Kovair Jira Cloud Adapter

Release Note

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Document Version History		
Release	**Date**	**Reason**
Jira Cloud Adapter (Initial Release)	08 - April - 2015	Initial release
Jira Cloud Adapter (Updated)	28 - Sept - 2015	Jira EventService support
Jira Cloud Adapter (Updated)	15 - Mar 2016	Jira Issue Entity Exposed.
Jira Cloud Adapter (Updated)	21 - Sept - 2016	Jira Agile Support Added in Event Service
Jira Cloud Adapter(Action Updated)	12 - June - 2019	Jira Enhancement Custom Features
Jira Cloud Adapter (Updated)	03 - Sept - 2019	Embedded Image Support added for Description Field
Jira Cloud Adapter (Updated)	10 - feb- 2020	Support for tool version 8.6.1
Jira cloud Adapter (Updated)	21 - July - 2020	Support for Cloud version

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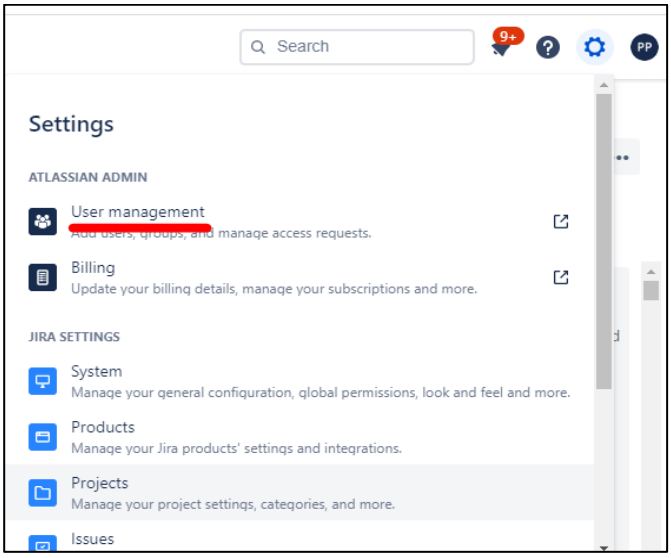
Supported JIRA version And Technology Used:

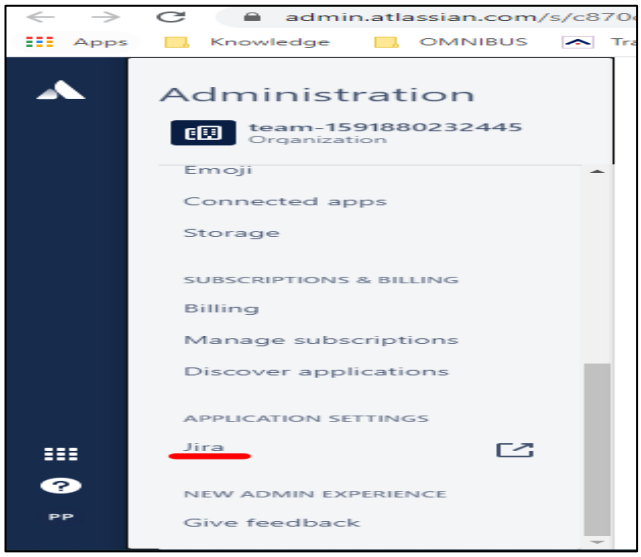
Jira Version: **8.6.1 (On premise and SAAS)**

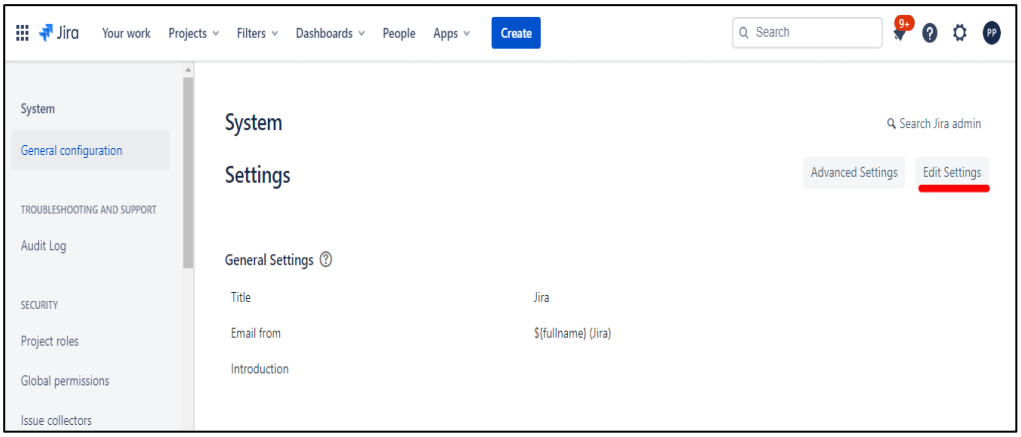
Version	**8.6.1**
Technology used	**REST, Hook**

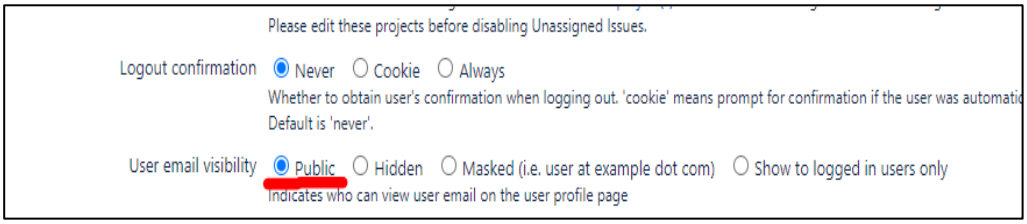
Integration Pre-Requisite

- It is recommended to use a user who is assigned to Jira **administrator** group for the project involved in integration.
- For registering Webhook through API one need to have access to Administration in Jira. So the user should be an administrator if Web hook is used to fetch the events.
- For Jira cloud instance following user configuration should be done for proper sycing of data related to user fields:









The above option(public) under 'User email visibilty' must be checked for proper user field data generation in event side.

*Sometimes it happens that custom fields cannot be fetched with regular Jira user. So to fetch all of the items it is recommended to use Jira-Admin user.

**Also user have to be at least in Jira-Developer or Jira-Administrator group for registered project in order to access the configuration metadata, field metadata, user info etc.

Integration Components:

Components	Type	Responsibility
JIRA Adapter	Web Service	Interacting with Omnibus Engine and Application
JIRA Web Hook	Web Service	Event Collection by pushing.
JIRA Event Service	Event Service	Event Collection by Pulling.

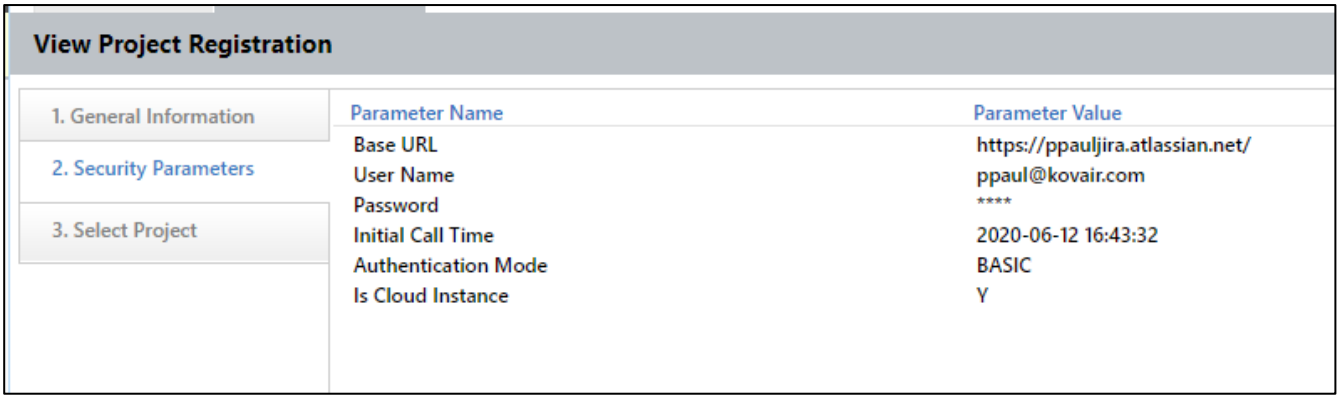
*** Note:** Jira Web Hook and Event Service is complementary to each other. Only one can be used at a time.

