MICRO FOCUS

AccuSync 2018.1

AccuSync Managment Console Help

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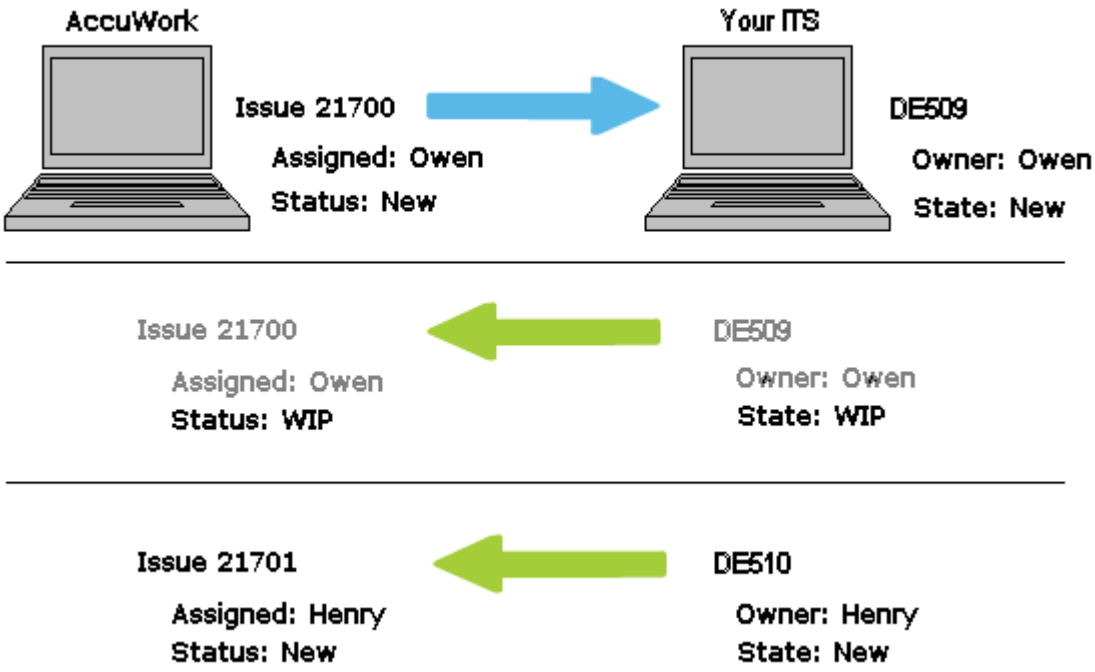
Contents

Overview

This chapter introduces AccuSync. It describes how synchronization works and the components that can be included in an AccuSync Configuration.

AccuSync is a fully bidirectional utility that synchronizes AccuWork issues in an AccuRev depot with issues in one or more projects in your information tracking system (ITS), as shown in the following illustration.



In this example, a new issue, `21700`, is created and assigned to Owen in AccuWork. AccuSync automatically creates this issue as defect `DE509`. When the **State** of defect `DE509` is changed from `New` to `WIP` in your ITS, AccuSync automatically synchronizes the changed value with the Status field in the corresponding AccuWork issue. Finally, an ITS user creates a new defect, `DE510`. This new issue is automatically created as issue `21701` in AccuWork.

Notice that in this example the AccuWork **Assigned** field corresponds to the **Owner** field in the ITS schema. Similarly, the AccuWork **Status** field corresponds to the **State** field in your ITS. As the AccuSync administrator, you decide how to map fields in one system to those in another, ensuring that issue data in one system matches data in the other, regardless of how it is labeled. You also decide the types of issues you want to synchronize, how often you want to synchronize your issue tracking systems, and whether or not you want AccuSync to perform a two-way synchronization. Predefined AccuSync configurations help simplify the field mapping process.

AccuSync currently supports these ITSs: Atlassian JIRA, BMC Remedy ITSM, HP Quality Center, IBM Rational ClearQuest, and Rally Enterprise Edition. See the AccuRev web site for more information: *http://www.accurev.com/integrations.html*

Administrator's Role

The role of the AccuSync administrator is to install, configure, run, and maintain AccuSync. Configuration and maintenance procedures are described in this book. See the *AccuSync Installation and Release Notes* for installation procedures.

Synchronization Behavior Defined by the AccuSync Configuration

The details of how AccuSync synchronizes AccuWork issues with issues in an ITS project are described in the AccuSync configuration. You use a separate AccuSyncAccuSync Configuration for each AccuRev depot you want to synchronize with an ITS project.

The information in an AccuSync Configuration includes:

- Connection settings for the AccuWork and ITS systems that host the issues you want to synchronize.
- The specific fields in these issues whose data you want to synchronize. For example, you might want to map the Comments field in an AccuWork issue to the Description field in an ITS issue, and you might choose not to synchronize a field that is peculiar to one system. You can create a mapping definition, a named group of field mappings, and use it as a building block to create other, more specialized mapping definitions. You might have different mapping definitions for defects and tasks, for example.
- How frequently you want AccuSync to synchronize AccuWork with your ITS. You can perform an initial synchronization of all issues in a depot based on a transaction number or date you specify. After the initial synchronization, you can use a synchronization pattern to schedule synchronization of AccuWork issues and ITS issues at any interval you specify. You can also perform synchronizations manually whenever you choose.
- Whether you want AccuSync to perform two-way synchronization of issue and change package data, or whether you want to use one-way synchronization to capture issue data from your ITS (or vice-versa). Synchronization patterns in the default AccuSync configuration are defined as two-way but you can change them. See *Synchronization Types* for more information.
- Optional transformers that let you convert values in one system to different values in the other. For example, you can use transformers to strip the `@domain_name` suffix from user names for inclusion in an AccuWork issue. You can also create custom transformers.

See *AccuSync Configuration Components* for a complete list of the components that can make up an AccuSync Configuration.

Default AccuSync Configuration

AccuSync includes a default configuration for supported ITSs that includes the field mappings, mapping groups, mapping definitions, and other information required to synchronize issues in AccuWork and your ITS.

See *Quick Start* to learn how to get started with the default configuration.

Creating a New Configuration

In most cases, customizing the default configuration is easier than creating a new configuration from scratch. You might want to create a new configuration if you have heavily modified your AccuWork and ITS schema, for example. See *Creating a New Configuration* for more information.

Tip: Before creating a new configuration, review the components in the default configuration to understand whether it might be easier to customize the default configuration.

AccuSync Configuration Components

The following table summarizes the individual components that can comprise an AccuSync Configuration.

Note: Required components are predefined in default AccuSync Configurations.

Component	Description	Required
Connection	Each AccuSync Configuration has two connection components: one for AccuWork, and one for the ITS. In addition to connection properties, the connection component identifies the AccuRev depot and ITS project whose issues the AccuSync Configuration will synchronize.	Yes
Mapping Definition	Describes which types of issues (defects or tasks, for example) will be synchronized and, for that issue type, which AccuWork and ITS fields will be synchronized.	Yes. Typically one for each type of issue being synchronized.
Synchronization Pattern	Specifies how often AccuSync will perform the synchronization task specified by the associated mapping definition, and whether that synchronization is one-way or two-way. An AccuSync Configuration can have multiple synchronization patterns.	Yes. Typically one for each type of issue being synchronized.
Field Mapping	A field mapping is a matched pair of AccuWork and ITS issue fields that you want to synchronize (**Assigned To** and **Owner**, for example). One or more field mappings are organized within a mapping definition.	Yes
Mapping Group	A table that contains the valid values for the same field in different systems. One system might define the values **1**, **2**, and **3** for a **Priority** field, while the other system might use **Blocking**, **Important**, and **Moderate**, for example. Mapping groups are always associated with a field mapping when valid values for a field vary across systems.	No. Required only if valid values for a field differ across systems
Transformers	A utility that AccuSync uses to convert data from one format to another during synchronization.	No
Filters	A utility AccuSync uses to identify which issue records to include in, or omit from, synchronization tasks.	No

To see how the default configuration components are defined, see the configuration reference section for your ITS:

- *BMC Remedy Configuration Reference*
- *HP ALM Configuration Reference*
- *JIRA Configuration Reference*
- *Rally Configuration Reference*
- *IBM Rational ClearQuest Configuration Reference*

Other AccuSync Components

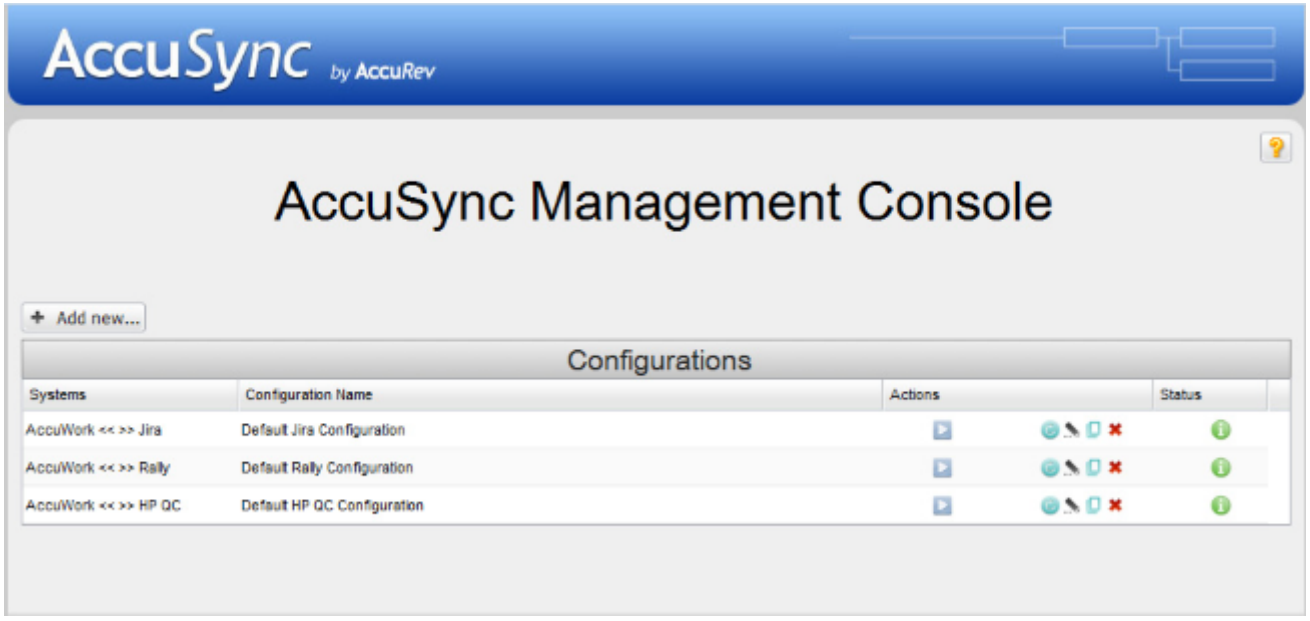
In addition to the AccuSync Configuration, AccuSync consists of these other components:

AccuSync Management Console

You use the **AccuSync Management Console** to create and manage AccuSync Configurations, and to monitor the synchronization activity between the systems represented by each configuration. Examples of the tasks you perform using the **AccuSync Management Console** include:

- Specifying and running AccuSync Configurations.
- Checking the status of an AccuSync Configuration.
- Setting watermarks.
- Setting up email notification.

The **AccuSync Management Console** main page is the entry point for all tasks associated with creating, maintaining, and running AccuSync Configurations. Other pages of the **AccuSync Management Console** become accessible once an AccuSync Configuration has been created.



Tip: Clicking the AccuSync logo at the top of any page takes you to the main page.

See *Start the AccuSync Management Console* for more information.

AccuSync Server

The AccuSync Server is the engine that performs the synchronization tasks between the AccuRev depot and the ITS project. The AccuSync Server is typically started as part of the installation process; it must be running in order for you to start the **AccuSync Management Console**.

See *AccuSync Services* for more information.

Quick Start

This chapter describes how to set up the default configurations that are installed with AccuSync. There are default configurations for all supported ITSs, each with its own field mappings and mapping definitions. See *Configuration Reference* for your ITS to learn which fields are included in the default configuration.

Note: Even if the default configuration contains all the field mappings you require, you still need to perform the procedures described in this chapter.

Important: Do not change the default configuration. Instead, create a copy of the configuration and modify the copied configuration based on what needs to be synchronized between the two systems.

For general information about default configurations, see *Customizing the Default Configuration*.

For information about what fields are mapped by default, see the *Configuration Reference* for your ITS.

If you want to create a new AccuSync Configuration, see *Creating a New Configuration*.

Important: Backup your AccuSync configuration before upgrading to a newer version of AccuSync and to schedule backups on a regular basis.

Overview

Setting up the default ITS configuration involves performing tasks in your ITS, AccuWork, AccuRev, and AccuSync as summarized below. Some steps are unique to a particular ITS and that others vary slightly by ITS.

Step 1	*Configure JIRA for AccuSync in JIRA*.
Step 2	*Set Up the AccuWork Schema in AccuWork*.
Step 3	*Add ITS Project to AccuWork Issue Records in AccuWork*.
Step 4	*Add AccuWork Fields to Your ITS Schema in your ITS*.
Step 5	*Create the AccuSync User in AccuSync*.
Step 6	*Start the AccuSync Management Console in AccuSync*.
Step 7	*Edit the AccuWork and ITS Connection Settings in AccuSync*.
Step 8	*Review the Default Configuration in AccuSync.*

Configure JIRA for AccuSync

If you are using AccuSync with JIRA, you need to do the following before you can use AccuSync:

- Install the JIRA plugin for AccuSync.
- Restart JIRA.

The following procedures are required regardless of whether you are upgrading from a previous release of AccuSync or are installing AccuSync for the first time.

Configure JIRA to Accept Remote API Calls

To configure JIRA to accept remote API calls:

1. In JIRA, open the **Administration** tab.
2. Navigate **Global Settings** > **General Configuration**.
3. At the bottom of the **General Configuration** page, click **Edit Configuration**.
4. Locate the **Options** section, and ensure that the **Accept remote API calls** property is set to `ON`.
5. Click the **Update** button to save your changes.

Install the JIRA Plugin for AccuSync

This section describes the JIRA plugin for AccuSync and how to install them. If you already installed the plugin as part of upgrading AccuSync from an earlier version, you can skip this section.

Purpose of the JIRA Plugins for AccuSync

JIRA plugins for AccuSync automatically add the following custom fields to JIRA:

AccuWorkIssueLink	Stores the URL that JIRA users can use to open a browser and display the issue in the AccuRev Web UI.
AccuWorkKey	Stores the unique alphanumeric key for each AccuWork issue record.
AccuWorkChangePackage	Stores summary AccuWork issue change package information.
AccuWorkChangePackageHistory	Stores detailed AccuWork issue change package information.

These fields appear on the JIRA View Custom Fields page only after AccuSync has performed a synchronization task.

Different Plugins for JIRA 6 and JIRA 7

AccuSync provides plugins for JIRA 6 and JIRA 7, named `AccuSync JiraPlugin-6.jar` and `AccuSyncJiraPlugin-7.jar` respectively. This file is installed to the `\jiraPlugin` directory where you installed AccuSync. For example: `c:\Program Files (x86)\AccuSync\jiraPlugin\`.

Both plugins are what Atlassian refers to as Version 2 plugins. Version 2 plugins have different installation procedures than Version 1 plugins. For more information, refer to your JIRA documentation.

Note: `AccuSyncJiraPlugin-6.jar` plugin is common for single server and JDC for JIRA 6 version. `AccuSyncJiraPlugin-7.jar` plugin is common for single server and JDC for JIRA 7 version.

Retrieving Missing Fields

The fields **AccuWorkIssueLink**, **AccuWorkKey**, **AccuWorkChangePackage** and **AccuWorkChangePackageHistory** are not visible after a fresh installation of JIRA.

To retrieve the fields you must perform the following steps:

1. Launch **AccuSync Management Console** and navigate to **Connections** tab, select `JIRA`.
2. Add JIRA details and validate the test connection.
3. Once test connection is successful, refresh the AccuSync page a couple of times. The fields will be visible in the JIRA **View Custom Fields** page

How to Install the JIRA Plugin for AccuSync

1. Stop the AccuSync service if it is running. See *Stopping AccuSync Server*.
2. Back up any existing AccuSync Configurations.
3. Run the utility to update the AccuSync database.

4. For information on JIRA 6 and JIRA 7, follow the instructions in your JIRA documentation for installing plugins::

   - *https://confluence.atlassian.com/doc/managing-add-ons-or-plugins-25788666.html*
   - *https://confluence.atlassian.com/adminjiraserver070/managing-add-ons-749382694.html*

   For more information, see *http://confluence.atlassian.com/display/JIRA050/Managing+JIRA's+Plugins*

   Note: If the links do not work directly, copy and paste the link on any browser.

5. Start the AccuSync Service. See *Starting AccuSync Server*

Set Up the AccuWork Schema

The field mappings in an AccuSync Configuration rely on fields defined in both the AccuWork schema and your ITS schema: if you want to synchronize the **Status** field in your ITS, there must be an equivalent and compatible field in AccuWork, regardless of its name (the equivalent field might be called State in AccuWork, for example). Further, the values for fields with a type of Choose must be defined in the respective schemas as well. For example, when you define a Project field with a type of Choose, you must also define the values that can be specified for that field (`Acme`, `Windfall`, and `Gimble`, for example). In AccuWork, the schema also controls which fields are displayed for an issue record.

In order to set up the AccuWork schema for use with AccuSync, you can either:

Use the default AccuWork schema for your ITS that was installed with AccuSync	AccuRev recommends using the default AccuWork schema for your ITS if you are using AccuSync with a new AccuWork installation, that is, one without a pre-existing AccuWork schema.
Modify your existing AccuWork schema to incorporate fields required for synchronization	Modify your existing AccuWork schema if you are upgrading from AccuBridge.

Note: Regardless of whether you use the default AccuWork schema for your ITS or modify your current AccuWork schema, you must define values for your ITS projects and applications in your AccuWork schema.

IBM Rational ClearQuest, HP ALM, Rally, and Remedy users only: When you have finished setting up the AccuWork schema, you must add custom fields to your ITS schema for the AccuWork data you want to store and display in your ITS. See *Add AccuWork Fields to Your ITS Schema* for more information.

Using the Default AccuWork Schema

The AccuSync installation includes a default AccuWork schema for your ITS located in `\defaultAccuWorkSchema\its` where you installed AccuSync (`c:\Program Files (x86)\AccuSync\defaultAccuWorkSchema\rally`, for example). This AccuWork schema includes all the fields needed to synchronize AccuWork and ITS issues, as well as many fields that, while not required to support issue synchronization, are considered useful in most installations, like the **Status** field, for example.

To use the default AccuWork schema, simply copy the `defaultAccuWorkSchema\its\dispatch` directory to the `\dispatch` directory for any depot you plan to synchronize with your ITS:

Microsoft Windows	`xcopy <install>\defaultAccuWorkSchema\<its>\dispatch\* <storage>\depots\<depot_name>\dispatch /E`

Linux	`cp -r <install>/defaultAccuWorkSchema/<its>/dispatch <storage>/depots/<depot_name>`

Where:

- `<install>` is the AccuSync installation root. For example: `c:\Program Files (x86)\AccuSync\`.
- `<its>` is the name of your ITS. For example: `rally`.
- `<storage>` is the AccuRev installation `\storage` directory. For example: `c:\Program Files (x86)\AccuRev\storage`.
- `<depot_name>` is the AccuRev depot name. For example: `fiesta`.

Note: Each AccuRev depot has its own AccuWork schema. You must copy the default AccuWork schema to every depot whose issues you plan to synchronize with your ITS.

What to Do Next

After you have copied the default AccuWork schema to each of the depots whose issues you want to synchronize with those in your ITS, you must create values for your project (or, in the case of Remedy, application) mapping group.

Modifying an Existing AccuWork Schema

We recommend that you use the default AccuWork schema for your ITS that is included in your AccuSync installation, as described in *Set Up the AccuWork Schema*. However, users upgrading from AccuBridge might prefer to make changes to their existing AccuWork schema, as described in this section.

