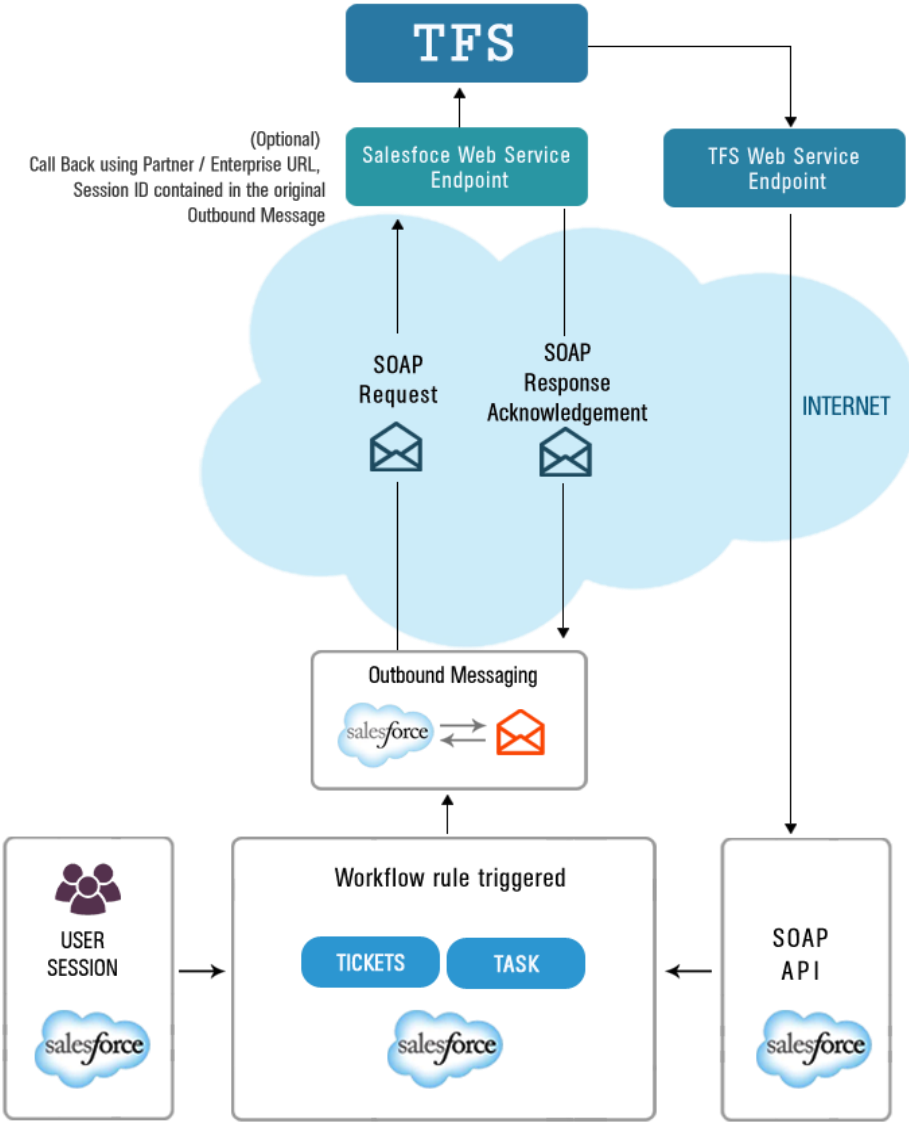
DemandBlue Salesforce TFS App

Contents

1. Introduction

This App is mainly used to integrate Salesforce and TFS. Whenever there is a Case is created or updated in Salesforce, a Bug/User Story will be created/updated in TFS automatically and Vice-versa. The validations in creating a bug in TFS are same implemented in Salesforce too.

2. Architecture Diagram



3. Prerequisites

I. Public IP server is mandatory to host the services.

II. The hosted service run in the below ports.

80: This port only accepts HTTP connections.

443: This port only accepts HTTPS connections.

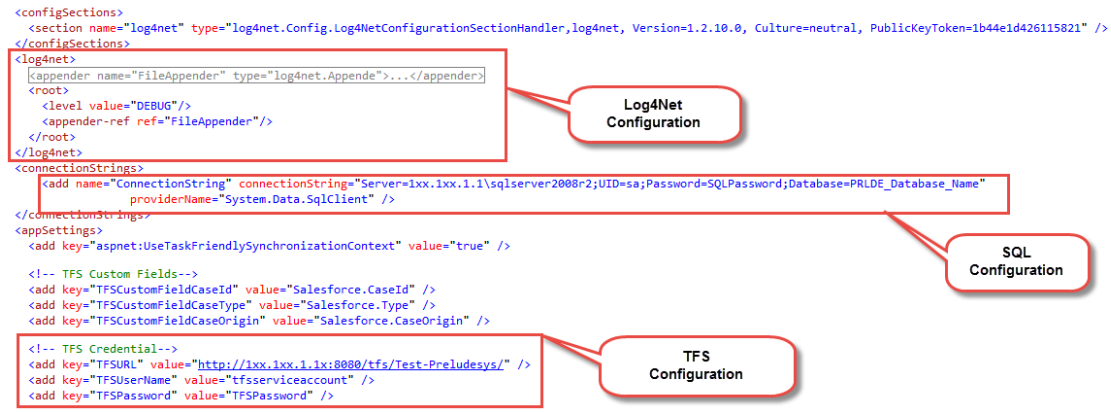
1024–66535 (inclusive): These ports accept HTTP or HTTPS connections.

III. Outbound message URL need to be configured to the public IP server.

4. Server Configuration

1. Configure the Salesforce WCF service configuration file as below:

2. Configure the TFS service configuration file as below:



3. Configure the TFS service configuration file as below:

	Configuration Settings
Log4Net Configuration	In "maximumFileSize" node error file size should be configured. If the size exceeds the value specified then it again recreates the file. In "level" node if value is set to "DEBUG" then debug trace will be logged. If value is set to "INFO" then only exception will be logged in the error log. In "file" node the path of the file is mapped.
SQL Configuration	In this section SQL Server- Server name, User name, Password and Database name is configured.
TFS Configuration	In this section TFS Credentials are configured also if the custom fields name is changed in TFS then it should be modified in this section too.

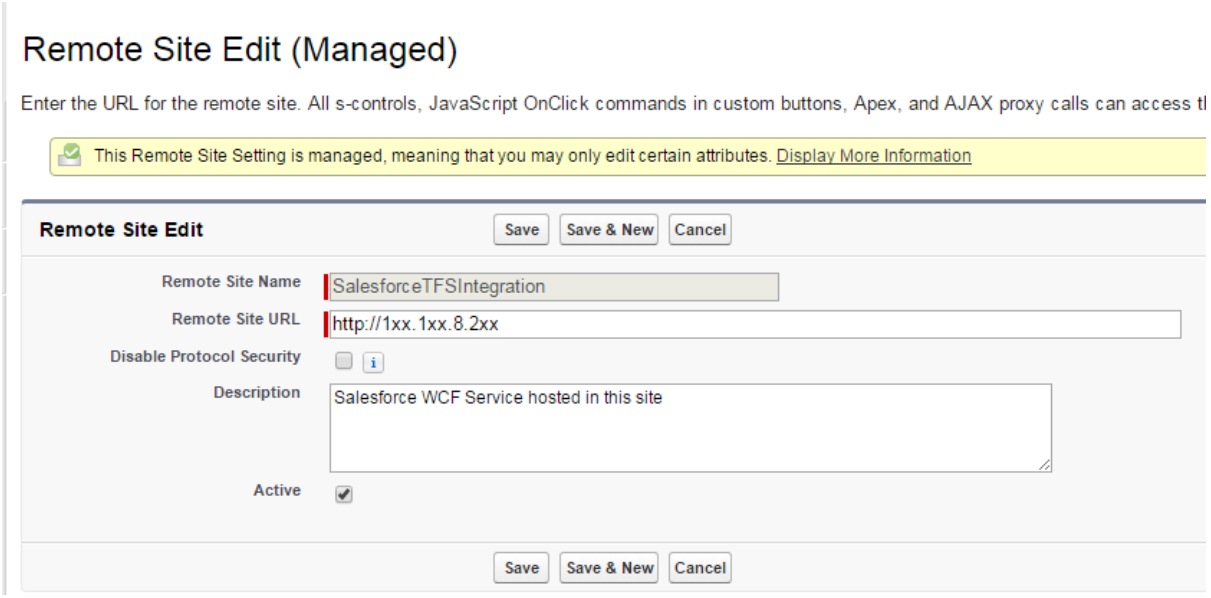
Salesforce Configuration	In this section Salesforce Credentials are configured.

