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SAP S/4HANA
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Setting Up *SAP S/4HANA for Enterprise Contract Management* **(1XV)**

THE BEST RUN SAP

Content

1 Purpose

This document describes additional configuration steps that must be carried out by customers to activate the following Integration Scenarios:

1. Integrate Document Sign for SAP S/4HANA for Enterprise Contract Management with DocuSign.
    - This enables user to perform the DocuSign functionality for the legal documents.
2. Integrate Document Sign for SAP S/4HANA for Enterprise Contract Management with non-standard eSignature provider.
    - - This enables user to perform eSignature functionality with any other eSignature provider chosen by customer. The solution requires custom coding as described in the according section.
3. Navigation to External Linked Objects from SAP S/4HANA for Enterprise Contract Management to any External System.
    - This enables user to navigate to the external system on click of Linked Object which belongs to the technical type of category *External*.

As these configuration steps are company-specific, they cannot be delivered by SAP, and must be carried out by the customer.

2 DocuSign Integration

2.1 Preparation

2.1.1 Required Information

During the activities described in this guide, you are also required to enter or provide system-specific information. To ensure a smooth and efficient integration between SAP S/4HANA and DocuSign service, we recommend that you have the information listed in the following table at hand before starting the integration process:

Type of Information Required:	Your Data
DocuSign Service	System details such as URL(Host and Port Information)
SAP S/4HANA On-Premise system	System details such as URL, Username, and Password

2.2 Define e-Signature parameter

Purpose

You want to use e-Signature integration with DocuSign as an e-Signature provider. In this case, you must activate the e-Signature integration by defining the e-Signature parameters.

Prerequisite

You have a valid user with enough Authorizations.

Procedure

1. Login into the S/4HANA system and execute transaction `SPRO`.
2. Navigate to configuration activity: *Enterprise Contract Management* > *General Settings* > *Define e-Signature Parameters*

3. On the *Change View "Define eSignature Parameters": Details* screen, choose *New Entries* and make the following entries:

Field Name	Value
e-Sign Parameter	`ACTIVATE_ESIGN`
Long Text	`Activate eSignature`
e-Sign Param Value	`<Check>`

4. Choose *Save*.

2.3 Subscribe the DocuSign API Integration

Purpose

The DocuSign service needs to be subscribed before you perform the configuration in SAP S/4HANA.

Prerequisite

You have a valid user with DocuSign Admin permission set.

Procedure

1. Log on to corresponding account with the *Admin* user. If several accounts are being used, choose the right one from the upper left profile icon.
2. Open the DocuSign admin center by choosing *Go to Admin*.
3. Open *Integrations/API and Keys*
4. If no Integration scenario to be used exists yet, choose *ADD APP / INTEGRATION KEY*.
   - Give a proper name for integration in the dialog box.
5. The integration scenario will be created.
6. Choose *Edit* on the integration scenario to be used, for example the one created in step 4.
7. Several information will be generated, noted or modified in the dialog box.

Field Name	Value
Integration Key	Note it down. It will be used in step Configure OAuth 2.0 Client [page 7] (OAuth 2.0 Client ID)
Authentication	Authorization Code Grant
Secret Keys	Generate one with *ADD SECRET KEY* and note it down.It will be used in step Configure OAuth 2.0 Client [page 7] (Client Secret)
Redirect URIs	Add from each system as shown in step Configure OAuth 2.0 Client [page 7] (Redirection URI). Redirect URI of each S4H system the integration with DocuSign shall be set up.

2.4 Configure OAuth 2.0 Client

Purpose

The OAuth 2.0 Client needs to be configured with the OAuth client information of the DocuSign service.

Prerequisite

You have a valid user with enough Authorizations.

Procedure

1. Log on to the S/4HANA system and execute transaction `OA2C_CONFIG`.
2. To create an OAuth 2.0 client, choose *Create*.
3. Enter the following entries and choose *OK*.