Required Changes

If you modify an existing AccuWork schema to support synchronization with your ITS, you need to:

Create fields in the AccuWork schema to store ITS data

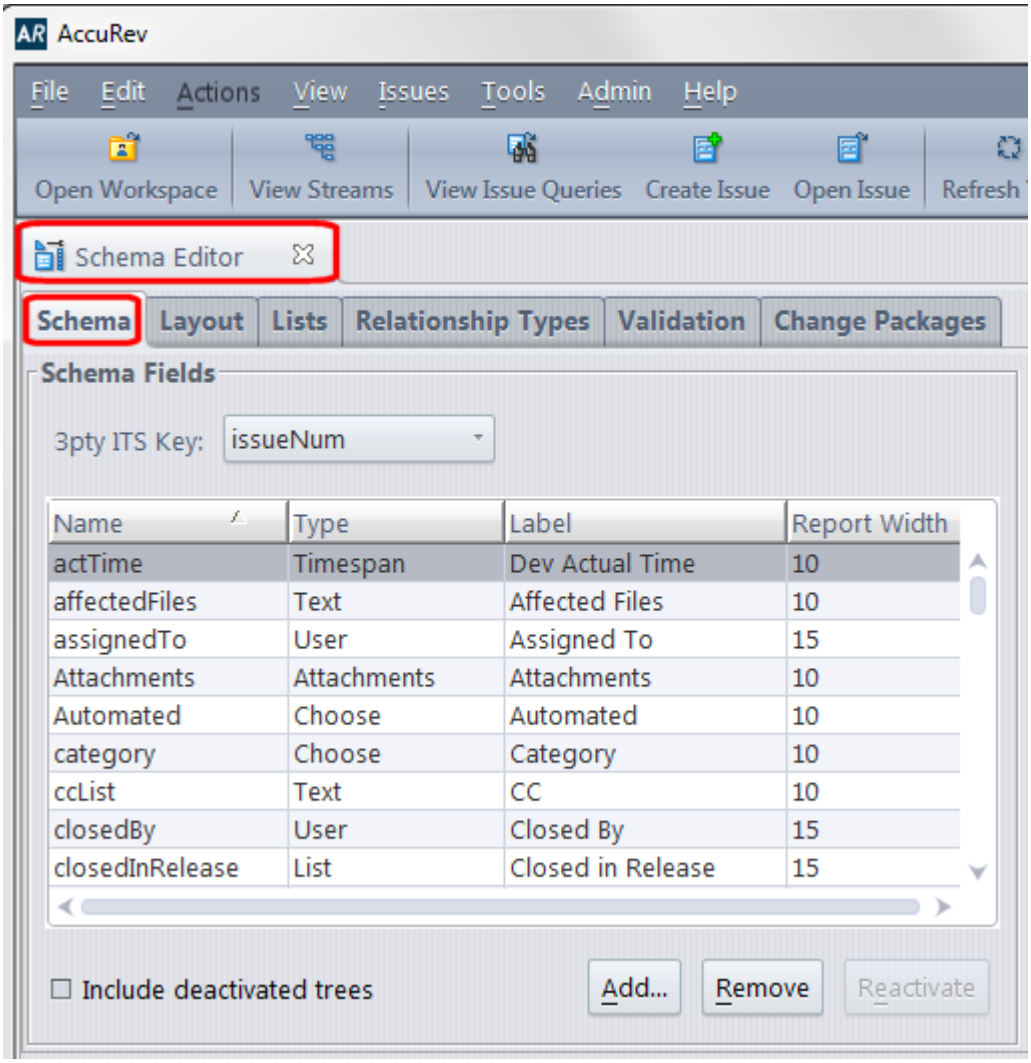
You create new fields using the **Schema** tab of the AccuWork **Schema Editor**. See *Create Fields in the Schema Editor* for more information.

Add fields to the AccuWork Issue Edit form to display ITS data

You add display fields using the **Layout** tab of the AccuWork **Schema Editor**. See *Add Fields to the AccuWork Issue Edit Form* Form for more information.

Create Fields in the Schema Editor

Use the **Schema** tab in the AccuWork **Schema Editor** to create new fields in the AccuWork issue database:



Refer to your AccuRev user documentation for more information on using the AccuWork **Schema Editor**.

The following tables summarize the fields you must create in the AccuWork schema for supported ITSs.

These are the minimum fields required for AccuSync to synchronize issues with your ITS. Consider creating other fields in the AccuWork schema as needed. For example, you might want to create a state field with a type of Choose whose values are **Defined**, **In-Progress**, **Completed**, and **Accepted**, for example.

Note: The **Label** column has been left empty. Consider using it to record the name you plan to use for the field's label in the **AccuWork Issue Edit Form**, as described in *Add Fields to the AccuWork Issue Edit Form*. When defining the field Label, consider using the system name with which you are synchronizing as part of the name to remove any ambiguity -- JIRA Issue ID, for example.

IBM Rational ClearQuest

The following table identifies the IBM Rational ClearQuest field types and describes how each field is used by AccuSync. New fields must use the name and type shown here.

Field Name	Label	Type	Description
cqKey		Text	Stores the IBM Rational ClearQuest issue key (SAMPLE00000048, for example) of the request or task associated with the AccuWork issue. If you are currently using AccuBridge, note that the name of the ClearQuest **key** field has changed.

Field Name	Label	Type	Description
cqLink		Attachments	Stores the URL that AccuWork users can use to launch a web browser and access the issue in ClearQuest. If you are currently using AccuBridge, note that the name of the ClearQuest issue **linkfield** has changed.
securityPolicy		Text	Stores the security policy associated with the change request (Everyone, OpenUP Security, and so on).

BMC Remedy

The following table identifies the minimum fields required to create incident records in BMC Remedy.

Field Name	Label	Type	Description
remedyKey		Text	Stores the incident issue key (INC_CAL_1000004, for example) of the issue associated with the AccuWork issue.
remedyLink		Attachment	Stores the URL that AccuWork users can use to launch a web browser and access the issue in BMC Remedy.

Required fields can be customized and will vary based on application type. Consult your BMC Remedy administrator for the fields required for your implementation, and then create at least those mappings in your BMC Remedy configuration.

Rally

The following table identifies the Rally field types and describes how each field is used by AccuSync. New fields must use the name and type shown here.

Field Name	Label	Type	Description
rallyID		Text	Stores the Rally Formatted ID (DE239 or US481, for example) of the artifact associated with the AccuWork issue.
rallyObjectID		Text	Stores the unique Rally alphanumeric key for each issue record. Do not confuse this field with issueNum, which uniquely identifies the issue record at the AccuWork level.
rallyIssueLink		Attachments	Stores the URL that AccuWork users can use to launch a Web browser and access the artifact in Rally.
Workspace		Choose	Stores the name of the Rally workspace the issue is associated with.

Project		Choose	Stores the name of the Rally project associated with the Rally workspace.
			In Rally, multiple nested projects may have the same name. For example, `Project_1` may contain child project `Project_ABC` and `Project_2` may also contain a child project named `Project_ABC`. For nested projects having the same name as other nested projects, specify the full pathname for the project, using the pipe character.
			For example:
			`Project_1|Project_AB C`
			`Project_2|Project_AB C`

JIRA

The following table identifies the JIRA field types and describes how each field is used by AccuSync. New fields must use the name and type shown here.

Field Name	Label	Type	Description
jiraKey		Text	Stores the JIRA issue key (WEB-01, for example) of the issue associated with the AccuWork issue. If you are currently using AccuBridge, note that the name of the JIRA key field has changed.
jiraIssueLink		Attachments	Stores the URL that AccuWork users can use to launch a web browser and access the issue in JIRA. If you are currently using AccuBridge, note that the name of the JIRA issue link field has changed.
jiraProject		Choose	Stores the name of the JIRA project associated with the AccuRev depot. Make sure to specify values for your JIRA projects. See Using Choose Type Fields for more information.
type		Choose	Stores the values of JIRA issue types: Bug, New Feature, Task, and Improvement, for example. If the type field is already defined in your AccuWork Schema, make sure it is of the type Choose and that values for the field have been specified.

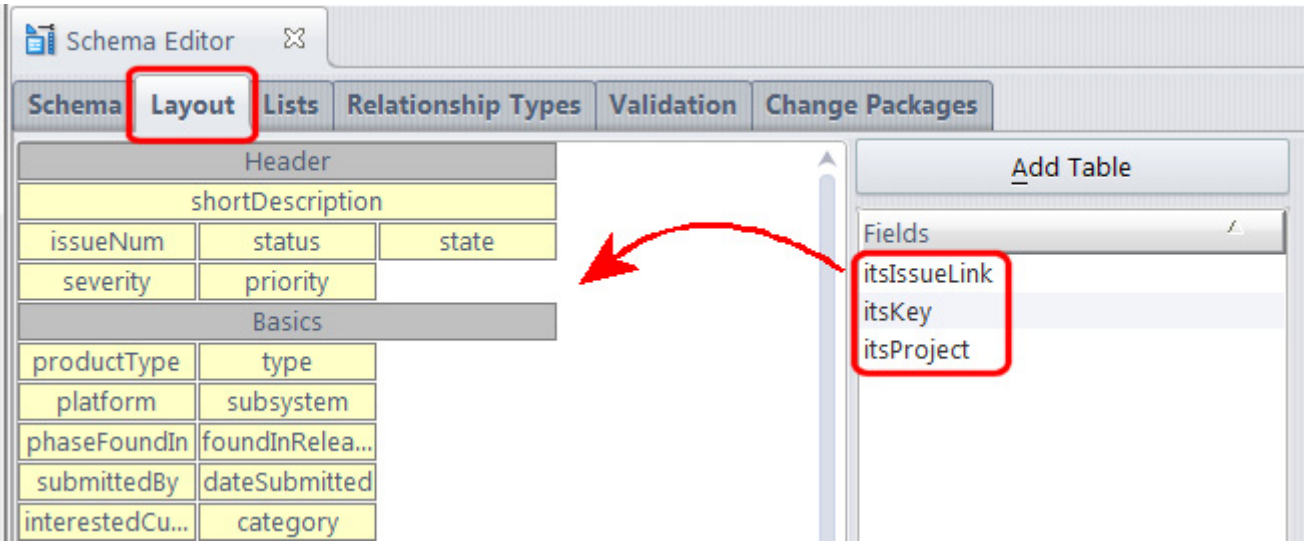
HP ALM

The following table identifies the HP ALM field types and describes how each field is used by AccuSync. New fields must use the name and type shown here.

Field Name	Label	Type	Description
hpKey		Text	Stores the HP ALM issue key (214, for example) of the issue associated with the AccuWork issue. If you are currently using AccuBridge, note that the name of the HP ALM key field has changed.
hpLink		Attachments	Stores the URL that AccuWork users can use to launch a web browser and access the issue in HP ALM. If you are currently using AccuBridge, note that the name of the HP ALM issue link field has changed.

Add Fields to the Issue Edit Form

After you have created fields in the schema for your ITS, decide which of these fields you want to display on the **Issue Edit** form. Then, use the **Layout** tab of the **Schema Editor** to add those fields to the **Issue Edit Form**, as shown in the following illustration:



Refer to your AccuRev user documentation for more information on using the **Schema Editor**.

What to Do Next

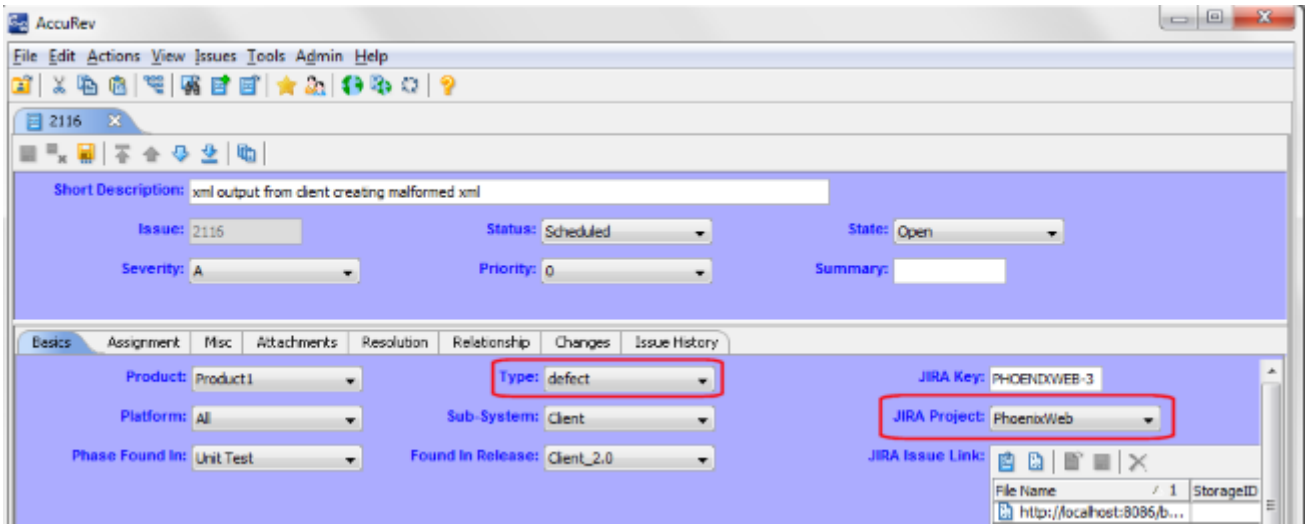
After you have modified your existing schema to support synchronization, you should refresh the AccuSync Configuration to ensure that it is using your changes.

Refreshing the AccuSync Configuration

If you update the AccuWork schema after you have created an AccuSync Configuration, you must refresh the AccuSync Configuration to make it aware of those changes. You do this by clicking the **Reload Configuration Cache** button on the **AccuSync Management Console** main page. See *Making Changes to Configurations* for more information.

Add ITS Project to AccuWork Issue Records

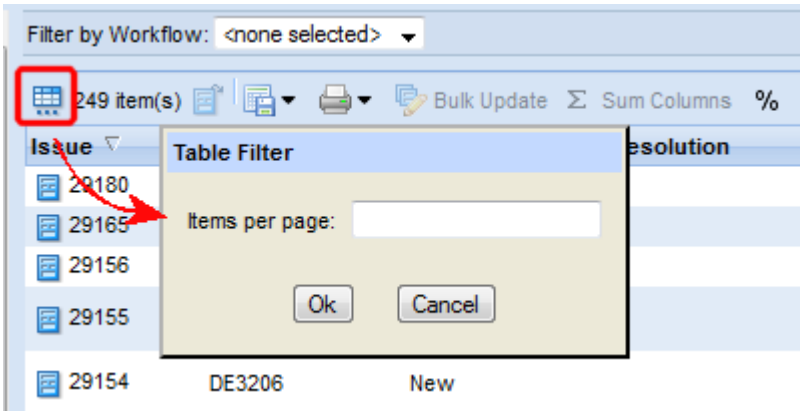
Once you have created values for your ITS project names in the AccuWork schema, you need to update your AccuWork issue records with these values as appropriate, as shown in the following illustration.



Assigning an ITS project name to the AccuWork issue record allows AccuSync to successfully synchronize issue records on both systems.

Tip: The AccuRev Web UI bulk update feature allows you to change field values for multiple records at one time.

When you run a query, issue records satisfying the query are displayed in the **Query Browser Results** pane. By default, up to 500 records are displayed at a time. If you want to change the number of records displayed at a time, click the **Table Filter** button and set a new value in the Items per page field in the Table Filter dialog box, as shown in the following illustration:



See the *AccuRev Web Interface User's Guide* or *Web UI online help* for more information on bulk update and Query Browser features.

Specifying Nested Project Names (Rally Only)

AccuSync supports nested Rally projects for as many levels as are defined in Rally. For example, in Rally, `Project_Dev` may contain a sub-project, `Project_Dev2`, and `Project_Dev2` may contain a sub-project, `Project_Dev2A`.

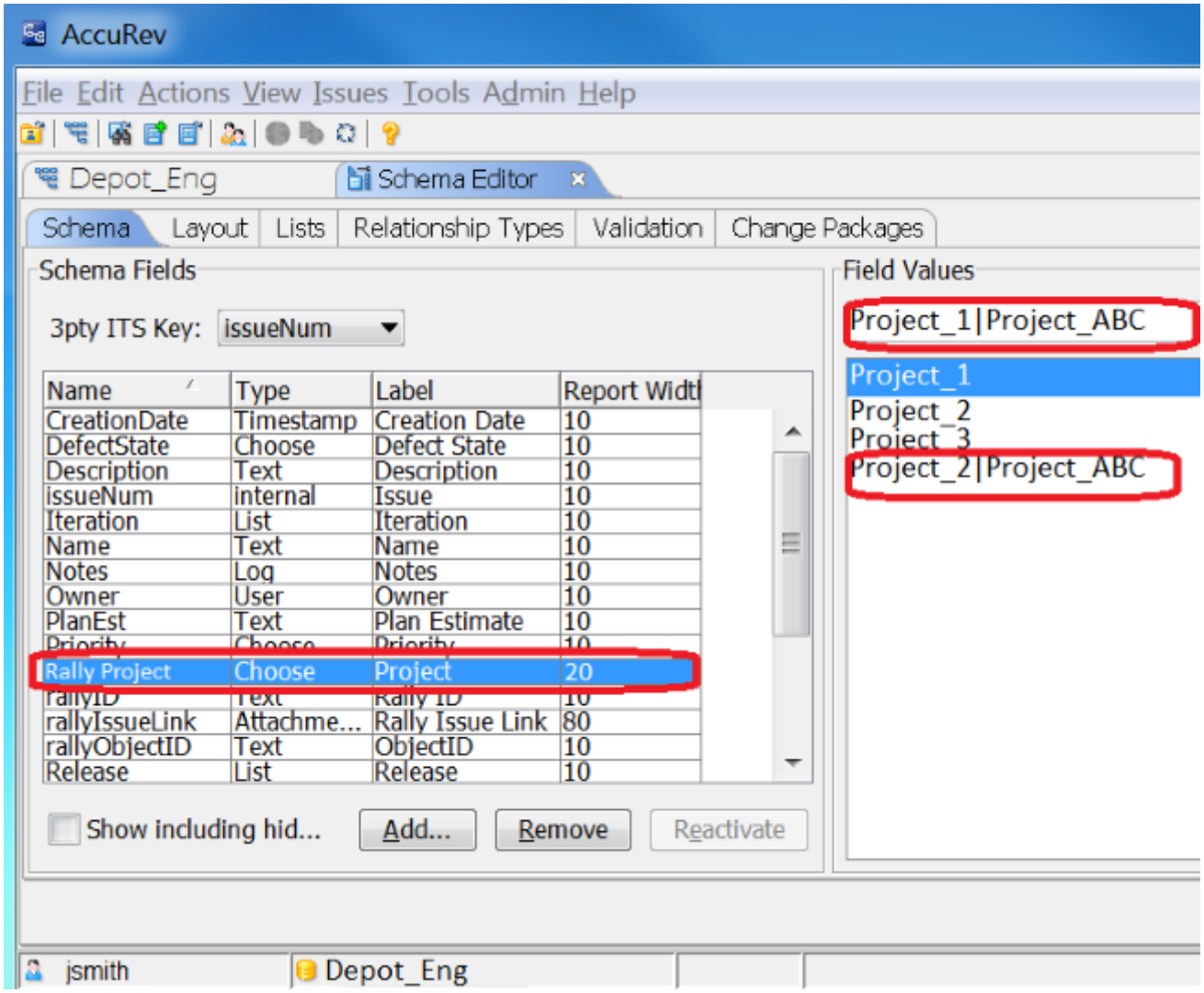
Rally permits multiple projects of the same name within the same Rally workspace. For example, `Workspace1` in Rally may contain `Project_1` with sub-project `Project_ABC` and it may also contain `Project_2` with another sub-project also named `Project_ABC`. When multiple projects have the same name, you must define the project name with the full path in the AccuWork schema.

Specifying Rally Project Names in the AccuWork Schema

For multiple projects having the same name within a workspace, you must specify the full pathname of the project in the AccuWork schema. Use the pipe character | to define the pathname. For example: `Project_1|Project_ABC`.