5. Salesforce Configuration

In Salesforce we need to configure the below items:

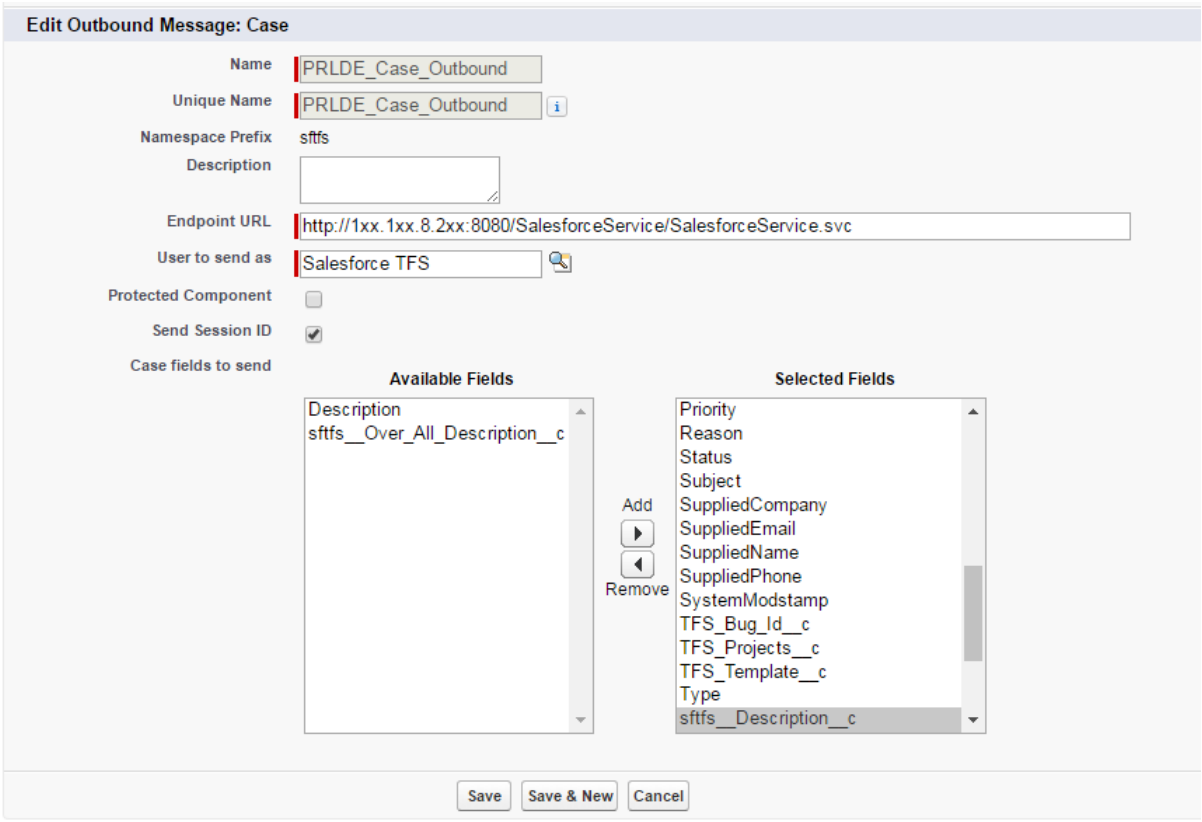
1. **Remote Site Settings**

In Remote site settings add the base URL of the WCF service in "Remote Site URL". Please find the below screenshot for your reference.



2. **Outbound Message**

In the outbound message add the Salesforce WCF service endpoint URL.
Please find the below screenshot for your reference.



3. **Generating Consumer Secret and Consumer Key**

Following are the steps to generate consumer secret and consumer key,

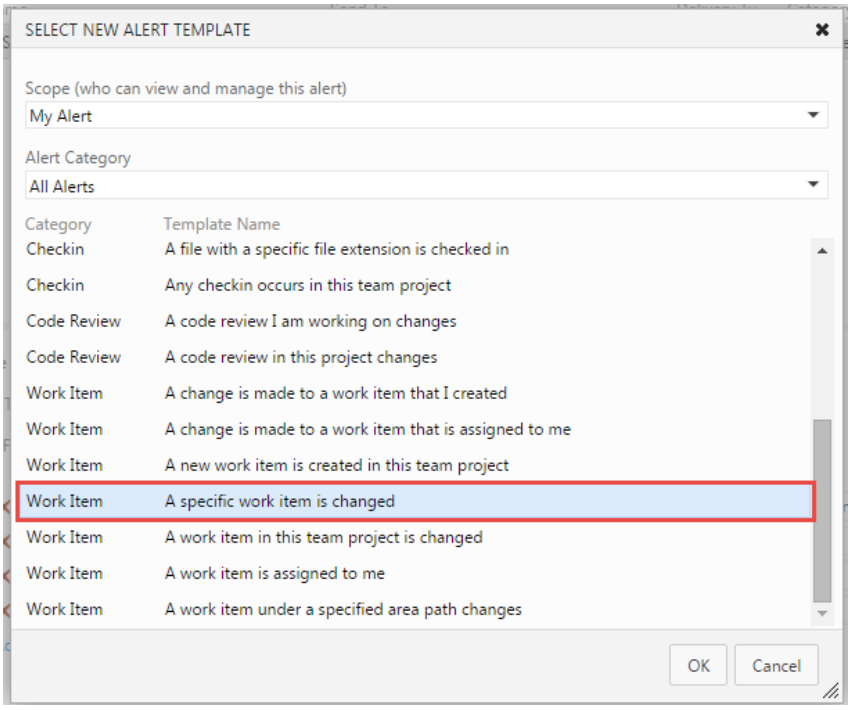
- Click on your username in the top right corner, and choose "Setup" from the menu.
- In the left hand navigation, you'll see App Setup
    - Click "Create"
    - Click "Apps"
    - Scroll down to the bottom, and you'll see "Connected Apps"
    - Click "New."
- Fill out the required fields
    - Connected App Name is "TFS Integration"
    - API Name= TFS_Integration (filled automatically)
    - Enter the contact email
- Click the checkbox to enable OAuth settings.
    - The callback URL is not used in the integration.
    - Select "Full Access" and click "Add"
    - Then click "Save"
- On the next page, under OAuth Settings, you'll see Consumer Key and the option to reveal and get your Consumer Secret

6. TFS Configuration

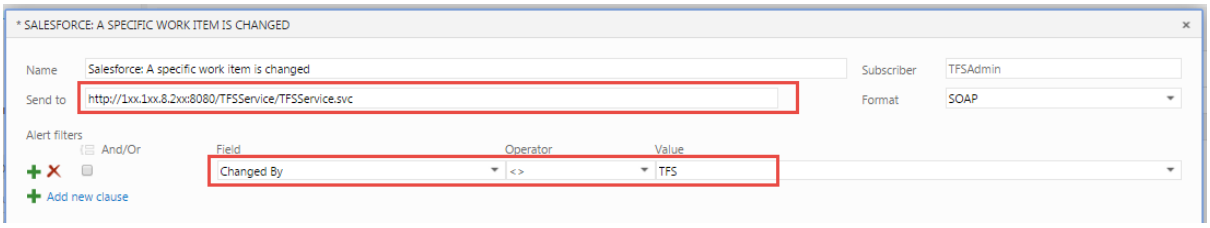
In this section we have explained how to create custom fields and alert in TFS.