Component Pre-Requisite:

Component	Pre-Requisite
Adapter	➢ IIS 6.0 or Higher. ➢ .Net Framework 4.6

	➢ IIS Account user must have access to delete the files from Installation Directory of Event Service or Web Hook.
Webhook	➢ IIS 6.0 or Higher. ➢ .Net Framework 4.6 ➢ For Jira Cloud, SaaS Instance the Webhook service URL must be accessible from Jira Server.
Event Service	➢ .Net Framework 4.0 ➢ The event service account must have access to write files in Installation Directory.

Registration of JIRA Cloud Adapter



Following are the parameters required:

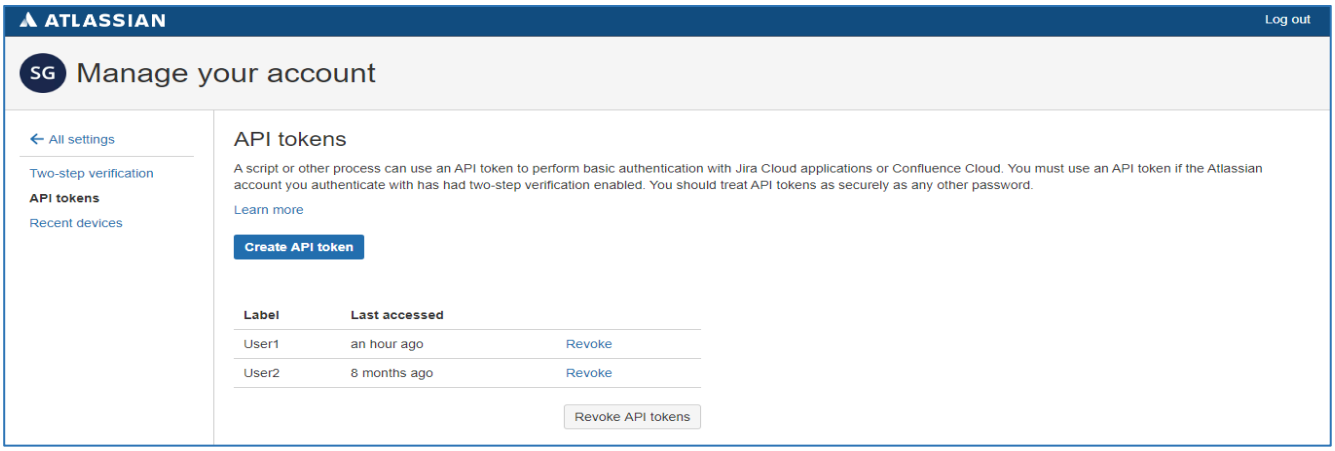
- **Base URL:** Put the base URL of Jira.
  Example:
  Enterprise Version: http://kov-dev05.kovairindia.com:1000
  SaaS Version: https://kovdev.atlassian.net
- **User Name:** Provide JIRA Cloud User Login Name.
- **Password:** Provide password or token key(for cloud instance) in password field.
- **Initial Call Time:** Provide initial call time for event polling.
- **Authentication Mode:** Provide AuthMode (BASIC/COOKIE). Default - 'BASIC'
- **Is Cloud Instance:** Provide Y for cloud instance. Default - 'N'

Pre-Requisite for registering Jira cloud instance:-

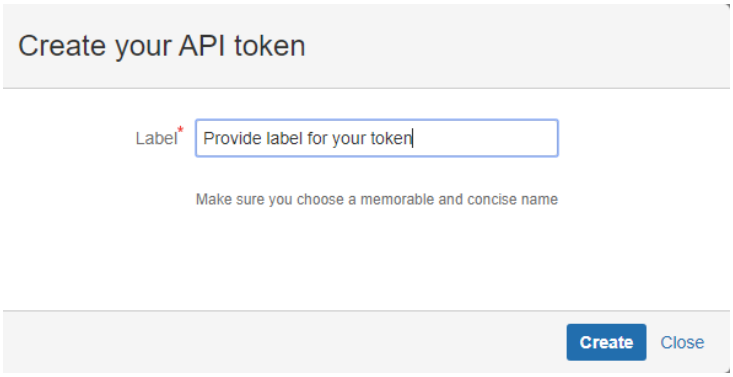
- Value of **AuthMode** should be **'BASIC'** in Adapter Web.Config File.
- Password should be valid API Token.

To create API Token Please follow the following Steps:

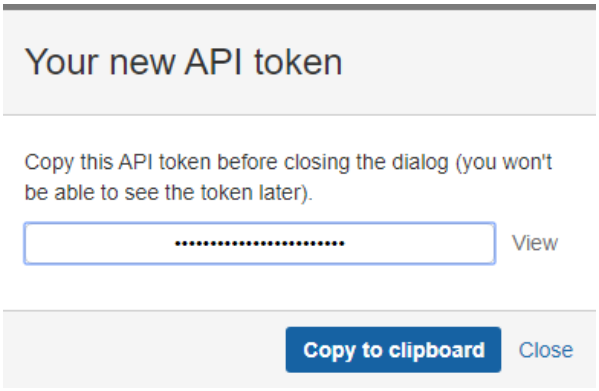
- Log in to https://id.atlassian.com/manage/api-tokens.
- Click **Create API token**.



- From the dialog that appears, enter a memorable and concise **Label** for your token and click **Create**.



- Click **Copy to clipboard**, then paste the token to Password



Component Custom Configuration:

Adapter Configuration:

- Web.config Database Configuration (**Adapter**)
- Web.config Adapter Custom Key Configuration (**Adapter**).

***While configuring the adapter, Webhook and EventService please make sure to check the details in the above order. The order contains grouped-similar configuration.*

Web.config Database Configuration (Adapter):

```
<KovairDBProvider>
<DbProperties DBName="##########" DataBaseType="SQLSERVER" UserName="#####" Password="#####"
DatabasePath="" DbProvider="SqlClient" IsDBPasswordEncrypted="false" ServerName="Database"
SqlAuthenticationMode="SQL"/>
</KovairDBProvider>
```

***Yellow** highlighted fields need to be changed as per your requirement**

Note: `IsDBPasswordEncrypted` = **false**, only when the password contains encrypted text.

= **true**, only when password contains non-encrypted Text.