Note: If the name of a child project is not used by another project, it is not necessary to specify the full pathname.

The following illustration shows several Rally projects specified in the AccuWork schema. The two projects that have the same name (`Project_ABC`) are defined with their full pathnames. For more information about the AccuWork schema, see the *AccuRev User's Guide*.

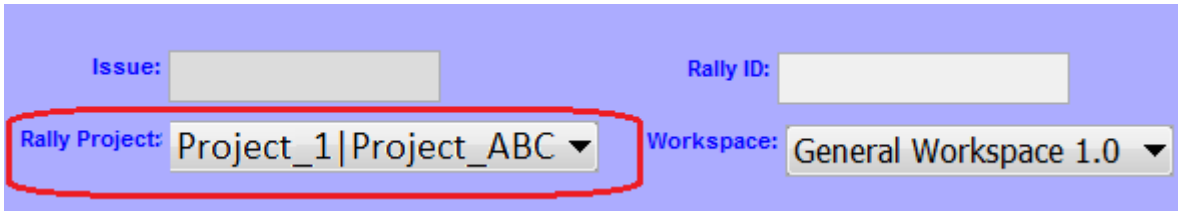


Specifying Rally Project Names by End-users in AccuWork

When a user enters an issue in AccuWork to be synchronized with Rally, the user selects the Rally Project name in an AccuWork field. The Rally Project name selections shown in the list are as specified in the AccuWork schema. (See *Specifying Nested Project Names (Rally Only)*.)

For nested Rally Projects that have the same name as other projects in the workspace, the choices for Rally project should show the full pathname for projects as they were set up in the AccuWork schema. Use the pipe character | to define the pathname. For example: `Project_1|Project_ABC`.

If the Rally Project field has been set up as a Text type field (rather than a Choose type field) the end user enters the Rally project name. In this case, the end user should be instructed to enter the full pathname for the Rally project if the project has the same name as another project. Example: `Project_1|Project_ABC`.



If, during synchronization, AccuSync detects that an issue in AccuWork does not have the necessary full path for a duplicate Rally project name, an error message displays.

Add AccuWork Fields to Your ITS Schema

Once you have modified AccuWork as described in the preceding steps, you need to:

- Add the AccuWork fields in the following table to your ITS schema.
- Ensure that these fields are not editable by your ITS users wherever they are displayed

Specific procedures vary from one ITS to another, but they typically involve adding a custom field to the ITS schema and then making that field read-only or hidden in views that allow users to modify other fields like **Description** or **Comment**, for example. Custom fields added to your ITS schema must use the field name and type shown here:

Field Name	Label	Type	Description
AccuWorkKey		Text	Stores the unique alphanumeric key for each AccuWork issue record.
AccuWorkIssueLink		Attachment	Stores the URL that your ITS users can use to open a web browser and display the artifact in the AccuRev Web UI.
AccuWorkChangePackage		Text	Stores summary AccuWork issue change package information.
AccuWorkChangePackageHistory		Text	Stores detailed AccuWork issue change package information.

Note: The **Label** column has been left empty. Consider using this column to record the name you plan to use for the field's label when displaying issue record data in your ITS.

The following sections describe considerations for each ITS supported by AccuSync.

All ITSs: Refresh the AccuSync Configuration

If you update the AccuWork schema after you have created an AccuSync Configuration, you must refresh the AccuSync Configuration to make it aware of those changes. You do this by clicking the **Reload Configuration Cache** button on the **AccuSync Management Console** main page. See *Making Changes to Configurations* for more information.

BMC Remedy Users

You must add the fields in the preceding table to the *create* and *read* forms for whatever Remedy applications you plan to synchronize with AccuWork. For example, if you are synchronizing the **Incident Management** application, you need to add these fields to the `HPD:IncidentInterface_Create` and `HPD:IncidentInterface` forms. Note that the value of the `Entry Mode` property for the `AccuWorkKey` field must not be `Display` on either form.

BMC Remedy users must use BMC Remedy Developer Studio to add required fields to the Remedy schema. Refer to your *BMC Remedy Developer Studio documentation* for more information.

ClearQuest Users

You must add the fields in the preceding table to the ClearQuest schema to enable synchronization between AccuWork and ClearQuest. The basic procedure is outlined here. Refer to your *Rational ClearQuest documentation* for more information.

1. Using the ClearQuest Designer, log in to your schema repository.
2. Check out the ALM schema.
3. Add the fields to the required type (`ALMRequest` and `ALMTask`) as needed.
4. Add the fields to the ClearQuest forms as needed.
5. Save your changes, and then validate and check in the schema.
6. Update the ClearQuest database with the new schema.
7. Stop and start these ClearQuest services. For example:
   - IBM HTTP Administration for WebSphere ApplicationServerV8.5
   - IBM HTTP ServerV8.5
   - IBM WAS85 Service

Synchronizing Custom Fields

The fields described in the preceding table are required for AccuSync to successfully synchronize AccuWork issues with ClearQuest requests and tasks. See *IBM Rational ClearQuest Configuration Reference* to learn about the fields that are synchronized by the default ClearQuest configuration (**Owner**, **Description**, and so on).

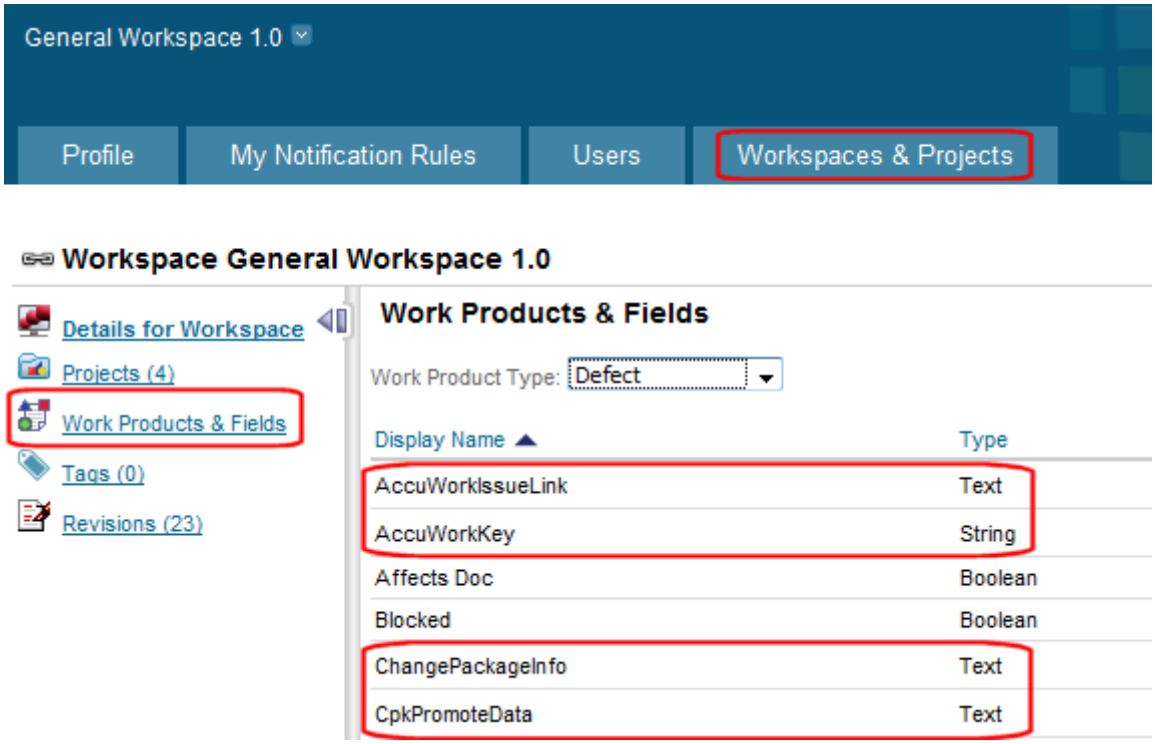
In addition to the required and default configuration fields, AccuSync allows you to create and synchronize up to 30 additional fields, called custom fields. You follow the same basic process for adding custom fields that you use for adding required fields, with these exceptions:

Custom fields have required names	Due to limitations in the ClearQuest API, custom fields must adhere to a strict naming convention in order to be recognized by the synchronization engine. You can name these fields however you like in the AccuWork schema, but in ClearQuest they must be created as `customField1`, `customField2`, `customField3` and so on, and cannot exceed `customField30`. Note that these names are case-sensitive.
Custom fields must be added to the AccuWork schema	Once you create a custom field in ClearQuest, you need to add the corresponding field to the AccuWork schema and the issue form as described in *Modifying an Existing AccuWork Schema*. For example, if you add `customField1` to ClearQuest to store a customer name, you might add an **Interested Customer** field to the AccuWork schema to allow this value to be synchronized.
Custom fields must be added to AccuSync field mappings	The custom fields you create in ClearQuest must be added to an AccuSync field mapping, to associate the custom field with a corresponding field in AccuWork. See *Editing Field Mappings* for more information.

Rally Users

In order to support issue synchronization with Rally, you must add the fields in the preceding table as custom fields. Once you have defined these custom fields, you can choose to display them in the Rally work product as desired, but they should be read-only. You must add these AccuWork fields for each Rally artifact - defect, task, and story - you are synchronizing with an AccuWork issue type

You use the **Work Products & Fields Summary View** to modify the Rally work product:



See your Rally documentation for more information on modifying the Rally work product.

JIRA Users

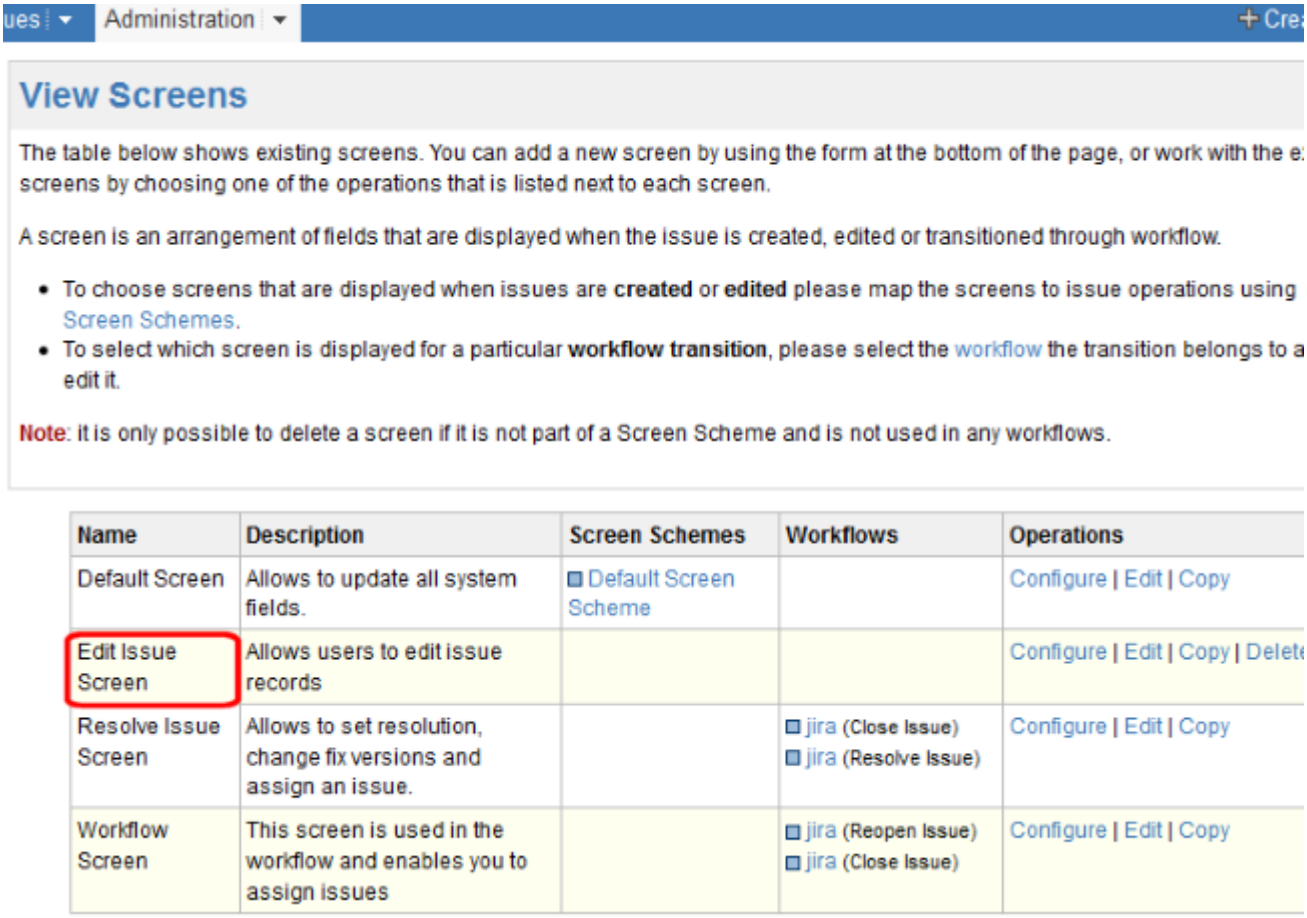
AccuWork fields are automatically added to JIRA when you install the JIRA plugin. They appear on the JIRA **View Custom Fields** page only after AccuSync has performed a synchronization task. You need to ensure that these fields are not editable. There are a number of ways to accomplish this, including making the fields read-only, hiding the fields, or creating an edit screen that does not display them. This last approach is described here. Refer to your JIRA documentation for more information.

To remove AccuWork fields from the edit screen in JIRA, you need to:

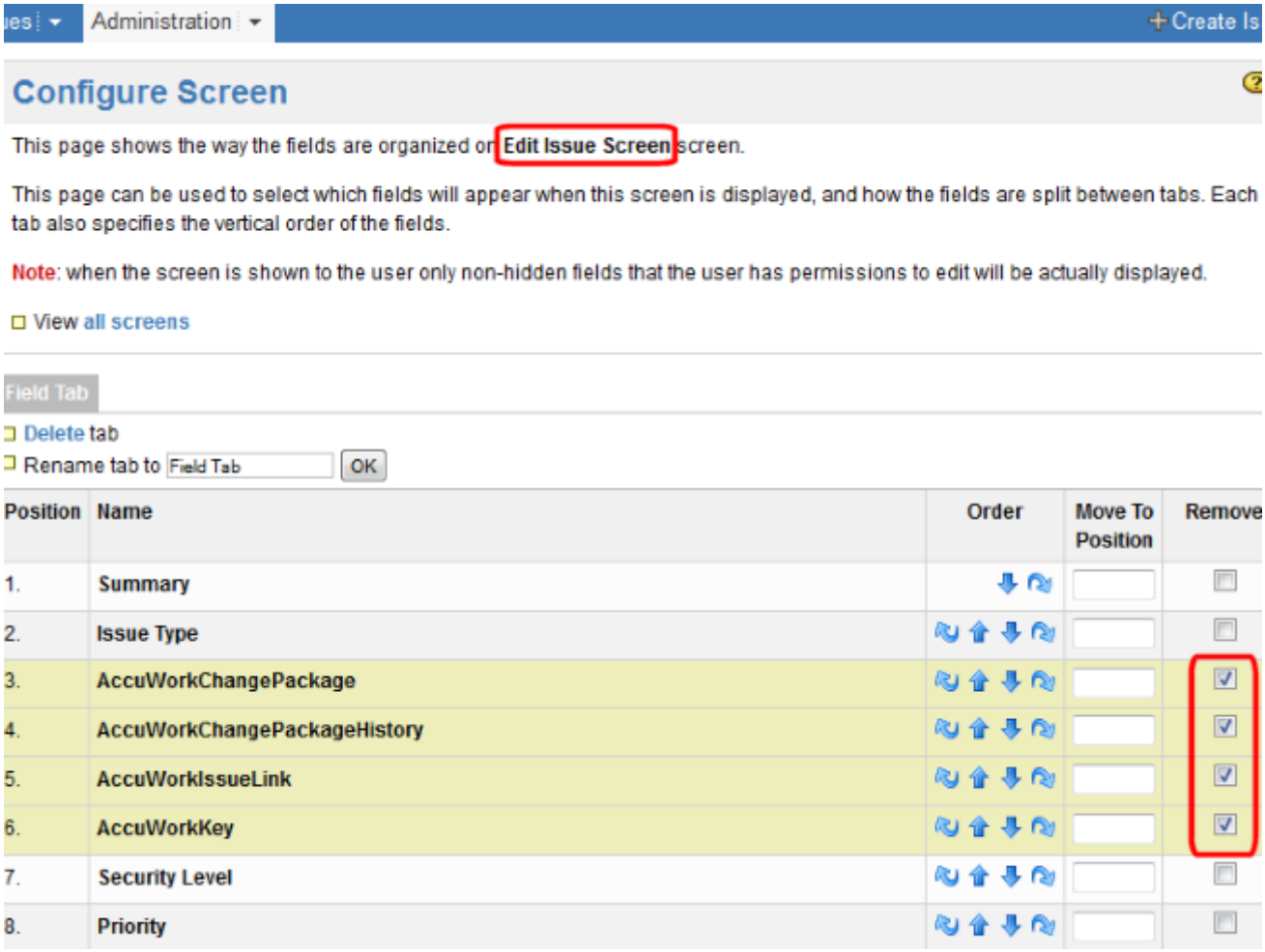
- Create a custom screen that does not include AccuWork fields.
- Associate that screen with the JIRA Edit operation.

To create a custom screen in JIRA:

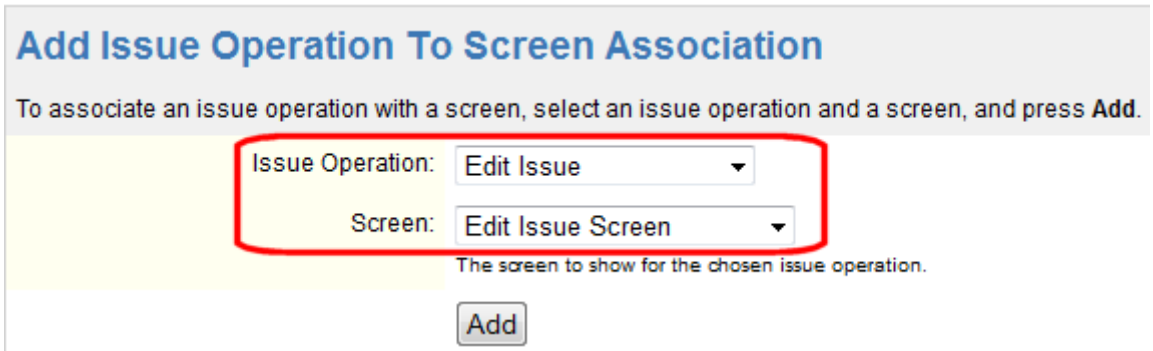
1. Log in to JIRA as the JIRA administrator.
2. Click the **Administration** tab in the top navigation bar, then choose **Issue Fields** > **Screens** from the left navigation bar. The **View Screens** page appears.
3. Make a copy of the **Default Screen**:
   a) Locate the **Default Screen** and click **Copy** in the **Operations** column.
   b) On the **Copy Screen** page, enter a name for the new screen. (`Edit Issue Screen`, for example.) You can enter an optional description.
   c) Click **Copy** to create the new screen.



