Replicon Integration with S/4HANA Cloud & SAP SuccessFactors Configuration Guide

For SAP Cloud Platform Integration

Version 1.0 | March 2021

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1 Introduction

1.1 Definition

This configuration guide describes the necessary configuration steps to execute the Replicon Integration with SAP S/4HANA Cloud & SAP SuccessFactors integration scenarios, delivered in the Package, to integrate Replicon TimeBill Plus with SAP S/4 HANA Cloud & SAP SuccessFactors, using the SAP Cloud Platform Integration (SAP CPI) as the integration platform.

The Integration Package is developed and maintained by Replicon, Inc. and contains integration flows to support the following business workflows:

- Sync SAP SuccessFactors employees to Replicon users
- Sync SAP S/4HANA Cloud customers to Replicon clients
- Sync SAP S/4HANA Cloud roles to Replicon billing rates
- Map project statuses between SAP S/4HANA Cloud and Replicon
- Sync SAP S/4HANA Cloud projects to Replicon projects
- Sync approved Replicon timesheet data to SAP S/4HANA Cloud

1.2 Intended Audience

The *Replicon Integration with SAP S/4HANA Cloud & SAP SuccessFactors* Configuration Guide is intended to be used by both technology and application consultants.

1.3 Structure

The structure of this configuration guide follows the sequence of steps required to configure and integrate Replicon with SAP S/4HANA Cloud and SAP SuccessFactors, using SAP CPI.

1.4 Additional Documentation

SAP Cloud Platform:
https://help.sap.com/viewer/product/CP/Cloud/en-US

SAP Cloud Platform Integration:
https://help.sap.com/viewer/product/CLOUD_INTEGRATION/Cloud/en-US

SAP Process Integration:
https://help.sap.com/viewer/product/SAP_NETWEAVER_PROCESS_INTEGRATION/7.1./en-US

SAP S/4HANA Cloud:
https://help.sap.com/viewer/product/SAP_S4HANA_CLOUD/2102.500/en-US

SAP S/4HANA Cloud:

https://help.sap.com/viewer/product/SAP_SUCCESSFACTORS_HXM_SUITE/2011/en-US

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2 Business Scenario

Replicon's Time Tracking for Service Organizations leverages Replicon's multi-format, multi-lingual SaaS platform allowing organizations to capture, validate, and transform project time data, ensuring global governance and reducing leverage leakage. Replicon delivers front end customization and configuration abilities, with a modern user experience across desktop and mobile, to SAP S/4HANA Cloud.

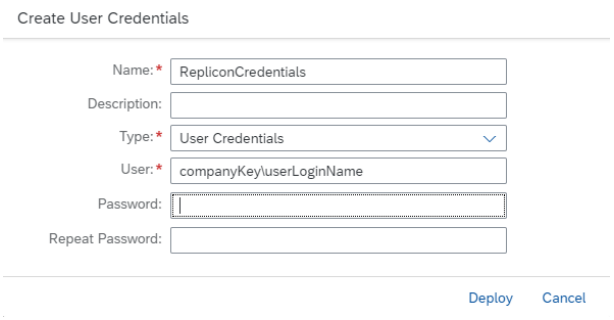
Replicon integrates to S/4 HANA Cloud to capture project details, and to SAP SuccessFactors' Employee Central to capture and provision users. Validated and approved time data is sent back from Replicon to SAP S/4HANA Cloud.

3. Prerequisites

To configure and deploy the integration package using this guide, you would need to have completed the following steps below:

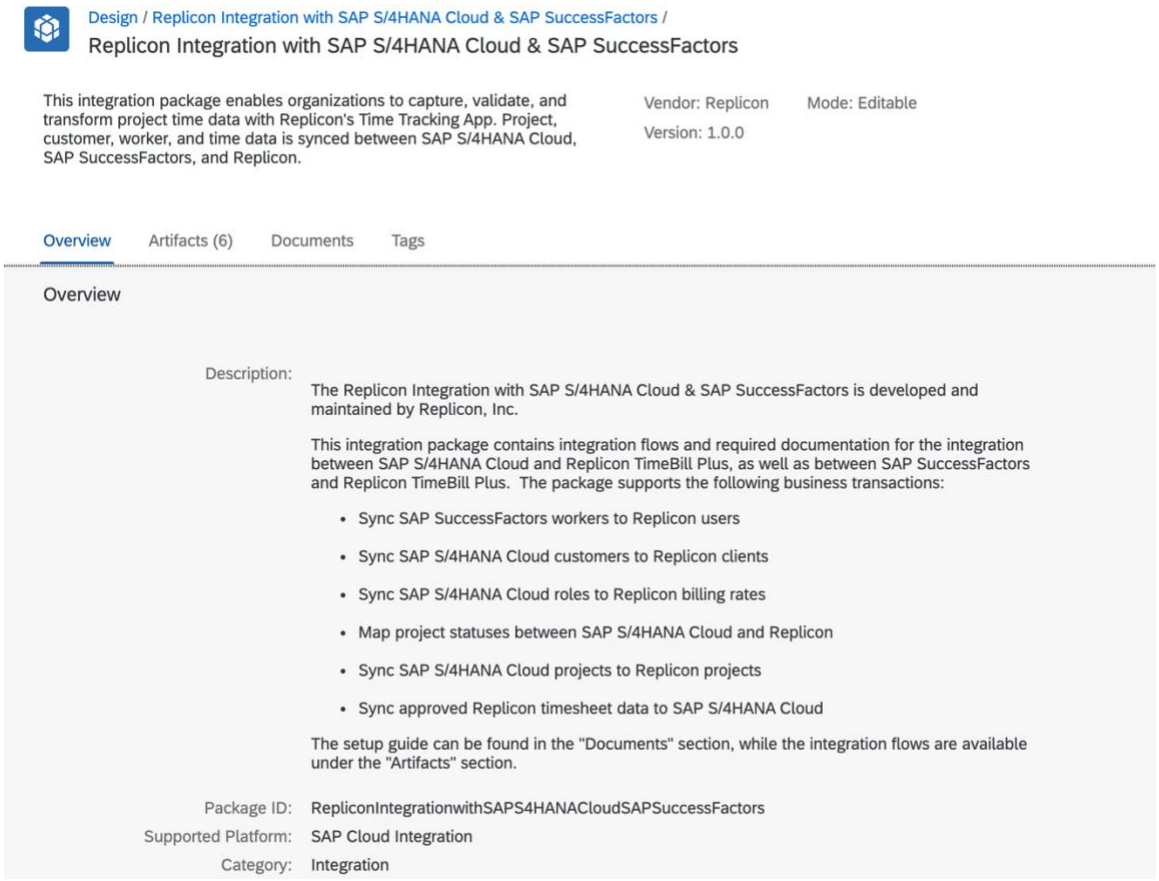
Step	Documentation
1. You have procured SAP CPI tenant.	Please contact your SAP Sales Representative.
2. You have procured SAP S/4HANA Cloud.	Please contact your SAP Sales Representative.
3. You have procured SAP SuccessFactors.	Please contact your SAP Sales Representative.
4. You have procured Replicon TimeBill Plus.	*https://store.sap.com/en/product/display-0000059390_live_v1*