Web.config Adapter Custom Configuration (Adapter):

```
<appSettings>
      <!--NoOfEvents Collected Per Call From Engine-->
 <add key="NoOfEvents" value="50"/>
      <!--Rational Focal Point version-->
 <add key="AdapterVersion" value="6.6.3"/>
      <!--Rational Focal Point Rest Call PageSize-->
 <add key="PageSize" value="10"/>
      <!--Rational Focal Point Rest Call PageSize-->
 <add key="ClearMetaData" value="N"/>
    <!--WebHook URL-->
 <add key="WebHookURL" value="http://kov-dev05.kovairindia.com/JiraWebHook/WebHookService.svc"/>
    <!--Is For Plugin-->
 <add key="IsForPlugin" value="Y"/>
    <!--Plugin DateTimeFormat-->
 <add key="PluginDateTimeFormat" value="dd/MM/yyyy HH:mm"/>
    <!--Set value to "Y" to get events using windows service else set value to "N" to get
events using webhook-->
    <add key="GetEventsUsingEventService" value="Y"/>
     <!--If following is set to Y then only one entity will be exposed: Issue-->
    <add key="ExposeIssueEntityOnly" value="Y"/>
    <add key="AdapterDateTimeFormat" value="MM/dd/yyyy"/>
    <!--Jira Server TimeZone :: TimeZone String Ref: https://msdn.microsoft.com/en-us/library/gg154758.aspx -->
    <add key="JiraServerTimeZone" value="India Standard Time"/>
    <!--Jira Adapater Registred User's Preffered TimeZone -->
```

```
    <add key="JiraUserTimeZone" value="India Standard Time"/>

    <!--Jira Adapater Execute Action :: Clean Description using browser object -->
    <add key="JiraDescriptionCleanUsingBrowser" value="Y"/>
<!--Jira Adapater Execute Action :: Is Wiki Supported -->

        <add key="IsWikiSupportedInDescription" value="Y"/>
 <!--Jira Adapater Execute Action :: If Wiki Supported then using which method 1. Using raw html
in {html} tags or 2. Using html to Wiki Converter If value is "N" then html to Wiki converted
will be used else html tag wil be used -->

 <add key="IsWikiSupportedInDescriptionUsingHtmlTag" value="N"/>

<!--Jira Adapater Execute Action :: Issue type entity to Sprint Relation through sprint lookup
field.-->

        <add key="SprintRelationThroughLookup" value="Y"/>
 <!--EditMetaFieldRequired :: To expose field Only in Edit from.-->

        <add key="EditMetaFieldRequired" value="Y"/>
<!--LegacyIdentifierFieldNameInJIRA :: Leagacy Search Field Name.-->

        <add key="LegacyIdentifierFieldNameInJIRA" value=""/>
<!--ForceLegacySearch :: To force the LegacySearch.-->

        <add key="ForceLegacySearch" value="N"/>
 <!--ExposeCommentAsField :: To Expose Comment as Fields .-->

        <add key="ExposeCommentAsField" value="Y"/>
 <!--To Enable some Custom Implementation-->

        <add key="EnableJiraKeyValidationFeature" value="N"/>
<!--[Y/N] 'Y' to enable All Attachments Flow. 'N' to flow traditional Attachments-->

        <add key="AllAttachmentsFlow" value="Y"/>
 <!-- Shared Path for All Attachment Synchronization feature. (Full Read/Write access must be
provided) -->

        <add key="AttachmentSharedFolderPath" value="\\LAPTOP11\SharedFolder"/>
   <!--[Y/N] 'Y' to enable All Comments Flow. 'N' to flow traditional comments-->

        <add key="AllCommentsFlow" value="Y"/>
<!-- [Y/N] 'Y' to activate log archival mechanism. -->

        <add key="EnableLogArchival" value="Y"/>
 <!-- Fully qualified physical path of the Adapter meta data folder if any.-->

    <add key="AdapterConfigFolderPath"
value="E:\TFS\KOVAIR_JIRA_JIRA_Cloud\Source\JIRACloudAdapter\ConfigXML" />

    <!--Fully qualified physical path of the Adapter log folder.-->

    <add key="AdapterLogPath" value="E:\TFS\KOVAIR_JIRA_JIRA_Cloud\Source\JIRACloudAdapter\Log"
/>

    <!-- qualified physical path of the Executable file of the Event Service if there is any
Event Service component installed.-->
```

```
    <add key="EventServiceExePath" value="C:\Program Files (x86)\Kovair Inc\Jira Event Service\JiraEventService.exe" />


    <!-- qualified physical path of the Event Service meta data folder if any. This is only applicable If there is any Event Service component installed.-->
    <add key="EventServiceConfigFolderPath" value="C:\Program Files (x86)\Kovair Inc\Jira Event Service\ConfigXML" />
    <!-- Event Service name If there is any Event Service component installed.-->
    <add key="EventServiceName" value="JiraEventService" />
   <!-- Fully qualified physical path of the Event Service log folder If there is any Event Service component installed.-->
    <add key="EventServiceLogPath" value="C:\Program Files (x86)\Kovair Inc\Jira Event Service\Log" />

</appSettings>
```

*Yellow highlighted fields need to be changed as per your requirement. **(Optional)**

*Turquoise highlighted fields needs to be changed and configured**. (Mandatory)**

Tag Name	Mandatory	Description
NoOfEvents	No	No's of Events that omnibus engine will collect at a time. [Default : 10]
AdapterVersion	No	Adapter Version is kept just for information.
PageSize	No	Rest call Page size. Should not be more than
ClearMetaData	No	[Y/N] Clears project and Userinfo from DB for a specific site. So that deleted projects and users may get updated in DB.
WebHookURL	**Yes**	Webhook Url. Do the following things. 1) Make sure that Webhook is browsable from Adapter server. 2) Put the webservice Url without the .wsdl. The webhookservice url should look exactly like above.

IsForPlugin	**Yes**	**[Y/N]** If only plugin(VSTS/Eclipse) is used. Wrong configuration of this value will hugely effect plugin feature. But configuring this wrong way for normal adapter will only hamper the actions to be executed in Jira.
PluginDateTimeFormat	No	DateTime format which will be visible from plugin
GetEventsUsingEventService	**Yes**	**[Y/N]** Set value to "Y" to get events using windows service else set value to "N" to get events using webhook.
ExposeIssueEntityOnly	**Yes**	**[Y/N]** Set value to "Y" to Expose Issue entity only. If Set to "N" then all issue types are exposed as Entity.
JiraServerTimeZone	NO	Jira Server TimeZone (in Jira Administration> System > SystemInfo) :: TimeZone String Ref: https://msdn.microsoft.com/en-us/library/gg154758.aspx
JiraUserTimeZone	NO	Jira Adapater Registred User's Preffered TimeZone (in Jira User's Profile Preffered TimeZone) TimeZone String Ref: https://msdn.microsoft.com/en-us/library/gg154758.aspx
JiraDescriptionCleanUsingBrowser	NO	**[Y/N]** If value set to "Y" then description will be added as plaint text with reserving space and newline else will be added as single line plain text.
IsWikiSupportedInDescription		Jira Adapater Execute Action :: Is Wiki Supported
IsWikiSupportedInDescriptionUsingHtmlTag		Jira Adapater Execute Action :: If Wiki Supported then using which method 1. Using raw html in {html} tags or 2. Using html to Wiki Converter If value is "N" then html to Wiki converted will be used else html tag wil be used
SprintRelationThroughLookup		Jira Adapater Execute Action :: Issue type entity to Sprint Relation through sprint lookup field.
EditMetaFieldRequired		To expose field Only in Edit from
LegacyIdentifierFieldNameInJIRA		Leagacy Search Field Name
ForceLegacySearch		To force the LegacySearch.