Field Name	Value
OAuth 2.0 Client Profile	**`SAP_COM_0518`**
OAuth 2.0 Client ID	ClientID (BrokerID)generated in the step Subscribe the DocuSign API Integration [page 6]

Field Name	Value
Configuration Name	**<name>**(For example SAP_COM_0518)

4. On the *Details* screen, enter the following details:

Field Name	Value
Client Secret	Client Secret generated in the step Subscribe the DocuSign API Integration [page 6]
Authorization Endpoint	Authorization end point depending on target environment: ○ Sandbox (demo): account-d.docusign.com/oauth/auth ○ Production account.docusign.com/oauth/auth
Token Endpoint	Token end point depending on target envoronment: ○ Sandbox (demo): account-d.docusign.com/oauth/token ○ Production account.docusign.com/oauth/token
Client Authentication	**Basic**
Resource Access Authentication	**Header Field**
Selected Grant Type	**Current user related**
Grant Type (Current User related)	**Authorization Code**

> **i** Note
>
> Add the proxy information (Proxy Host, Proxy Port, Proxy User, Proxy Password) if required.

5. Save your changes.

2.5 Configure RFC Destination

Purpose

RFC Destination for the must be created in SAP S/4HANA On-Premise system to establish the communication.

Prerequisite

You have a valid user with enough Authorizations.

Procedure

1. Log on to the S/4HANA system and execute transaction `SM59`.
2. Choose *Create*
3. Enter the following entries.

Field Name	Value
RFC Destination	**<name>** (For example: **LCMDOCUSIGN**)
Connection Type	**G** (HTTP Connection to External Server)
Description 1	**RFC for DocuSign Connection**

4. On the *Technical Settings* Tab, enter the following entries:

Field Name	Value
Host	Sandbox/Test environment: **demo.docusign.net** Production account varies where account is hosted, for example: **eu.docusign.net**
Path Prefix	**/restapi/v2/accounts/{accountId}** The account Id can be found on page Integrations/API and Keys within DocuSign Admin Center (field API Account ID)

5. On the *Logon and Security* Tab, enter the following entries:

Field Name	Value
SSL	**Active**
SSL Certificate	**DEFAULT SSL Client (Standard)**

> **i** Note
>
> The SSL settings could be different depending on customer's system environment.

6. Choose *Save*

2.6 Import SSL Certificates

Purpose

For enabling secure (SSL) communication with DocuSign, corresponding SSL certificates must be imported to each system building an integration with DocuSign API, for example development, quality and production systems.

Prerequisite

You have a valid user with enough Authorizations.

Procedure

1. Download required certificates from DocuSign trust center web page according to the target environment to be used on system, either for sandbox (demo.docusign.net) or corresponding production account depending on datacenter the account is being hosted.
2. Log on to the S/4HANA system and execute transaction `STRUST`.
3. Import downloaded certificate file into secure store upon your choice.

2.7 Configure RFC Destinations for DocuSign Integration Scenario

Purpose

You can configure the RFC Destinations for the DocuSign Integration scenario.

Prerequisite

You have a valid user with enough Authorizations.

Procedure

1. Log on to the S/4HANA system and execute transaction `SPRO`.
2. Navigate to configuration activity: *SAP S/4HANA for Enterprise Contract Management Integration Basic Settings Assign RFC Destination*.
3. On the *Change View "Maintain Integration Configuration": Overview*screen, choose *New Entries* and make the following entries:

Field Name	Value
Integration Scenario	**DocuSign**
API RFC Destination	**<RFC Destination>** created in the step Configure RFC Destination [page 8]
UI RFC Destination	
OAuth for API	**<Configuration Name>** created in the step Configure OAuth 2.0 Client [page 7](For example SAP_COM_0518)

4. Choose *Save*.

2.8 Extensibility (Activate Integration BADI)

Purpose

The extensibility option enables you to run the standard communication scenario provided for DocuSign.

Prerequisites

You have a valid user with enough Authorizations to perform the development.

Procedure

1. Log on to the S/4HANA system and execute transaction `SE18`.
2. Activate the following BADI implementations provided by SAP of Enhancement Spot **LCM_ESIGN_INTEGRATION.**

BADI definition	BADI implementation
LCM_ESIGN_SEND	**LCM_BADI_SEND_TO_DOCUSIGN**
LCM_ESIGN_URL	**LCM_BADI_URL_TO_ENVELOPE**

2.8.1 Extensibility (Implement Document Filter BADI)

Purpose

In addition to the SAP delivered standard DocuSign integration BADI implementations you have activated in step above; the extensibility option allows you to filter out documents by format or other characteristics which are not applicable for sending to DocuSign.