5. You have configured your SAP CPI instance.	*https://help.sap.com/viewer/product/SAP_CLOUD_PLATFORM_INTEGRATION_SUITE/sap.cp.integration.suite/en-US*
6. You have created a Communication User in SAP S/4HANA Cloud and configure that user with certificate based authentication from SAP CPI.	*https://help.sap.com/viewer/0f69f8fb28ac4bf48d2b57b9637e81fa/2102.500/en-US/a089d73fc2114abababeb457cf87dd5deb.html*
7. You have created the following Communication Arrangements in SAP S/4HANA Cloud for the above referenced Communication User: SAP_COM_0008 SAP_COM_0027 SAP_COM_0054 SAP_COM_0087	*https://help.sap.com/viewer/0f69f8fb28ac4bf48d2b57b9637e81fa/2102.500/en-US/214442004da34f738a97f7e924db7fed.html*
8. You have ensured that your Replicon TimeBill Plus instance has a user with the following permission roles assigned: System Administrator Project Administrator Billing Manager	*https://www.replicon.com/help/how-permissions-work/*

9. You have configured the Replicon Administrator User's credentials under the "Security Material" section in your SAP CPI instance. This Replicon Administrator user will be used for the integration and it is required that the user always be enabled and have a valid license in your Replicon tenant.	*https://help.sap.com/viewer/368c481cd6954bdfa5d0435479fd4eaf/Cloud/en-US/b8ccb53b9ec44652b885476f02184a0f.html* 
10. You have added the SAP CPI / Integration Suite Application credentials into the "Security Material" section.	*https://help.sap.com/viewer/368c481cd6954bdfa5d0435479fd4eaf/Cloud/en-US/b8ccb53b9ec44652b885476f02184a0f.html*
12. You have deployed and configured the "SAP SuccessFactors Employee Central Integration with SAP S/4HANA Cloud: Employee Data" Integration Package.	*https://api.sap.com/package/SAPSuccessFactorsEmployeeCentralIntegrationwithSAPS4HANAEmployeeData?section=Artifacts*
12. You have ensured that Cost Centers and Locations match between SAP SuccessFactors and SAP S/4HANA Cloud.	N/A

4 Integration Package Installation

1. Go to https://api.sap.com/
2. Search for *Replicon Integration with SAP S/4HANA Cloud & SAP SuccessFactors*
3. You should now see the Integration Package and related Artifacts



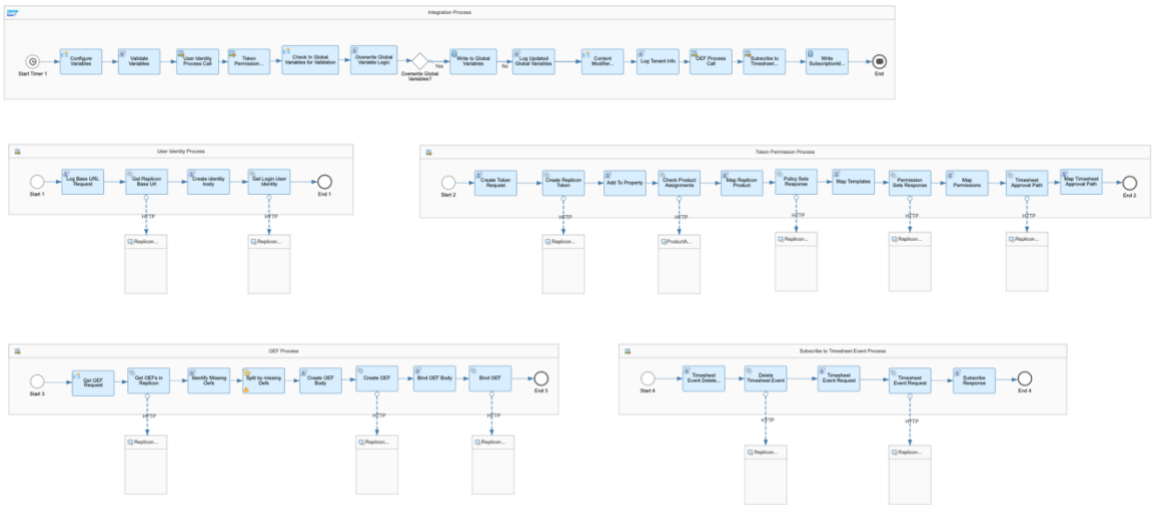
4. Configure the Integration Package Artifacts as per the below instructions and deploy them on your SAP CPI tenant.

5. Configuring and Deploying the Integration Package Artifacts

This section documents the steps required to configure the Integration Package Artifacts. The integration Artifacts to be configured and deployed are:

- _1. Integration Package Initial Configuration
- _2. Sync SAP SuccessFactors Workers to Replicon Users
- _3. Sync SAP S/4HANA Cloud Customers to Replicon Clients
- _4. Map SAP S/4HANA Cloud Project Status to Replicon Project Status
- _5. Sync SAP S/4HANA Cloud Projects to Replicon Projects
- _6. Sync Replicon Time Data to SAP S/4HANA Cloud

5.1 Integration Package Initial Configuration



5.1.1 Configuration Parameters

Parameter	Description/Instructions
Client Sync Start Date	Define the date & time from which the client sync should start using the following format: yyyy – mm-ddTHH:MM:SS
Log Message Request	Set to “No” if you do not want to generate log message requests. Set to “Yes” if you do want to generate log message requests.
Log Message Response	Set to “No” if you do not want to generate log message responses. Set to “Yes” if you do want to generate log message responses.
Overwrite Previous Configuration	Set to “No” to ensure that when re-deploying Integration Package your initial / existing configuration will be preserved. Set to “Yes” to overwrite your existing configuration of the Integration Package.
Project Controlling Area OEF	Enter the OEF name in Replicon to which the “Project Controlling Area” should map.