ExposeCommentAsField		To Expose Comment as Fields.
EnableJiraKeyValidationFeature		To Enable some Custom Implementation
AllAttachmentsFlow		'Y' to enable All Attachments Flow. 'N' to flow traditional Attachments
AttachmentSharedFolderPath		Shared Path for All Attachment Synchronization feature
AllCommentsFlow		'Y' to enable All Comments Flow. 'N' to flow traditional comments
EnableLogArchival		'Y' to activate log archival mechanism.
AdapterConfigFolderPath	**YES**	physical path of the Adapter meta data folder if any
AdapterLogPath	**YES**	Physical path of the Adapter log folder
EventServiceExePath	**YES**	Physical path of the Executable file of the Event Service if there is any Event Service component installed.
EventServiceConfigFolderPath	**YES**	Physical path of the Event Service meta data folder if any. This is only applicable If there is any Event Service component installed.
EventServiceName	**YES**	Event Service name If there is any Event Service component installed.
EventServiceLogPath	**YES**	Physical path of the Event Service log folder If there is any Event Service component installed.

Reason for Keeping **"IsForPlugin":

When doing omnibus configuration a field mapping is saved, we store all the fields in DB. That field details is fetched when processing event fields and also in Executing some action in Jira. But if the Plugin is only used then fields in DB will not be present. So for execute action the fields will not be available from DB. So if the flag's Value is "**Y**" we retrieve all the fields from Jira. Hence eliminating the DB dependency.

Adapter Console Configuration:

Give valid value to the following key in Adapter web.Config file.

- AdapterConfigFolderPath
- AdapterLogPath
- EventServiceExePath

- EventServiceExePath
- EventServiceConfigFolderPath
- EventServiceName
- EventServiceLogPath

If ApplicationPool is **Classic** mode then highlighted section needs to be added in following hierarchy in Adapter's Web.Config file.

```
<configuration>
  <system.web>
    <httpHandlers>
      <add verb="*" path="Telerik.Web.UI.WebResource.axd" type="Telerik.Web.UI.WebResource,
       Telerik.Web.UI" validate="false" />
      <add verb="*" path="Telerik.Web.UI.DialogHandler.aspx"
       type="Telerik.Web.UI.DialogHandler, Telerik.Web.UI,
Culture=neutral,        PublicKeyToken=121fae78165ba3d4"></add>
      <add verb="*" path="Telerik.Web.UI.SpellCheckHandler.axd"
       type="Telerik.Web.UI.SpellCheckHandler, Telerik.Web.UI,
Culture=neutral,        PublicKeyToken=121fae78165ba3d4"></add>
    </httpHandlers>
  </system.web>
</configuration>
```

If ApplicationPool is **Integrated** mode then highlighted section needs to be added in following hierarchy in Adapter's Web.Config file.

```
<configuration>
  <system.webServer>
       <handlers>
        <remove name="Telerik_Web_UI_WebResource_axd" />
          <add name="Telerik_Web_UI_WebResource_axd" path="Telerik.Web.UI.WebResource.axd"
          type="Telerik.Web.UI.WebResource" verb="*" preCondition="integratedMode" />
          </handlers>
        </system.webServer>
      </configuration>
  </system.webServer>

</configuration>
```

Webhook Configuration:

- Web.config Database Configuration (**Webhook**)
- Web.config Adapter **Custom Key** Configuration (**Webhook**).

***While deploying or configuring the adapter and Webhook please make sure to check the details in the above order. The order contains grouped-similar configuration.*

AppSetting Database Configuration (Webhook):

```
<KovairDBProvider>
<DbProperties DBName="##########" DataBaseType="SQLSERVER" UserName="#####" Password="######"
DatabasePath="" DbProvider="SqlClient" IsDBPasswordEncrypted="false" ServerName="Database"
SqlAuthenticationMode="SQL"/>
</KovairDBProvider>
```

*Yellow highlighted fields need to be changed as per your requirement. **This is the same Config kept in adapter web.config**

[*Please refer to the following Section* Web.config Database Configuration (Adapter):]

AppSetting Webhook Custom Configuration (Webhook):

```
<appSettings>
    <!--Rational Focal Point version-->
 <add key="WebHookVesion" value="6.6.3"/>
    <!--Rational Focal Point Rest Call PageSize-->
 <add key="PageSize" value="50"/>
    <!--Date Time Format-->
 <add key="DateTimeFormat" value="MM/dd/yyyy HH:mm"/>
    <!--Item Url Will be an Anchor-->
 <add key="ExposeItemAnchorUrl" value="Y"/>
</appSettings>
```

Key descriptions are in below

WebHookVesion – Jira Version

PageSize – Rest call Pagesize.

DateTimeFormat – DateTime Format.

ExposeItemAnchorUrl – "Y/N" for "Y" item Url will flow as an formatted HTML. For "N" it will flow like normal SLT.

EventService Configuration:

- app.config Database Configuration (**EventService**)
- app.config Adapter **Custom Key** Configuration (**EventService**).

***While deploying or configuring the adapter and Event Service please make sure to check the details in the above order. The order contains grouped-similar configuration.*

*** you can find this app.config settings in the installation folder of event service in [Eventservicename].exe.config file.*

AppSetting Database Configuration (EventService):

```
<KovairDBProvider>
<DbProperties DBName="#########" DataBaseType="SQLSERVER" UserName="#####" Password="#####"
DatabasePath="" DbProvider="SqlClient" IsDBPasswordEncrypted="false" ServerName="Database"
SqlAuthenticationMode="SQL"/>
</KovairDBProvider>
```

*Yellow highlighted fields need to be changed as per your requirement. **This is the same Config kept in adapter web.config**

[*Please refer to the following Section* Web.config Database Configuration (Adapter):]

AppSetting EventService Custom Configuration (EventService):

```
<appSettings>
    <!--Rational Focal Point version-->
 <add key="WebHookVesion" value="6.6.3"/>
    <!--Rational Focal Point Rest Call PageSize-->
 <add key="PageSize" value="50"/>
    <!--Date Time Format-->
 <add key="DateTimeFormat" value="MM/dd/yyyy HH:mm"/>
    <!--Item Url Will be an Anchor-->
 <add key="ExposeItemAnchorUrl" value="Y"/>
    <!—Interval For EventService To Get Events From JIRA Cloud 1000 = 1 Sec-->
 <add key="TickTime" value="10000"/>
    <!--If following is set to Y then only one entity will be exposed: Issue-->
 <add key="ExposeIssueEntityOnly" value="Y"/>
    <!--Jira Server TimeZone ::  example : India Standard Time :: TimeZone String Ref :
        https://msdn.microsoft.com/en-us/library/gg154758.aspx -->
 <add key="JiraServerTimeZone" value=""/>
   <!--Jira Adapater Registred User's Preffered TimeZone. example : India Standard Time ::
       TimeZone String Ref: https://msdn.microsoft.com/en-us/library/gg154758.aspx -->
 <add key="JiraUserTimeZone" value=""/>
   <!--Send Jira Event's Comment using HttpUtility.HtmlEncode with CDATA -->
 <add key="JiraEventCommentHtmlEnabled" value="Y"/>
   <!--Send Jira Event's Description using HttpUtility.HtmlEncode -->
 <add key="JiraEventDescriptionHtmlEncode" value="N"/>
<!--(Y/N)To Generate Attachment while Event Generation -->
```

```
 <add key="GenerateEventWithOutAttachment" value="N"/>

 <!--(Y/N)To Generate Comment while Event Generation -->

    <add key="GenerateEventWithOutComment" value="N"/>

<!--EnableConfigManagement :: To enableConfig management based on ConflictConfig.xml-->

        <add key="EnableConfigManagement" value="Y"/>

<!--[Y/N] 'Y' to enable All Attachments Flow. 'N' to flow traditional attachments.-->

        <add key="AllAttachmentsFlow" value="Y"/>

 <!-- Shared Path for All Attachment Synchronization feature. (Full Read/Write access must be
provided) -->

     <add key="AttachmentSharedFolderPath" value="\\LAPTOP11\SharedFolder"/>

 <!--[Y/N] 'Y' to enable All Comments Flow. 'N' to flow traditional comments-->

        <add key="AllCommentsFlow" value="Y"/>

<!-- [Y/N] 'Y' to activate log archival mechanism. -->

        <add key="EnableLogArchival" value="N"/>

   <!-- Time (between 1 and 60) after midnight till when log archival will be tried if not done
already for the particular day. -->

        <add key="TimeSpanFromMidnightToTryArchive" value="15"/>

 <!-- Location where archived log files will kept. Must have necessary permission. If kept blank,
archived log files will be kept inside 'EVENT_SERVICE_INSTALLATION_DIRECTORY\Log-Archive'. -->

        <add key="ArchiveLogDirectoryFullPath" value=""/>

 <!-- [Y/N] 'Y' to activate event generation in parallel tasks. 'N' for normal event generation.-->

        <add key="isParallelProcessingNeeded" value="N"/>

 <!--BlockCommentFlowByRegisteredUser - Check this to Y to filter out the comments entered by
registered user.-->

        <add key="BlockCommentFlowByRegisteredUser" value="Y"/>

    <!--BlockAttachmentFlowByRegisteredUser - Check this to Y to filter out the attachment added by
registered user.-->

        <add key="BlockAttachmentFlowByRegisteredUser" value="Y"/>

<add key="IgnoreLoopBackEvent" value="Y"/>

        <!-- [Y/N] 'Y' to skip generation of Loopback events from Jira. -->

</appSettings>
```

