

SAP BUSINESS TECHNOLOGY PLATFORM | EXTERNAL

# Configuration Guide

Direct Supplier Down Payment Requests using SAP  
Build Process Automation or SAP Workflow  
Management

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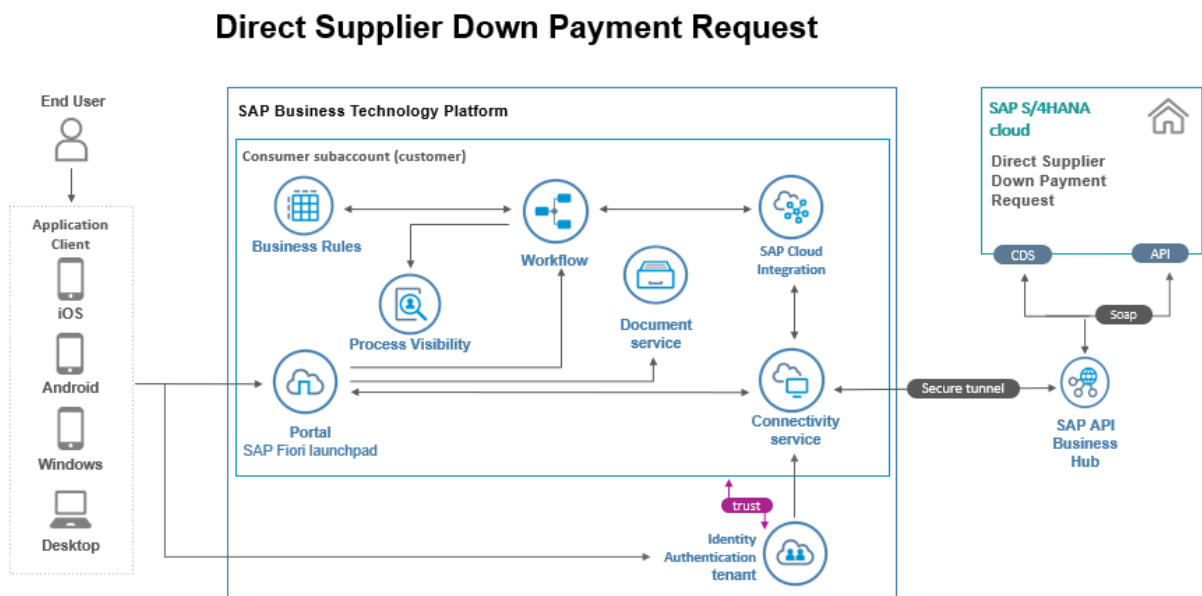
# Overview

This document provides information about configuration steps to consume the live process package Direct Supplier Down Payment Request. The main audience of this document are Procurement Experts, Finance experts, Developers and Product owners.

The Direct Supplier Down Payment Request content package enables SAP S/4HANA customers to automate the approvals required for creation of Down Payment Requests using SAP Build Process Automation or SAP Workflow Management without additional development in SAP S/4HANA.

## Salient features of this content package are:

- Plug and Play with SAP S/4HANA without any additional development.
- Process steps delivered to approve down payment.
- Automatic email notification to parties involved.
- Business Rules provides flexibility in determining approver determination strategy and approvers.
- Custom validation on down payment attributes using Business Rules.
- New variant of the process can be created using the pre-delivered process steps in a no-code / low-code approach.
- Out-of-the-box visibility into key process performance indicators of the down payment.



# Live Process Artifacts

A package consists of process templates, process steps, decisions, and process visibility models. Please refer [help documentation](#) about these artifacts.

## Process

A process template is a set of business activities and tasks that, once completed, fulfills an organization approval process. The **Direct Supplier Down Payment Request** package contains the following process template:

**Down Payment Request** – Create down payment request in SAP S/4HANA with a multilevel approval process. It includes start and end process steps for easy no-code/low-code configuration.

A business process can be broken down logically into smaller parts or steps. Each process step is a collection of activities to perform a specific task. For example, an approval process step can contain an activity to determine the approvers, an approval task itself, notifications activities, and handle the approval result. Table 1 represents the list of process steps available to be used in Direct Supplier Down Payment Request.