1. Creating Alert

In Team Foundation Server, go to settings menu and click alert tab. In this new window, select the below highlighted template name.

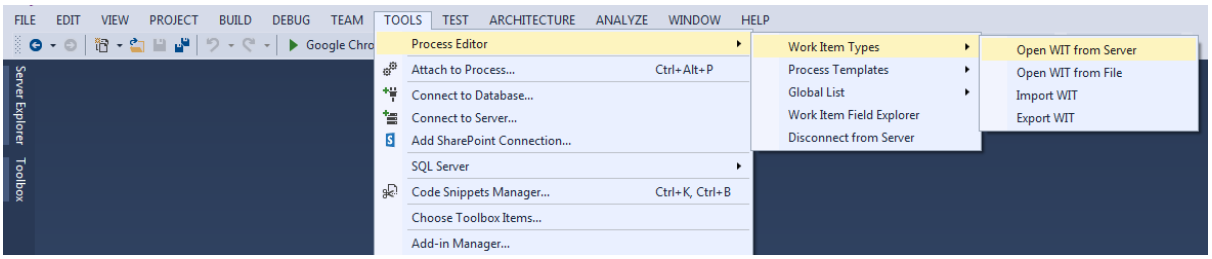


Please find the below filters to be added for project. In Send To field we need to add the TFS WCF endpoint URL.