Key descriptions are in below -

WebHookVesion – Jira Version

PageSize – Rest call PageSize.

DateTimeFormat – DateTime Format.

ExposeItemAnchorUrl – "Y/N" for "Y" item Url will flow as an formatted HTML. For "N" it will flow like normal SLT
TickTime – After each TickTime Jira event service will get Events from JIRA Cloud. 1000 = 1Sec.
ExposeIssueEntityOnly – [Y/N] Set value to "Y" to Expose Issue entity only. If Set to "N" then all issue types are exposed as Entity.
JiraServerTimeZone - Jira Server TimeZone (in Jira Administration> System > SystemInfo) :: TimeZone String Ref: https://msdn.microsoft.com/en-us/library/gg154758.aspx
JiraUserTimeZone - Jira Adapater Registred User's Preffered TimeZone (in Jira User's Profile Preffered TimeZone) TimeZone String Ref: https://msdn.microsoft.com/en-us/library/gg154758.aspx
JiraEventCommentHtmlEnabled– If "Y" then send Jira Event's Comment with HTML.
JiraEventDescriptionHtmlEncode - If "Y" then send Jira Event's Description using HttpUtility.HtmlEncode. Added for Kovair Adapter support. Set as required.
GenerateEventWithOutAttachment -If "Y" then Generate Attachment while Event Generation.
GenerateEventWithOutComment -If "Y" then Generate Comment while Event Generation.
EnableConfigManagement -To enableConfig management based on ConflictConfig.xml.
AllAttachmentsFlow -'Y' to enable All Attachments Flow. 'N' to flow traditional attachments.
AttachmentSharedFolderPath -Shared Path for All Attachment Synchronization feature.
AllCommentsFlow -'Y' to enable All Comments Flow. 'N' to flow traditional comments.
EnableLogArchival -'Y' to activate log archival mechanism.
TimeSpanFromMidnightToTryArchive - Time (between 1 and 60) after midnight till when log archival will be tried if not done already for the particular day.
ArchiveLogDirectoryFullPath -Location where archived log files will kept. Must have necessary permission. If kept blank, archived log files will be kept inside 'EVENT_SERVICE_INSTALLATION_DIRECTORY\Log-Archive'.
isParallelProcessingNeeded - 'Y' to activate event generation in parallel tasks. 'N' for normal event generation.
BlockCommentFlowByRegisteredUser - Check this to Y to filter out the comments entered by registered user.It will only work when **AllCommentsFlow** is set to 'N'.
BlockAttachmentFlowByRegisteredUser -Check this to Y to filter out the attachment added by registered user.It will only work when **AllAttachmentsFlow** is set to 'N'.
IgnoreLoopBackEvent :-'Y' to skip generation of Loopback events from Jira.
[Note : This works for object type of events only.]

Entities Configuration

Jira has issue types. Which is exposed as entities. Issue can be of different type. Most general types are

Bug
Epics
New Feature
Story
Improvement
Sub-task
Task
Custom Entities
Sprint

If 'ExposeIssueEntityOnly' flag is set in web.config then only Issue Entity Exposed.

Issue

Supported Features of Entities

Entity Name	System Fields	Custom Fields	Attachment	Comment
Custom Entities	Yes	Yes	Yes	Yes
Issue	Yes	Yes	Yes	Yes
Sprint	Yes	No	No	No

Note: If Jira Project contains Sprint field (Jira Agile specific field) then Sprint Entity will be available.

If any issue is modified to a sprint then Sprint add or modify event will be generated.otherwise Sprint Event will not generate. Sprint delete event is not supported.

Field Configuration:

Entity Field	Data Type	Comments
Created	DateTime	Record Created time in Jira

Creator	User	User who created the issue
Key	Single Line Text	Key of Issue in Jira
ID	Single Line Text	Id of Issue in Jira
Jira Item Url	Single Line Text	Permalink of Issue in Jira
Progress	Integer	
Status	Lookup	(Editable) Status of Entity
Updated	DateTime	Record Updated time in Jira
Votes	Integer	
Resolution Date	DateTime	
Work Ratio	Single Line Text	
Time Spent	Integer	
Resolution	Lookup	Editable only when you use it in screen
Original Estimate	Float	
Remaining Estimate	Float	
Owner Group	Lookup	
Sprint Specific fields in Issue Type Entity	**Data Type**	**Comments**
Linked Sprint	EntityObject	Related Sprints's Ids.
Sprint	Lookup	Multivalued lookup. Linked sprints's name. Note while entity mapping select "Add New Item" if value not exists in Kovair or other tool. Example : 
Sprint Entity Field	**Data Type**	**Comments**
Name	Single Line Text	Sprint name
Id	Int	Sprint Id
StartDate	DateTime	Sprint StartDate
EndDate	DateTime	Sprint EndDate

Status	Lookup	Sprint Status. Note while entity mapping select “Add New Item” if value not exists in Kovair or other tool. Example : 
Complete Date	DateTime	Sprint Complete Date
Board	Lookup	Sprint Board

Supported JIRA Field Type

JIRA Field Type	Omnibus Field Type	Multivalued
➢ Text Field Single Line (String) ➢ URL Field (URL)	Single Line Text	No
Text Field MultiLine (Textarea)	Multi Line Text	No
Number Field (Number)	Float	No
Date Picker (Date)	Date	No
Date Time Picker (Datetime)	DateTime	No
User Picker Single User (User)	User	No
➢ CheckBox(Radiobuttons) ➢ Select List Single Choice (Select) ➢ Project Picker (Projects) ➢ Version Picker Single Version (Version) ➢ Group Picker Single Group (Grouppicker)	Lookup	No
➢ Radio Buttons (Multicheckboxes) ➢ Select List Multiple Choices (Multiselect) ➢ Version Picker Multiple Versions (Multiversion) ➢ Group Picker Multiple Group (Multigrouppicker	Lookup	**Yes**
User Picker Multiple Users (Multiuserpicker)	User	**Yes**

**Above custom field types are supported along with the system fields. There may be other field types in JIRA but currently they are not supported.

