender: Figaf

Adapter Type: HTTPS

Connection

Address: /figaf/servicenow/searchissues

User Role: ESBMessaging.send Select

- o **Address:** This is the path appended to your Integration Suite tenant URL to call this iFlow.
- o **User Role:** The calling system must authenticate with a user having this role.

Receiver Details (Connection to ServiceNow):

Configure "Search ServiceNow Tasks"

Sender Receiver More

Receiver: ServiceNow

Adapter Type: HTTP

Connection

Address: {{ServiceNow URL}}/api/now/table/vtb_task

ServiceNow URL: https://dev264606.service-now.com

Query: sysparm_fields=number%2Cshort_description%2Cdescription%2Cstate%2Csys_id

Credential Name: ServiceNow_BasicAuth

- o **ServiceNow URL:** The base ServiceNow search API endpoint. This should be changed to your ServiceNow instance's URL.
- o **Query:** The fields retrieved.
- o **Credential Name:** The alias of the User Credential artifact in Integration Suite for ServiceNow authentication (Basic Auth).

3.1.2. Using the

IFlow Trigger: HTTPS call, typically from

Input: None explicitly via body for this configuration.

Output: JSON response from SN containing the search results.

```
[
  {
    "ID": "PTSK0001002",
    "URL": "https://dev264606.service-
now.com/nav_to.do?uri=vtb_task.do?sys_id=2d506281c358321035fc7cec0501318a",
    "Title": "Task2",
    "Description": "Description 2",
    "Status": "1"
  },
  {
    "ID": "PTSK0001001",
    "URL": "https://dev264606.service-
now.com/nav_to.do?uri=vtb_task.do?sys_id=d450a281c358321035fc7cec05013134",
    "Title": "Task1",
    "Description": "Description 1",
    "Status": "2"
  }
]
```

3.2. Update ServiceNow

This iFlow is triggered by webhooks from Figaf whenever tickets or transports undergo changes. Based on a central JSON configuration, it dynamically performs actions in ServiceNow, such as transitioning tasks statuses or adding comments.

3.2.1. Configuration (from iFlow's "Configure")

Sender Details:

Configure "Update ServiceNow Task"

Sender Receiver More

Connection

Sender: Figaf

Adapter Type: HTTPS

Address: /figaf/servicenow/updatetask

User Role: ESBMessaging.send Select

- o **Address:** This is the path appended to your Integration Suite tenant URL to call this iFlow.
- o **User Role:** ESBMessaging.send as default in this case.

Receiver:

Configure "Update ServiceNow Task"

Sender **Receiver** More

Connection

Receiver: ServiceNow

Adapter Type: HTTP

Address: {{ServiceNow Base URL}}/api/now/table/vtb_task

ServiceNow Base URL: https://dev264606.service-now.com/

Credential Name: ServiceNow_BasicAuth

- o **ServiceNow Base URL:** address of your ServiceNow instance.
- o **ServiceNow Token Credential Name:** Client credentials – user and key for ServiceNow

More:

Configure "Update ServiceNow Task"

Sender Receiver **More**

Type: All Parameters

Figaf Base URL: https://alf-figaf.cfapps.us10-001.hana.ondemand.com

- o **Figaf Base URL :** This is the path to your Figaf instance.

3.2.2. Options:

The primary configuration for this iFlow is managed through a JSON structure defined within the *CM_Initialize* Content Modifier step, specifically on its *Message Body* tab. This JSON dictates how

The screenshot displays the SAP iFlow configuration interface for the task "Update ServiceNow Task". The process flow includes a "Start" event triggered by "HTTPS", followed by steps "SC_CreateProperti...", "CM_SetProperties", and "CM_ConfigureJSON". A decision diamond "R_EntityType" branches the flow into "Ticket/Transport" and "Unexpected Message End". An "Exception Subprocess" contains "Error Start 1" and "Error End".

The "Content Modifier" section is open to the "Message Body" tab, showing a JSON configuration:

```
Type: Expression
Body: {
  "globalServiceNowConfig": {
    "defaultCommentHeader": "Figaf Event Update:"
  },
  "eventMappings": {
    "TICKET_CREATED": {
      "enabled": true,
      "actionType": "transitionAndComment",
      "transitionDetails": {
        "id": "ab90d3e293622210ed2f7d1efaba105e"
      },
      "comment": "Ticket created : ${property.FigafBaseUrl}/#/devops/tickets/[[technicalTicketId]]"
    }
  }
}
```

Key Configuration Sections within the

- **globalServiceNowConfig:**
 - defaultCommentHeader: An optional prefix automatically added to comments posted by this integration (e.g., "Figaf Event Update:").

```
"globalServiceNowConfig": {  
  "defaultCommentHeader": "Figaf Event Update:"  
}
```

eventMappings: This is the core section where you define actions for each Figaf eventType. For each event (e.g., TICKET_CREATED, TRANSPORT_APPROVED):

- enabled: (boolean) Set to true to process this event type, false to ignore it.
- actionType: Defines the primary ServiceNow action. Only allowed values:
 - commentOnly: Only adds a comment to the related ServiceNow issue.
 - transitionAndComment: Performs a ServiceNow workflow transition and then adds a comment.
- transitionDetails: (Object, used if actionType involves a transition)
 - id: The sys_id of the ServiceNow vtb_lane to be changed to. This ID must be found from your specific ServiceNow project.
- comment: (String) The template for the comment to be added to the ServiceNow issue. Placeholders in the format [[placeholderName]] will be replaced with values from the Figaf webhook payload.
 - Example: "Transport [[technicalTransportId]] for Figaf ticket [[webhookTicketDtoList[0].technicalTicketId]] is now [[status]]."