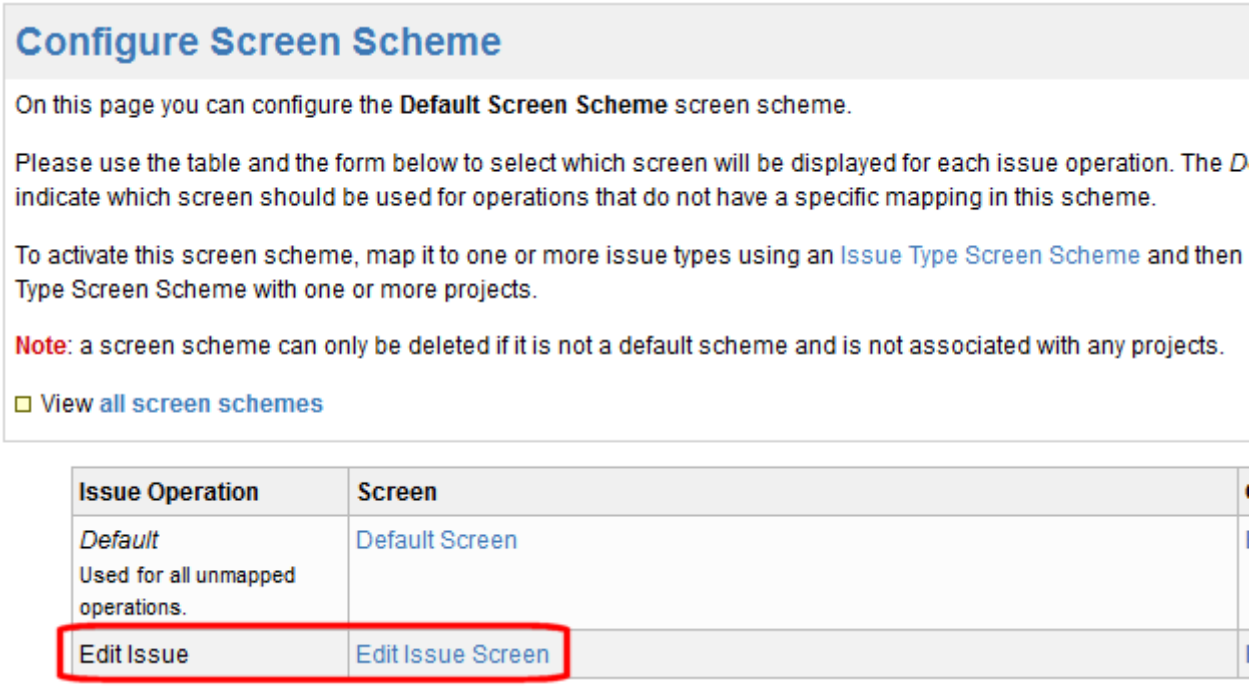
4. Locate the new **Edit Issue Screen** and click **Configure** in the **Operations** column. The **Configure Screen** page appears.



5. Locate the **AccuWork** fields, select the **Remove** check box for those fields, and click the **Remove** button at the bottom of the form.
6. Now you are ready to associate the new **Edit Issue Screen** with the JIRA **Edit** operation. Click the **Administration** tab in the top navigation bar, then choose **Issue Fields** > **Screen Schemes** from the left navigation bar. The **View Screen Schemes** page appears.
7. Locate the **Default Screen Scheme** and click **Configure** in the **Operations** column. The **Configure Screen Scheme** page appears.
8. Complete the fields in the **Add Issue Operation To Screen Association** section as follows:
   - For the **Issue Operation** field, choose `Edit Issue`.
   - For the **Screen** field, choose the `Edit Issue Screen` you created in the previous procedure.



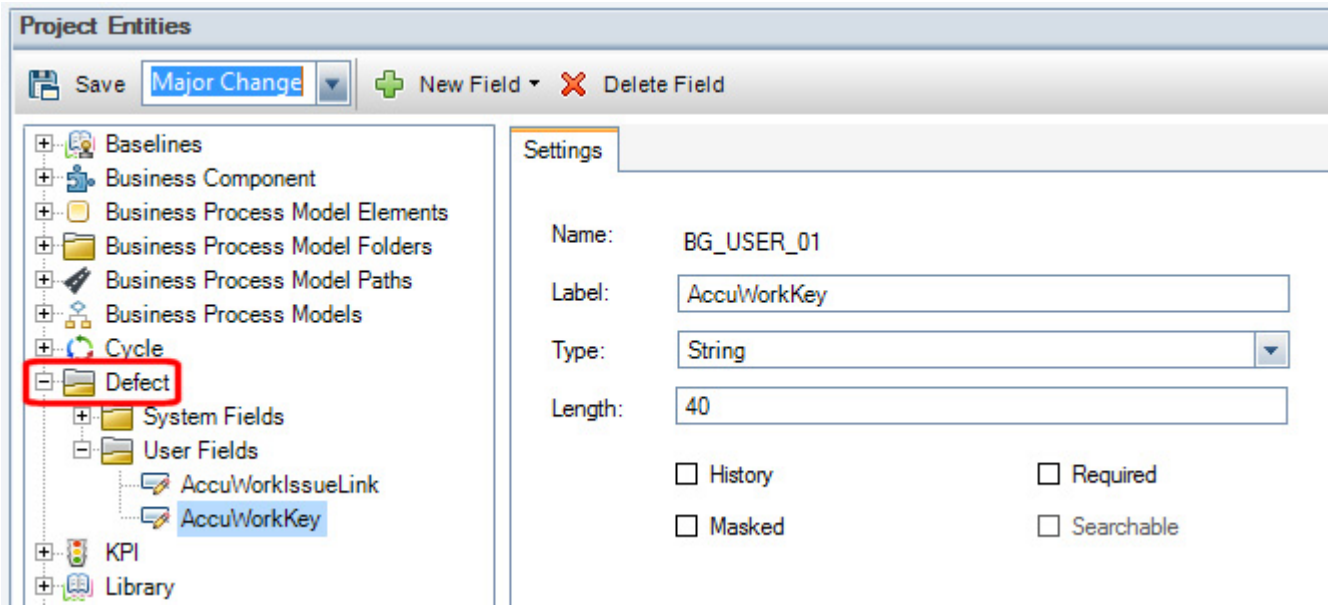
9. Click **Add**. The new screen appears in the **Configure Screen Scheme** table:



HP ALM

You must add the AccuWork fields to your ALM projects as user-defined fields. You can do this using the Quality Center Project Customization.

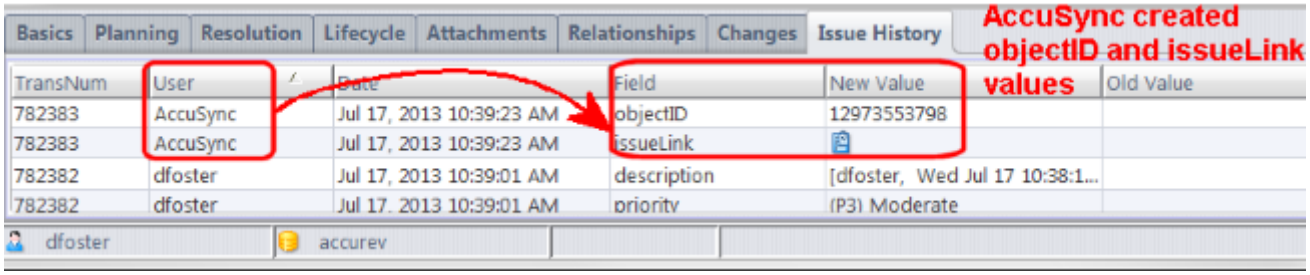
1. Log in to HP ALM as the administrator.
2. Choose **Tools** > **Customize** from the **Quality Center** menu.
3. Choose **Project Entities** from the navigation bar. The **Project Entities** page appears.
4. Expand the **Defect** folder and then select the **User Fields** folder.
5. Click the **New Field** button.



6. In the **Settings** tab, specify the values for the field you are adding.

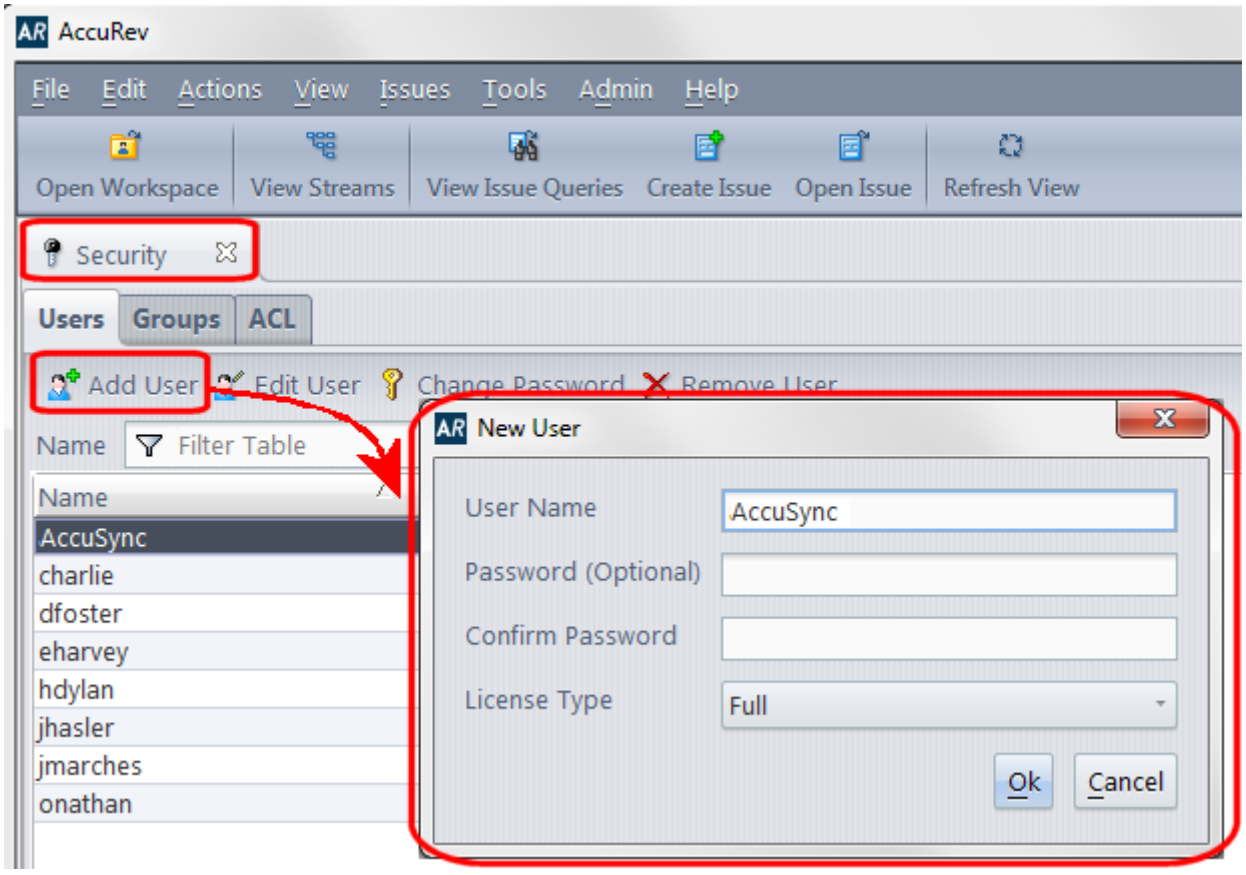
Create the AccuSync User

We recommend that you create a distinct AccuSync user in AccuRev and in your ITS, and that you use this user - and only this user - when specifying the connection settings in your AccuSync Configurations. The AccuSync user name you specify is the user AccuWork associates with changes made by AccuSync during synchronization. When a record is updated with changes resulting from synchronization (as when an `objectID` or `issueLink` value is created, for example), the AccuSync user name appears in the **User** column in the **Issue History** tab for that change, as shown here:



Requirements for the AccuSync User

In AccuRev, you create users on the **Security** tab, as shown here:



When creating the AccuSync user, note the following requirements. The AccuSync user:

- Must have any permissions needed to access the AccuRev depots and ITS projects and applications whose issues you want to synchronize.

- Must have any permissions needed to create, edit, and assign issues on both AccuRev and your ITS.
- Cannot be the same as the AccuBridge user. (This requirement applies only if you are upgrading from AccuBridge to AccuSync).
- Should not be used to perform any tasks other than synchronization on either AccuRev or your ITS.

Tip: Consider creating different AccuSync user names in AccuRev and your ITS. For example, you might want to create the AccuSync user in AccuRev as `accusync_ITS` and the AccuSync user in your ITS as `accusync_AccuWork`. Having different AccuSync user names defined in each system can make it easier to understand which system originated a change when reviewing an issue record's history. Refer to your AccuRev and ITS user documentation for more information on creating users.

Start the AccuSync Management Console

This section describes how to start and stop the **AccuSync Management Console**. You use the **AccuSync Management Console** to edit, run, manage, and maintain AccuSync configurations.

Important: The AccuRev Server and the Apache Tomcat server for AccuSync must both be running before you can start the **AccuSync Management Console**. These servers are typically started as part of the AccuSync installation process. See *Appendix F: AccuSync Services* if you need to start either one of these servers.

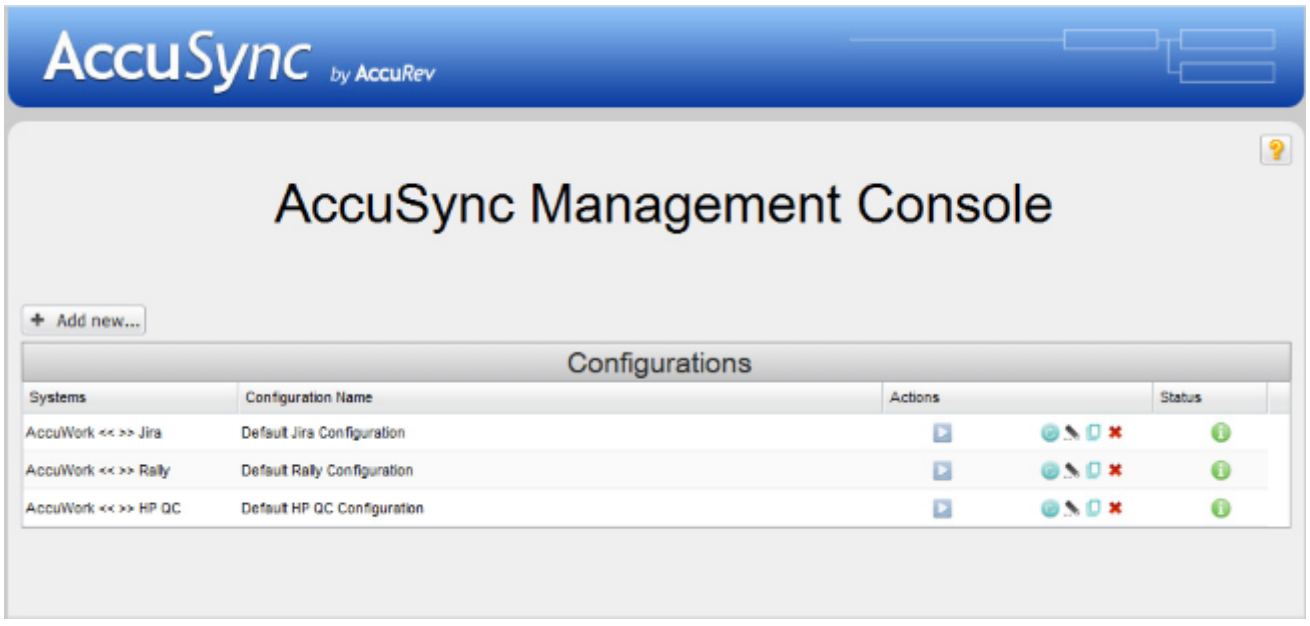
Starting the AccuSync Management Console

Note: These procedures assume that you accepted the `Shortcut Folder` default values during installation.

To start the **AccuSync Management Console**:

Microsoft Windows	Click **Start** > **All Programs** > **AccuSync** > **AccuSync Management Console Link**.
Linux	Enter the URL for the **AccuSync Management Console** in your browser's address field and press `Enter`. Example: `http://localhost:8085/accusync/`

The **AccuSync Management Console** main page appears in the web browser.



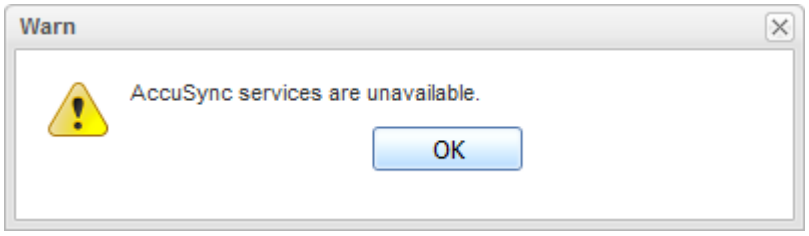
Tip: Default configurations are installed for every ITS that AccuSync supports. You might see a different set of default configurations than those shown here.

Troubleshooting AccuSync Management Console Problems

Following are some problems you might encounter when starting the **AccuSync Management Console** and the steps to take to avoid and correct them.

AccuSync services are unavailable

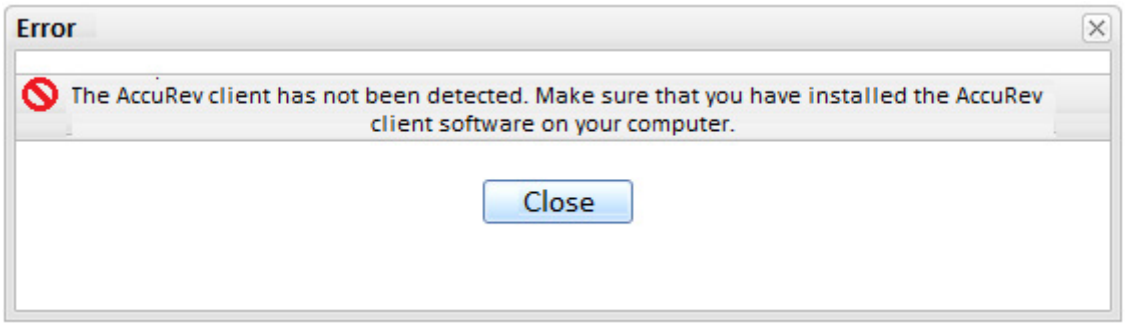
If the AccuSync server is not running when you start the **AccuSync Management Console**, AccuSync displays an error message like the following:



If you see this error, verify that the AccuSync server is running. If necessary, restart the AccuSync server and try starting the **AccuSync Management Console** again. See *AccuSync Services* for more information.

The AccuRev client has not been detected

If the AccuRev client has not been installed or if AccuSync cannot find the `accurev.exe` file in the path you provided in the connection configuration, AccuSync displays an error message like the following:



If you see this error, verify that the AccuRev client is installed. Check the AccuRev connection settings dialog box to ensure that the path provided for `accurev.exe` is accurate.

Connection failed

AccuRev 6.1 introduced support for the Secure Sockets Layer (SSL) protocol to provide encrypted communication between AccuRev clients and the AccuRev Server. If you are using AccuRev 6.1 or higher and SSL has been enabled on the AccuRev Server, you will be unable to connect to the AccuRev Server until you accept the SSL certificate. See *Post-Installation Procedures* in the *AccuSync Installation and Release Notes* for more information.

Stopping the AccuSync Management Console

To stop the **AccuSync Management Console**, close the browser in which it is running.

Note: AccuSync Configurations continue to run as scheduled even if you stop the **AccuSync Management Console**.

Edit the AccuWork and ITS Connection Settings

Each default AccuSync Configuration includes partially specified connection settings for AccuWork and your ITS. In addition to connection information, you use the connection settings to specify:

- The AccuRev depot and ITS projects and applications whose issues you want AccuSync to synchronize.
- The name of the AccuWork schema field that stores the type of issue (defect or task, for example) that AccuSync will synchronize.

This section describes how to edit the default connection settings.

Before You Begin

Before editing the AccuWork and ITS connection settings in AccuSync, make sure the AccuRev Server is running and that your ITS service is available. AccuSync requires a live connection to verify fields and other data.

In addition, we recommend that you create a copy of the default configuration for your ITS before modifying its connection settings or making any other changes you find necessary. Copied configurations contain all of the settings of the configuration you select as the source. These include AccuWork and ITS connections, mapping definitions, synchronization patterns, and so on.

Note: You cannot copy an AccuSync Configuration if it is running.