Prerequisites

You have a valid user with enough Authorizations to perform the development.

Procedure

1. Log on to the S/4HANA system and execute transaction `SE18`.
2. Choose New BAdi Enhancement Spot **LCM_ESIGN_INTEGRATION**.
3. Implement and activate the following BADI definition.

BADI definition	Method	Use
LCM_ESIGN_FILTER	**FILTER_DOCUMENTS**	**Filter out any document by format or other characteristics not applicable for eSignature process**

For more information about method parameters and use of BADI, please refer to the BADI documentation available in system.

2.9 Processing of Status Updates

Purpose

Schedule the report for processing status updates of DocuSign Envelopes in the system. The report checks for status updates (Draft to Sent and any status to Voided or Completed) and updates the Envelope and Document eSignature status in the system accordingly.

Prerequisite

You have a valid user with enough Authorizations.

Procedure

1. Log on to the S/4HANA system and execute transaction `KCPB` for Job Scheduling.
2. Enter the report name **`R_LCM_DOCUSIGN_PROCESS_STATUS`** and a variant name for parametrization a of step 3.
3. Create a report variant. Parameters are:

Field Name	Value
Legal Transaction IDs	IDs of Legal Transaction containing Envelopes to be processed (recommended for individual start or report)
Envelope Creation Date	Date of creation Envelopes to be processed from
Document IDs	IDs of Legal Document contained in Envelopes to be processed (recommended for individual start or report)
Envelope IDs	Specific Envelope IDs to be processed(recommended for individual start or report)

4. Schedule it with timings as needed to update Envelope status for background processing.

2.10 Optional: Configure Content Type for Certificate of Completion

Purpose

You want to store the certificate of completion document for completed DocuSign envelope. In this case, you must maintain the mandatory content type used by the system to manage this type of document.

Prerequisite

You have a valid user with enough Authorizations.

Procedure

1. Log on to the S/4HANA system and execute transaction `SPRO`.
2. Navigate to configuration activity: *SAP S/4HANA for Enterprise Contract Management and Assembly* > *Documents* > *Define Content Types*.
3. On the *Change View "Maintain Document Content Types": Overview* screen, choose *New Entries* and make the following entries:

Field Name	Value
Content Type	**ECOC**
Long Text	Any label to be shown in given language for example **e-signature certificate**

4. Choose *Save*.

2.11 Optional: Maintain DocuSign Template

Purpose

Set up one or more DocuSign Server Templates allowing Envelopes to be sent immediately (for example start the signature process) out of integration instead of just creating them as Draft.

Prerequisite

You have a valid DocuSign user with permissions to manage Templates, for example Admin permission set.

Procedure

1. Maintain one or more DocuSign Server Templates. Templates are managed on *TEMPLATE* page within DocuSign account. For details about how to add and modify Templates, you can consult the DocuSign online help.
   The mandatory elements of a Template for use with CM integration are:
   A Template Name. This will be shown in drop down value list when you send Legal Documents to DocuSign
   One or more template documents defining the signature input fields match the documents to be processed via this template. With this step, the signature box (Sign here) and other informational fields belonging to each participant are being placed on the document page. For example, they will appear at the same position on documents being sent to DocuSign as defined in the corresponding template document. If more than one document maintained, the sending to eSign operation using the selected template shall also include the same number of documents in same sequence.
   One or more recipients as required for the specific template /process. Recipient shall have a Role Name maintained, and this will be shown in the dialogue when you send Legal Documents to DocuSign after the template is selected. In this step, recipients maintained in the Template might be populated with Users or Business Partners email address and name. When the Name and eMail for specific recipient has already been filled in Template, it will be taken over.
   During the sending process, once all recipients defined within the selected Template have been populated with valid User (email) information, the integration will allow you to send out the Envelope directly after creation.
2. Publish the Templates created within a folder and share this folder with all users who should access the Templates via the CM DocuSign integration based on their authorizations. For distinguishing the template access authorizations, you can move Templates to different folders and share these with authorized DocuSign users accessing the integration.