**Table 1. Process Steps**

| Process Steps         | Cardinality | Detailed Description  |
|-----------------------|-------------|---|
| DownPaymentValidation | 1..1        | Based on the company code and threshold amount it will validate the down payment request.   |
| DownPaymentApproval   | 1.. N       | This step initiates and completes one level of approval for the down payment request creation. This step can occur multiple times in the process variant. Based on the number of approvals required, this step can be re-used multiple times. It is possible to rename the step to appropriate approval roles, for example, 'Approval by Manager'. The approver is determined based on various conditions using a business rule. The requestor and the approver are automatically notified via mail about the decision and approval task, respectively. |
| DownPaymentCreation   | 1..1        | Create down payment request in SAP S/4HANA system after completion of all the configured approval steps. This step can occur only once, and it should be the last step in a process variant. If there is any success or error while creating or updating the down payment request, notification mail will be triggered to the Initiator.  |

A process step can have customizable properties and they could determine the outcome of the process step. For example, the Approval step can be reused multiple time and based on these properties the approver is determined.

Approver can see down payment request history based on down payment request creation details. In rework task, if down payment request creation details objects are modified by approver, then approval history will be shown as per the updated down payment creation history. If down payment request creation details are modified again to old down payment request object, then old history will be visible to the approver based on down payment request creation details object. Please see Table 2 for more details

**Table 2. Process Step Properties**

| Process Step        | Properties | Detailed Description  |
|---------------------|------------|---|
| DownPaymentApproval | Level Name | Based on the name of the approval level, the approver is determined using a business rule. Default value is HOD, and it can be configured to any approval level, provided the same approval level name is configured in the business rule |

The process has attributes, and these attributes are available in process visibility to search approval process instances and to define process performance indicators. Please see Table 3 for more details.

**Table 3. Process Attributes.**

| Process Attributes | Detailed Description |
|--------------------|----------------------|
| companyCode        | Company Code         |
| amount             | Threshold Amount     |
| documentHeaderText | Document Header Text |
| reference          | Reference            |
| documentDate       | Document Date        |
| postingDate        | Posting Date         |
| Currency           | Currency             |
| approvalStatus     | Approval Status      |
| initiatorUserId    | Initiator UserId     |

The following (sample) context required to start the Workflow:

```
{
  "DownPaymentDetails": {
    "companyCode": "3010",
    "amount": 100.75,
    "supplier": "30300030",
    "currency": "EUR"
  },
  "DownPaymentCreationDetails": {
    "headerData": {
      "companyCode": "3010",
      "companyCodeName": "",
      "documentDate": "2021-12-17",
      "postingDate": "2021-12-17",
      "currency": "EUR",
      "currencyName": "",
      "documentHeaderText": "DR admin 123",
      "Reference": "DR admin 123",
      "amount": 100.75,
      "initiatorEmail": "john.doe@example.com ",
      "initiatorUserId": "john.doe@example.com "
    },
    "itemData": [
      {
        "supplier": "30300030",
```

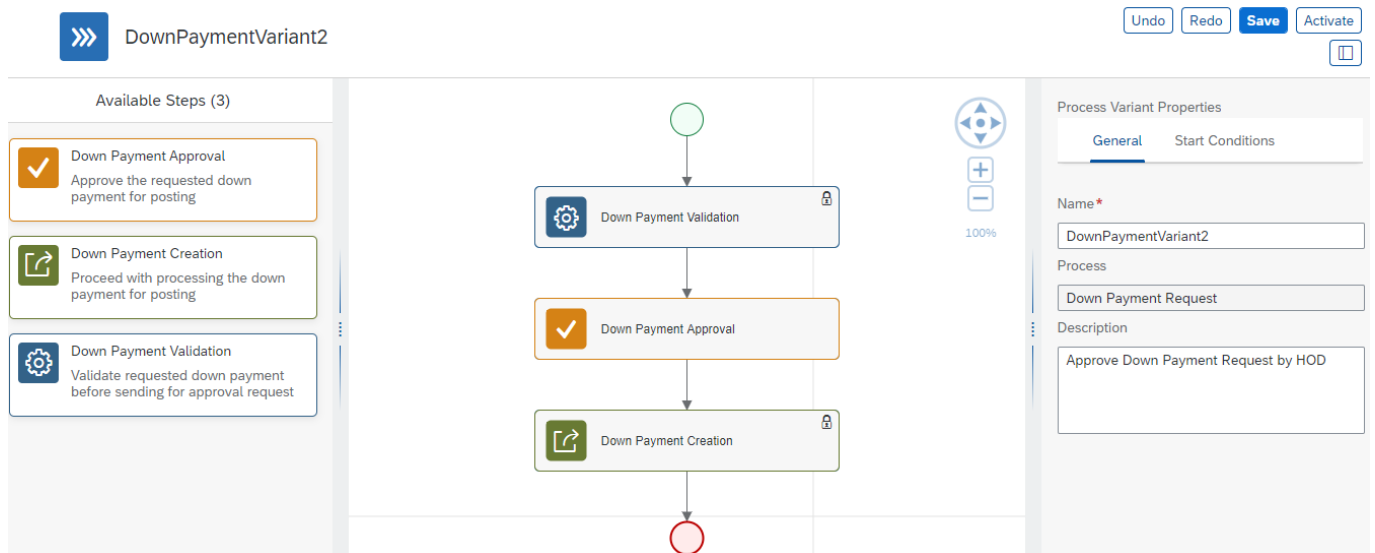
```
"trgSpecGLInd": "F",
"amount": "100",
"itemtext": "10% off",
"assignment": "",
"costCentre": "",
"order": "",
"purchasingDocument": "4500000002 ",
"wbsElement": "",
"purchasingDocItem": "00010",
"taxCode": "P0",
"taxCodeName": "Purchase - GST 0% (P0)",
"TaxAmount": "",
"dueOn": "2021-12-17",
"paymentBlock": "A",
"paymentBlockName": "Blocked for payment (A)",
"paymentMethod": "T",
"paymentMethodName": "SEPA Credit Transfer (T)"
}
]
},
"History": []
}
```