Copying an AccuSync Configuration

To copy an AccuSync Configuration:

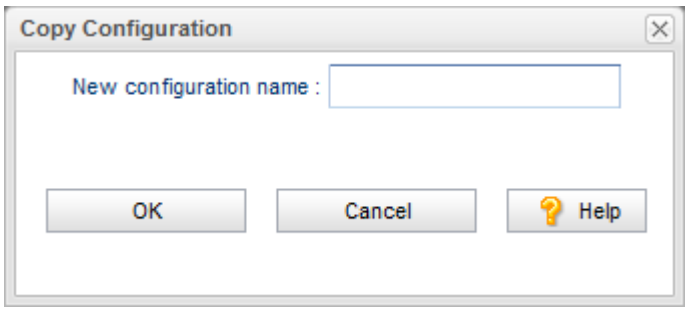
1. Go to the **AccuSync Management Console** main page.

   Tip: Clicking the AccuSync logo at the top of any page takes you to the main page.

2. Click the **Copy Configuration** button for the AccuSync Configuration you want to copy.

   Note: The **Copy Configuration** button is disabled if the configuration is running.

   The **Copy Configuration** dialog box appears.



3. Enter a name in the **New configuration name** field and click **OK**. The new configuration appears in the **Configurations** table on the **AccuSync Management Console** main page.

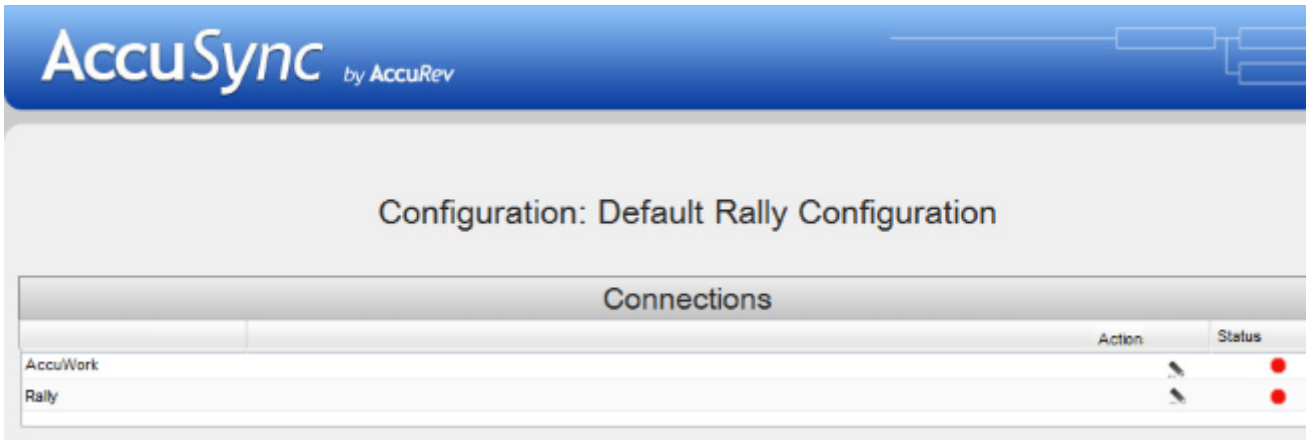
Editing AccuWork Connection Settings

To edit the AccuWork connection settings:

1. Go to the **AccuSync Management Console** main page.

   Tip: Clicking the AccuSync logo at the top of any page takes you to the main page.

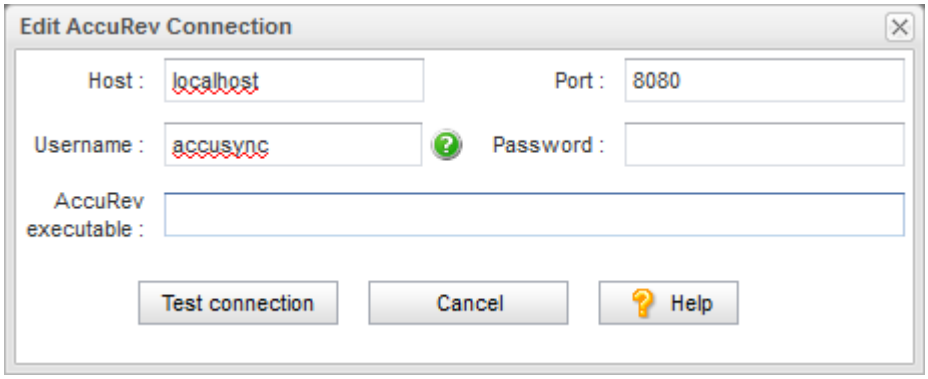
2. On the **AccuSync Management Console** main page, double-click the AccuWork Configuration you want to edit. The **Configuration** page for the configuration you selected appears.



3. Click the **Edit Configuration** button .

   Note: The **Status** column displays the stop icon at this point because the connection has not yet been established. For more information about the connection status icons, see *Connections Table: Action and Status Information* .

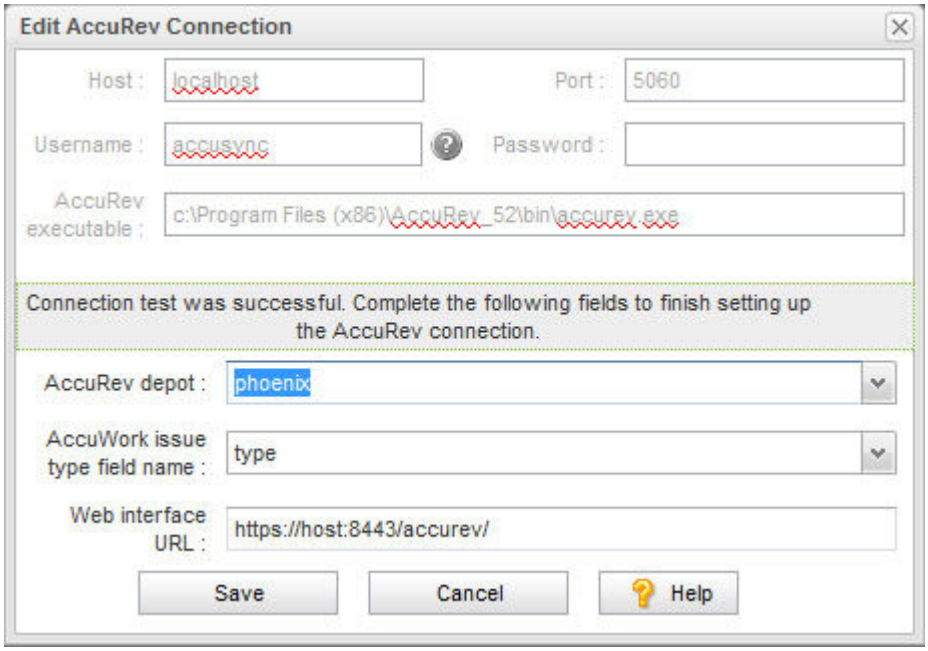
   The **Edit AccuRev Connection** dialog box appears.



4. Specify the values required to connect to AccuWork:

Host and Port	These are the values that correspond to the AccuRev installation with which you will be synchronizing your ITS.
Username and Password	Be sure to enter the username and password of the AccuSync user you created specifically for AccuSync. See *Create the AccuSync User* for more information.
AccuRev executable	Use this field to optionally specify the absolute path of your AccuRev executable (accurev.exe). If you leave this field empty, AccuSync looks for `accurev.exe` in your systems's PATH.

5. Click the **Test Connection** button. When the connection succeeds, a new panel appears on the **Edit AccuRev Connection** dialog box.



6. Complete the remaining fields as follows:

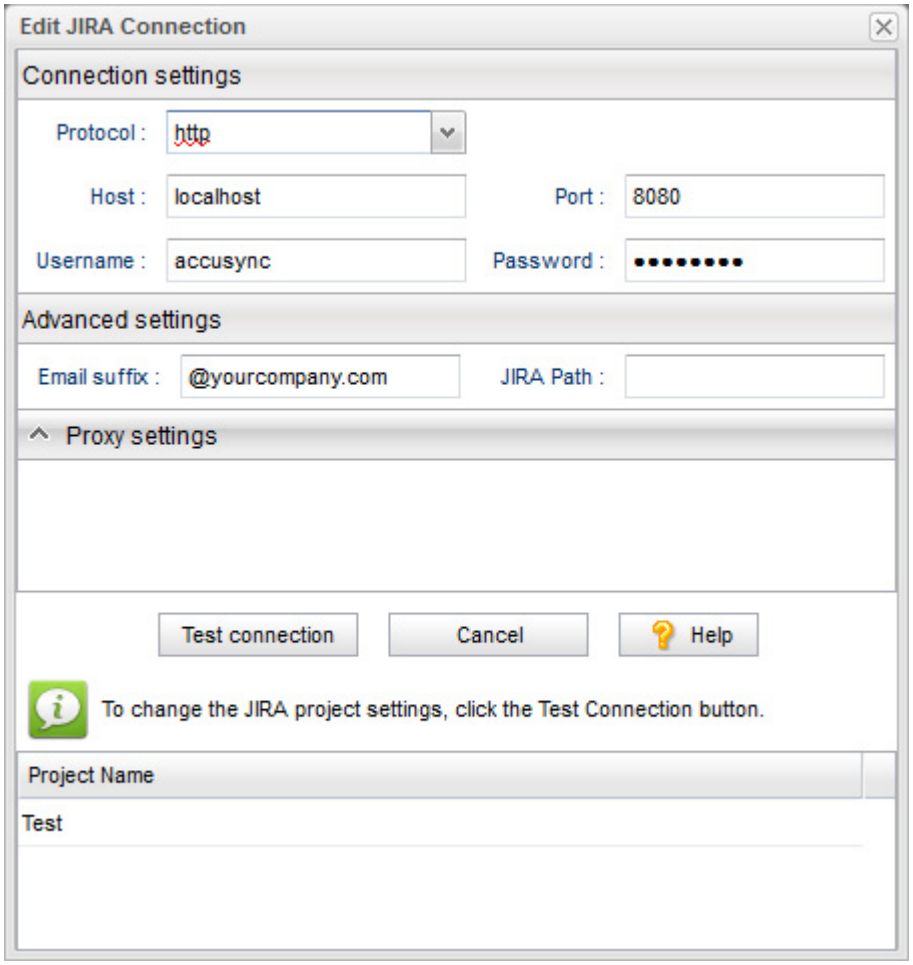
AccuRev depot	Choose the depot you want to synchronize with your ITS. When you select a depot, a default value appears in the AccuWork issue type field name field.
AccuWork issue type field name	The internal name of the field that displays the issue type (defect, task, and so on) on the AccuWork **Issue Edit Form**. Unless you have changed the name in the AccuWork schema, the name of this field is type. **Note:** The field's name typically differs from its label. For example, the field named type is displayed on the Issue Edit Form using the label Type.
Web Interface URL	Enter the URL for the machine hosting the AccuRev Web Interface. For example: `http://localhost:8080/accurev/`.

7. Click the **Save** button. The revised configuration appears in the Configurations table on the **AccuSync Management Console** main page.

Editing ITS Connection Settings

To edit your ITS connection settings:

1. On the **AccuSync Management Console** main page, double-click the AccuSync Configuration you want to edit. The Configuration page for the configuration you want to edit appears.
2. In the **Connections** table, click the **Edit Connection** button for your ITS connection. The **Edit Connection** dialog box appears. Fields on the **Edit Connection** dialog box vary based on ITS. The dialog box for JIRA is shown here.



3. Specify the values required to connect to your ITS. See *Editing ITS Connection Settings* if you need help with this step.
4. Click the **Test Connection** button.

   When the connection succeeds, new panels appear on the **Edit Configuration** dialog box. Fields on this panel vary based on your ITS.

   Note: for JIRA users: If the connection to JIRA does not succeed, make sure that the JIRA plugin for AccuSync was installed and that JIRA has been configured to accept remote API calls. See *Configure JIRA for AccuSync* for more information.

   Note: for Rally Users: You cannot select a Task project without also selecting the corresponding Defect or Story project.
5. Click the **Save** button. The revised configuration appears in the **Configurations** table on the **AccuSync Management Console** main page.

Review the Default Configuration

After you specify the AccuWork and ITS connection settings, AccuSync validates all of the components defined in the default configuration - its field mappings, mapping groups, and so on. If AccuSync was unable to validate a component, it displays the component name in red. For example, if a field mapping includes a field that has not been defined in one system's schema, that field mapping is displayed in red.

Before running the configuration or an individual synchronization pattern, you should review each of the components in your configuration and correct any errors. See *Customizing the Default Configuration* to learn how to edit the components in a configuration. When you are ready to run the configuration or one of its synchronization patterns, see *Running the Initial Synchronization*.

Tip: An invalid configuration is usually caused by field mappings that AccuSync cannot reconcile. *Editing Field Mappings* describes where to find field mapping definitions in AccuSync and how to change them. Refer to *Configuration Reference* for your ITS for a complete listing of field mappings and other configuration components required to synchronize with your ITS.

Next Steps

Once you are satisfied that the configuration has been specified correctly, you are ready to run a synchronization as described in *Running the Initial Synchronization*.

Working with AccuSync Configurations

This chapter describes administrative tasks associated with managing AccuSync, including running and stopping AccuSync Configurations, addressing errors, and backing up and restoring AccuSync Configurations.

This chapter assumes that you have set up a default AccuSync Configuration as described in *AccuSync Quick Start*, or have created a new one as described in *Creating a New Configuration*.

Running the Initial Synchronization

Once you have defined an AccuSync Configuration, the process for running a synchronization the first time varies based on whether you have upgraded from an existing AccuBridge or AccuSync product, or you have installed AccuSync for the first time. Refer to the following tables for the initial synchronization procedure applicable to your environment.

AccuSync Upgrades

If You Have Upgraded From	Go To
AccuBridge	*Initial Synchronization After Upgrading from AccuBridge*
A previous AccuSync release (2011.1, for example)	*Initial Synchronization After Upgrading from a Previous AccuSync Release*

New AccuSync Installations

If You Have Installed AccuSync And	Go To
There are currently no records in either AccuWork or your ITS	*Initial Synchronization After Installing AccuSync with New ITSs*
There are existing records in either or both AccuWork and your ITS	*Initial Synchronization After Installing AccuSync with Existing ITSs*

Initial Synchronization After Upgrading from AccuBridge

Follow this procedure for running the initial synchronization if you have upgraded from AccuBridge:

1. Turn off AccuBridge if it is still running. (It should have been turned off as part of the AccuSync installation process.) Refer to your AccuBridge documentation if you need help with this step.
2. In AccuSync, make sure that the **Skip Key Validation** option is selected for any configuration you plan to run. See *Advanced Configuration Settings* if you need help with this step.
3. In AccuSync, set the **Synchronization Type** to `one-way` for each synchronization pattern you plan to run. Set **AccuWork** as the `master` system. See *Editing Synchronization Patterns* if you need help with this step.
4. Run the synchronization as described in *Running an AccuSync Configuration* and review the results.
5. If the results are what you expect:
   - Stop the synchronization.

- Change the Synchronization Type back to two-way.
- Clear the Skip Key Validation option.
- Back up the AccuSync configuration for safekeeping. See *Backing Up and Restoring AccuSync Configurations* for more information.
- Start the synchronization again.

Initial Synchronization After Upgrading from a Previous AccuSync Release

Follow this procedure for running the initial synchronization if you have upgraded from a previous AccuSync release (AccuSync 2011.1, for example):

1. If you backed up your existing AccuSync Configurations prior to installing the current AccuSync release, restore those configurations if you want to continue using them. See *Backing Up and Restoring AccuSync Configurations* if you need help with this step.
2. In AccuSync, set the watermark or specify one or more mapping definition filters to limit the sample of issue records that AccuSync will synchronize initially. See Setting Watermarks and Creating a Mapping Definition Filter if you need help with this step.
3. Run the synchronization as described in *Running an AccuSync Configuration* and review the results.
4. If the results are what you expect:

   - Stop the synchronization.
   - Remove any watermarks or filters you created in Step 2.
   - Back up the AccuSync configuration for safekeeping. See *Backing Up and Restoring AccuSync Configurations* for more information.
   - Start the synchronization again.

Initial Synchronization After Installing AccuSync with New ITSs

Follow this procedure for running the initial synchronization if you have installed AccuSync for the first time and are using it with AccuWork and ITS systems that currently contain no issue records.

1. Create one or more issues in both AccuWork and your ITS.
2. In AccuSync, ensure that the Synchronization Type for each synchronization pattern in your configuration is set to two-way. See *Editing Synchronization Patterns* if you need help with this step.
3. Run the synchronization as described in *Running an AccuSync Configuration* and review the results.
4. If the results are what you expect, back up the AccuSync configuration for safekeeping. See *Backing Up and Restoring AccuSync Configurations* for more information.

Once the synchronization is running again, issue records will be synchronized as they are added to your ITSs.

Initial Synchronization After Installing AccuSync with Existing ITSs

Follow this procedure for running the initial synchronization if you have installed AccuSync for the first time and are using it with existing AccuWork and ITS systems, one or both of which contain issue records.

1. In AccuSync, set the watermark or specify one or more mapping definition filters to limit the sample of issue records that AccuSync will synchronize initially. See *Setting Watermarks* and *Mapping Definition Filter* if you need help with this step.

2. If only one system has issue records, set the Synchronization Type to one-way for each synchronization pattern you plan to run; set as the master system the system that currently contains records. See *Editing Synchronization Patterns* if you need help with this step.
3. Run the synchronization as described in *Running an AccuSync Configuration* and review the results.
4. If the results are what you expect:
   - Stop the synchronization.
   - Remove any watermarks or filters you created in Step 1.
   - If you set the Synchronization Type to one-way in Step 2, set it back to two-way.
   - Back up the AccuSync configuration for safekeeping. See *Backing Up and Restoring AccuSync Configurations* for more information.
   - Start the synchronization again.

Running an AccuSync Configuration

When you run an AccuSync Configuration, AccuSync runs all the synchronization patterns that are defined for that configuration. Synchronization patterns are run serially, one after the other, at whatever frequency has been defined for them. (The default is one minute.) AccuSync performs the synchronization tasks associated with each synchronization pattern; issue records and watermarks on both systems are updated accordingly. If you choose, you can stop individual synchronization patterns within an active AccuSync Configuration. See Stopping Configurations and Synchronization Patterns.

Tip: Before running an AccuSync Configuration for the first time, run each synchronization pattern in that configuration individually. Review the results of each synchronization pattern and verify that they are what you expect; any changes to synchronization components that might be required can be easier to identify this way. See Running a Synchronization Pattern for more information.

To run an AccuSync Configuration:

1. Go to the **AccuSync Management Console** main page.

   Tip: Clicking the AccuSync logo at the top of any page takes you to the main page.

2. Click the **Run** button for the configuration you want to run. AccuSync runs the selected configuration. The **Run** button is replaced by the **Stop** button, which allows you to stop the configuration at any time. The status button changes based on whether or not AccuSync encounters any errors when running the configuration. See *Understanding Synchronization Status* for more information.

Restarting an AccuSync Configuration

Once a configuration is running, it continues to run each of the synchronization patterns defined for it according to the frequency you have specified for those synchronization patterns. If the AccuSync server is stopped and restarted, however, configurations remain stopped until they are started again.

You can restart a configuration manually by clicking its Run button, as described in*Running an AccuSync Configuration*. If you prefer, you can configure AccuSync to restart configurations automatically, as described in the following procedure.

To configure AccuSync to automatically restart configurations when the AccuSync server is restarted:

1. Open the `accusync.properties` file in a text editor. This file is located in the `\bin` folder where you installed AccuSync.

2. Add the following line:

```
accusync.synconstart=true
```

Note: Other settings in the `accusync.properties` are for internal use only. Do not delete or edit these settings.

3. Add a line like the following for each ITS whose configurations you want AccuSync to restart automatically:

```
accusync.synconstart.<ITS_name>=<config_name>[,<config_name>,]
```

where `ITS_name` is the name of your ITS, and `config_name` is the name of the configurations you want AccuSync to automatically restart. Note that:

- You must use the following values for `ITS_name`:

`cq`	for IBM Rational ClearQuest
`hpqc`	for HP ALM
`jira`	for JIRA
`rally`	for Rally
`remedy`	for BMC Remedy

- To specify multiple configurations for an ITS, enter each configuration name separated by a comma.
- `ITS_name` and `config_name` values are case-sensitive.

Tip: See *Example*.