3 Flexible eSignature Integration

3.1 Preparation

3.1.1 Required Information

During the activities described in this guide, you are also required to enter or provide system-specific information. To ensure a smooth and efficient integration between SAP S/4HANA and DocuSign service, we recommend that you have the information listed in the following table at hand before starting the integration process:

Type of Information Required:	Your Data
eSignature Service provider	System details such as URL(Host and Port Information), authentication details such as administration user
SAP S/4HANA On-Premise system	System details such as URL, Username, and Password

3.2 Define e-Signature parameter

Purpose

You want to use flexible e-Signature integration with a chosen digital signing service provider. In this case, you must activate the e-Signature integration by defining the e-Signature parameters.

Prerequisite

You have a valid user with enough Authorizations.

Procedure

1. Login into the S/4HANA system and execute transaction `SPRO`.

2. Navigate to configuration activity: *Enterprise Contract Management* > *General Settings* > *Define e-Signature Parameters*
3. On the *Change View "Define eSignature Parameters": Details* screen, choose *New Entries* and make the following entries:

Field Name	Value
e-Sign Parameter	**ACTIVATE_ESIGN**
Long Text	**Activate eSignature**
e-Sign Param Value	**<Check>**

4. Choose *Save*.

3.3 Recommended: Set up RFC Destination

Purpose

You need to set up communication to the digital signing provider via http client within BADI implementations. For managing the http communication client, setting up RFC destination with valid endpoint details of provider is recommended.

Prerequisite

You have a valid user with enough Authorizations.

Procedure

1. Log on to the S/4HANA system and execute transaction `SM59`.
2. Choose *Create*.
3. Enter the following entries:

Field Name	Value
RFC Destination	**<name>** (Example: **LCMDESIGN**)
Connection Type	**G** (HTTP Connection to External Server)

Field Name	Value
Description 1	`RFC for eSignature Connection`

4. On the *Technical Settings* tab, enter the following entries:

Field Name	Value
Host	API Endpoint URL of service provider
Path Prefix	Any path prefix required to communicate to providers endpoint

5. On the *Logon and Security* tab, enter the following entries:

Field Name	Value
SSL	`Active` recommended, depending on the provider communication capabilities
SSL Certificate	`DEFAULT SSL Client (Standard)`

> **i** Note
>
> The SSL settings could be different depending on customer's system environment.

6. Choose *Save*

3.4 Recommended: Import SSL Certificates

Purpose

For enabling secure (SSL) communication with eSignature provider, corresponding SSL certificates must be imported n each system building an integration with the provider API, e.g. development, quality and production systems.

Prerequisite

You have a valid user with enough Authorizations.

Procedure

1. Download required certificates from provider home page according to target environment to be used on system,
2. Log on to the S/4HANA system and execute transaction `STRUST`.
3. Import downloaded certificate file into secure store upon your choice.

3.5 Prepare Authentication Mechanism

You must ensure that the system users or technical user can login consuming the provider API. Communication to provider will be carried out through BADI implementations which are triggered by the Fiori application eSignature functionality.

The options for authenticating against the provider API depend very much on the provider capabilities and could range from user/password, SAML 2.0 variants or OAuth 2.0. You can refer to the provider documentation for available scenarios.

3.6 Register eSignature Event Handlers

Purpose

eSignature integration is executed from Fiori application within BADI which will be called via asynchronous ABAP Objects Event mechanism. Therefore, the corresponding eSignature events must be registered with an ABAP class handler provided by SAP.

Prerequisite

You have a valid user with enough Authorizations.

Procedure

1. Log on to the S/4HANA system and execute transaction `SWETYPV`.

2. On the *Change View "Event Type Linkages": Overview* screen, choose *New Entries* and make the following entries:

Field Name	Value
Object Category	**ABAP Class**
Object Type	**CL_LCM_WF_LT_PROCESS**
Event	**LCM_LT_SEND_SGNTRGROUP**
Receiver Type	**DUMMY**
Receiver Call	**Method**
Class Name	**CL_LCM_ESIGN_INTEGRATION**
Interface Name	**BI_EVENT_HANDLER_STATIC**
Method Name	**ON_EVENT**
Check Function Module	**<leave empty>**
Receiver Type Function Module	**<leave empty>**
Destination of Receiver	**<leave empty>**
Event delivery	**Using tRFC (Default)**
Linkage Activated	**<Check>**
Enable Event Queue	**<No Check>**
Behavior Upon Error Feedback	**System defaults**
Receiver Status	**No Errors**