	By default, it is expected that an OEF called “ProjectControllingArea” has been configured in your Replicon tenant. For more information please visit: https://www.replicon.com/help/creating-custom-fields/#adding-a-dynamic-custom-field
Project Status to Sync	Define the project status criteria to be used to sync projects from SAP S/4HANA Cloud to Replicon. For example, if the parameter is configured as: “Contract Preparation, In Execution” Then only projects that are in “Contract Preparation” or “In Execution” status in SAP S/4HANA Cloud will be synced into Replicon TimeBill Plus. Separate multiple project statuses with a comma.
Project Sync Start Date	Define the date & time from which the project sync should start using the following format: yyyy – mm-ddTHH:MM:SS

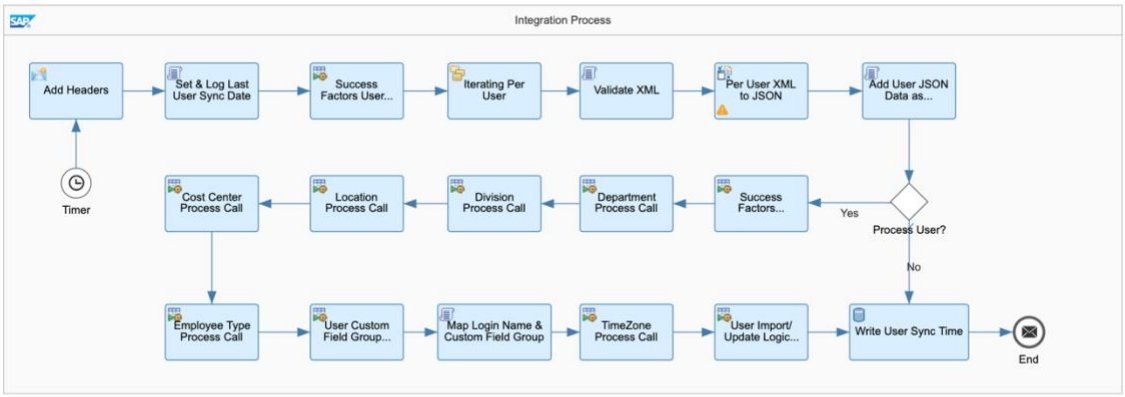
Replicon Company Key	Enter your Replicon tenant's "Company Name" key without spaces
Replicon Credentials Name	Enter the username of the main System Administrator User that has been configured under the "Security Material" section in your SAP CPI tenant. Remember that this user must have the following Permission Roles in Replicon: System Administrator Project Administrator Billing Manager And also must remain always in Enabled status and assigned with a valid license.
Root Department	Define where to replicate the Department structure from SAP SuccessFactors when syncing users to Replicon. For example, if the parameter is configured as: "Company"

	Then the departments structure from SAP SuccessFactors will be replicated under the main “Company” department in Replicon. For more information please visit: https://www.replicon.com/help/setting-up-user-groups/
SAP CPI Credential Name	Enter the username of the main SAP CPI / Integration Suite Application User that has been configured under the “Security Material” section in your SAP CPI tenant.
SAP CPI URL	Enter your SAP CPI tenant URL
SAP S4HANA Certificate Name	Enter your SAP S/4HANA Certificate Name if you plan on using a unique certificate. If left blank, the standard certificate will be applied.
SAP S4HANA Cloud URL	Enter your SAP S/4HANA Cloud URL
Timesheet Approval Path	Enter the default Timesheet Approval Path that is to be assigned to the Employees who are synced from SAP SuccessFactors into Replicon Users.

	The Timesheet Approval Path configured here must match the Timesheet Approval path configured/available in your Replicon tenant. For more information please visit: https://www.replicon.com/help/setting-up-approval-paths/ If left blank, the standard “Project Manager” Supervisor path will be applied.
User Permissions	Enter the default User Roles that are to be assigned to the Employees who are synced from SAP SuccessFactors into Replicon Users. The User Roles configured here must match the User Rules configured/available in your Replicon tenant. Separate multiple User Roles with a comma. For more information please visit: *https://www.replicon.com/help/how-permissions-work/* If left blank, the standard “Project Resource” and “Project Manager” User Roles will be applied.

User Sync Start Date	Define the date & time from which the user sync should start using the following format: yyyy – mm-ddTHH:MM:SS
User Templates	Enter the default Timesheet, Time Off, and Billing Templates (if applicable) that are to be assigned to the Employees who are synced from SAP SuccessFactors into Replicon Users. The User Templates configured here must match the Timesheet, TimeOff, and Expenses Templates configured/available in your Replicon tenant. Separate the Templates with a comma. For more information please visit: *https://www.replicon.com/help/setting-up-timesheet-templates/* *https://www.replicon.com/help/setting-up-time-off-templates/* *https://www.replicon.com/help/setting-up-expense-templates/*

5.2 Sync SAP SuccessFactors Workers to Replicon Users

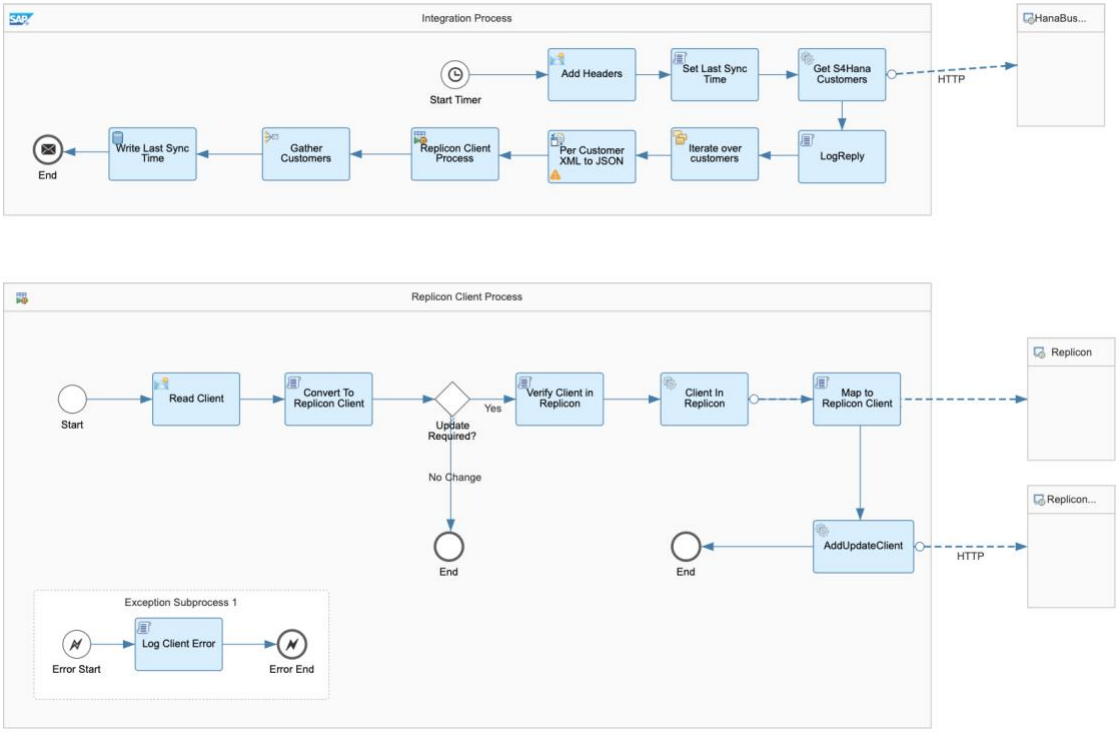


5.2.1 Configuration Parameters

Parameter	Description/Instructions
Timer	Define whether the integration iflow should run only once, run daily on a scheduled day, or run based on a time interval.
Time Zone	Select the timezone to be used when executing a scheduled run for the integration.
Log Message Body	Set to “No” if you do not want to generate log message responses. Set to “Yes” if you do want to generate log message responses.