Example

Imagine you had two JIRA configurations, one for synchronizing enhancements (**Sync Enhancements**) and one for synchronizing defects (**Sync Defects**), that you wanted AccuSync to restart automatically. Your `accusync.properties` file would have the following entries:

```
accusync.synconstart=true
accusync.synconstart.jira=Sync Enhancement,Sync Defects
```

Running a Synchronization Pattern

AccuSync runs all synchronization patterns defined for an AccuSync Configuration when you run the configuration. You can also run synchronization patterns individually, as described here.

To run a synchronization pattern:

1. Go to the **AccuSync Management Console** main page.

Tip: Clicking the AccuSync logo at the top of any page takes you to the main page.

2. Click the **Edit Configuration** button  . The **Configuration** page appears.
3. In the **Sync Patterns** table, click the **Run** button  for the synchronization pattern you want to run. AccuSync runs the selected synchronization pattern. The **Run** button is replaced by the Stop button  , which allows you to stop the synchronization pattern at any time. The status button changes based on whether or not AccuSync encounters any errors. See *Understanding Synchronization Status* for more information.

Understanding Synchronization Status

The status symbol provides an at-a-glance summary of the synchronization status for both AccuSync Configurations and synchronization patterns, as summarized in the following:

The synchronization is running with no errors. Placing the pointer over the button displays the tooltip, `Status (no errors)`.

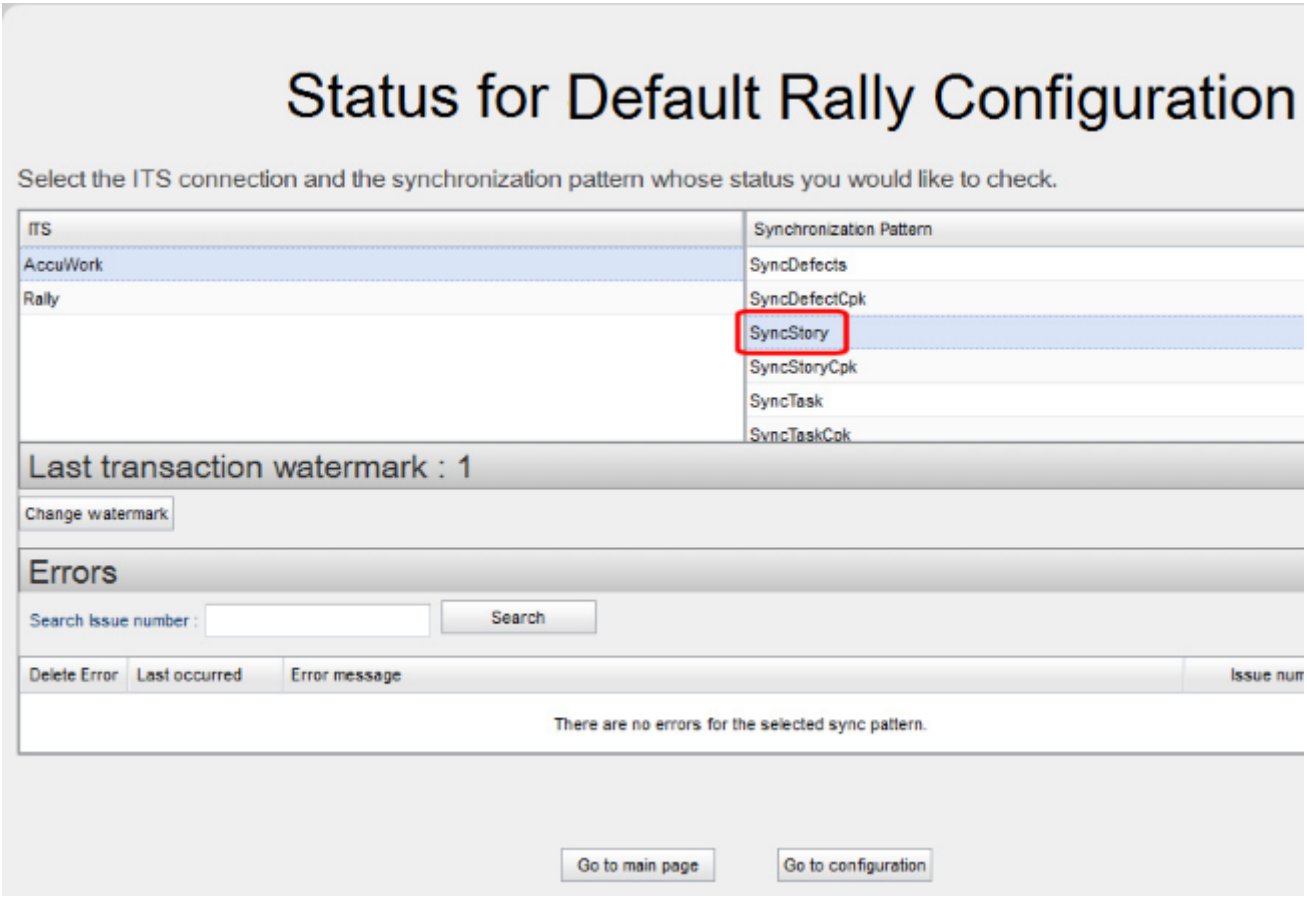
Note: This symbol is also displayed when the synchronization is idle.

One or more errors occurred during the synchronization. Placing the pointer over the button displays a tooltip that tells you the number of errors, `Status (2 errors)`, for example. For an AccuSync Configuration, this is the summary of errors for all synchronization patterns associated with the configuration. For a synchronization pattern, this number represents the errors for that synchronization pattern only.

See *Responding to Errors* for more information.

Getting Status Details

When you click the status button for an AccuSync Configuration, the status page for that configuration appears. The status page displays a summary of error messages, if any, per system and per synchronization pattern. The following illustration shows no errors for the **SyncStory** synchronization pattern in the AccuWork system, for example:



To review errors for a particular ITS, click the name of that system (AccuWork or Rally, in this example), and then click the synchronization pattern you want to investigate. The Errors table displays all errors for the currently selected synchronization pattern; errors are listed in the order in which AccuSync encounters them. See *Responding to Errors* for more information on working with synchronization errors.

AccuSync Log

When you start AccuSync, AccuSync creates a log that is updated while AccuSync runs. The log, `bridge.log`, is written to the `\bin` directory of the AccuSync installation directory (`c:\Program Files (x86)\AccuSync\bin\bridge.log`, for example). The log can provide useful information when troubleshooting synchronization errors.

Synchronization Information

The log file contains a record of the synchronization. The following example shows a sample log entry for a synchronization, identified with a time and date stamp:

Rally example:

```
2012-04-25 16:42:54,269 INFO Rally Connection - Selected rally workspace(s)
and project(s) for [Defect]:
   QA_Workspace2: [RallyFullTesting]
   QA_Workspace1: [QA Project 1][QA Project 5]
```

JIRA example:

```
2012-04-25 17:46:34,706 INFO
com.accurev.its.bridge.plugins.jira.JiraITSConnection
- Selected jira project(s):
   [AutomationProject3]
   [AutomationProject2]
   [AutomationProject1]
```

Available Memory Information

The log file contains information about the total system memory, used system memory, and free system memory available to AccuSync after a synchronization takes place. The following example shows a sample log entry:

```
2012-04-25 17:46:39,007 INFO Synchronizer - Total System memory: 2047 Mb
2012-04-25 17:46:39,008 INFO Synchronizer - Used System memory:1290 Mb
2012-04-25 17:46:39,009 INFO Synchronizer - Free System memory: 757 Mb
```

When there is memory available for AccuSync to run another synchronization is low, a warning is included in the log file. The following example shows a sample warning:

```
2012-04-25 18:03:29,674 INFO Synchronizer - WARNING: POTENTIAL LOW MEMORY.
Please
check java -Xmx parameter's value in startup.bat, it should be increased to
avoid out of memory exception
2012-04-25 18:03:29,677 INFO Synchronizer - JVM total memory: 27.000 Mb
2012-04-25 18:03:29,695 INFO Synchronizer - JVM used memory: 15.694 Mb
2012-04-25 18:03:29,695 INFO Synchronizer - JVM free memory: 11.306 Mb
```

Responding to Errors

This section describes the types of errors recorded and the features you can use to learn about and address them.

Types of Errors Recorded

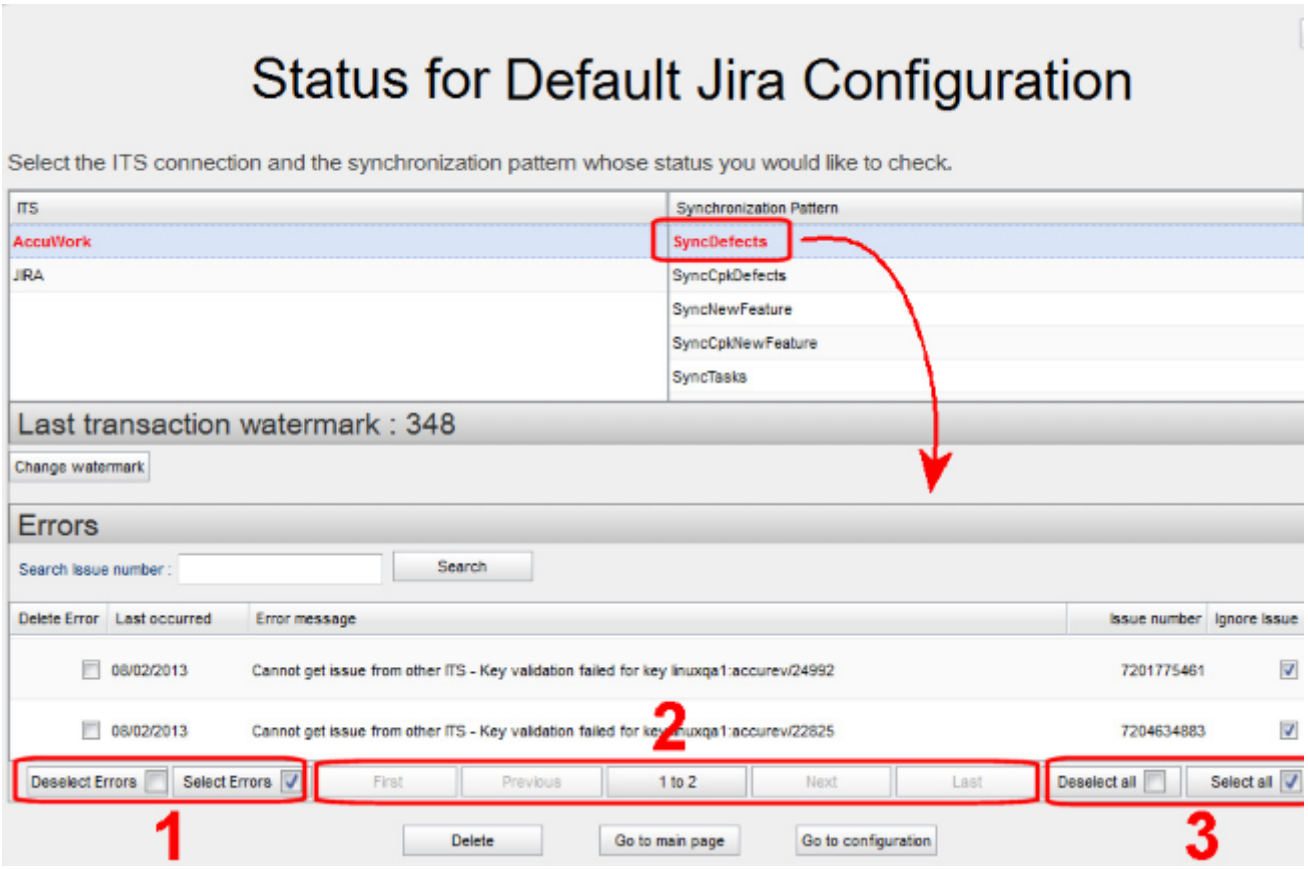
AccuSync records fatal errors and synchronization errors:

Fatal error	Typically associated with a lost network connection or system failure. In AccAccuSyncuSync, the name of a synchronization pattern that encounters a fatal error is displayed in red; clicking the tab next to the synchronization pattern name displays information about the error. **Note:** If AccuSync encounters a fatal error, consider increasing the network retry count, retry delay, or both. See *Changing Network Settings* for more information.
Synchronization error	Occurs when AccuSync is unable to synchronize issue records. This can happen for a number of reasons, including one or more of the following: • A field mapping was specified incorrectly (fields with mis-matched types, for example). • A field value specified for one system does not exist in the other. • The issue record has been deleted from your ITS. If AccuSync encounters a synchronization error, verify that your AccuWork and ITS schema have the necessary fields, and that your mapping definitions and field mappings (including any filters and transformers they use) are specified correctly. See Making Changes to AccuSync Configurations for more information.

Note: Only fatal errors prevent a synchronization from continuing.

Error Reporting

When AccuSync encounters an error executing a synchronization pattern, it displays the name of the synchronization pattern, and the affected ITS, in red. When you select a synchronization pattern, any errors associated with that synchronization pattern are displayed in the **Errors** table, as shown in the following illustration:



For each error, the **Errors** table displays:

- The date the error last occurred.
- A brief description of the error.
- The number of the issue that caused it.

The **Errors** table also contains a set of controls that let you:

1 - Quickly toggle the **Delete Error** check box for all issues. (See *Deleting Errors* for more information on this subject.)

2 - Navigate through pages of errors (when the number of errors requires multiple pages).

Note: The center field in this set of controls shows the current set of all issues that are currently being displayed (1 to 3, as shown in the preceding illustration, or 1 to 25 of 678, for example).

3 - Quickly toggle the **Ignore Issue** check box for all issues. (See *Suspending Synchronization for an Issue* for more information on this subject.)

Searching for Issues with Synchronization Errors

Rather than scrolling through the errors table to locate an issue with a synchronization error, you can locate the issue directly using the **Errors** table issue search feature.

To search for an issue with a synchronization error, type the issue number in the **Search issue number** field and click the **Search** button.

Deleting Errors

You can delete errors from the **Errors** table. You might want to do this if the table has become crowded with errors that you have no intention of addressing, as might be the case with issues that are no longer active. For example, some ITSs do not allow you to make changes to an issue that has a status of Closed. If you

make a change to such a record in AccuWork (adding additional information about the issue's root cause or fix, for example), AccuSync will encounter a synchronization error when it tries to update the Closed issue on the other ITS.

Note: Deleting an error does not affect whether or not AccuSync tries to synchronize the associated issue; it simply removes the error from the log. AccuSync attempts to synchronize issues associated with deleted errors only if the issue has been modified since the last synchronization. Any associated ITS items and synchronization patterns that are highlighted in red (indicating an error) remain in red until you restart AccuSync.

To delete an error from the **Errors** table:

1. Select the check box to the left of the error you want to delete.

   Tip: To select the delete check box for all errors, click the check box in the **Errors** table heading.

2. Click the **Delete** button under the **Errors** table.

Suspending Synchronization for an Issue

Use the Ignore Issue checkbox if you want AccuSync to skip the associated issue during subsequent synchronizations. You might want to suspend synchronization for an issue that is reporting errors while you troubleshoot the cause in order to eliminate repetitive entries in the **Errors** table (and to suppress email notification, if you have enabled it).

AccuSync will not attempt to synchronize the issue as long as the Ignore Issue checkbox is checked. Once you have identified and addressed the root cause, clear the Ignore Issue checkbox and AccuSync will try to synchronize the issue again.

Tip: The **Ignore Issue** checkbox is checked by default. Use the **Deselect all** button to clear this field for all errors.

Email Notification

AccuSync emails errors it encounters if you have enabled email notification. (See *Email Notification for AccuSync Events* for more information.)

Changing Network Settings

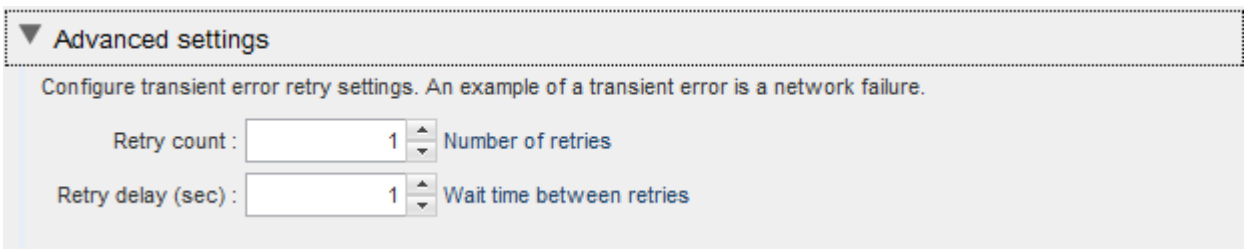
AccuSync lets you adjust the number of retries and the retry interval that AccuSync should attempt in the event of a network error. You might want to adjust the default values for these network settings if you find AccuSync encountering fatal errors during synchronization.

To change network settings:

1. Go to the **AccuSync Management Console** main page.

   Tip: Clicking the AccuSync logo at the top of any page takes you to the main page.

2. Click the **Edit Configuration** button . The **Configuration** page appears.
3. Click the **Edit Admin Details** button. The **Admin Details for Configuration** page appears.
4. Click the **Advanced Settings** tab to expand that section.



5. Increase the values in the **Retry count** and **Retry delay (sec)** fields as needed.
6. Click **Save**.

Email Notification for AccuSync Events

If you want, you can configure AccuSync to send email when a synchronization:

- Encounters an error.
- Is started or stopped.

You specify this information on the **Mail Settings panel** of the **Admin Details for Configuration** page.

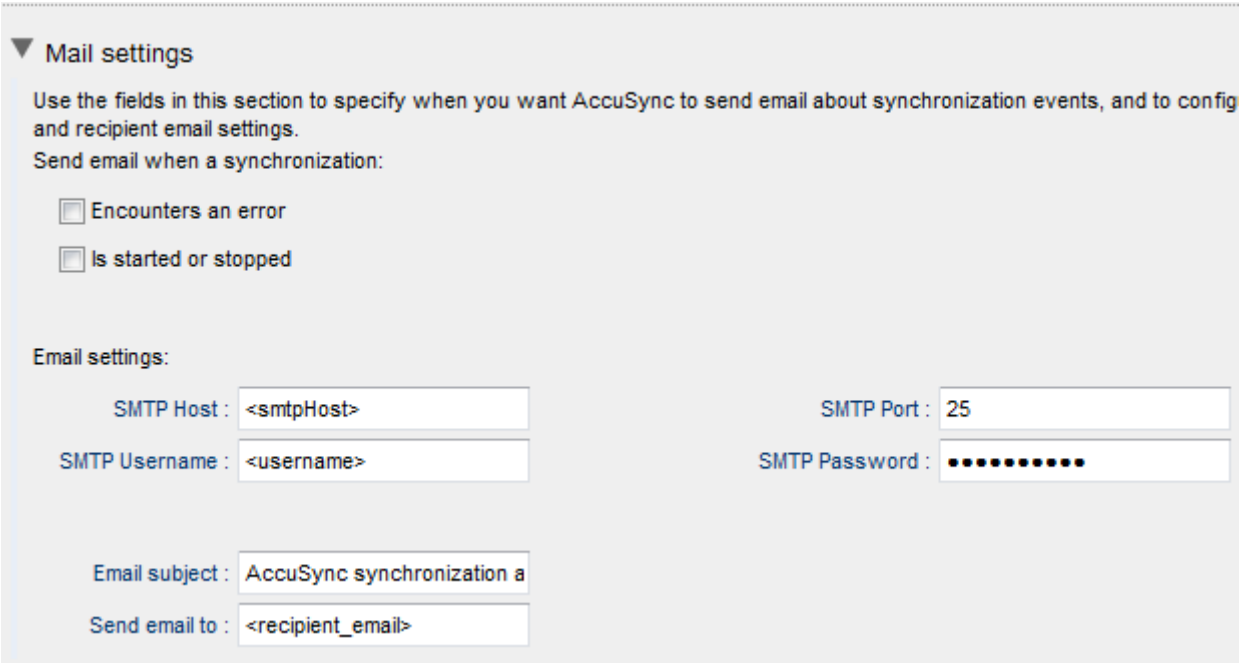
Note: AccuSync sends a separate email for each error it encounters each time the synchronization pattern is run. You can suppress repetitive email for any error you choose. See *Suspending Synchronization for an Issue* for more information.