3. Choose *Save*.
4. Choose *New Entries* again and make the following entries:

Field Name	Value
Object Category	**ABAP Class**
Object Type	**CL_LCM_WF_LT_PROCESS**
Event	**LCM_LT_CANCEL_SGNTRGROUP**
Receiver Type	**DUMMY**
Receiver Call	**Method**

Class Name	**CL_LCM_ESIGN_INTEGRATION**
Interface Name	**BI_EVENT_HANDLER_STATIC**
Method Name	**ON_EVENT**
Check Function Module	**<leave empty>**
Receiver Type Function Module	**<leave empty>**
Destination of Receiver	**<leave empty>**
Event delivery	**Using tRFC (Default)**
Linkage Activated	**<Check>**
Enable Event Queue	**<No Check>**
Behavior Upon Error Feedback	**System defaults**
Receiver Status	**No Errors**

3.7 Extensibility (Implement Integration BADI)

Purpose

The extensibility option enables you to implement the communication for integrating with the eSignature provider. All mandatory BADI must be implemented for enabling the flexible scenario.

Prerequisites

You have a valid user with enough Authorizations to perform the development.

Procedure

1. Log on to the S/4HANA system and execute transaction `SE18`.
2. Choose New BAdi Enhancement Spot **LCM_ESIGN_INTEGRATION**.

3. Implement and activate the following BADI definitions.

BADI definition	Method	Use	Mandatory
LCM_ESIGN_SEND	**SEND**	**Send / Create an eSignature process.**	**X**
LCM_ESIGN_SEND	**CANCEL**	**Cancel an eSignature process**	**X**
LCM_ESIGN_URL	**GET_URL**	**Get or compute URL linking to the provider for accessing the eSignature process. The URL will be used in Fiori for providing navigation to the provider.**	**X**
LCM_ESIGN_FILTER	**FILTER_DOCUMENTS**	**Filter out any document formats / content types not applicable for eSignature process**	

For more information about method parameters and use of BADI please consult the BADI documentation available in system.
Development steps to be performed vary a lot on the eSignature provider API, but in common cases consist of:

- Instantiate http client object based on RFC destination
- Authenticate http client object
- Setup http header parameters
- Setup request URL and method (like GET, POST)
- Trigger URL
- Receive and parse response from provider
- Handle errors (for example, logging)

4 External Linked Objects Integration

4.1 Preparation

4.1.1 Required Information

During the course of the activities described in this guide, you will be required to enter or provide system-specific information. To ensure a smooth and efficient integration to SAP S/4HANA, we recommend that you have the information listed in the table below at hand prior to starting the integration process.

Type of Information Required:	Your Data
External System	System details such as URL(Host and Port Information)

4.2 Configuration in SAP S/4HANA

4.2.1 Configure RFC Destination

Purpose

RFC Destination for the must be created in SAP S/4HANA On-Premise system to establish the communication with External System (for Navigation only).

Prerequisite

You have a valid user with enough Authorizations.

Procedure

1. Log on to the S/4HANA On-Premise System and execute the `SM59` Transaction Code.

2. Choose *Create*.
3. On the *Create Destination* dialog box, make the following entries:
    1. *Destination*: **<Destination Name>**, for example, **ZRFC_EXT_LO**
    2. *Connection Type*: Choose **HTTP Connection to External Server** from dropdown list.
4. Choose *ENTER*.
5. On the *RFC Destination* screen, make the following entries:
    1. *Description 1*: **<Meaning full description>**, for example, **Connection to XYZ System**
6. Choose the *Technical Settings* tab and make the following entries:
    1. *Host*: **<Host Name>**, for example, **service.sap.com**
    2. *Port*: **<Port Number>**, for example, **443**
    3. *Path Prefix*: **<Path>**, for example, **/parameter**
7. Choose *Save*.

4.2.2 Maintain Configuration Data using SPRO

Prerequisites

You have a valid user with enough Authorizations using SPRO transaction to modify the configuration data.