Un-Supported JIRA Field Type

Below are the fields which are not supported currently.

Select List Cascading

Labels
Global Rank
Hidden Job Switch
Job Textbox
Text Field (Read-Only)
Epic Links

Relation Configuration:

Relation for All Issue Types

Any issue of any type can be linked with any issue type. So relation types can be permutation of all entities present in Jira.

For Example: Let's say for certain Project there exists following entities

Bug	Epic	Story

So the Relations would be -

1. Bug to Bug	1. Epic to Bug	1. Story to Bug
2. Bug to Epic	2. Epic to Epic	2. Story to Epic
3. Bug to Story	3. Epic to Story	3. Story to Story

Issue to Sprint

**Link Type (Relation Field) is also Exposed with relation.

Relation for Issue entity

For Issue entity the only relation would be

Issue
Issue to Issue

Relation invoke criteria from JIRA

Web Hook: Relation event will flow after you add a relation and modify the record. And relation Field will contain the value as you view the record from source record.

Suppose you have a bug and a Story. Name them “Target Bug 1” and “Related Story 1”

Now you link them with “Blocks” link type. So when you open both record it will look the following.

Target Bug 1 ----------Blocks------→Related Story 1

And

Related Story 1 --------Blocked by--→Target Bug 1

Now if you edit the bug. Then the relation will flow with relation field’s value as “Blocks”. Or if you edit the Story the relation will flow with relation field’s value as “Blocked by”.

Event Service the Relation will be picked up as of when the Relation is created or deleted in Jira.

Relation Fields:

Relation Field is exposed with Relation. Allowed values are as bellow.

Field Name	Field Type	Field Values(a)	Field Values(b)
Issue Link Types	Lookup	Blocks	Is blocked by
		Relates to	Relates to
		Duplicates	Is duplicated by
		Clones	Is cloned by

Please note that Field Values (a) is when you view the link from source record. And Field Values (b) is when you view the link from related record. You can also add custom values in relation types. That is also supported.

Relation Field Value for Event	Relation Field Value For Action
Relation cannot be added manually. In order to add relation you need physically modify the record (either or target) after creating relation. So when you modify a record. The link type value shown form that particular modified record will flow.	Relation Action will also have the same effect. If you pass the link type value then after action you can see the same value from the record from which you have created the relation from. If you do not pass the value then the top most relation type will be assigned while creating the relation.

Note : No relation field supported for Issue to Sprint relations.

Events / Action Configurations:

Object Events:

Entity Name	Add	Modify	Delete
All Entity	**Yes**	**Yes**	**Yes ***
Sprint	**Yes**	**Yes**	**No**

*Note: Delete events can only be fetched from JIRA Cloud only through Webhook. With Event Service the Delete event will not be exposed.

Note: Add Action is not exposed for Sprint.

Attachment Events:

*Note: Delete events not supported for Sprint entity.

Relation Category	Add	Modify	Delete
Action	**Yes**	**NO**	**Yes**
Event	**Yes**	**NO**	**Yes**

Comment Events:

*Note: Comment events not supported for Sprint entity.

Relation Category	Add	Modify	Delete
Action	**Yes**	**Yes**	**Yes**
Event	**Yes**	**Yes**	**Yes**

Object Actions:

Entity Name	Add	Modify	Delete
All Entity	**Yes**	**Yes**	**Yes**
Sprint	**Yes**	**Yes**	**No**

Relational Events and Actions:

Relation Category	Add	Modify	Delete
Action	Yes	NO	Yes
Event	Yes	NO	Yes

Syncback Configuration

Only following fields are supported for Syncback

Field Name	Data Type
Key	Single Line Text
ID	Single Line Text
Jira Item Url	Single Line Text

Plugin Features

Plugin feature is supported for this version of adapter. Some configuration change is required in adapter's web.config.

For Plugin Support	For Normal Adapter
<!--Is For Plugin--> <add key="IsForPlugin" value="Y"/>	<!--Is For Plugin--> <add key="IsForPlugin" value="N"/>

Plugin Filter

Plugin filter shows all the filters from Jira. As Jira has filters which can retrieve items from multiple projects. So by default all the filters are shown in filter dropdown. Upon selecting one filter, if the filter has permission to list issue type from the specific project then along with the filtration the filtered item will be shown in List.

project in (KDP, KTP) AND **issuetype** in (Bug, Epic, Improvement) AND status in ("In Progress", Done, "To Do") ORDER BY updatedDate DESC

Let's say the filter condition in JIRA is following.

So now let's assume your project is "**KDP**" and your Entity is "**Bug**".
Now when plugin shows the data it converts the condition based on your Project and your entity. Rest of the query remains the same.
So you can see the modified filter condition below.
If no filter found inside the project then "Default" filter is shown.

project in (KDP) AND **issuetype** in (Bug) AND status in ("In Progress", Done, "To Do") ORDER BY updatedDate DESC

Plugin View

There is no view mechanism in Jira. But it does have a feature by which you can associate fields (which you want to be visible and which you want to hide). So if that is configured for a selected filter that that view is displayed from plugin. Otherwise default system fields are shown.

Plugin Operations

Operation Details(Sample Entity : Bug)	Supported
Filter Population of Bug	Yes
View Population of Bug	Yes
Toggle between the filters	Yes
View Bug	Yes
Add Bug	Yes
Modify Bug	Yes
Delete Bug	Yes
View all Comments	Yes
View all Attachments	Yes
View all Relations	Yes
Modify Bug and Add/Delete Attachment	Yes
Modify Bug and Add Comment	Yes
Modify Bug and Add/Delete Relation	Yes
Modify Bug and Add/Delete Attachment, Comment and Relation	Yes

Add Bug with Relation/Attachment/Comment	**Yes**
Add/Delete Relation From link Window	**Yes**

Custom Features

Exposure of Single Entity 'Issue':

Initial Configuration:

`ExposeIssueEntityOnly` should be set to 'Y' is both **Adapter** and **event service**. Also new Database script should be executed if patching is done.

New Table Added – `JIRAIssueScreenInfo.`

Entity Configuration:

All the entities will be hidden and only "Issue" entity will be exposed.

Field Configuration:

Irrespective of any issue type and assignments (in screen) all the fields are exposed. Issue Type is exposed as a mandatory Lookup field.

In JIRA the custom fields are created and then added to a screen. Custom fields also can be added based on Issue Types. So following can be a field configuration for say two issue types Bugs and Epic

Field Name (Field Type)	Assigned Issue Types
Custom MV Lookup (Lookup)	Epic
Custom SLT Type-1 (SingleLineText)	Bug
Custom DateTime Sync (DateTime)	All Issue Types

So all the 3 field will be exposed only once irrespective of Issue types, they are assigned to.

Field Manipulation in Event

If the Field is present in the issue type then the field Value will be flown as entered else they will flow as blank value. Consider this when creating field mapping with the target tool.

In above example following field value will flow when event occurs

Issue Type : **Bug**		Issue Type : **Epic**	
Field Name	**Field Value**	**Field Name**	**Field Value**
Custom MV Lookup	Blank	Custom MV Lookup	Value Present
Custom SLT Type-1	Value Present	Custom SLT Type-1	Blank
Custom DateTime Sync	Value Present	Custom DateTime Sync	Value Present

Field Manipulation in Action

While performing action on Jira, extra field which are not present in the issue types are discarded.

FieldId collection are stored in Local DB `JIRAIssueScreenInfo` based on issue types. While adding or modifying a record in Jira, information from this table is used to filter the fields.

* Two action are performed when a modify action occurs with changed issue type values. First one changes the issue type and second one updates the issue specific field if any.