Log Message Property	Set to “No” if you do not want to generate log messages Set to “Yes” if you do want to generate log messages.
Offset Time In Minutes	Standard/default parameter value.
Replicon Application	Standard/default parameter value.

5.3 Sync SAP S/4HANA Cloud Customers to Replicon Clients

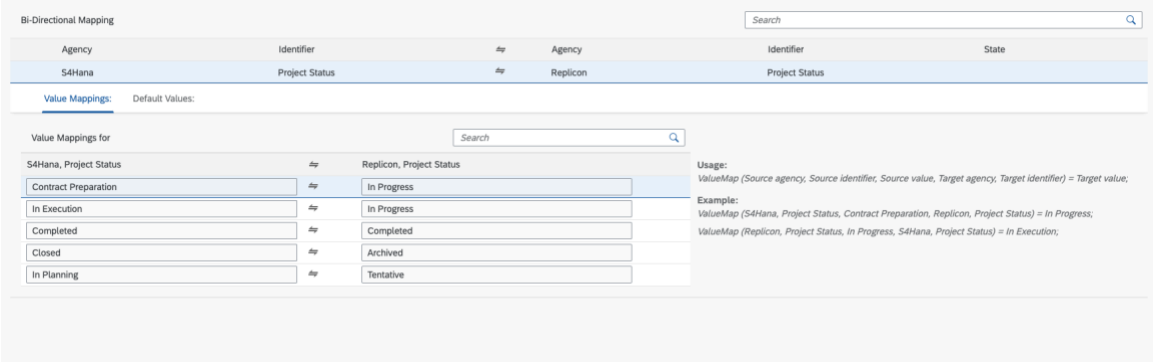


5.3.1 Configuration Parameters

Parameter	Description/Instructions
Timer	Define whether the integration iflow should run only once, run daily on a scheduled day, or run based on a time interval.

Time Zone	Select the timezone to be used when executing a scheduled run for the integration.
Log Message Header	Set to “No” if you do not want to generate log message headers. Set to “Yes” if you do want to generate log message headers.
Log Message Property	Set to “No” if you do not want to generate log messages Set to “Yes” if you do want to generate log messages.
Offset Time In Minutes	Standard/default parameter value.
Replicon Application	Standard/default parameter value.

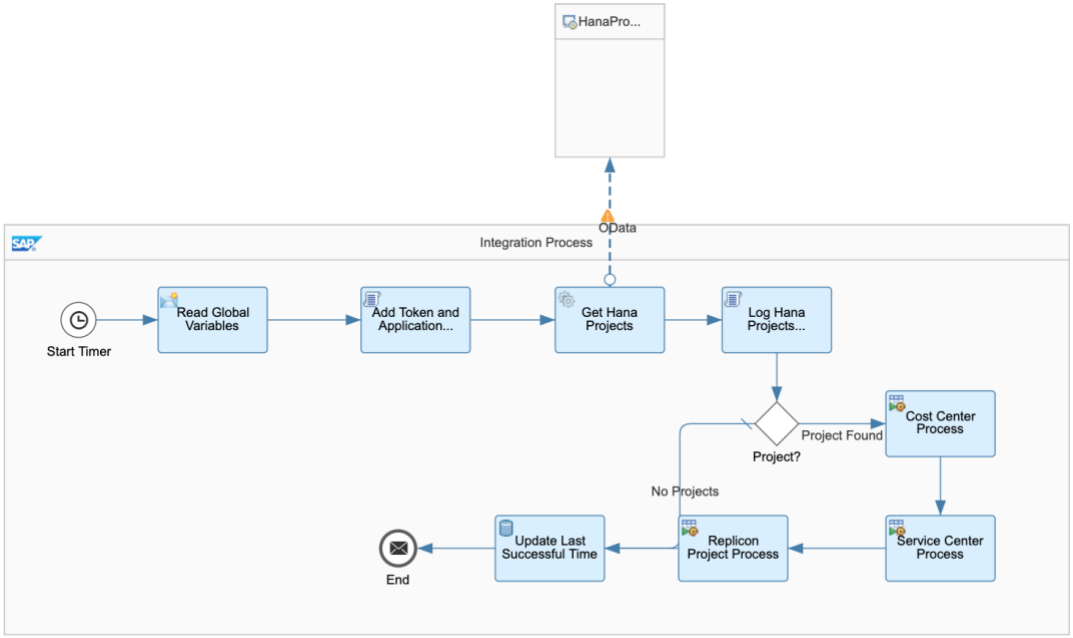
5.4. Map SAP S/4HANA Cloud Project to Replicon Project Status



5.4.1 Configuration Parameters

Parameter	Description/Instructions
S4HANA, Project Status	Define the Project statuses from SAP S/4HANA Cloud to be mapped to Replicon Project statuses
Replicon, Project Status	Define the Project statuses in Replicon to which SAP S/4HANA Cloud Project statuses are to be mapped.