4.2.2.1 Define Technical Types for Linked Objects

Procedure

1. Log on to the SAP S/4HANA On Premise system with the user which satisfies the prerequisites.
2. Execute the transaction SPRO.
3. On the application toolbar of the screen. choose *SAP reference IMG*.
4. Navigate to Configuration Activity: *SAP S/4HANA for Enterprise Contract Management and Assembly* > *General Settings* > *Define Technical Types for Linked Object Types*
5. Choose *Execute*.
6. On the *Change View* screen, choose *New Entries*.
7. On the *New Entries: Details of Added Entries* screen, make the following entries:
    - *Lnk. Obj. Tech. Type*: **<Technical Type>**, for example, **EXYZ**
    - *Lnk . Obj. Tech. Cat*: Choose **External** from dropdown list.
    - *RFC Destination*: **<Enter RFC Destination which you created in the previous chapter>**, for example, **ZRFC_EXT_LO**

8. Choose *Save*.

4.2.2.2 Define Linked Object Types

Procedure

1. Log on to the SAP S/4HANA On Premise system with the user which satisfies the prerequisites.
2. Execute the transaction `SPRO`.
3. On the application toolbar of the screen. choose *SAP reference IMG*.
4. Navigate to Configuration Activity: *SAP S/4HANA for Enterprise Contract Management and Assembly* > *General Settings* > *Define Linked Object Types*
5. Choose *Execute*.
6. On the *Change View* screen, choose *New Entries*.
7. On the *New Entries: Details of Added Entries* screen, make the following entries:
   - *Linked Object Type*: **<Linked Object>**, for example, **E001**
   - *Long Text*: **<Some Description>**, for example, **External Contract**
   - *Lnk. Obj. Tech. Type*: **<Enter the value which you created in the previous chapter>**, for example, **EXYZ**
8. Choose *Save*.

4.2.2.3 Define Profiles

Procedure

1. Log on to the SAP Fiori launchpad in the SAP S/4HANA Cloud system with the user which is satisfies the prerequisites.
2. Execute the transaction `SPRO`.
3. On the application toolbar of the screen. choose *SAP reference IMG*.
4. Navigate to Configuration Activity: *SAP S/4HANA for Enterprise Contract Management and Assembly* > *Profiles* > *Define Profiles*
5. Choose *Execute*.
6. On the *Change View* screen, you have two options to assign the Linked Object Type which you created in the previous chapter.
   - Option 1: By defining a new Linked Object Set
     1. Choose *Define Sets* in the left-side pane *Dialog Structure*.

2. Choose *New Entries*.
3. In the right-side pane, make the following entries:
    1. *Prf. Set*:**<Profile Set>**, for example, **P1**
    2. *Set Type*: Choose **Linked Object** from dropdown list.
    3. *Long Text*: **<Description>**, for example, **External Contract**
4. Choose *Save*.
5. Choose the created Profile Set and in the left-side pane choose *Linked Objects*.
6. Choose *New Entries*.
7. In the right-side pane, make the following entries:
    1. *LObj. Set*: **<Select Profile Set which you created>**, for example, **P1**
    2. *LnkObj.Ty*: **<Select Linked Object Type which you created in previous chapter>**, for example, **E001**
8. Choose *Save*.
9. Choose *Define Profiles*.
10. In the right-side pane, make the following entries:
    1. *LObj. Set*: **<Linked Object Set>**, for example, **P1**

- Option 2: By modifying an existing Linked Objects Set
    1. Choose *Define Sets* in the left-side pane *Dialog Structure*.
    2. In the right-side pane, choose the existing set which is Linked Object Set Type and in the left-side pane, choose *Linked Objects*.
    3. Choose *New Entries*.
    4. In the right-side pane, make the following entries:
        1. *LObj. Set*: **<Select Profile Set which you created>**, for example, **P1**
        2. *LnkObj.Ty*: **<Select Linked Object Type which you created in the previous chapter>**, for example, **E001**
    5. Choose *Save*.
    6. Choose *Define Profiles*.
    7. In the right-side pane, make the following entries:
        1. *LObj. Set*: **<Linked Object Set>**, for example, **P1**

4.2.3 Extensibility

Purpose

The extensibility option enables you to modify the target URL at runtime.

Prerequisites

You have a valid user with enough Authorizations to perform the development.

Procedure

Implement the BAdI : `LCM_LT_S4_EXT_LINKD_OBJ_NAVGTN` to modify the URL at runtime.

5 Error Handling

Since it is navigation-only scenario, no additional approach is need for error handling. Errors will be displayed on UI if any.

6 Appendix

6.1 Ticket Component

Implementation Step	Component	Comment

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