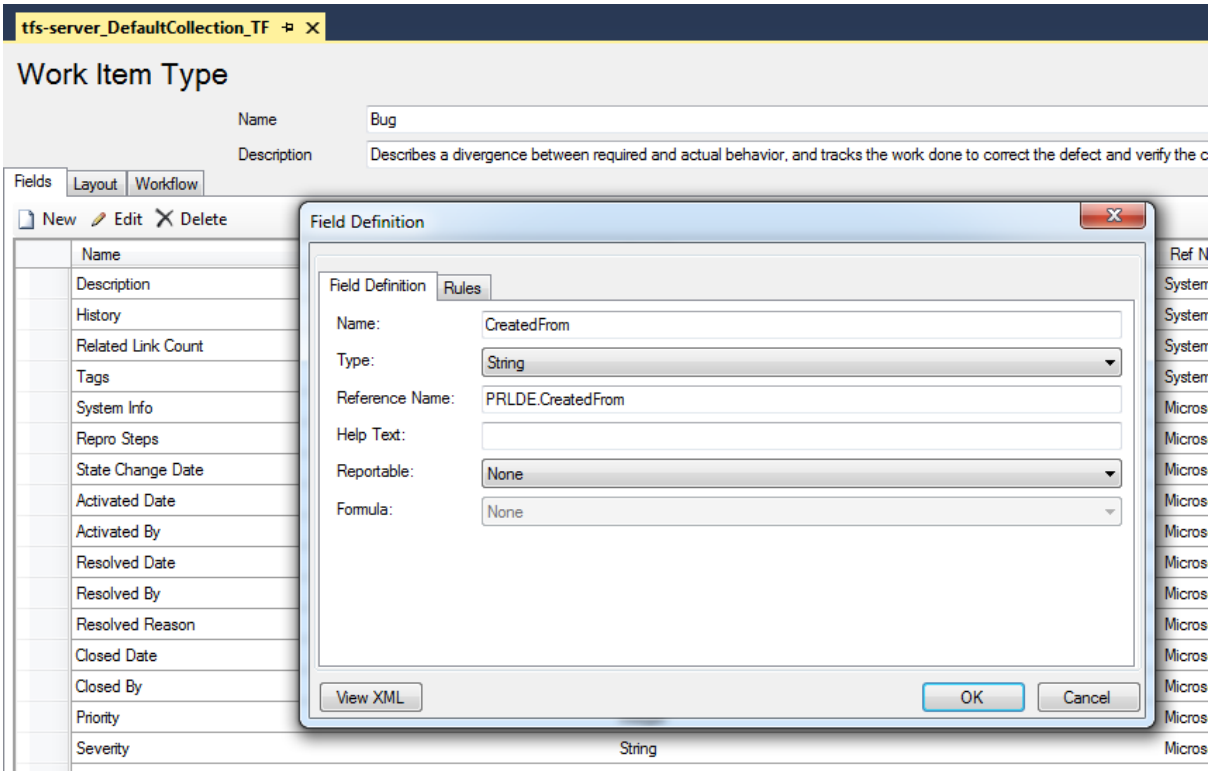


2. Creating Custom Fields

I. Open Visual Studio, In "Tools" menu select the Process Editor -->Work Item Types -->Open WIT from Server.



II. Click New from Fields tab and enter "Field Name" field and select Type as below screenshot:

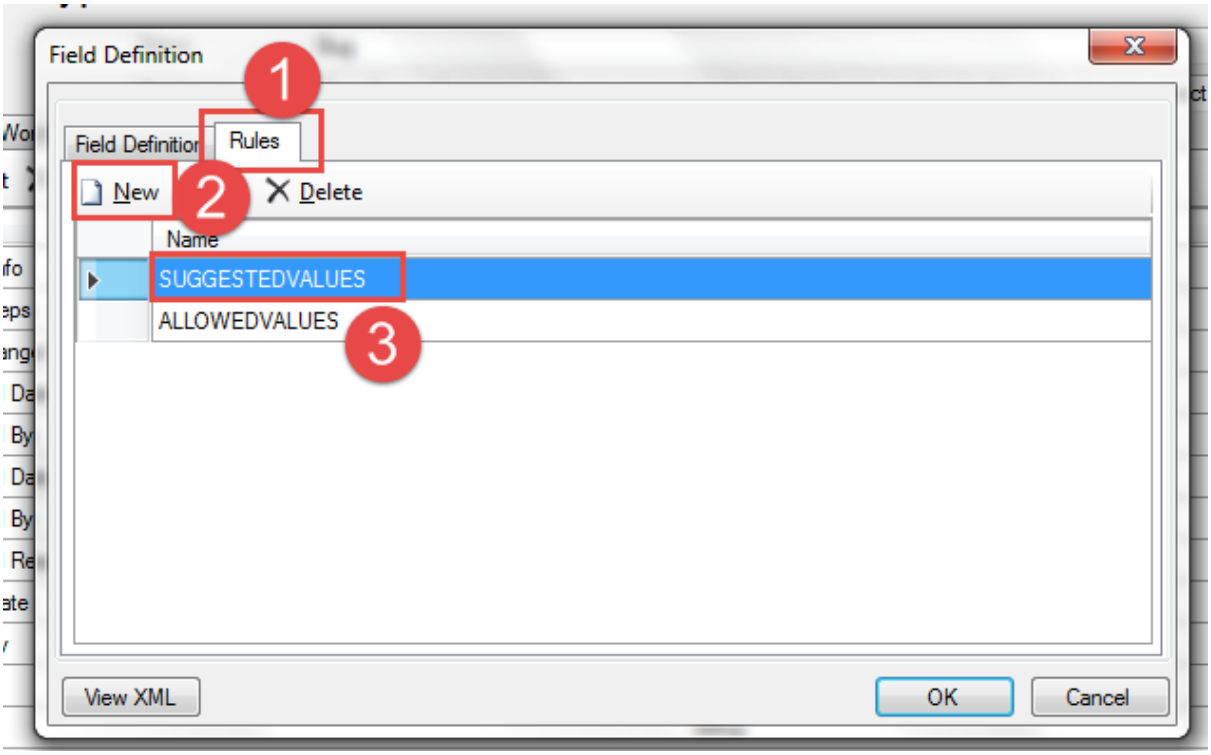


III. Using the above steps we should create the below fields with their corresponding datatype:

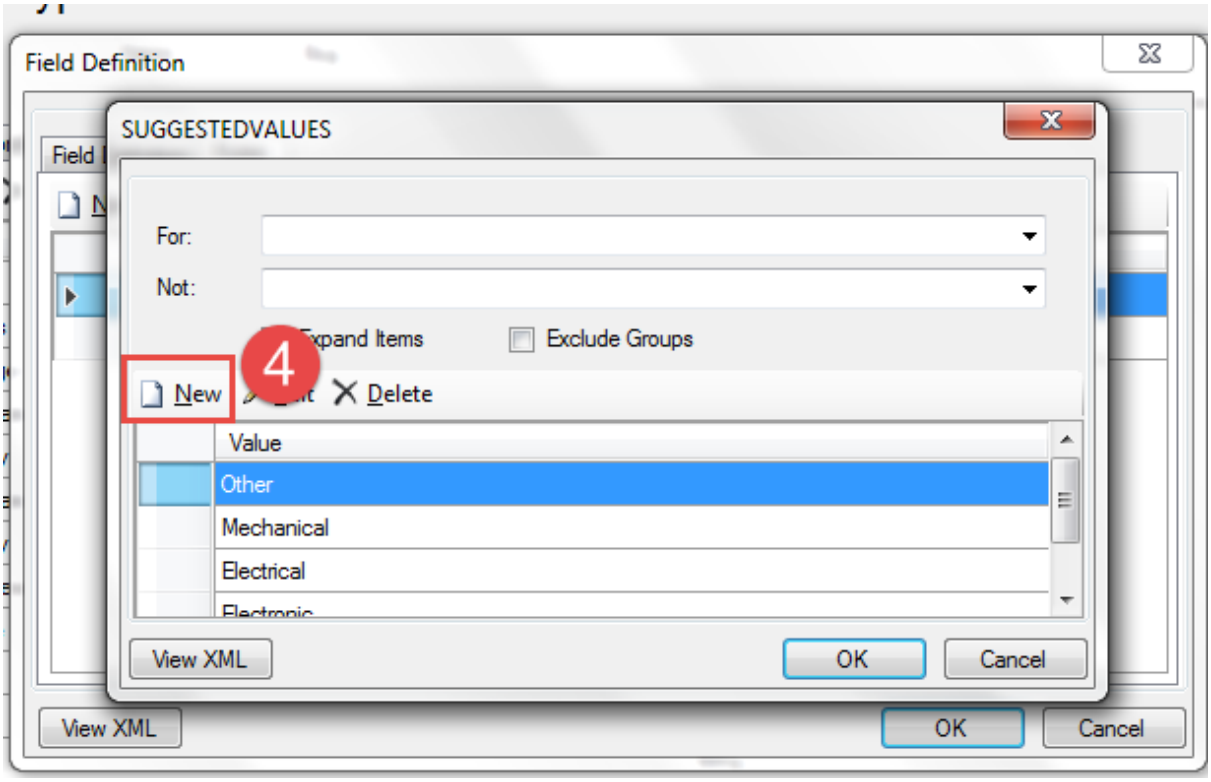
Field Name	Data Type	Template	Values
Salesforce.CaseId	String	Bug	
Salesforce.Type	String	Bug	Other, Mechanical, Electrical, Electronic, Structural
Salesforce.CaseOrigin	String	Bug	Phone, Email, Web, None
Salesforce.CaseValues	HTML	Bug	
Salesforce.CaseId	String	User Story	
SalesforceUser.CaseData	HTML	User Story	

IV. Using the below steps we can add the values to the fields:

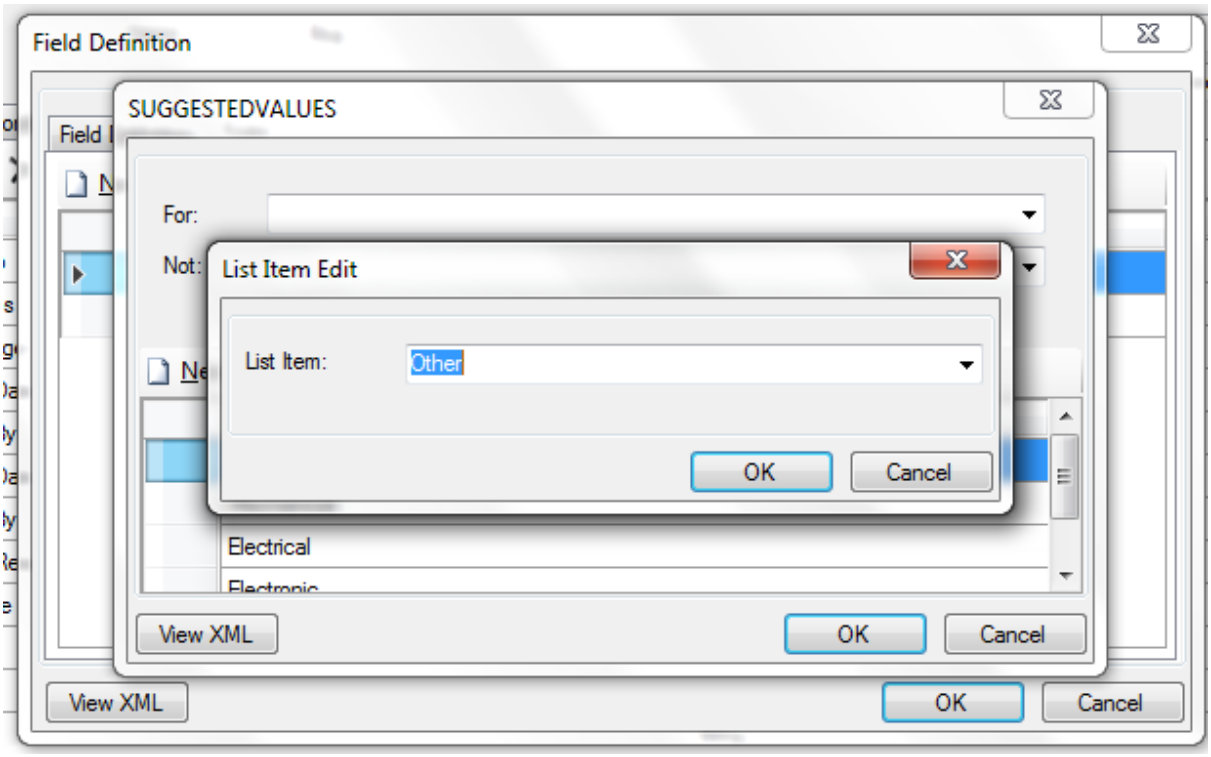
a. Open the WorkItem Bug template and click the Field which need to be added with values. In the popup window click Rules tab, from this tab click New button and Select SUGGESTEDVALUES as below:



b. In SUGGESTEDVALUES windows, click New button as below:



c. In List Item Window add the values and click Ok as below:

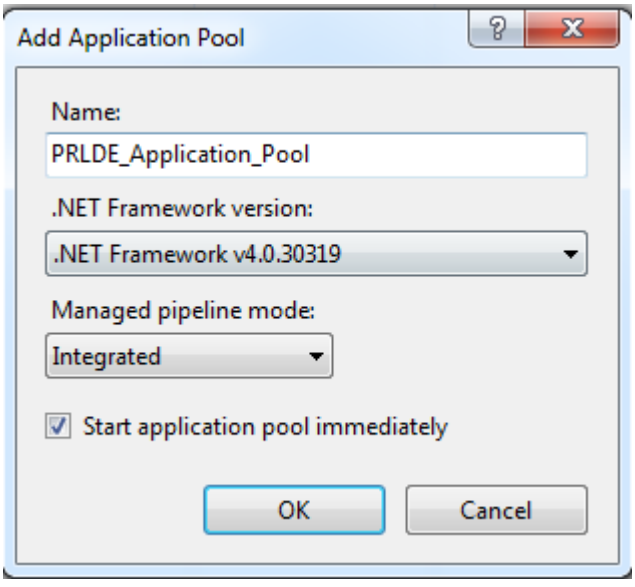


d. Repeat the above steps for ALLOWEDVALUES also to make the field as mandatory.

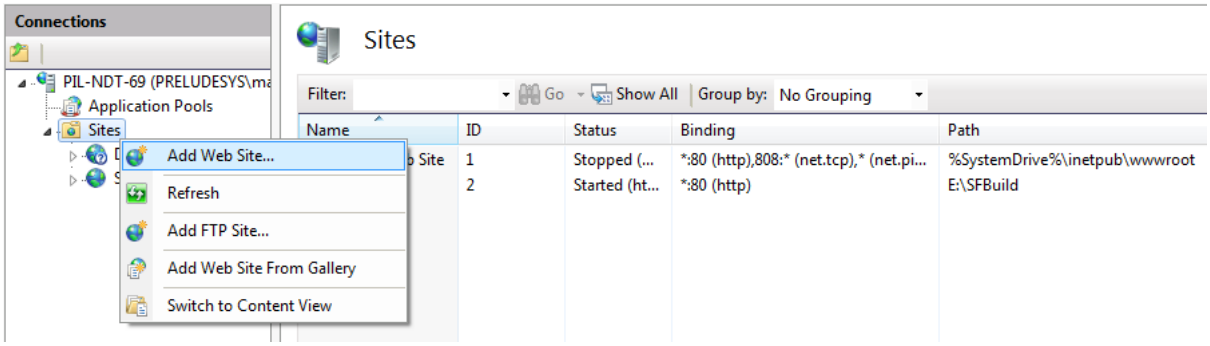
7. Hosting WCF Services

Following are the steps to be followed for hosting the Salesforce, Attachment and TFS Service

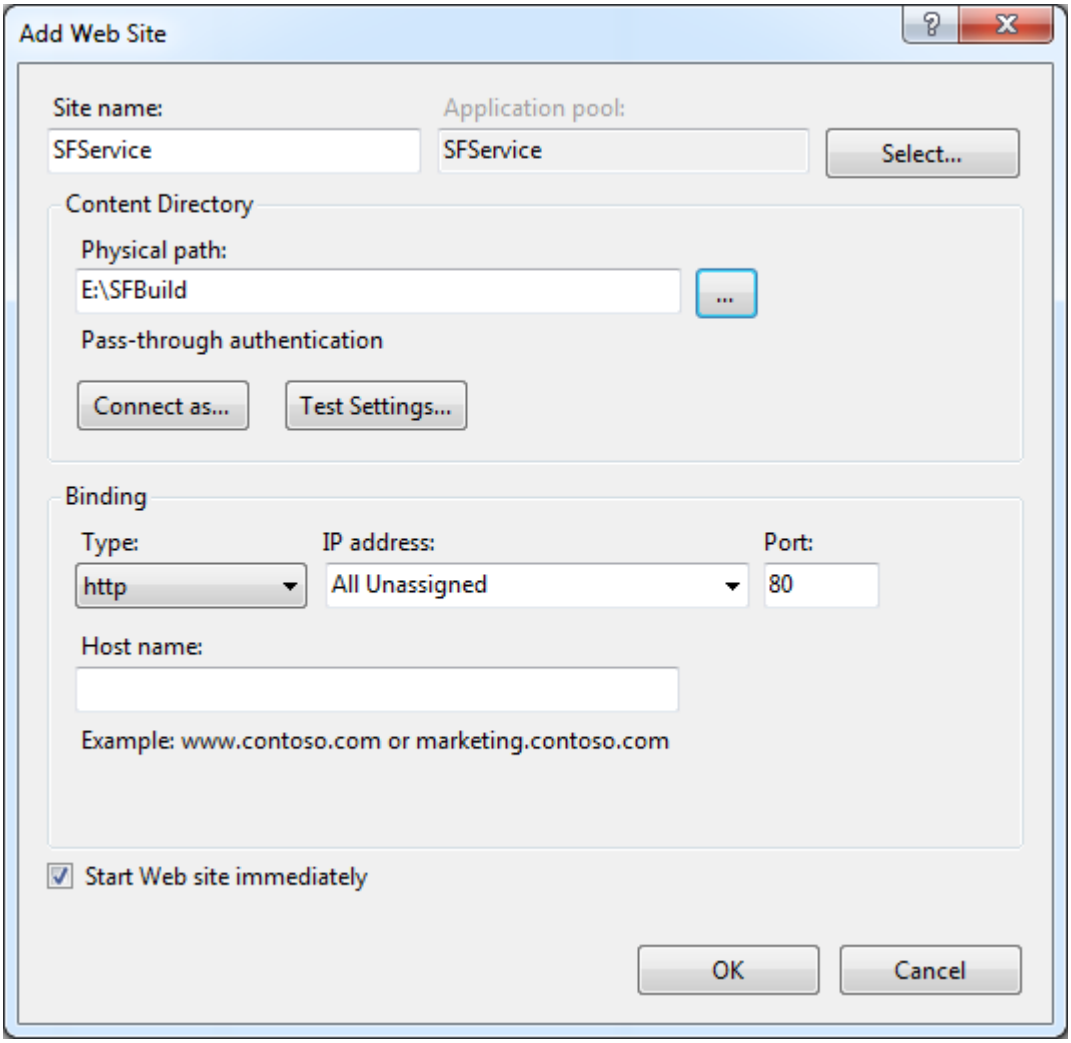
1. Add new "Application Pool" with .Net Framework version 4.0.3 and select Managed pipeline mode to "Integrated" as below.



2. Right click the "Sites" and select "Add Web site". Please refer the below screenshot for your reference.

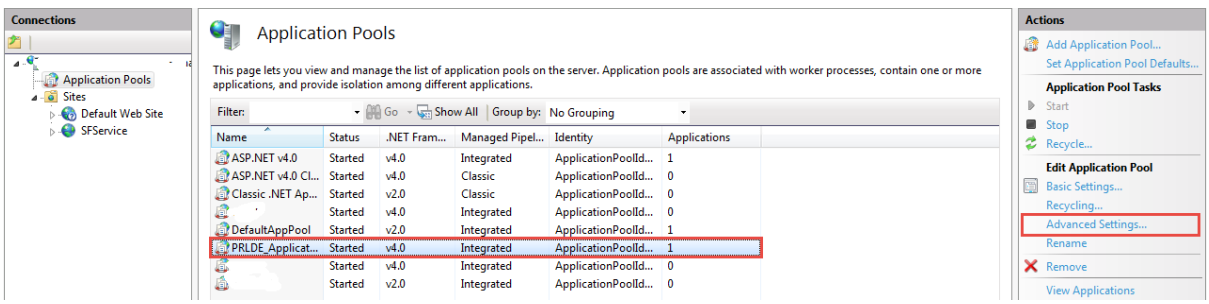


3. Give Site name for the WCF Service, select the Newly created application pool and browse the Physical path where the published source code is located as screenshot below.