This is an example of configuration for the **TRANSPORT_APPROVED** Figaf event.

```
"eventMappings": {  
  "TRANSPORT_APPROVED": {  
    "enabled": true,  
    "actionType": " transitionAndComment",  
    "transitionDetails": {"id": "6d402281c358321035fc7cec0501318d"},  
    "comment": "Transport [[technicalTransportId]] for Figaf ticket [[webhook-  
TicketDtoList[0].technicalTicketId]] on landscape [[landscape.name]] is now [[sta-  
tus]]."  
  }  
}
```

Explanation:

"enabled": true

The TRANSPORT_APPROVED event will be

"actionType": " transitionAndComment",

The event will produce a transition and a comment for the corresponding ServiceNow task.

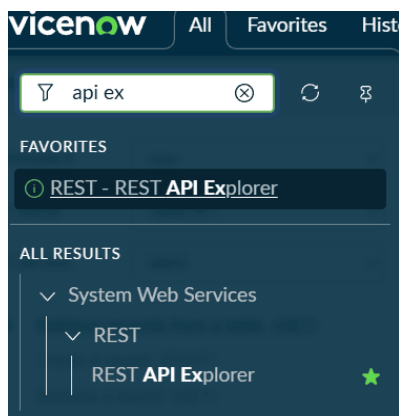
```
"transitionDetails": { "id": "6d402281c358321035fc7cec0501318d"},
```

The **new lane** of the task will be that of sys_id “6d402281c358321035fc7cec0501318d”.

```
"comment": "Transport [[technicalTransportId]] for Figaf ticket [[webhook-TicketDtoList[0].technicalTicketId]] on landscape [[landscape.name]] is now [[status]]."
```

This will add a comment with some essential info.

You can find the **sys_id** of the cards lanes by using the REST API Explorer, and creating **GET** request



Prepare request

Path parameters

Name	Value
* tableName	Visual Task Board Lane (vtb_lane)

Query parameters

Name	Value
sysparm_fields	sys_id,name

3.2.3. Using the

- **Trigger:** HTTPS call from Figaf
- **Input:** JSON - This iFlow expects to be called by Figaf webhooks and receive a JSON
- **Output:** JSON - Calls to ServiceNow containing data about transitions and/or comments.

A list of suggested placeholders for comments:

- [[technicalTransportId]]
- [[status]]
- [[landscape.name]]
- [[webhookTicketDtoList[0].externalTicketId]] (for the ServiceNow key if present in the Figaf payload)
- [[webhookTicketDtoList[0].technicalTicketId]] (for the Figaf ticket)
- [[figafEntityId]]
- [[eventType]]

3.3. Update Figaf Transport from

This IFlow provides a way to automatically import a transport in Figaf via a ServiceNow task state change (for example, moving a task to “Done” status).

3.3.1. ServiceNow

We need to create a REST Message and a Business Rule that will call our IFlow.

1. Create a new REST Message.
2. Configure CPI basic auth. (Credentials from BTP Cockpit).
3. Create a POST method (after creating and accessing again the REST Message);

The screenshot shows the ServiceNow interface for creating a new REST Message. The top navigation bar includes 'servicenow', 'All', 'Favorites', 'History', 'Workspaces', 'Admin', and a search bar. The main header is 'REST Message - New Record'. The form fields are:

- * Name: call_integration_suite
- Application: Global
- Accessible from: This application scope only
- Description: (empty)
- * Endpoint: https://figafpartner-1.it-cpi018-rt.cfapps.eu10-003.hana.ondemand.com/http/figaf/servicenow/updatetransport

Below the form, there is an 'Authentication' section with a 'HTTP Request' tab. A blue box contains the following text:

REST Messages support the following Authentication types:

- Basic authentication
- Mutual (two-way authentication)
- OAuth 2.0

Authentication configured on the REST Message will automatically apply to child HTTP Methods. Authentication configured on child HTTP Methods will override the parent configuration.

More info

Authentication type: Basic (selected)

Basic auth profile: cpi

Use mutual authentication:

Below the authentication section, there is a table of HTTP Methods:

Name	HTTP method	Endpoint
POST	POST	https://figafpartner-1.it-cpi018-rt.cfap...

The table has a search bar and a 'New' button. The pagination shows '1 to 1 of 1'.