5.5 Sync SAP S/4HANA Cloud Projects to Replicon Projects

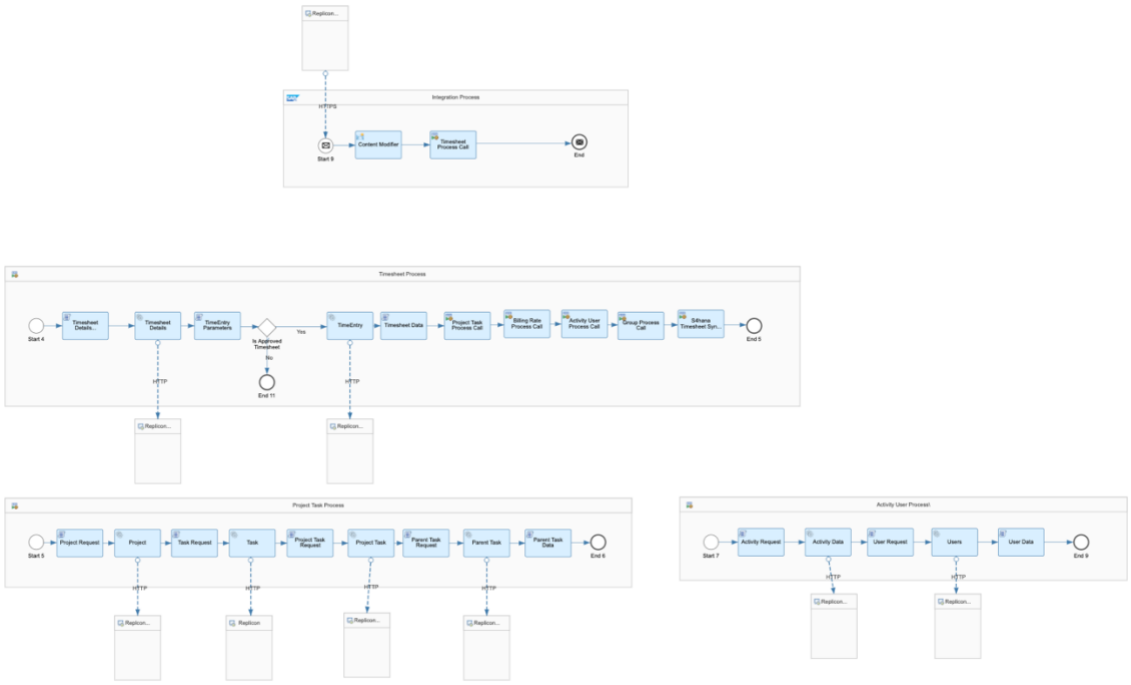


5.5.1 Configuration Parameters

Parameter	Description/Instructions
Timer	Define whether the integration iflow should run only once, run daily on a scheduled day, or run based on a time interval.
Time Zone	Select the timezone to be used when executing a scheduled run for the integration.
Log Cost Center Message	Set to “No” if you do not want to generate log messages for cost centers. Set to “Yes” if you do want to generate log messages for cost centers.

Log Message Body	Set to “No” if you do not want to generate log messages. Set to “Yes” if you do want to generate log messages.
Log Message Header	Set to “No” if you do not want to generate log message headers. Set to “Yes” if you do want to generate log message headers.
Log Message Property	Set to “No” if you do not want to generate log message properties. Set to “Yes” if you do want to generate log message properties.
Log Service Center Message	Set to “No” if you do not want to generate log messages for service centers. Set to “Yes” if you do want to generate log messages for service centers.
Offset Time In Minutes	Standard/default parameter value.
Replicon Application	Standard/default parameter value.

5.6 Sync Replicon Time Data to SAP S/4HANA Cloud



5.6.1 Configuration Parameters

Parameter	Description/Instructions
Application Name	Standard/default parameter value.

Log Message Body	Set to “No” if you do not want to generate log messages. Set to “Yes” if you do want to generate log messages.
Log Message Header	Set to “No” if you do not want to generate log message headers. Set to “Yes” if you do want to generate log message headers.
Log Property	Set to “No” if you do not want to generate log message properties. Set to “Yes” if you do want to generate log message properties.

6 Contact Information

Address

Replicon
3 Lagoon Dr, Suite 130
Redwood City, CA 94065

Phone

650 286 9200

Fax

650 508 9229

Web

www.replicon.com

Email

support@replicon.com

7 Appendix

7.1.1 Sample Payload Data

Artifacts:

_1. Integration Package Initial Configuration

No calls made to SAP in this Integration Flow

_2. Sync SAP SuccessFactors Workers To Replicon Users

SuccessFactors Adapter - User Entity

Payload Request:

Accept: application/atom+xml
Authorization: SAP-PASSPORT
Application-Interface-Key=i56g59hb
Request URL : GET

https://apisalesdemo8.successfactors.com/odata/v2/User?$filter=lastModifiedDateTime ge datetimeoffset'2021-02-26T07:15:30Z' or empInfo/lastModifiedDateTime ge datetimeoffset'2021-02-26T07:15:30Z' or empInfo/personNav/lastModifiedDateTime ge datetimeoffset'2021-02-26T07:15:30Z'&$expand=empInfo,empInfo/personNav,personKeyNav&$select=userId,email,empId,firstName,lastModifiedDateTime,lastName,timeZone,username,empInfo/personIdExternal,empInfo/lastModifiedDateTime,empInfo/personNav/dateOfBirth,empInfo/personNav/lastModifiedDateTime,personKeyNav/personIdExternal,empInfo/endDate,empInfo/startDate&paging=snapshotHTTP/1.1

Payload Response

```
<User>
<User>
        <empId/>
        <firstName>Bill</firstName>
        <lastName>John</lastName>
<lastModifiedDateTime>2021-02-
25T16:51:33.000</lastModifiedDateTime>
        <empInfo>
        <EmpEmployment>
<lastModifiedDateTime>2021-02-
25T16:51:30.000</lastModifiedDateTime>
        <personNav>
        <PerPerson>
<lastModifiedDateTime>2021-02-
26T07:20:58.000</lastModifiedDateTime>
        <dateOfBirth>1985-01-
        02T00:00:00.000</dateOfBirth>
        </PerPerson>
        </personNav>
        <endDate/>
        <personIdExternal>BJ123</personIdExternal>
        <startDate>2021-02-25T00:00:00.000</startDate>
        </EmpEmployment>
        </empInfo>
        <timeZone>US/Pacific</timeZone>
        <userId>BJ123</userId>
        <email/>
        <personKeyNav>
        <PersonKey>
        <personIdExternal>BJ123</personIdExternal>
        </PersonKey>
        </personKeyNav>
        <username>billj</username>
</User>
</User>
```

SuccessFactors Adapter - EmpJob Entity

Payload Request:

Accept: application/atom+xml
Authorization: SAP-PASSPORT
Application-Interface-Key=i56g59hb
Request URL: GET

https://apisalesdemo8.successfactors.com/odata/v2/EmpJob?$filter=userId eq 'BJ123'&$expand=costCenterNav,employmentTypeNav,departmentNav,divisionNav,locationNav&$select=userId,costCenterNav/externalCode,costCenterNav/name,employmentTypeNav/id,employmentTypeNav/externalCode,employmentTypeNav/localeLabel,departmentNav/externalCode,departmentNav/name,divisionNav/externalCode,divisionNav/name,locationNav/externalCode,locationNav/name&paging=snapshotHTTP/1.1