To enable email notification for AccuSync events:

1. Go to the **AccuSync Management Console** main page.

   Tip: Clicking the AccuSync logo at the top of any page takes you to the main page.

2. Click the **Edit Configuration** button . The **Configuration** page appears.
3. Click the **Edit Admin Details** button. The **Admin Details for Configuration** page appears.
4. Click the **Mail Settings** tab to expand that section.



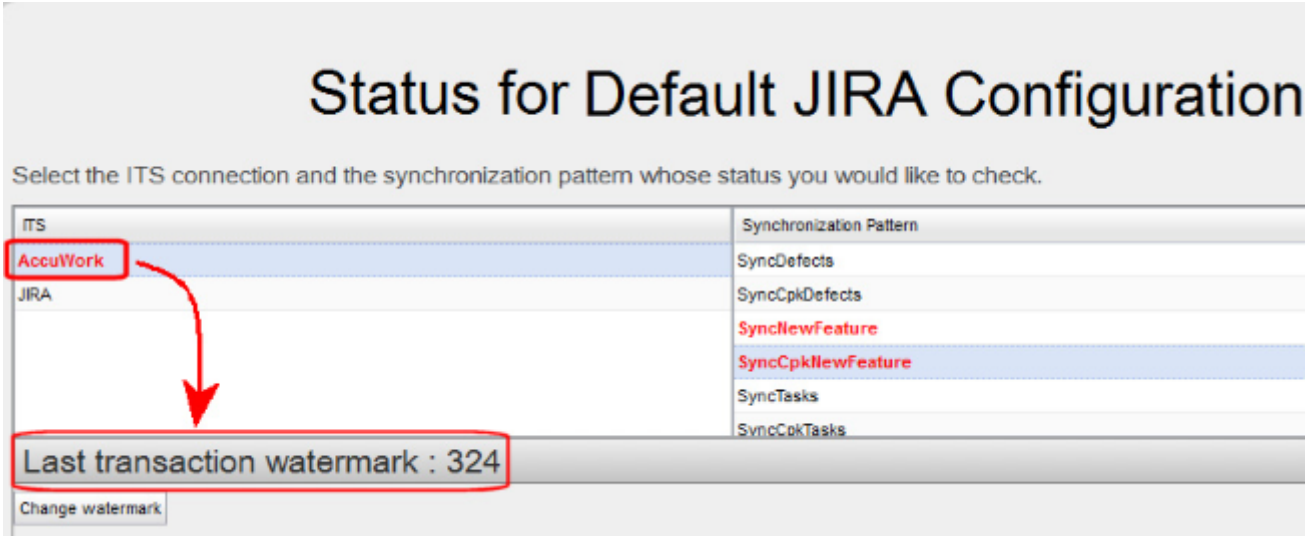
5. Select the AccuSync events for which you want email notification:
   - Encounters an error.
   - Is started or stopped.
6. Complete the **SMTP Host**, **SMTP Port**, **SMTP Username**, and **SMTP Password** fields with values that are appropriate for your environment.
7. The value in the **Email subject** field is used for all AccuSync email notifications, regardless of their type. Change the default value (`AccuSync synchronization alert`) as needed.
8. Use the **Send email to** field to specify the email addresses of the individuals you want to receive synchronization alerts. This is typically the email address of the AccuSync or IT system administrator, as appropriate. Use commas to separate multiple email addresses.

9. Click **Save**.

Setting Watermarks

A *watermark* is a value that identifies the most recent transaction in a system. In AccuRev, the watermark is represented by the transaction number in a depot. For example, a watermark of `10979` means that the last recorded transaction for a given depot was number `10979`. In Rally and JIRA, the watermark is represented by the timestamp of the most recent transaction. For example, a watermark of `2012-03-29 12:45:33` means that the last transaction occurred at `12:45:33` on `March 29`.

The current watermark is displayed on the status page for the AccuSync Configuration for the currently selected system, as shown in the following illustration, which displays the watermark for AccuWork:



Generally speaking, you do not need to adjust the watermark, but there are occasions when you might want

to. For example, you might want to adjust the watermark:

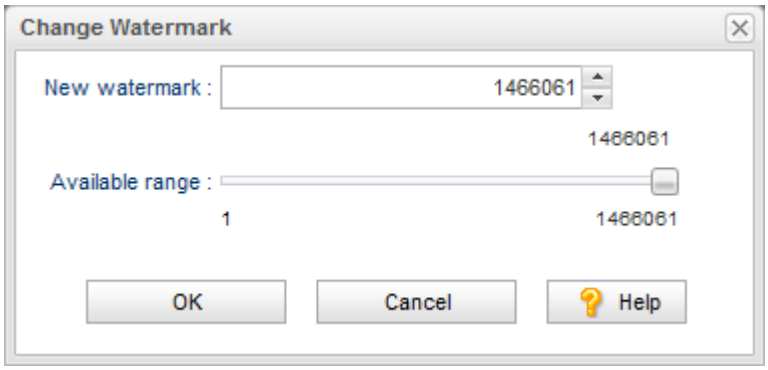
Prior to the initial synchronization	Imagine the current AccuWork transaction number is at 1000 when you install and configure AccuSync. If you want to synchronize with your ITS using an earlier watermark, either based on transaction number or date, you can do so. If you do not modify the watermark, AccuSync synchronizes all the issues in your systems, starting with the first transaction/ earliest date, that match the mapping definitions you have defined for your synchronization patterns.
To synchronize a previously skipped issue	Imagine that you make a change to an issue that was skipped by the synchronization process, perhaps a filter prevented the issue from being synchronized, and you now want to synchronize the issue. You can redefine the filter to include this issue the next time you synchronize, but because the watermark is now greater than it was when you changed the filter, AccuSync will still not synchronize the issue. In this case, you can set the watermark to a value lower/earlier than the watermark recorded for that issue and then run synchronization again.

You adjust the watermark using the watermark tool.

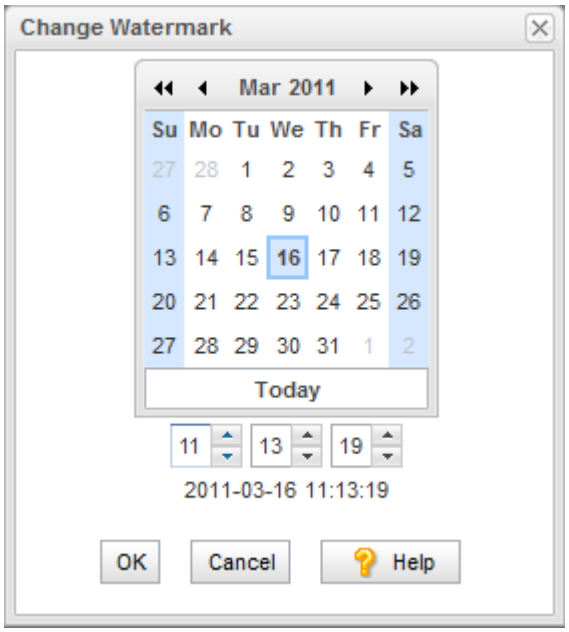
The Watermark Tool

The AccuSync watermark tool displays the current watermark for the system you select, and optionally lets you change the watermark. There are separate tools for AccuWork and your ITS, as shown in the following:

AccuWork Watermark Tool

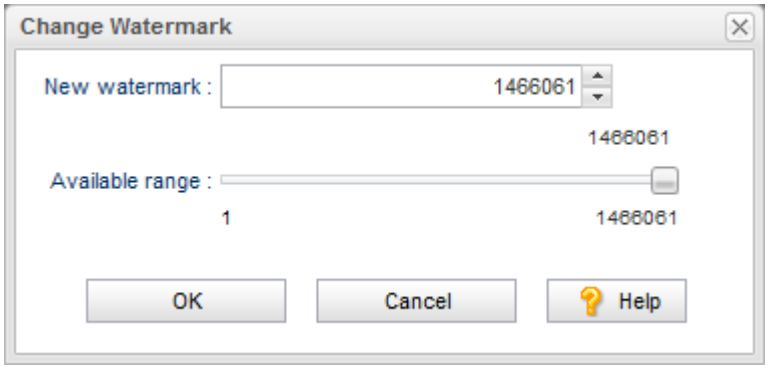


Watermark Tool for Supported ITSs



Adjusting the AccuWork Watermark

1. Click the **Status** button (or) for the AccuSync Configuration or any synchronization pattern. The status page for the AccuSync Configuration appears.
2. Click the **Change Watermark** button. The **Change Watermark** dialog box appears.



The value in the **New watermark** field reflects the most recent transaction in the depot synchronized by this Configuration. The **Available range** slider indicates the range of transactions for the depot, from 1 to the current transaction level.

3. To change the watermark, you can:

- Enter (type or paste, for example) a value in the **New watermark** field.
- Click the spin control in the New watermark field.
- Drag the **Available range** slider (the value in the **New watermark** field changes as you move the slider).

4. Click **OK**. The new watermark is set and will be used the next time you synchronize. After synchronization, the watermark is set to the current transaction number.

Stopping Configurations and Synchronization Patterns

When you stop a Configuration, AccuSync stops all synchronization patterns associated with that configuration. You can stop synchronization patterns individually if you choose. Stopping a synchronization pattern does not affect other synchronization patterns in the same AccuSync Configuration.

Stopping an AccuSync Configuration

1. Go to the **AccuSync Management Console** main page.

   Tip: Clicking the AccuSync logo at the top of any page takes you to the main page.

2. Click the **Stop** button for the configuration you want to stop. AccuSync stops the selected configuration/synchronization patterns. The **Stop** button is replaced by the **Run** button, which allows you to run the configuration again.

Stopping a Synchronization Pattern

1. Go to the **AccuSync Management Console** main page.

   Tip: Clicking the AccuSync logo at the top of any page takes you to the main page.

2. Click the **Edit Configuration** button. The **Configuration** page appears.
3. In the **Sync Patterns** table, click the **Stop** button for the synchronization pattern you want to stop. AccuSync stops the selected configuration/synchronization patterns. The **Stop** button is replaced by the **Run** button, which allows you to run the configuration again.

Backing Up and Restoring AccuSync Configurations

The AccuSync Configuration database contains all the information about your AccuSync Configurations: connection settings, synchronization patterns, mapping definitions, and so on. The AccuSync Configuration database is created in the `db` directory where you installed AccuSync (`c:\Program Files (x86)\AccuSync\db`, for example).

It is important to back up the Configuration database using the backup utility that is installed with AccuSync. Backup and restore utilities are located in the bin directory where you installed AccuSync (`c:\Program Files (x86)\AccuSync\bin`, for example). Utilities are provided for both Microsoft Windows and Linux operating systems.

Backing Up an AccuSync Configuration

Important: Create a back up of your AccuSync Configuration in these situations:

- After you have performed an initial synchronization and are satisfied that AccuSync is synchronizing your issue records as expected.
- After you make any change to an existing synchronization (changing connection settings or your schema, for example).
- Before upgrading to a newer AccuSync version.

When you back up an AccuSync Configuration, AccuSync creates a backup directory where you installed AccuSync (`c:\Program Files (x86)\AccuSync\backup`, for example). Each backup is created in its own directory with the name `<timestamp>_<name>`, using a name you give it. For example, `2011-03-14_13-52.28_acme`, where `acme` is the name you provided to the backup utility. The `<timestamp>` has the format `yyyy-mm-dd_hh-mm.ss`.

Note: The backup utility does not back up other AccuSync directories like `bin`, `conf`, and `transformers`.

Running the Backup Utility

Note: The location of the `Backup` command assumes that you accepted the **Shortcut Folder** default values during installation.

To run the backup utility:

1. Stop the AccuSync Service. See *Stop AccuSync Services*
2. Start the backup utility:

Microsoft Windows	Click **Start** > **All Programs** > **AccuSync** > **AccuSync Backup**.
Linux	Click the `AccuSync_Backup` shortcut on your desktop.
Console	Navigate to the `bin` directory where you installed AccuSync and run the `backup.bat` (Microsoft Windows) or `backup.sh` (Linux) file.

   Regardless of how you start the backup utility, AccuSync opens a console that displays a message reminding you to stop the AccuSync Service and the following prompt:

```
Do you want to back up the default drectory or Custom directory ? (Y for Default / N for Custom)
```

3. If you type n at the prompt and press `Enter` The backup utility displays the prompt:

```
Enter the Custom backup path:
```

   Type the back up path `D:\Test` , for example and press `Enter` the backup utility displays the prompt :

```
The backup will be made in this location:D\Test
```

   Note: Backing up to a customized location was not possible in earlier releases.

4. If you type y at the prompt and press `Enter`. The backup utility displays the prompt:

```
Enter the name for the backup:
```

5. Type a name for the backup and press `Enter` to continue. The backup utility creates the backup directory in the backup directory (`c:\Program Files (x86)\AccuSync\backup \2011-03-14_13-52.28_acme`, for example).
6. Restart the AccuSync Service. See *AccuSync Service*.

Restoring an AccuSync Configuration

When you restore a configuration, AccuSync overwrites the existing `\db` directory with the database backup you specify.

Running the Restore Utility

Note: The location of the `Restore` command assumes that you accepted the `Shortcut Folder` default values during installation.

1. Stop the AccuSync Service. See *AccuSync Service* if you need help with this step.
2. Start the restore utility:

Microsoft Windows	Click **Start** > **All Programs** > **AccuSync** > **AccuSync Restore**.
Linux	Click the `AccuSync_Restore` shortcut on your desktop.
Console	Navigate to the `bin` directory where you installed AccuSync and run the `restore.bat` (Microsoft Windows) or `restore.sh` (Linux) file.

Regardless of how you start the restore utility, AccuSync opens a console that displays a message reminding you to stop the AccuSync Server. It then displays

***** all the backups in the AccuSync backup directory in an ordered list (the order in which they were created). The following prompt appears: ****

```
Do you want to restore from the default back up directory or from the
custom directory?(Y for Default and N for Custom):
```

3. Type `Y` at the prompt and press `Enter`

Note: If you select `N`, you will be prompted to enter the path from where the backed up files are to be restored.

The restore utility displays all the backups in the AccuSync backup directory in an ordered list (the order in which they were created) and the following prompt appears :

```
Select the backup you want to restore:
```

4. Type the number associated with the backup you want to restore and press `Enter`. The `db` directory is restored to the AccuSync installation directory (`c:\Program Files (x86)\AccuSync\db`, for example).
5. Restart the AccuSync Service. See *AccuSync Service*.

Using AccuSync with AccuRev Workflow

AccuRev workflow is AccuRev's optional application life cycle tool that lets you define workflow stages and the transitions that link those stages. Transitions typically perform some type of action as the issue moves from one workflow stage to another (such as changing the value of an issue record's Status field from New to WIP, for example). See the *AccuRev Web User Interface User's Guide* for more information on AccuRev workflow.

If you are using AccuRev workflow, you can make workflow transitions available in issue records in your ITS. Users can choose a transition from a list of transitions that you provide, and the next time that record is synchronized with AccuWork:

- Changes made to the issue record in your ITS are made to the issue record in AccuWork.
- AccuRev workflow executes the transition on the record in AccuWork.
- Any changes to the issue record in AccuWork resulting from the execution of that transition are also made to the issue record in your ITS as part of the same AccuRev transaction.

Transitions can be specified in the ITS only and must be set manually. That is, the value of the **Transition** field in an issue record in your ITS cannot change as the result of the synchronization process.

Exposing Workflow Transitions to AccuSync

The following procedure describes how to expose workflow transitions to AccuSync. When you are done, users processing issues will be able to specify a workflow transition for issue records in your ITS, allowing *AccuWorkflow* to execute the transition the next time that issue record is synchronized.

Important: Before performing this procedure:

- Fully define and implement your workflows. See the *AccuRev Web User Interface User's Guide* for more information on AccuRev workflow.
- Review the workflows and create a list of all the transitions you want to expose to the AccuSync synchronization process.

To expose a workflow transition to AccuSync:

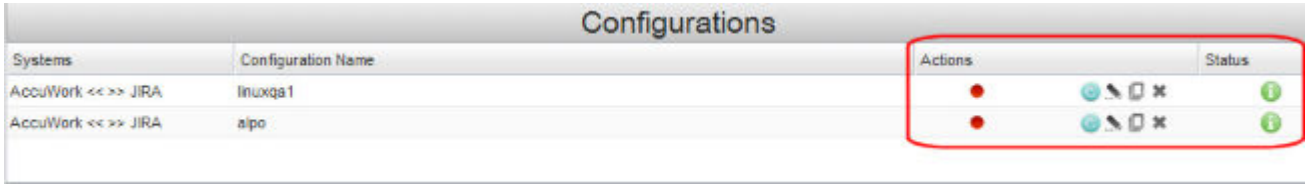
1. In AccuWork, use the **Schema Editor** to add a new field to the AccuWork schema. Name the field transition, and give it the type Text.

   Note: This field is for internal AccuRev use only. Do not add this field to the issue record's layout in AccuWork.
2. In your other ITS, add a new custom field. You can name the field anything you want, but consider naming it transition for consistency with the associated field in AccuWork. Give the field a type that lets users choose from a list of values when modifying the issue record in your other ITS.
3. Using your list of transition names (see Before You Begin), create values for the transition field you created in Step 2. The names you enter must match exactly the transition names as they are defined in the workflow.
4. In AccuSync, create a new field mapping for the AccuWork and ITS transition fields in an existing mapping definition. For example, if you are using a default ITS AccuSync configuration, you might want to add the new transition field mapping to the Basic mapping definition.

   Tip: If you decide to create a new mapping definition, make sure you also either create a synchronization pattern that uses that mapping definition, or add that mapping definition to an existing synchronization pattern.
5. In AccuSync, click the **Reload Configuration Cache** button to ensure that the configuration incorporates the AccuWork schema changes.

Summary of AccuSync Actions and Status Symbols

AccuSync Configurations and configuration components like synchronization patterns and field mappings are displayed in tables like the one shown in the following illustration:



Configurations and Sync Patterns Tables: Action and Status Information

The following tables describe the action and status information that is displayed in the **Configurations** table and the **Sync Patterns** table.

Button	Displayed For	Description
 **Run**	• AccuSync Configurations • Synchronization patterns	Runs the Configuration or synchronization pattern. When the configuration or synchronization pattern is running, the Run button changes to the Stop button.  **Note:** The **Run** button is gray by default. For an AccuSync Configuration, the **Run** button turns blue only after one or more synchronization patterns have been defined for the configuration. (You cannot run a configuration that does not have at least one synchronization pattern defined for it.) See *Running an AccuSync Configuration* and *Running a Synchronization Pattern* for more information.
 **Stop**	• AccuSync Configurations • Synchronization patterns	Stops the Configuration or synchronization pattern. When the configuration or synchronization pattern stops, the **Stop** button changes to the **Run** button. See *Stopping Configurations and Synchronization Patterns* for more information.
 **Reload Config Cache**	AccuSync Configurations	Reloads the Configuration to recognize changes made to the AccuWork or ITS schema for an existing Configuration.
 **Edit**	• AccuSync Configurations • Synchronization patterns • Connections • Mapping definitions • Mapping groups • Field mappings • Required field mappings • Field mappings	Allows you to edit the selected Configuration or configuration component. See *Making Changes to Configurations* for more information.
 **Delete**	• AccuSync Configurations • Synchronization patterns • Mapping definitions • Mapping groups • Mapping groups • Field mappings	Deletes the selected Configuration or configuration component. See *Making Changes to Configurations* for more information.

Status	Displayed For	Description
 Running, no errors.	• AccuSync Configurations • Synchronization patterns	Indicates that the Configuration or synchronization pattern is running with no errors. Clicking the status button displays a page summarizing errors, if any. See *Understanding Synchronization Status* for more information.
 Stopped, errors	• AccuSync Configurations • Synchronization patterns	For a Configuration, indicates that AccuSync encountered an error in one or more of the synchronization patterns associated with the AccuSync Configuration. For a synchronization pattern, indicates that a synchronization error occurred. See *Understanding Synchronization Status* for more information.