4. Create a new Business Rule. Here you can set up when will the flow be triggered (Filter Conditions).

servicenow All Favorites History Workspaces Admin Business Rule - New Record Search

Business Rule New record Submit

A business rule is a server-side script that runs when a record is displayed, inserted, deleted, or when a table is queried. Use business rules to automatically change values in form fields when the specified conditions are met. [More Info](#)

Name Rule1 Application Global

Table Visual Task Board Card [vtb_card] Active

Priority 100 Advanced

When to run Actions Advanced

Specify whether the business rule should run on Insert or Update. Use Filter Conditions to specify under which conditions the business rule should run.

When async Insert

Order 100 Update

Delete

Query

Filter Conditions Add Filter Condition Add OR Clause

Lane changes to Done AND OR

Role conditions

Submit

5. Under “Advanced” upload the script below, then submit the rule:

```
(function executeRule(current, previous) {
var taskNumber = "";
if (current.task) {
var taskGR = new GlideRecord('task');
if (taskGR.get(current.task.toString())) {
taskNumber = taskGR.getValue('number');
}
}
// Optionally get the state or lane
var taskState = current.getValue('lane');
// Build payload later using these values

var payload = {
id: current.sys_id.toString(),
number: taskNumber,
// state: taskState, // Uncomment if you also want state
updated: current.sys_updated_on.toString()
};

var restMessage = new sn_ws.RESTMessageV2('call_integration_suite',
'POST');
restMessage.setRequestBody(JSON.stringify(payload));
var response = restMessage.execute();
var responseBody = response.getBody();
```

```

var httpStatus = response.getStatusCode();
gs.info("Webhook response: " + httpStatus + " " + responseBody);

})(current, previous);

```

3.3.2. Configuration (Integration)

- Sender Details:

Configure "Update Transport from ServiceNow to Figaf"

The screenshot shows the 'Sender' configuration tab. It includes the following fields:

- Sender:** ServiceNow
- Adapter Type:** HTTPS
- Address:** /figaf/servicenow/updatesend
- User Role:** ESBMessaging.send

There is a 'Select' button next to the User Role field and an information icon (i) next to the Address field.

- o **Address:** This is the path appended to your Integration Suite tenant URL to call this iFlow.
- o **User Role:** User role for authentication (ESBMessaging.send in this case).

- Receiver Details (Connection to ServiceNow):

Configure "Update Transport from ServiceNow to Figaf"

The screenshot shows the 'Receiver' configuration tab. It includes the following fields:

- Receiver:** Figaf_2
- Adapter Type:** HTTP
- Address:** {{Figaf URL}}/api/v1/transport/\${property.technicalTransportId}/import
- Figaf URL:** https://app.figaf.com
- Credential Name:** Figaf_ServiceNow_OAuth_Client

There are information icons (i) next to the Figaf URL and Credential Name fields.

- o **Figaf URL:** The base Figaf URL. Will be used to build the address to call the API.
- o **Credential Name:** The alias for storing the Figaf OAuth Client Credentials.

To create the Figaf OAuth Client, in Figaf go to Configuration -> OAuth Clients -> Add OAuth Client. Select the following scopes:

ticket:read, ticket:run, ticket:import, ticket:resolve,

Then add the credentials in Integration Suite like below. Token Service Url is your Figaf url followed by /oauth/token.

Edit OAuth2 Client Credentials

Name: * Figaf_OAuth_Client

Description:

Runtimes: * Cloud Integration

Token Service URL: * https://app.figaf.com/oauth/token

Client ID: * d7KUsCNWcx63sFy

Client Secret: *

Client Authentication: * Send as Request Header

Scope: *

Content Type: application/x-www-form-urlencoded

Resource:

Audience:

Custom Parameters

<input type="checkbox"/>	Key	Value	Send as Part of
	No data		

- More config.

Configure "Update Transport from ServiceNow to Figaf"

Sender Receiver **More**

Type: All Parameters

Triggering State: Done

- o **Triggering State:** The state of the card triggering a transport import.

4. Deployment and General Setup

1. Deploy Credentials:

- o Ensure the User Credential artifact (containing valid ServiceNow credentials) is deployed on your Cloud Integration tenant and that the iFlows configurations reflect the same alias.
- o Ensure the User Credential containing Figaf OAuth Client certificate is deployed.

2. Configure “Search ServiceNow Tasks”:

- o Access the iFlow and go to the "Configure" view.
- o Update the Receiver Address to your ServiceNow instance URL.
- o Modify the Receiver Query parameter to match your desired JQL (project, fields, etc.).

3. Configure “Update ServiceNow Tasks”:

- o Access the iFlow;
- o Configure the sender/receiver/more settings;
- o Modify the CM_ConfigureJson Content Modifier's Message Body with your preferences and the desired logic (sys_id of cards lane, comment templates, etc.) as detailed in section 3.2.

4. Configure “Update Transport from ServiceNow to

- o Follow the Setup Steps from sections 3.3.1.
- o Update the IFlow’s Configuration.

5. **Deploy Integration Package:** Deploy this integration package and it’s iFlow’s to your Integration Suite tenant.

6. Configure Figaf Webhooks:

- o In Figaf, set up a new integration and then the webhooks to point to the endpoint URL of the deployed **Update ServiceNow Issues iFlow**.