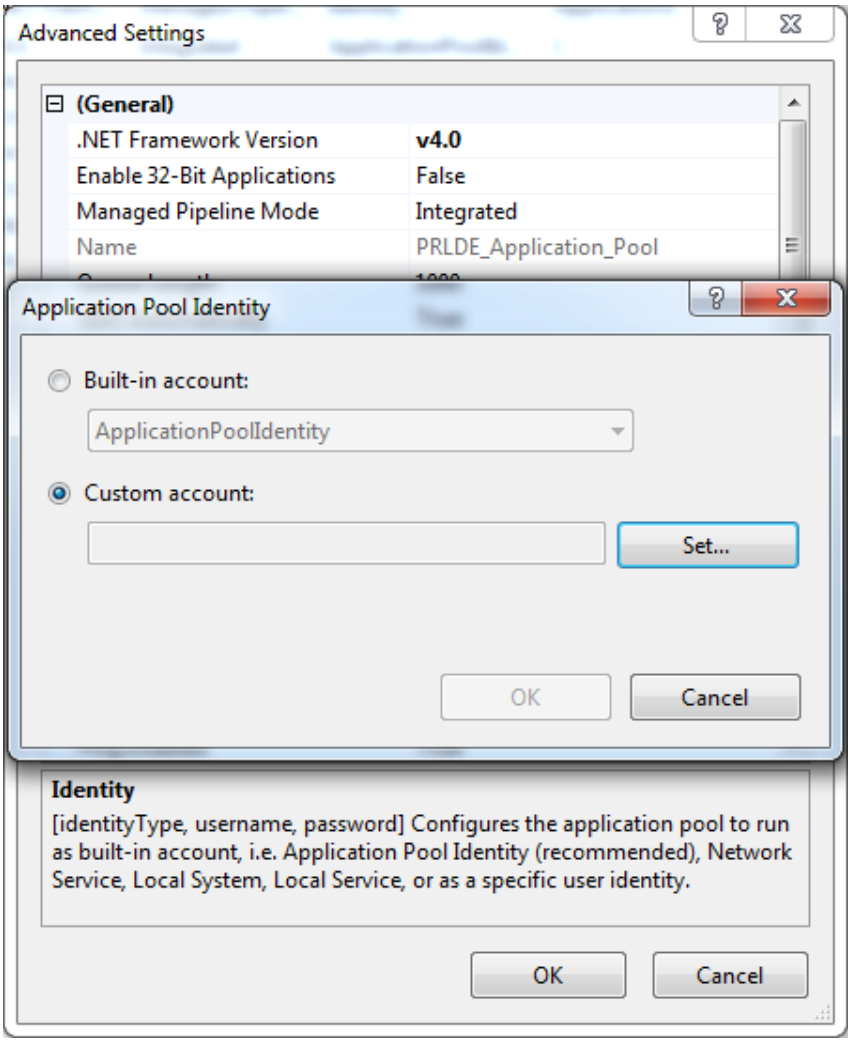


If we are going to use "Windows Authentication" for SQL server then we have to follow the below two steps:

1. Select the Application Pool and click "Advanced Settings" menu from Actions pane as below:



2. In the "Process Model" tab, select the "Application Pool Identity" menu. A new window will open as below. In that window select the custom account that has windows authentication rights to access the SQL server.

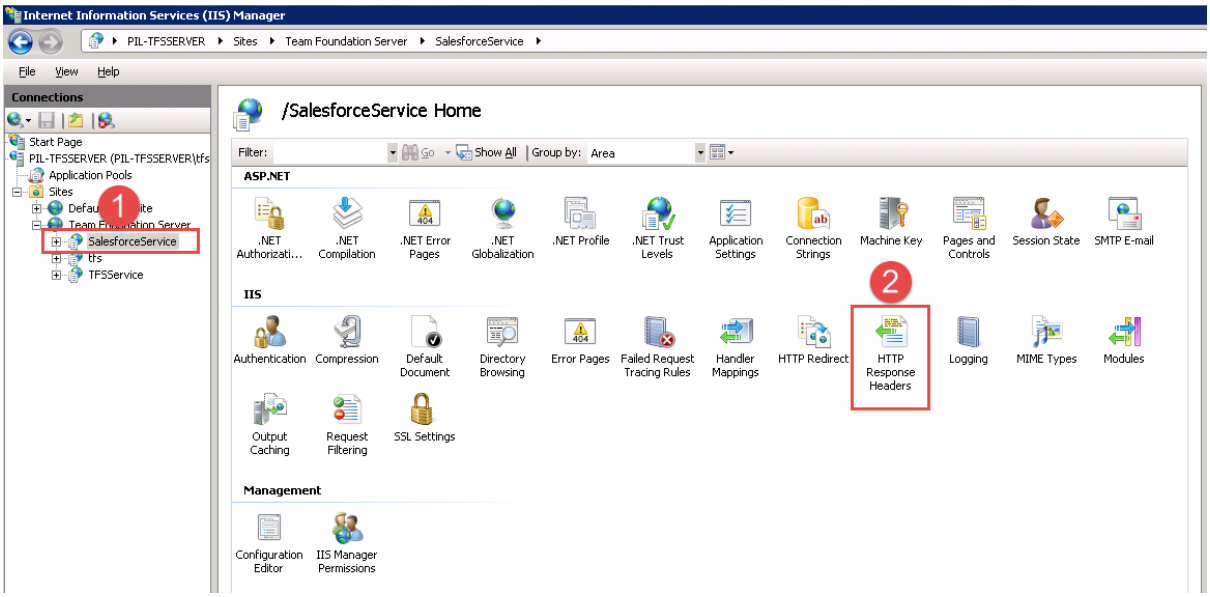


Once the above steps completed then we need to add the below **HTTP Response Headers** in the Internet Information Services (IIS).

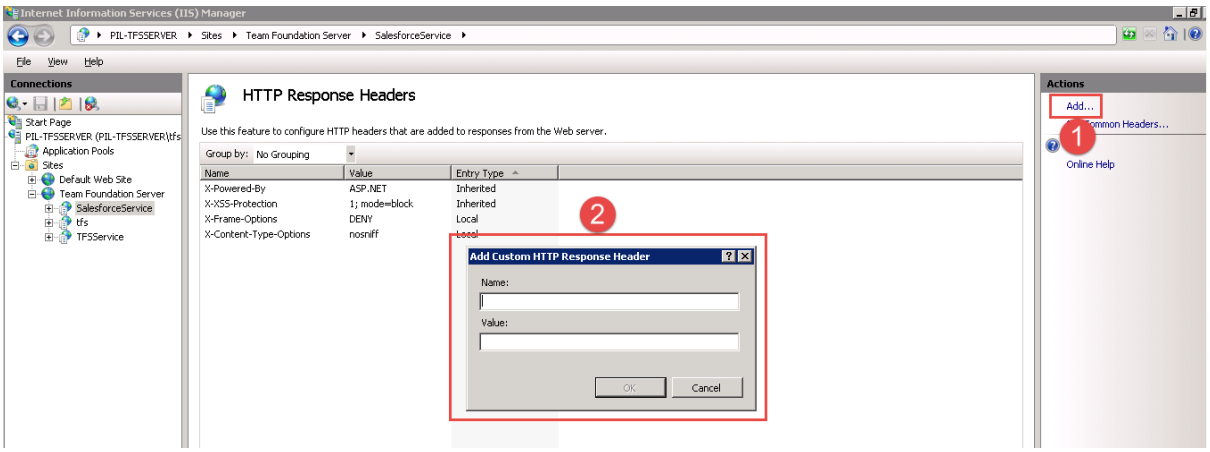
Name	Value
X-XSS-Protection	1; mode=block
X-Frame-Options	DENY
X-Content-Type-Options	nosniff

Please follow the below steps to add the **HTTP Response Headers** in Internet Information Services (IIS).