## Process Variants

A process variant consists of multiple process steps configured by a line of business expert. It is possible to create multiple variants of the same process.

Please refer [help documentation](#) about how to import content packages and configure a process variant.

An example of Direct Supplier Down Payment Request variant is given below. It is possible to configure multiple variants of this process.



### Import Direct Supplier Down Payment Request and Configure Process Variants with SAP Build Process Automation

1. In the [SAP Build Process Automation Store](#), search for live process package Direct Supplier Down Payment Request and import the same. This content package has one process template and process variant(s) for that template.
2. In the Application Development [Lobby](#), click to open the package with name Direct Supplier Down Payment Request. This opens the package in a new tab/window.
3. Click the + icon next to the process template to create a new process variant.
4. Enter Name of the new Process Variant (ex, Two Step Approval).
5. Click the newly created Process Variant tile to save and activate the process variant.
6. The process variant has a default implementation with two steps and at least one level of approval.
7. It is possible to remove steps like “Approval for Direct Supplier Down Payment Request” from a process variant only if there are multiple approvals. Please note that whether a step is mandatory or optional, and how many a times any step can be used within a variant, are dependent on the constraints defined on the process steps.
8. Save and activate the variant. A successful activation will create a new workflow definition in the account that can be viewed in the [Monitor Processes and Workflows app](#).

## Import Direct Supplier Down Payment Request and Configure Process Variants with SAP Workflow Management

1. In Process Flexibility Cockpit app, search for content package Direct Supplier Down Payment Request and import the same. Please refer the standard help document about [how to import a content package](#). This content package has one process template and process variant(s) for that template.
2. Open content package in Flexibility Cockpit and click Process Variants tile.
3. Click New Process Variant.
4. Enter Name of the new Process Variant (ex, default) and select “Direct Supplier Down Payment Request” as Process.
5. Click the newly created Process Variant tile to save and activate the process variant.
6. The process variant has a default implementation with two steps and at least one level of approval.
7. It is possible to remove steps like “Approval for Direct Supplier Down Payment Request” from a process variant only if there are multiple approvals. Please note that whether a step is mandatory or optional, and how many a times any step can be used within a variant, are dependent on the constraints defined on the process steps.
8. Save and activate the variant. A successful activation will create a new workflow definition in the account that can be viewed in the Monitor Workflows – Workflow Definition app in SAP Fiori Launchpad.

## Decisions & Policies

Decisions allow to encapsulate the business logic from core applications and supports the reuse of business rules across different business processes. Decisions enable customers to adopt changes in processes without changing the underlying workflows or application logic. SAP Build Process Automation or SAP Workflow Management has business rules capabilities that enables customers to centrally manage all decisions. Please go through the [business rules capabilities](#) in SAP Build Process Automation or SAP Workflow Management.

Direct Supplier Down Payment Request process will enable the customers to flexibly configure decisions to gain the flexibility.