Attachment Comment and Relation Support

Attachment Comment and relation are fully supported with this feature.

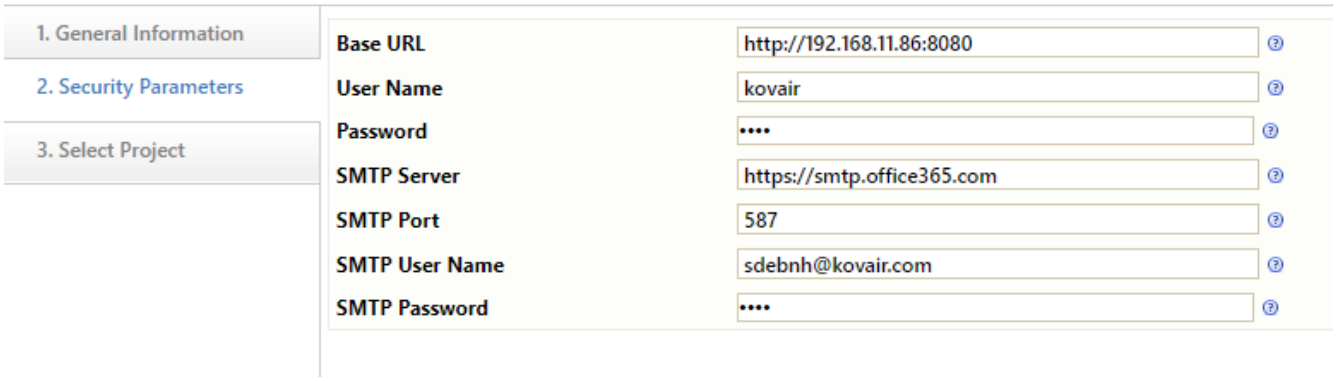
Limitation with exposing single Entity:

- Plugin is not supported when this feature is enabled.
- This feature only works with event service not with Web hook.
- Any type of sub-entity (Ex.: Sub-Task, Technical Task), which are based on their parents will not flow. So if the target tool doesn't sends the ParentEntityName and ParentEntityId with the event then those types of issue will not get added in Jira. Action will show the specific error.

Custom Features

Updated Registration of JIRA Cloud Adapter

Based on '`EnableJiraKeyValidationFeature`' web.config key value the following config params is been exposed. If this key value is set Y then only below configuration parameters and Enity will be exposed.



Following are the parameters required

- **Base URL:** Put the base URL of Jira.
  Example: **Enterprise Version:** http://kov-dev05.kovairindia.com:1000
  SaaS Version: https://kovdev.atlassian.net
- **User Name:** Provide JIRA Cloud User Login Name.
- **Password:** Provide JIRA Cloud Password
- **SMTP Server**: Put the SMTP Server Url.
  Example: `https://smtp.office365.com`
- **SMTP Port**: Put the correct SMTP port.
  Example: 587
- **SMTP User Name**:provide mail user name.
- **SMTP Password**: provide mail password.

Note: Once the configparams is set, it can't be reversible.

Exposed Entity

Email

Exposed Fields

Field Name	Field Type	Expected Value	Additional Notes
Jira Key	SingleLineText	SAH-1981	Expected proper Jira Key.

SMTP Recipients	Multiline Text	Emails sperated by comma. Example: sdebnath@kovair.com;vmishra@kovair.com,adey@kovair.com	Recipient Mail id's, multiple id's must be splitted by , or ;
Status Of Mail	SingleLine Text	Sample Values: • Jira Id is not found <id> and Mail is successfully send • Jira Id <id> is successfully found	This field is to be used only for Syncback to get the exact mailer status.
Additional Email Text	SingleLine Text	Additional text in mail body	Field value will replace the macro value of Email- $$$$ADDITIONALEMAILTEXT$$$$
Mail Subject	SingleLine Text	Mail subject of the mail	If this field is not mapped then the default mail subject will be shown in below format: `Kovair Mail : Jira Id- $$$$JIRAID$$$$ Not present in project $$$$ProjectName$$$$`

Note: Jira Key should be in proper Jira Id format.

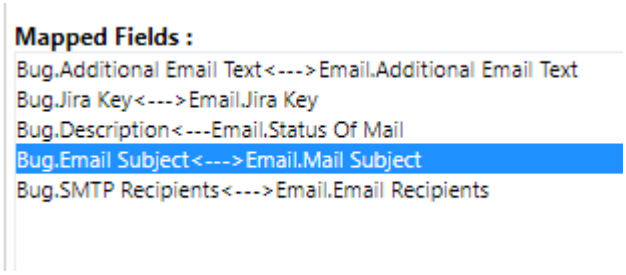
Exposed Actions

Add Email
Modify Email

Note:

- No Event is exposed for this entity.
- Attachment and comment is not exposed.

Mandatory Field Mapping



Action

Case	Action Result	Expected Outcome
JIRA id present in Jira	**Successful**	**Action Status-Y.** Status Of Mail: `Jira Id <id> is successfully found`
JIRA id absent in Jira Mail Sent Succesfully	**Successful**	**Action Status-Y.** StatusOfMail: `Jira Id is not found <id> and Mail is successfully send`
JIRA id absent in Jira Mail Sent Failed	**Error**	**Action Status-N.**

Mail Template

```
<Root>
<Subject>
    <![CDATA[$$$$EMAILSUBJECT$$$$]]>
  </Subject>
  <Body>
    <![CDATA[<body>
    <div id="Container">
        <div style="font-weight: bolder; color: #17365D;">
            No Record found having Id $$$$JIRAID$$$$
        </div>
        <br/>
        <br/>
        <div style="font-weight: bolder; color: #17365D;">
            $$$$ADDITIONALEMAILTEXT$$$$
        </div>
        <br/>
        <br/>
        <div class="DetailDiv" style="font-size: 9px;">
            *** This is an automatically generated email, please do not reply. For any query,
            Contact Support : support@kovair.com (+1 408-262-0200 Extn : 2100)***
        </div>
    </div>
</body>]]>
  </Body></Root>
```

Some macro is present to replace the jira id, EMAILSUBJECT and Additional Email Text exposed as field Additional Email Text. Mail Template is configurable, any changes can be applied
Note: Change on same record multiple time will send multiple mails.

All Comments Synchronization

Feature:

All comments for a record will flow every time. So comment will not get lost even if an event gets blocked by service flow condition.

Prerequisites:

1.Key '**AllCommentsFlow** ' should be set to 'Y' in both adapter web.config and App.Config .

2.User should map Internal Comment Details (MultiLineText) field from both adapters in field mapping interface of Kovair.

3.Both the source & target adapter database must be hosted in the **same SQL Server** instance. The database identity / account set in JiraCloudAdapter > Web.config > KovairDBProvider section must have permission to execute READ query in the adapter database from where comment is coming.

4.In target adapter (if it supports all comment) related flag needs to be turned on as well.

Note : Delete Comment does not support in AllCommentsFlow .

All Attachments Synchronization

Feature:

All attachments for a record will flow every time. So attachment will not get lost even if an event gets blocked by service flow condition.

Prerequisites:

1.Key '**AllAttachmentsFlow** ' should be set to 'Y' in both adapter web.Config and App.Config.