Payload Response:

```
<EmpJob>
<EmpJob>
<employmentTypeNav>
<PicklistOption>
<externalCode>U4</externalCode>
<localeLabel>Salaried staff</localeLabel>
<id>3631</id>
</PicklistOption>
</employmentTypeNav>
<divisionNav>
<FODivision>
<externalCode>RES_DEV</externalCode>
<name>Research &amp;amp; development</name>
</FODivision>
</divisionNav>
<locationNav>
<FOLocation>
<externalCode>10000-0003</externalCode>
<name>San Diego</name>
</FOLocation>
</locationNav>
<costCenterNav>
<FOCostCenter>
<externalCode>10000_MKT1</externalCode>
<name>Advertising</name>
</FOCostCenter>
</costCenterNav>
<departmentNav>
<FODepartment>
<externalCode>5000131</externalCode>
```

<name>Market Research</name>
</FODepartment>
</departmentNav>
<userId>BJ123</userId>
</EmpJob>
</EmpJob>

_3. Sync SAP S/4HANA Cloud Customers to Replicon Clients

API_BUSINESS_PARTNER/A_Customer

Payload Request:

Accept: application/atom+xml
Authorization: SAP-PASSPORT
Application-Interface-Key=i56g59hb
Request URL: GET

https://host:port/sap/opu/odata/sap/API_BUSINESS_PARTNER/A_Customer

Payload Response:

<feed xmlns="http://www.w3.org/2005/Atom" xmlns:m="http://schemas.microsoft.com/ado/2007/08/dataservices/metadata" xmlns:d="http://schemas.microsoft.com/ado/2007/08/dataservices" xml:base="https://my305626-api.s4hana.ondemand.com/sap/opu/odata/sap/API_BUSINESS_PARTNER/"><id>https://my305626-api.s4hana.ondemand.com/sap/opu/odata/sap/API_BUSINESS_PARTNER/A_Customer</id><title type="text">A_Customer</title><updated>2021-02-26T08:21:30Z</updated><author><name/></author><link href="A_Customer" rel="self" title="A_Customer"/><entry><id>https://my305626-api.s4hana.ondemand.com/sap/opu/odata/sap/API_BUSINESS_PARTNER/A_Customer('1003592')</id><title type="text">A_Customer('1003592')</title><updated>2021-02-26T08:21:30Z</updated><category term="API_BUSINESS_PARTNER.A_CustomerType" scheme="http://schemas.microsoft.com/ado/2007/08/dataservices/scheme"/><link href="A_Customer('1003592')"

rel="edit" title="A_CustomerType"/><link href="A_Customer('1003592')/to_CustomerCompany" rel="http://schemas.microsoft.com/ado/2007/08/dataservices/related/to_CustomerCompany" type="application/atom+xml;type=feed" title="to_CustomerCompany"/><link href="A_Customer('1003592')/to_CustomerSalesArea" rel="http://schemas.microsoft.com/ado/2007/08/dataservices/related/to_CustomerSalesArea" type="application/atom+xml;type=feed" title="to_CustomerSalesArea"/><link href="A_Customer('1003592')/to_CustomerTaxGrouping" rel="http://schemas.microsoft.com/ado/2007/08/dataservices/related/to_CustomerTaxGrouping" type="application/atom+xml;type=feed" title="to_CustomerTaxGrouping"/><link href="A_Customer('1003592')/to_CustomerText" rel="http://schemas.microsoft.com/ado/2007/08/dataservices/related/to_CustomerText" type="application/atom+xml;type=feed" title="to_CustomerText"/><content type="application/xml"><m:properties xmlns:m="http://schemas.microsoft.com/ado/2007/08/dataservices/metadata" xmlns:d="http://schemas.microsoft.com/ado/2007/08/dataservices"><d:Customer>1003592</d:Customer><d:AuthorizationGroup></d:AuthorizationGroup><d:BillingIsBlockedForCustomer></d:BillingIsBlockedForCustomer><d:CreatedByUser>CB9980000030</d:CreatedByUser><d:CreationDate>2021-02-26T00:00:00</d:CreationDate><d:CustomerAccountGroup>CPD</d:CustomerAccountGroup><d:CustomerClassification></d:CustomerClassification><d:CustomerFullName>Company RepliconClient/59101-2614 Billings</d:CustomerFullName><d:CustomerName>RepliconClient</d:CustomerName><d:DeliveryIsBlocked></d:DeliveryIsBlocked><d:NFPartnerIsNaturalPerson></d:NFPartnerIsNaturalPerson><d:OrderIsBlockedForCustomer></d:OrderIsBlockedForCustomer><d:PostingIsBlocked>false</d:PostingIsBlocked><d:Supplier></d:Supplier><d:CustomerCorporateGroup></d:CustomerCorporateGroup><d:FiscalAddress></d:FiscalAddress><d:Industry></d:Industry><d:IndustryCode1></d:IndustryCode1><d:IndustryCode2></d:IndustryCode2><d:IndustryCode3></d:IndustryCode3><d:IndustryCode4></d:IndustryCode4><d:IndustryCode5></d:IndustryCode5><d:InternationalLocation

Number1>0</d:InternationalLocationNumber1><d:NielsenRegion></d:NielsenRegion><d:ResponsibleType></d:ResponsibleType><d:TaxNumber1></d:TaxNumber1><d:TaxNumber2></d:TaxNumber2><d:TaxNumber3></d:TaxNumber3><d:TaxNumber4></d:TaxNumber4><d:TaxNumber5></d:TaxNumber5><d:TaxNumberType></d:TaxNumberType><d:VATRegistration></d:VATRegistration><d:DeletionIndicator>false</d:DeletionIndicator></m:properties></content></entry></feed>

_4. Map SAP S/4HANA Cloud Project Status to Replicon Project Status

No calls made to SAP S/4HANA Cloud since this is a value mapper integration flow.