1. Down Payment Validation
2. Down Payment Approver
3. Approver Determination Strategy
4. Determine Process Administrator



## Down Payment Validation

With this decision, it is possible to add any business-specific validation on Down Payment Request. For Example, enable/disable the cloud application for a specific company code and threshold amount etc.

**Rule Service:** Down Payment Validation

**Input Data Object:** Down Payment Details (Structure)

| ATTRIBUTE        | TYPE   | DESCRIPTION   |
|------------------|--------|---|
| Company Code     | String | Company code of requested Direct Supplier Down Payment Creation     |
| Threshold Amount | Number | Threshold Amount of requested Direct Supplier Down Payment Creation |
| Currency         | String | Currency of Down Payment Request                                    |
| Level Name       | String | Approval Level for which specific approver will approve the request |

**Output:** Validation Result (Structure)

| ATTRIBUTE    | TYPE    | DESCRIPTION  |
|--------------|---------|--|
| Is Validated | Boolean | 'True' if validation is successful and 'False' if validation failed. |

## Determine Approvers

Rule service used to identify the potential approvers based on different company policy. Approver will be determined depending on company code and threshold amount. In this business rules Due date will be the business rules determined by a text rule based on down payment details. Every approver will have their respective due date in their approval task.

**Rule Service:** Down Payment Approver

**Input:** Down Payment Details (Structure)

| ATTRIBUTE        | TYPE   | DESCRIPTION   |
|------------------|--------|---|
| Company Code     | String | Company code is an organizational unit within financial accounting. |
| Threshold Amount | Number | Total amount of item group  |
| Currency         | String | Currency of Down Payment Request                                    |
| Level Name       | String | Approval Level for which specific approver will approve the request |

Along with the above attributes the other attributes can also be added as input parameters in this business rule.

**Output:** Down Payment Approver Details (Structure)

| ATTRIBUTE                    | TYPE    | DESCRIPTION  |
|------------------------------|---------|--|
| User ID                      | String  | User ID of the individual approver   |
| User Group                   | String  | The user group who can approve the task  |
| Mail ID                      | String  | Email address of the approver or approvers                                     |
| Is Approval Required         | Boolean | Check if approval is required. True for required and false not required.       |
| Unit of Time                 | String  | Unit of time of due duration   |
| Task Due Duration            | Number  | The task due duration target by which the user task needs to be completed      |
| Due Duration Reference Event | String  | Reference to an event in the workflow to determine the target of the user task |

### Due Date Determination Policy

Determine the due date duration for each approval step of the down payment creation approval process. Based on the reference to determine the due date and the due duration, the approval task's deadline is calculated automatically.

**Rule Name:** Determine Task Due Date  
**Input:** Down Payment Details (Structure)

| ATTRIBUTE        | TYPE   | DESCRIPTION   |
|------------------|--------|---|
| Company Code     | String | Company code of requested Direct Supplier Down Payment Creation     |
| Threshold Amount | Number | Threshold Amount of requested Direct Supplier Down Payment Creation |
| Currency         | String | Currency of Down Payment Request                                    |
| Level Name       | String | Approval Level for which specific approver will approve the request |

**Output:** Duration Due (Structure)

| ATTRIBUTE          | TYPE   | DESCRIPTION                                 |
|--------------------|--------|---|
| Duration Reference | String | Reference event in workflow that is used to |

|              |        |                                     |
|--------------|--------|-------------------------------------|
|              |        | determine the due date of user task |
| Unit of Time | String | Unit of Time                        |
| Duration     | Number | Duration                            |

### Approver Determination Strategy

The application will have two ways to identify approver. To identify the approver determination strategy below rule service will be used.

**Rule Service:** Approver Determination Strategy

**Input:** Down Payment Details (Structure)

| ATTRIBUTE        | TYPE   | DESCRIPTION   |
|------------------|--------|---|
| Company Code     | String | Company code of requested Direct Supplier Down Payment Creation     |
| Threshold Amount | Number | Threshold Amount of requested Direct Supplier Down Payment Creation |
| Currency         | String | Currency of Down Payment Request                                    |
| Level Name       | String | Approval Level for which specific approver will approve the request |

**Output:** Approver Determination Strategy (Structure)

| ATTRIBUTE                       | TYPE   | DESCRIPTION   |
|---------------------------------|--------|---|
| Approver Determination Strategy | String | Determination strategy can either "Business Rule" or "External Service" depending on Invoice details. |

### Determine Process Administrator

If approvers are not determined, then call a configuration rule where the customer has maintained the details about Process Administrator.