1. Open the Internet Information Services (IIS) and select the Services hosted and click the "**HTTP Response Headers**"



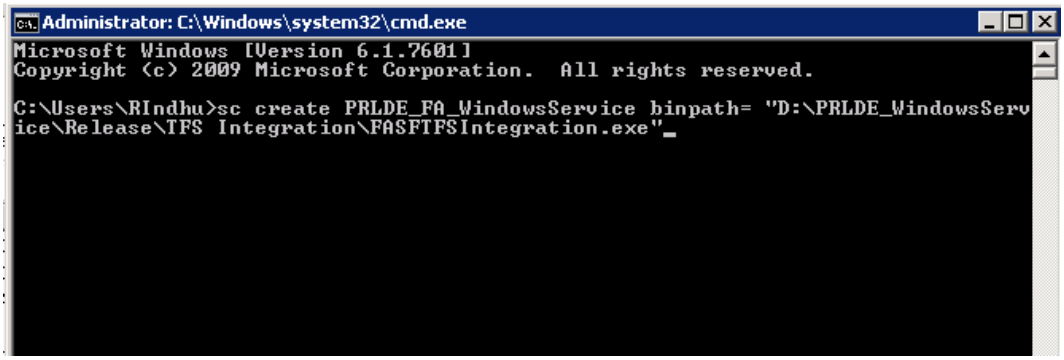
2. In the opened window click **Add** link then in the **Add Custom HTTP Response Header** pop up add the Response Header Name and values.



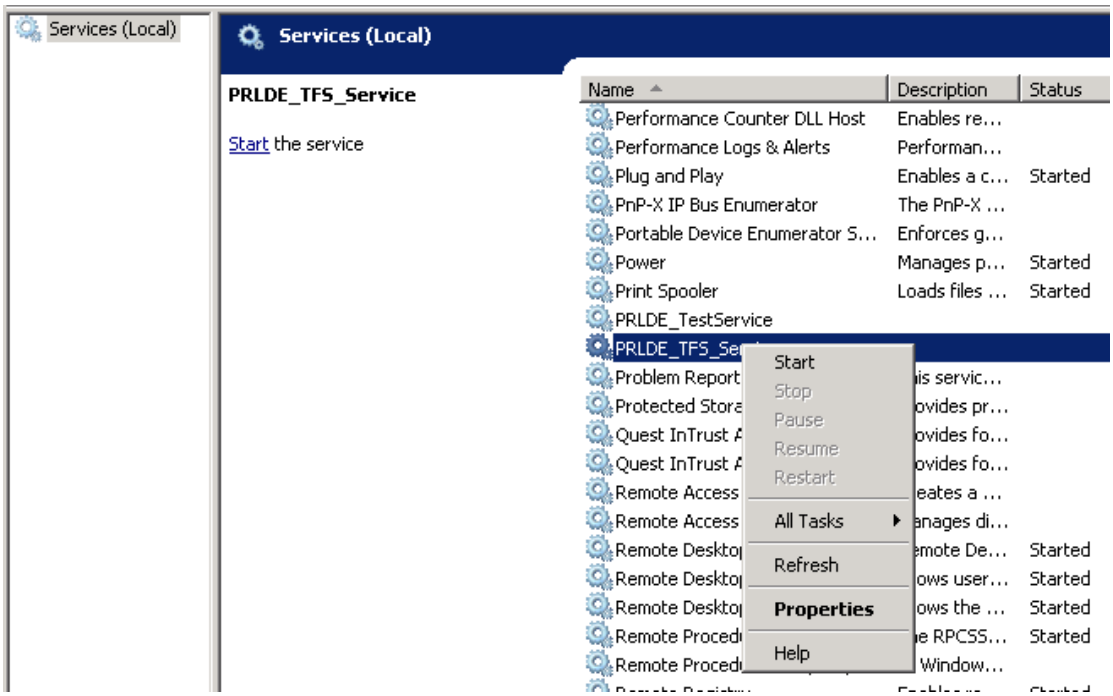
8. Hosting Windows Service

Following are the steps to be followed for hosting the Windows Service.

- Open the command prompt as administrator and execute the below command to create the windows service.
  - `SC CREATE <SERVICENAME> binpath= "<EXECUTABLEPATH>"`
  - Please refer the below screenshot for your reference.



- Once the above command is executed then the service is created in the server.
- Go to Run and execute "Services.msc" command.
- All the services in the server are displayed in this window. In this right click the installed service and start. Please refer the screenshot below:



9. Firewall Instruction

The Windows server firewall (WCF services are deployed) should be enabled for the below two URL:

https://test.salesforce.com/services/oauth2/token

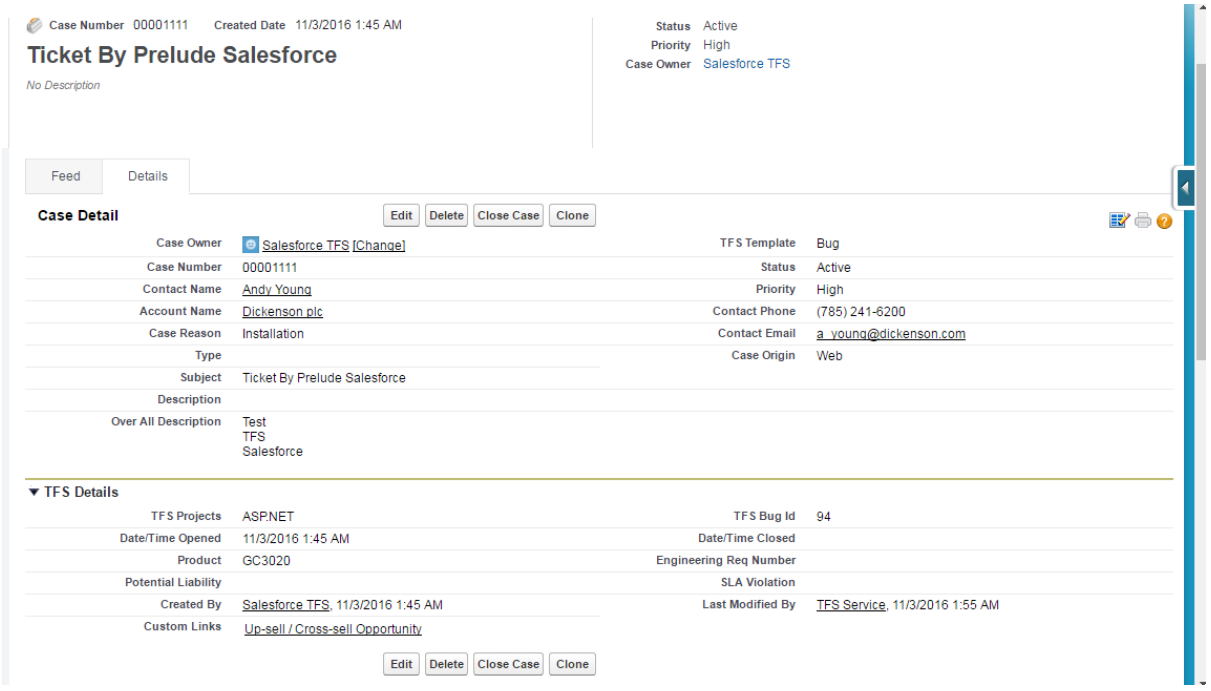
https://login.salesforce.com/services/oauth2/token