_5. Sync SAP S/4HANA Cloud Projects to Replicon Projects

SC_EXTERNAL_SERVICES_SRV/ProjectSet

Payload Request:

Accept: application/atom+xml
Authorization: SAP-PASSPORT
Application-Interface-Key=i56g59hb
Request URL: GET
https://host:port/sap/opu/odata/cpd/SC_EXTERNAL_SERVICES_SRV/ProjectSet?$filter=ChangedOn%20ge%20datetimeoffset%272021-02-26T08:27:00Z%27&$select=ProjectID,ChangedOn,ProfitCenterName,ProjectName,ProfitCenter,ProjectStage,StartDate,StageDesc,EndDate,Customer,CustomerName,ProjManagerId,ProjManagerName,ProjAccountantId,ProjAccountantName,ProjControllerId,ProjControllerName,CostCenter,CostCenterName,ProjPartnerId,ProjPartnerName,ProjectCategory,OrgID,OrgDesc HTTP/1.1

Payload Response:

<ProjectSet>
<Project>
<ProjControllerId></ProjControllerId>
<ProfitCenter>YB101</ProfitCenter>
<ProjAccountantName></ProjAccountantName>

<ProjectCategory>C</ProjectCategory>
<ProjectName>SF POLaris V2</ProjectName>
<Customer>1003586</Customer>
<ProjPartnerName></ProjPartnerName>
<ProjectStage>P003</ProjectStage>
<ProjectID>DF123</ProjectID>
<StageDesc>In Execution</StageDesc>
<ProjManagerName>Hemanth K</ProjManagerName>
<ProjPartnerId></ProjPartnerId>
<EndDate>2021-02-22T00:00:00.000</EndDate>
<ProjControllerName></ProjControllerName>
<StartDate>2021-02-22T00:00:00.000</StartDate>
<OrgID>1710</OrgID>
<CostCenter>0017101902</CostCenter>
<OrgDesc>Service Organization - Company US</OrgDesc>
<CostCenterName>Csltg Unit A (US)</CostCenterName>
<ProjAccountantId></ProjAccountantId>
<CustomerName>DTDC</CustomerName>
<ChangedOn>2021-02-26T08:31:10.000</ChangedOn>
<ProfitCenterName>Consulting Unit A</ProfitCenterName>
<ProjManagerId>50000100</ProjManagerId>
</Project>
</ProjectSet>

SC_EXTERNAL_SERVICES_SRV/PlanDataSet

Payload Request:

Accept: application/atom+xml
Authorization: SAP-PASSPORT
Application-Interface-Key=i56g59hb
Request URL: GET
https://host:port/sap/opu/odata/cpd/SC_EXTERNAL_SERVICES_SRV/PlanDataSet?$filter=ProjectID%20eq%20%27DF123%27&$select=ProjectID,Employee,ResourceId,WorkPackageID,EmployeeName,Wpname,ResTypeText,ResourceText,Confirmed HTTP/1.1

Payload Response:

<PlanDataSet>
<PlanData>
<WorkPackageID>DF123.1.1</WorkPackageID>
<Employee>50000141</Employee>
<ResTypeText>Team</ResTypeText>
<ResourceId>T002</ResourceId>
<Wpname>SF POLaris V2</Wpname>
<ProjectID>DF123</ProjectID>
<ResourceText>Senior Consultant</ResourceText>
<Confirmed></Confirmed>
<EmployeeName>Sathya V</EmployeeName>
</PlanData>
</PlanDataSet>
<ProjectRoleSet>

SC_EXTERNAL_SERVICES_SRV/ProjectRoleSet

Payload Request:

Accept: application/atom+xml
Authorization: SAP-PASSPORT
Application-Interface-Key=i56g59hb
Request URL: GET
https://host:port/sap/opu/odata/cpd/SC_EXTERNAL_SERVICES_SRV/ProjectRoleSet?$filter=ProjectID%20eq%20%27DF123%27&$select=BusinessPartnerID,ProjectRoleName,ProjectID,BusinessPartnerName HTTP/1.1

Payload Response:

<ProjectRoleSet>
<ProjectRole>
<ProjectRoleName>Project Manager</ProjectRoleName>
<BusinessPartnerID>9980000030</BusinessPartnerID>
<ProjectID>DF123</ProjectID>
<BusinessPartnerName>Hemanth K</BusinessPartnerName>
</ProjectRole>
</ProjectRoleSet>

SC_EXTERNAL_SERVICES_SRV/WorkpackageSet

Payload Request:

Accept: application/atom+xml
Authorization: SAP-PASSPORT
Application-Interface-Key=i56g59hb
Request URL: GET

https://host:port/sap/opu/odata/cpd/SC_EXTERNAL_SERVICES_SRV/WorkpackageSet?$filter=ProjectID%20eq%20%27DF123%27&$expand=WorkItemSet&$select=WPEndDate,WPStartDate,WorkPackageName,ChangedBy,ProjectID,ChangedOn,Quantity,UnitOfMeasure,WorkPackageID,WorkPackageUnitText,WorkPackageType,ProjectName,WorkItemSet/Workitem,WorkItemSet/Workitemname HTTP/1.1

Payload Response:

```
<WorkpackageSet>
<Workpackage>
<WorkPackageUnitText></WorkPackageUnitText>
<WorkPackageID>DF123.1.1</WorkPackageID>
<WorkPackageType></WorkPackageType>
<UnitOfMeasure></UnitOfMeasure>
<ChangedBy>CB9980000030</ChangedBy>
<ProjectName>SF POLaris V2</ProjectName>
<ProjectID>DF123</ProjectID>
<WorkPackageName>SF POLaris
V2</WorkPackageName>
<Quantity>0.0</Quantity>
<WPEndDate>2021-02-22T00:00:00.000</WPEndDate>
<WPStartDate>2021-02-
22T00:00:00.000</WPStartDate>
<ChangedOn>2021-02-26T08:31:10.000</ChangedOn>
<WorkItemSet>
<WorkItem>
<Workitem>P001</Workitem>
<Workitemname>Documentation</Workitemname>
</WorkItem>
<WorkItem>
<Workitem>P002</Workitem>
<Workitemname>Testing</Workitemname>
</WorkItem>
</WorkItemSet>
```

```
</Workpackage>
</WorkpackageSet>
```

_6. Sync Replicon Time Data to SAP S/4HANA Cloud

API_MANAGE_WORKFORCE_TIMESHEET/TimeSheetEntryCollection

Payload Request:

Accept: application/atom+xml
Authorization: SAP-PASSPORT
Application-Interface-Key=i56g59hb
Request URL: GET
https://my305626-api.s4hana.ondemand.com:443/sap/opu/odata/sap/API_MANAGE_WORKFORCE_TIMESHEET/TimeSheetEntryCollection?$filter=TimeSheetDate ge datetime'${property.timesheetStartDate}' and TimeSheetDate le datetime'${property.timesheetEndDate}' and PersonWorkAgreementExternalID eq '${property.personWorkAgreement}'