Once the process administrator is determined, then send a notification to the admin and create a user task. In the user task, the admin could either directly enter the user id/group and email address of the task owner or the administrator could fix the rule.

**Rule Service:** Determine Process Administrator

**Input:** Down Payment Details (Structure)

| ATTRIBUTE        | TYPE   | DESCRIPTION   |
|------------------|--------|---|
| Company Code     | String | Company code is an organizational unit within financial accounting. |
| Threshold Amount | Number | Threshold Amount of requested Direct Supplier Down Payment Creation |

|          |        |                                  |
|----------|--------|----------------------------------|
| Currency | String | Currency of Down Payment Request |
|----------|--------|----------------------------------|

**Output** Process Administrator Details (Structure)

| ATTRIBUTE               | TYPE   | DESCRIPTION                     |
|-------------------------|--------|---------------------------------|
| Administrator User IDs  | String | User ID List (comma separated)  |
| Administrator Group IDs | String | Group ID List (comma separated) |
| Administrator Email IDs | String | Email ID List (comma separated) |

## Supplier Down Payment Request Vocabulary

Supplier Down Payment Request Vocabulary enables the use of Start and Step conditions for this workflow management content.

**Attributes:** Down Payment Details (Structure)

| ATTRIBUTE        | TYPE   | DESCRIPTION   |
|------------------|--------|---|
| Company Code     | String | Company code of requested Direct Supplier Down Payment Creation     |
| Threshold Amount | Number | Threshold Amount of requested Direct Supplier Down Payment Creation |
| Currency         | String | Currency of Down Payment Request                                    |

## Process Visibility

Process Visibility capability in SAP Build Process Automation or SAP Workflow Management enables Process Owners and Process Operators to gain real time visibility on processes and key process performance indicators. It also enables customers gain out of the box process visibility into their deployed processes. Please refer [help documentation](#) for more details.

Supplier Down Payment Request Vocabulary process content package provides out of the box visibility on all the process variants in SAP Build Process Automation or SAP Workflow Management. Line of business expert will be able to enhance the visibility scenario to their requirements.

### Configure Visibility Scenarios in SAP Build Process Automation

1. Go to the Application Development Lobby.
2. Select Direct Supplier Down Payment Request.
3. Click to open Direct Supplier Down Payment Request scenario.
4. Click Activate button.

Please go through the [help documentation](#) on how to configure the visibility scenario.

## Configure Visibility Scenarios in SAP Workflow Management

1. Go to Process Visibility Cockpit.
2. Select Direct Supplier Down Payment Request tile.
3. Click Visibility Scenarios tile.
4. Select **Direct Supplier Down Payment Request** scenario

Please go through the [help documentation](#) on how to configure the visibility scenario.

## Access Process Workspace in SAP Build Process Automation

1. The process visibility scenario can be accessed using SAP Launchpad Service. Refer to the help document for [creating UI applications on central SAP Fiori Launchpad](#) for SAP Build Process Automation.
2. Once you have added the applications process Visibility Scenario Instances (with app ID com.sap.spa.pv.instances) and Visibility Scenario Dashboard (with app ID com.sap.spa.pv.ovp), follow the below steps to add a tile to access the Direct Supplier Down Payment Request dashboard.
  - a. Navigate into “Visibility Scenario Dashboard”.
  - b. On the screen that opens, choose Create a Local Copy.
  - c. To use custom texts, choose Edit and adapt the texts in the General section.
  - d. You can use a custom title, description, and subtitle for the tile.
  - e. Choose the Navigation tab.
  - f. Under the Intent section, ensure that the value in the Action tab is unique for every application.
  - g. Under the Parameters section, provide the following:

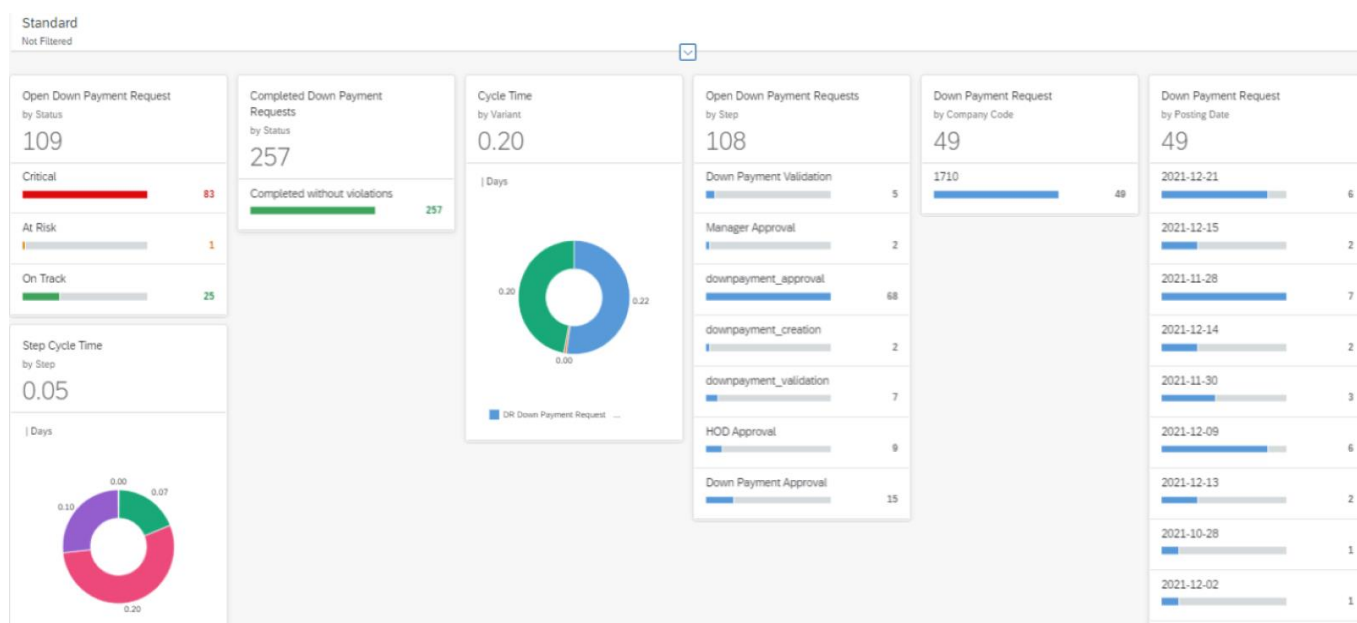
| Parameter Name | Parameter Value   |
|----------------|---|
| Name           | scenariold  |
| Default Value  | com.sap.content.downpayment.downpaymentrequest.<br>Down_Payment_Request |
| Required       | Toggle to Yes   |

- h. Choose Save.
  - i. Assign the local copy to a group and make sure that they're visible to users. For more information, see [Assign Apps to a Group and to a Catalog](#) and [Assign Content to a Role](#).
3. Once created, select app that corresponds to “Direct Supplier Down Payment Request”.
  4. User will see the process visibility dashboard below.

## Access Process Workspace in SAP Workflow Management

1. Go to Process Flexibility Cockpit
2. Select Direct Supplier Down Payment Request
3. Click Live Process Insights Direct Supplier Down Payment Request
4. User will see the below detailed process visibility dashboard.

Please go through [help documentation](#) on how to access process workspace.



## Appendix

### Approver Determination Strategy – External Service

The process content provides an option to determine approvers using an alternative strategy, i.e., External Service instead of Business Rule.

To leverage this strategy, the Approve Process step has a provision to call an iFlow with the following configuration. This iFlow needs to be implemented as per your business requirement.

|             |  |
|-------------|--|
| Destination | CPI [Refer to Setup Guide]             |
| CPI Adapter | HTTP                                   |
| Endpoint    | /http/DownPaymentApproverDetermination |

|                            |   |
|----------------------------|---|
| HTTP Method                | POST  |
| Request Payload Type       | JSON(application/json)  |
| Request Payload Structure  | <pre>{   "DownPaymentApproverPayload": {     "CompanyCode": "1010"     "ThresholdAmount": 700,     "Currency": "USD",     "LevelName": "HOD",   } }</pre>   |
| Response Payload Structure | <pre>{   "Result": [     {       "DownPaymentApproverDetails": {         "DueDurationReference": "Task",         "UnitOfTime": "h",         "UserID": "xyz@example.com",         "DueDuration": 2,         "IsApprovalRequired": true,         "UserGroup": "Approver_GroupId",         "MailID": "xyz@example.com"       }     }   ] }</pre> |