10. Using the System

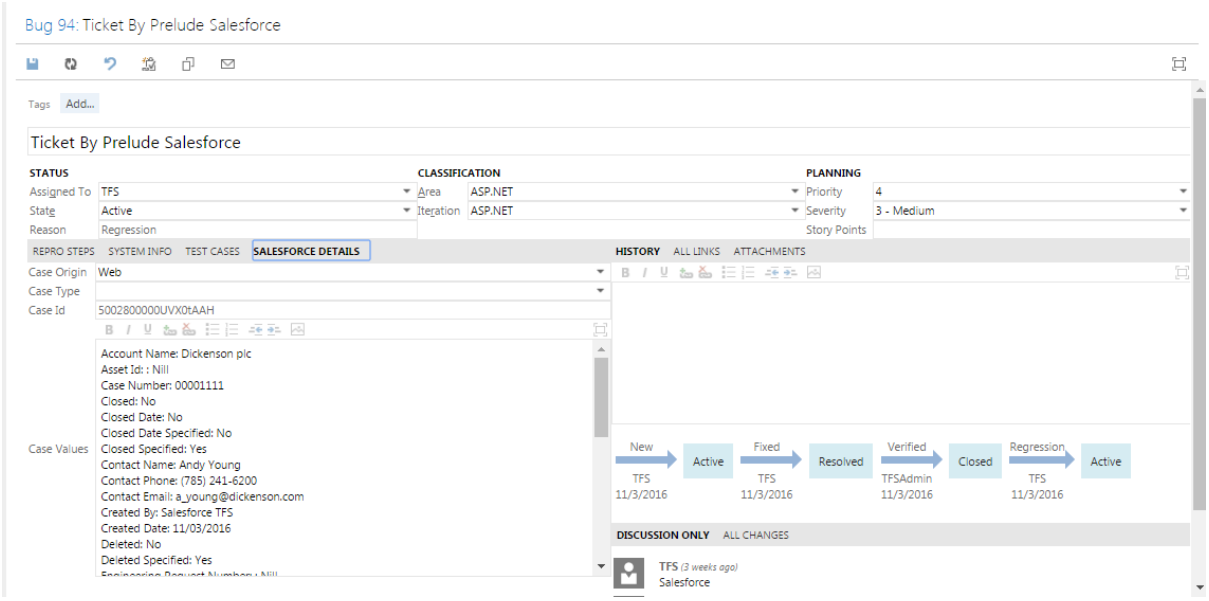
This section provides a detailed description of system functions.

1. Whenever a Case is created in Salesforce, the case details will be created as bugs/user stories in TFS.
2. Whenever a TFS bug/user story is updated, the related Salesforce Case will be updated in Salesforce.
3. Whenever a created case is updated in Salesforce, the related TFS bug/user story will be updated in TFS as below example.

Salesforce System



TFS System



4. Two-way sync will occur whenever the following fields are updated in both Salesforce and TFS.

Salesforce Case Fields	TFS Fields
Case Subject	Title
Status	State
Priority	Priority
Case Origin	Origin (Custom)
Type	Type

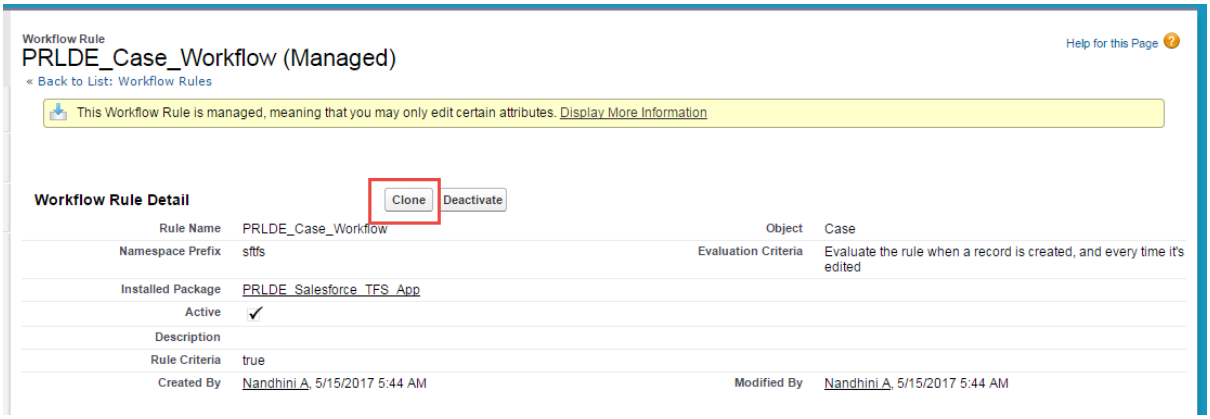
Comments	History

**We can also Sync other fields in Salesforce with TFS.

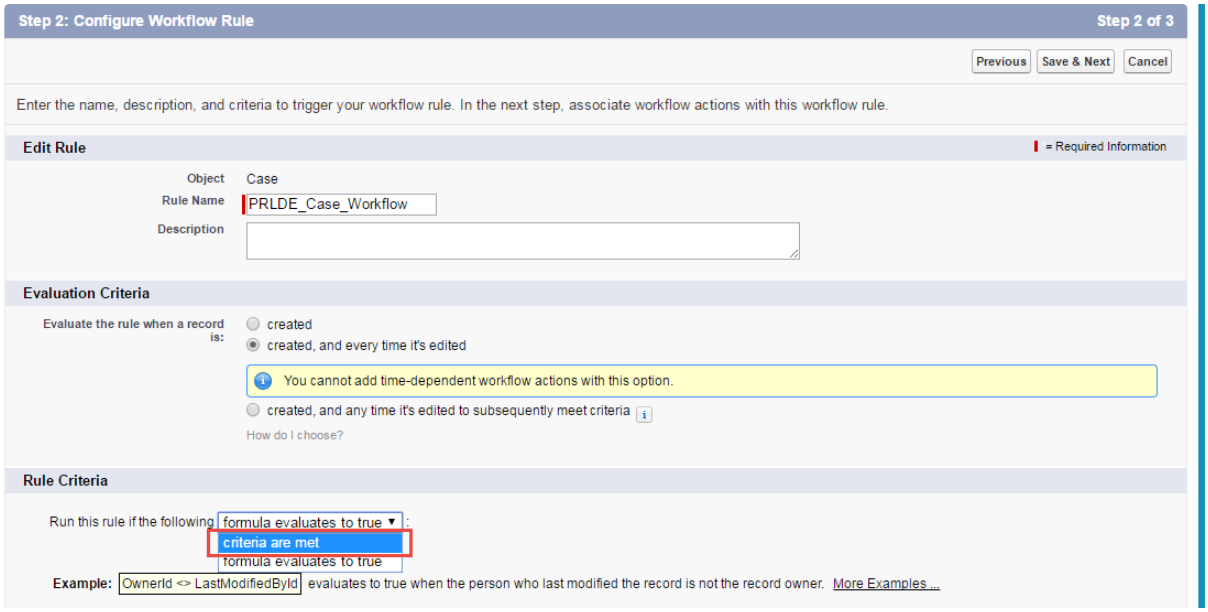
11. Record Type Configuration

Follow the below steps to create bug for specific record type.

- Clone the existing Workflow and delete the old one.



- In **Run this rule if the following,** mention as '**Criteria are met'** in the **Rule Criteria** Section



- In Filter Criteria , Mention the name of the particular Record Type.