Payload Response:

```
<TimeSheetEntryCollection>
<TimeSheetEntry>
<TimeSheetDate>2021-02-01T00:00:00.000</TimeSheetDate>
<TimeSheetRecord>000000025547</TimeSheetRecord>
<TimeSheetIsReleasedOnSave>false</TimeSheetIsReleasedOnSave>
<TimeSheetDataFields>
<TimeSheetTaskComponent></TimeSheetTaskComponent>
<WBSElement>SFTBP.1.1</WBSElement>
<HoursUnitOfMeasure>H</HoursUnitOfMeasure>
<ReceiverCostCenter></ReceiverCostCenter>
<ActivityType>T004</ActivityType>
<TimeSheetWrkLocCode></TimeSheetWrkLocCode>
```

```
<SenderCostCenter>17101902</SenderCostCenter>
<InternalOrder></InternalOrder>
<WorkItem>P001</WorkItem>
<RejectionReason></RejectionReason>
<BillingControlCategory></BillingControlCategory>
<PurchaseOrderItem>0</PurchaseOrderItem>
<TimeSheetNote></TimeSheetNote>
<TimeSheetTaskType></TimeSheetTaskType>
<RecordedQuantity>8.000</RecordedQuantity>
<TimeSheetOvertimeCategory></TimeSheetOvertimeCategory>
<TimeSheetTaskLevel></TimeSheetTaskLevel>
<RecordedHours>8.00</RecordedHours>
<PurchaseOrder></PurchaseOrder>
<ControllingArea>A000</ControllingArea>
</TimeSheetDataFields>
<PersonWorkAgreementExternalID>AB11223344</PersonWorkAgreementExternalID>
<TimeSheetPredecessorRecord></TimeSheetPredecessorRecord>
<TimeSheetStatus>60</TimeSheetStatus>
<TimeSheetIsExecutedInTestRun>false</TimeSheetIsExecutedInTestRun>
<TimeSheetOperation></TimeSheetOperation>
<CompanyCode>1710</CompanyCode>
<PersonWorkAgreement>50000132</PersonWorkAgreement>
</TimeSheetEntry>
</TimeSheetEntryCollection>
```

API_MANAGE_WORKFORCE_TIMESHEET/TimeSheetEntryCollection

Payload Request:

```
Accept: application/atom+xml
Authorization: SAP-PASSPORT
Application-Interface-Key=i56g59hb
Request URL: POST
https://my305626-api.s4hana.ondemand.com:443/sap/opu/odata/sap/API_MANAGE_WORKFORCE_TIMESHEET/TimeSheetEntryCollection
```

Request Body

<batchParts>
<batchChangeSet> <batchChangeSetPart>
<method>POST</method>
<TimeSheetEntryCollection> <TimeSheetEntry>
<TimeSheetDate>2021-02-01T00:00:00.000</TimeSheetDate>
<TimeSheetRecord>000000025547</TimeSheetRecord>
<TimeSheetIsReleasedOnSave>false</TimeSheetIsReleasedOnSave>
<TimeSheetDataFields>
<TimeSheetTaskComponent></TimeSheetTaskComponent>
<WBSElement>SFTBP.1.1</WBSElement>
<HoursUnitOfMeasure>H</HoursUnitOfMeasure>
<ReceiverCostCenter></ReceiverCostCenter>
<ActivityType>T004</ActivityType>
<TimeSheetWrkLocCode></TimeSheetWrkLocCode>
<SenderCostCenter>17101902</SenderCostCenter>
<InternalOrder></InternalOrder>
<WorkItem>P001</WorkItem>
<RejectionReason></RejectionReason>
<BillingControlCategory></BillingControlCategory>
<PurchaseOrderItem>0</PurchaseOrderItem>
<TimeSheetNote></TimeSheetNote>
<TimeSheetTaskType></TimeSheetTaskType>
<RecordedQuantity>8.000</RecordedQuantity>
<TimeSheetOvertimeCategory></TimeSheetOvertimeCategory>
<TimeSheetTaskLevel></TimeSheetTaskLevel>
<RecordedHours>8.00</RecordedHours>
<PurchaseOrder></PurchaseOrder>
<ControllingArea>A000</ControllingArea>
</TimeSheetDataFields>
<PersonWorkAgreementExternalID>AB11223344</PersonWorkAgreementExternalID>
<TimeSheetPredecessorRecord></TimeSheetPredecessorRecord>
<TimeSheetStatus>60</TimeSheetStatus>
<TimeSheetIsExecutedInTestRun>false</TimeSheetIsExecutedInTestRun>
<TimeSheetOperation>D</TimeSheetOperation>
<CompanyCode>1710</CompanyCode>

```
<PersonWorkAgreement>50000132</PersonWork
Agreement>
</TimeSheetEntry> </TimeSheetEntryCollection>
</batchChangeSetPart>
</batchChangeSet></batchParts>
```

Payload Response:

```
<statusInfo>Created</statusInfo>
<contentId/>
<body>
<TimeSheetDate>2021-02-
01T00:00:00.000</TimeSheetDate>
<TimeSheetRecord>000000025656</TimeSheetRecord>
<TimeSheetIsReleasedOnSave>false</TimeSheetIsRele
asedOnSave>
<TimeSheetDataFields>
<TimeSheetTaskComponent></TimeSheetTaskCompon
ent>
<WBSElement>SFTBP.1.1</WBSElement>
<HoursUnitOfMeasure>H</HoursUnitOfMeasure>
<ReceiverCostCenter></ReceiverCostCenter>
<ActivityType>T004</ActivityType>
<TimeSheetWrkLocCode></TimeSheetWrkLocCode>
<SenderCostCenter>17101902</SenderCostCenter>
<InternalOrder></InternalOrder>
<WorkItem>P001</WorkItem>
<RejectionReason></RejectionReason>
<BillingControlCategory></BillingControlCategory>
<PurchaseOrderItem>0</PurchaseOrderItem>
<TimeSheetNote></TimeSheetNote>
<TimeSheetTaskType></TimeSheetTaskType>
<RecordedQuantity>8.000</RecordedQuantity>
<TimeSheetOvertimeCategory></TimeSheetOvertimeCat
egory>
<TimeSheetTaskLevel></TimeSheetTaskLevel>
<RecordedHours>8.00</RecordedHours>
<PurchaseOrder></PurchaseOrder>
<ControllingArea>A000</ControllingArea>
</TimeSheetDataFields>
<PersonWorkAgreementExternalID>AB11223344</Perso
nWorkAgreementExternalID>
<TimeSheetPredecessorRecord>000000025563</TimeS
heetPredecessorRecord>
<TimeSheetStatus>30</TimeSheetStatus>
```

```
<TimeSheetIsExecutedInTestRun>false</TimeSheetIsExecutedInTestRun>
<TimeSheetOperation></TimeSheetOperation>
<CompanyCode>1710</CompanyCode>
<PersonWorkAgreement>50000132</PersonWorkAgreement>
</body>
```

NOTES:

All OData Calls from SAP SuccessFactors are done by basic Authentication via credentials stored in SAP CPI security material

All OData and HTTP Calls from S4 Hana Cloud are done by client certificate generated in S/4HANA Cloud and stored in SAP CPI Security Material