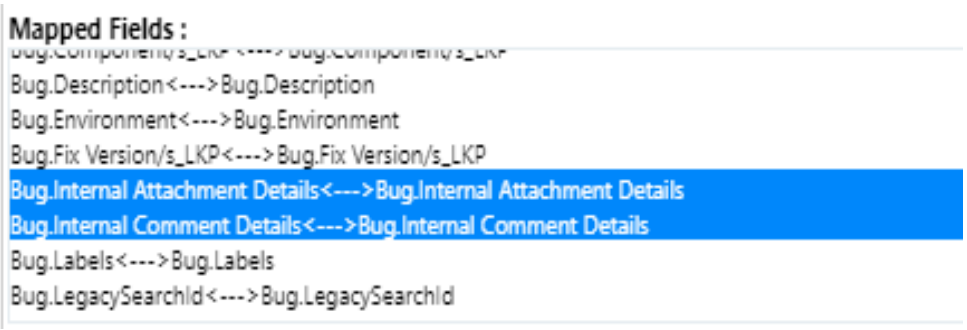
2.User should map Internal Attachment Details (MultiLineText) field from both adapters in field mapping interface of Kovair.

3.Both the source & target adapter database must be hosted in the **same SQL Server** instance.

4.A shared directory has to be created in the network domain. The network path must be made available to the event service (through key: AttachmentSharedFolderPath in configuration file). The accounts through which all the target adapters(s) and JiraCloudAdapter event service are running must be having full read / write permission in the shared network path. The attachments get downloaded locally into the shared directory path specified in AttachmentSharedFolderPath .

5.In target adapter (if it supports all attachment) related flag needs to be turned on as well.

Mandatory Field Mapping



Agile Support(sprint and release support)

Exposed Sprint

Sprint can be exposed as entity or as field.

Sprint event will trigger only if you update any issue which is related to that sprint.

To expose sprint as field you need to set **SprintRelationThroughLookup** as 'Y' in web.Config.

At a time it is recommended to use either relation or field. Both can not be used at the same time.

Sprint supported Features For Event

	Add	Modify	Delete
Sprint as Entity	Yes	Yes	No
Sprint as Lookup field	Yes	Yes	No
IssueType to Sprint	Yes	No	Yes

Sprint supported Features For Event

	Add	Modify	Delete
Sprint as Entity	Yes	Yes	No
Sprint as Lookup field	Yes	Yes	No
IssueType to Sprint	Yes	No	Yes

Event Trigger Criteria for Sprint add or modify

- Attach or update any Issue to selected Sprint.
- Attached issue mus have a service flow.

Exposed Release

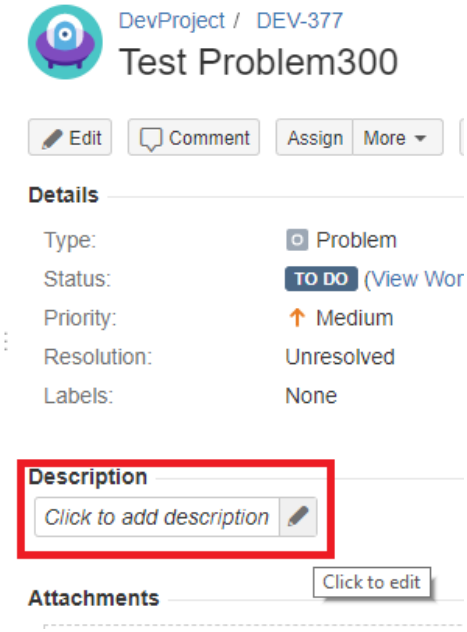
Release can be add via following field -

Affects version/s
Fix Version/s

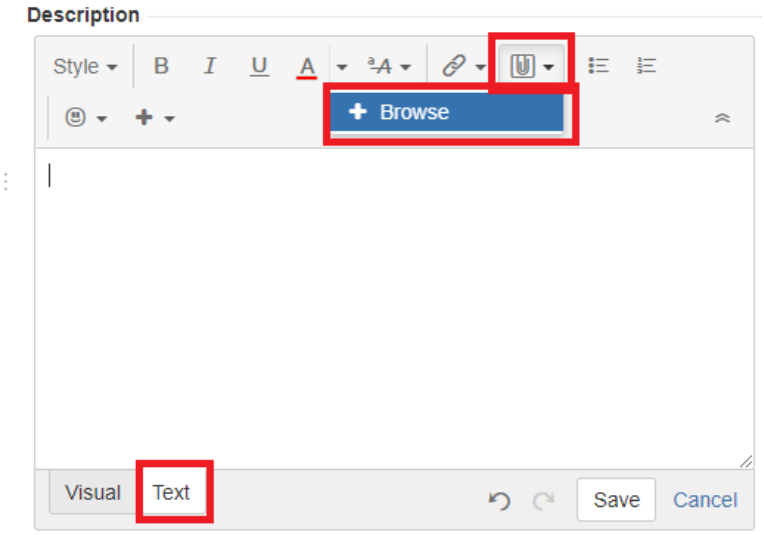
Embedded Images Support

Images can be embedded with the description field in JIRA and this will flow to the target tool as an embedded image in a RTF field,provided the target tool supports the flow of such an image. An embedded image can be created in JIRA by the following way:

1. Go to a record in JIRA and edit the Description field



2. Go to **Text** mode for the Description field, and then click on the **Attachment** button, and then click **Browse** to open and attach an image



3. Click on **Save**. Doing so, the image gets attached to the Description field and also is shown in the Attachment List as it gets added as an attachment.

During Action of an Embedded Image, the file gets added to JIRA with the name '**EMBEDDED_IMG<GUID>.<extension>**', as shown below:

Disclaimer

1. Normal users who are not associated with projects cannot be fetched. They can be added from Jira in user fields. But they cannot be exposed as they are not workspace-users.
2. As of now the User retrieval API only receives the users who are under Jira-Developer and Jira-Administrator group.
    a. The table below has a detailed list of permissions that are required for the JIRA Connector to work properly. By default, if the JIRA user is a member of JIRA-administrator, JIRA-users and JIRA-developers, it should have the below permissions.

Permission	Description
JIRA System Permissions: **JIRA Users**	Required for login
JIRA Project Permissions: **Browse Project**	Required to get projects
JIRA Project Permissions: Issue Permissions: **Create Issues**	Required to edit issues
JIRA Project Permissions: Issue Permissions: **Edit Issues**	Required to edit issues
JIRA Project Permissions: Issue Permissions: **Assign Issues**	Required for mapping Assignee field
JIRA Project Permissions: Issue Permissions: **Modify Issues**	Required for mapping Assignee field
JIRA Project Permissions: Issue Permissions: **Set Issue Security**	Required to set this field
JIRA Project Permissions: Comments Permission: **Add Comments**	Required to add comments

3. Rich text format is not supported currently. So the comment or description with rich text will be processed as normal text before adding to Jira.
4. Relation event and Comment Delete will work with Modify event of an Entity record.
5. Delete entity events can be fetched from JIRA Cloud only through Webhook not EventService.
6. Events for sprints will not be generated until any associated issue is updated in Jira Agile.
7. Sprint modify action only supported for updating Sprint Name, Start Date and End Date.
8. If IsWikiSupportedInDescriptionUsingHtmlTag is set to **"Y"** in adapter web.config file then there is a high chance that description html will appear in Jira UI as it has come from source tool else (i.e. if value set to **"N"**) content may get changed as html to wiki converter does not supports all html characters to wiki conversion for example **img,highlight** tag will not work after html to wiki conversion.
9. Events of those Attachments whose names start with '**EMBEDDED_IMG'** are skipped.
10. Embedded Images will always be created as a '**thumbnail**' in JIRA's description field when they are added from another tool, during action.
11. Since during action of Embedded images in JIRA the file names of the embedded images are not available, all existing attachments whose name start with '**EMBEDDED_IMG**' is first deleted from JIRA's attachment list and then overwritten with the Description field value sent from the source tool.