Connections Table: Action and Status Information

The **Status** column in the **Connections** table indicates the status of the AccuWork connection and the ITS connection. The following describes the action and status information that is displayed in the **Connections** table.

Actions

 **Edit**	Allows you to edit the selected connection.

Status

 **Not Connected**	Indicates that the connection is not working.
 **Connected**	Indicates that the connection is working.
 **In Progress**	Initialization of connection is in progress. This is displayed when the configuration of the connection is entered for the first time.

Customizing the Default Configuration

This chapter describes the procedures for editing the components in the default configuration for your ITS. See *Creating a New Configuration* if you want to create a new Configuration.

Important: This chapter assumes you have completed the set up process for default configurations described in *Quick Start*.

What is a Default Configuration?

A default configuration is an AccuSync Configuration that has been pre-configured to work with one of the ITSs supported by AccuSync: there are default configurations for JIRA, Rally, HP ALM, ClearQuest, and BMC Remedy, for example. Each default configuration contains AccuSync Configuration components, field mappings, synchronization patterns, and so on that are designed to work with the default AccuWork schema installed with AccuSync and the default schema of your ITS.

A default configuration requires little or no modification before you can use it to synchronize AccuWork issues with issues in your ITS. Some changes to individual configuration components might be required if you have modified the default AccuWork schema, the default ITS schema, or both. For example, if you added a custom field to your ITS schema, you might want to add that field to your AccuWork schema and create a field mapping to synchronize the data in that field.

See *AccuSync Configuration Components* for descriptions of the components in an AccuSync Configuration. For information about how these components have been pre-configured in the default configuration for your ITS, see the *Configuration Reference appendix* for your ITS.

Making Changes to Configurations

You can make changes to an active Configuration. There is no need to stop a running configuration or to stop the AccuSync Server to create a new field mapping, for example. However, after you make a change you need to ensure that AccuSync recognizes those changes as summarized in the following table:

If You Change	Example	You Must
The default configuration or one of its components.	Adding a new mapping definition or synchronization pattern.	Stop and then run the default configuration (or just the affected synchronization pattern, if applicable) for the change to be recognized by AccuSync.
The AccuWork or ITS schema.	Adding a new field or changing the layout.	Reload the configuration cache for any configuration affected by the change. Click on the **AccuSync Management Console** main page).

Note: You cannot copy or delete a Configuration or any of its components while it is running.

The following sections summarize the types of editing operations you can perform and where to find more information.

Editing Synchronization Patterns

You can edit and delete synchronization patterns. You cannot rename a synchronization pattern. For detailed information about synchronization patterns, see Creating Synchronization Patterns.

To edit a synchronization pattern:

1. Go to the **AccuSync Management Console** main page.

   Tip: Clicking the AccuSync logo at the top of any page takes you to the main page.

2. Click the **Edit Configuration** button. The **Configuration** page appears.
3. If you want to delete the synchronization pattern, click the **Delete** button.
4. Click the **Edit Sync Pattern** button. The **Edit Sync Pattern** dialog box appears.
5. Make any changes as needed and click **Save**.

After you change a synchronization pattern, you should run it to make sure that it performs as expected. See *Running a Synchronization Pattern* for more information. If you delete a synchronization pattern, you should run any Configurations that used it to make sure that they continue to perform as expected. See *Running an AccuSync Configuration* for more information.

Editing Mapping Definitions

You can edit, delete, and copy mapping definitions. The types of changes you can make to a mapping definition include:

- Adding or removing a field mapping.
- General editing such as renaming the mapping definition, adding or removing filters, changing the AccuWork and ITS issue types, and so on.

The procedure varies based on the type of change you want to make.

Editing procedures are described here. To copy a mapping definition, see *Copying a Mapping Definition*.

For detailed information on mapping definitions, see *Creating a Mapping Definition*.

Note: Changing a mapping definition might affect any synchronization patterns that use it. Be sure to verify that your synchronization patterns behave as expected after editing a mapping definition they use.

To add or remove a field mapping:

1. Go to the **AccuSync Management Console** main page.

   Tip: Clicking the AccuSync logo at the top of any page takes you to the main page.

2. Click the **Edit Configuration** button. The **Configuration** page appears.
3. In the **Mapping Definitions** table, click the **Edit Mapping Definition** button. The **Mapping Definition** page appears.
4. To add a new field mapping, click the **Add New...** button. See *Creating a Field Mapping* for more information.
5. To delete a field mapping, click the **Delete** button.

To perform general editing for a mapping definition:

1. On the **Mapping Definition** page, click the **Advanced Settings** button.
2. The **Edit Mapping Definition** dialog box appears. See *Creating a Filter* for more information.

After you make this change, you should run any synchronization patterns that use it to make sure that your changes provide the results you expect. See *Running a Synchronization Pattern* for more information.

Editing Field Mappings

You can edit and delete a field mapping. The types of changes you can make to a field mapping include:

- Changing one or both mapped fields.
- Changing the synchronization type.
- Changing the transformer associated with the field mapping.

For detailed information on these and other topics related to field mappings, see *Creating Field Mappings*.

1. Go to the **AccuSync Management Console** main page.

   Tip: Clicking the AccuSync logo at the top of any page takes you to the main page.

2. Click the **Edit Configuration** button . The **Configuration** page appears.
3. In the **Mapping Definitions** table, click the **Edit Mapping Definition** button . The **Mapping Definition** page appears.
4. To delete a field mapping, click the **Delete** button .
5. To edit a field mapping, click the **Edit Field Mapping** button . The **Edit Field Mapping** dialog box appears. See *Creating a Field Mapping* for more information.

After you make this change, you should run any synchronization patterns that use it to make sure that your changes provide the results you expect. See *Running a Synchronization Pattern* for more information.

Editing Mapping Groups

You can add and remove value pairs from a mapping group, but you cannot change the AccuWork or ITS values in a value pair individually: if you want to change an existing value pair, you must delete the pair and then create a new pair with the values you want. If you want to delete a mapping group, you must first delete all of its value pairs.

Note: Mapping groups are associated with transformers, which in turn are used by some field mappings. Because of this, changes you make to a mapping group might cause synchronization errors in any mapping definitions that rely on the field mappings that use a mapping group. To learn more about the relationship between field mappings, mapping groups, and transformers, see *Creating a Mapping Group*.

To edit a mapping group:

1. Go to the **AccuSync Management Console** main page.

   Tip: Clicking the AccuSync logo at the top of any page takes you to the main page.

2. Click the **Edit Configuration** button . The **Configuration** page appears.
3. Click the **Edit Admin Details** button. The **Admin Details for Configuration** page appears.
4. To delete a mapping group, delete all of its mappings by clicking the **Delete** button for each.
5. To change the value for a value pair, delete the pair, and then add a new pair with the values you want.

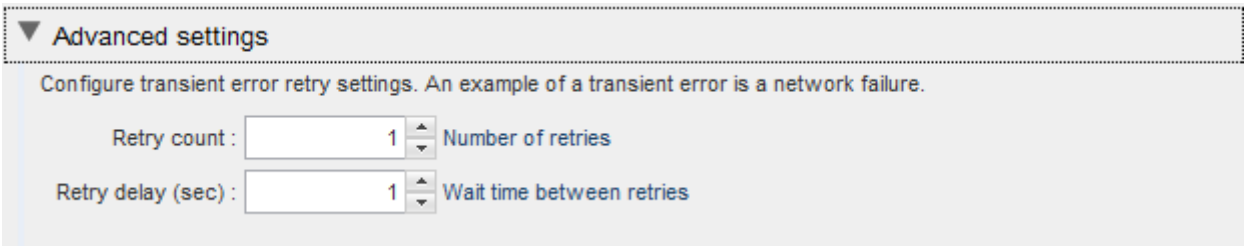
After you make this change, you should run any synchronization patterns that use it to make sure that your changes provide the results you expect. See *Running a Synchronization Pattern* for more information.

Advanced Configuration Settings

AccuSync provides advanced settings that can affect when AccuSync encounters a fatal error, and how AccuSync can alert you to these and other errors when they occur:

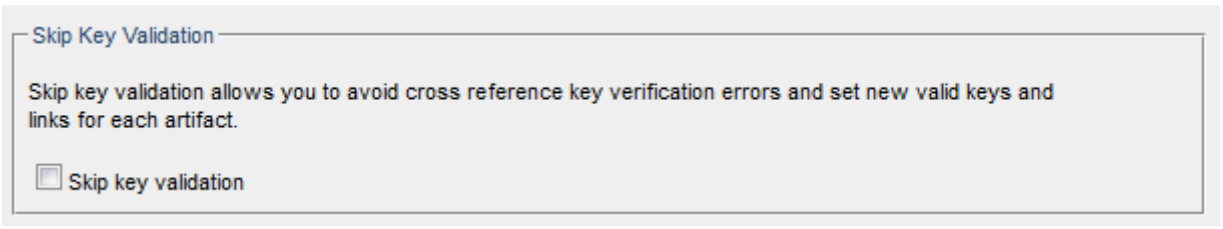
Network Retry Settings

AccuSync allows you to specify both the number of retries and the retry interval that AccuSync should attempt in the event of a network error. See *Types of Errors Recorded* for more information.



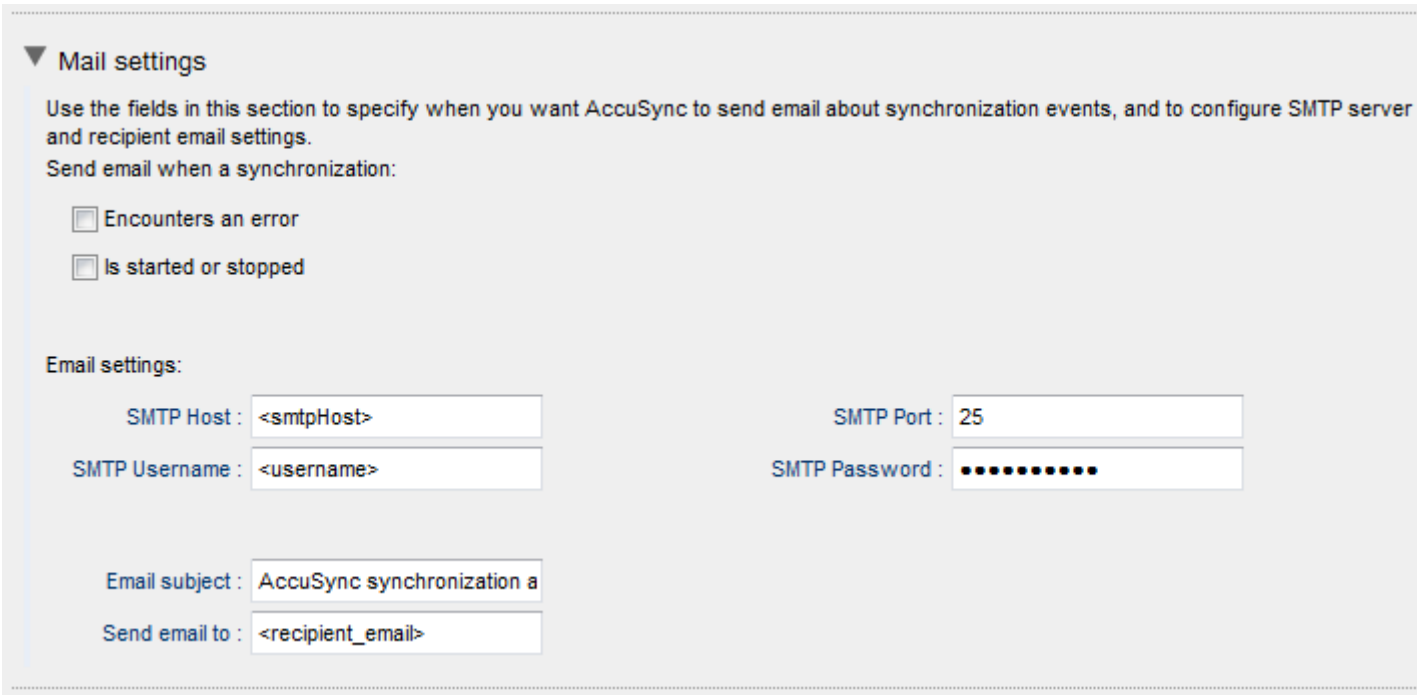
Key Validation

AccuSync validates AccuWork and ITS issue keys before synchronizing records. In some situations, such as upgrading from AccuBridge, you might want AccuSync to skip the key validation process. See *Running the Initial Synchronization* for more information.



Email Configuration

If you want, you can configure AccuSync to email AccuSync Configuration status and error reports to users you specify. See *Email Notification for AccuSync Events* for more information.



Advanced settings are displayed on the **Admin Details for Configuration** page for the current configuration. You display the **Admin Details for Configuration** page by clicking the **Edit Admin Details** button on the Configuration page. See *Working with AccuSync Configurations* for more information on these and other topics related to running Configurations.

Creating a New Configuration

This chapter describes how to create a new AccuSync Configuration from scratch. It provides the procedures and information needed to specify all of the components that make up an AccuSync Configuration.

Important: Before creating a new configuration, you should investigate whether you can customize the default configuration for your ITS. In many cases, the default configuration requires little or no modification before it can be used to synchronize AccuWork and your ITS issues. See *Customizing the Default Configuration* for more information.

Copying a Configuration

An alternative to customizing the default configuration is to copy it. Copying an existing configuration allows you to give it a different name and then modify its components as needed. See *Copying an AccuSync Configuration* for more information.

Overview of Creating a Configuration

The steps involved in creating a new Configuration are summarized in the following table:

Step	Description	For More Information
1	Set up AccuSync.	*Quick Start*
2	Create a new configuration, and then configure and test the connections to AccuWork and your ITS.	*Creating the AccuWork and ITS Connections*
3	Specify the issue types you want to synchronize (defects or tasks, for example), the fields you want to map, and settings for optional components like filters and transformers.	*Creating a Mapping Definition*
4	Specify the intervals at which you want AccuSync to synchronize your data, which mapping definition you want to use, and the default synchronization type.	*Creating a Synchronization Pattern*

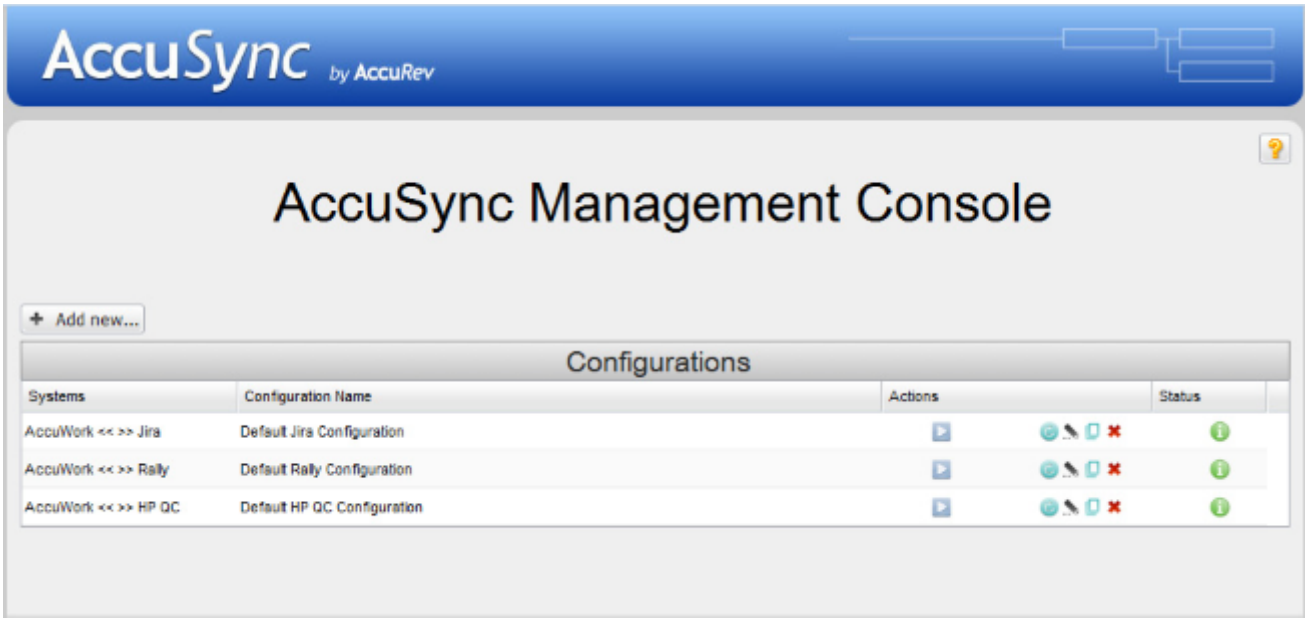
Creating the AccuWork and ITS Connections

This procedure describes how to create the connection components AccuSync uses to connect to AccuWork and your ITS. In addition to connection information, you use the connection components to specify:

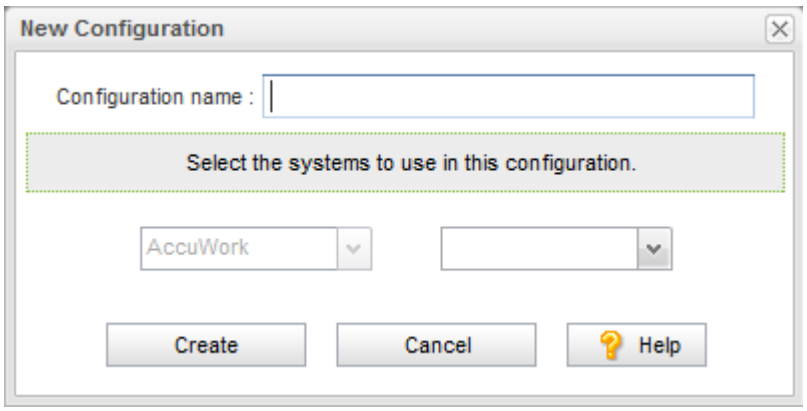
- The AccuRev depot and ITS projects whose issues you want AccuSync to synchronize.
- The name of the AccuWork schema field that stores the type of issue (defect or task, for example) AccuSync will synchronize

To create the AccuRev and ITS connections:

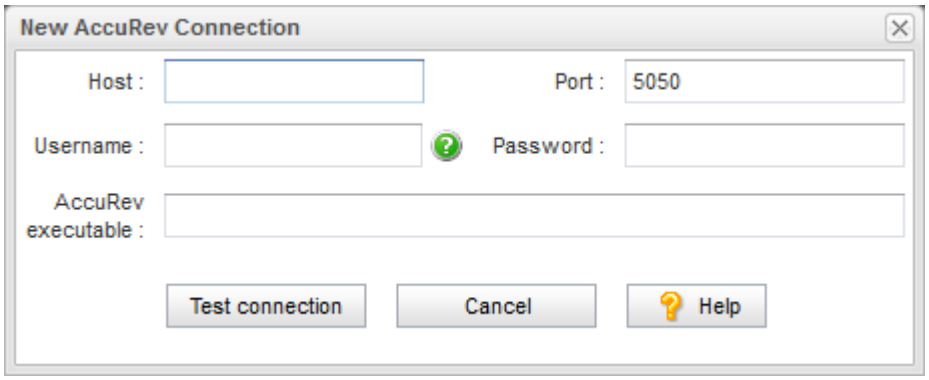
1. Verify that the AccuSync Server is running. See *AccuSync Server* if you need help with this step.
2. Verify that your ITS service is available. Depending on your ITS, this might involve ensuring that a server is running or simply checking that your cloud-based ITS is not down for maintenance, for example.
3. Start the **AccuSync Management Console**. See *Start the AccuSync Management Console* if you need help with this step. The **AccuSync Management Console** main page appears. Any existing configurations are displayed in the **Configurations** table.



4. Click the **Add new...** button. The **New Configuration** page appears.



5. Enter the **Configuration name**.
6. Select the system you are synchronizing with AccuWork.
7. Click the **Create** button. The **New AccuRev Connection** dialog box appears.

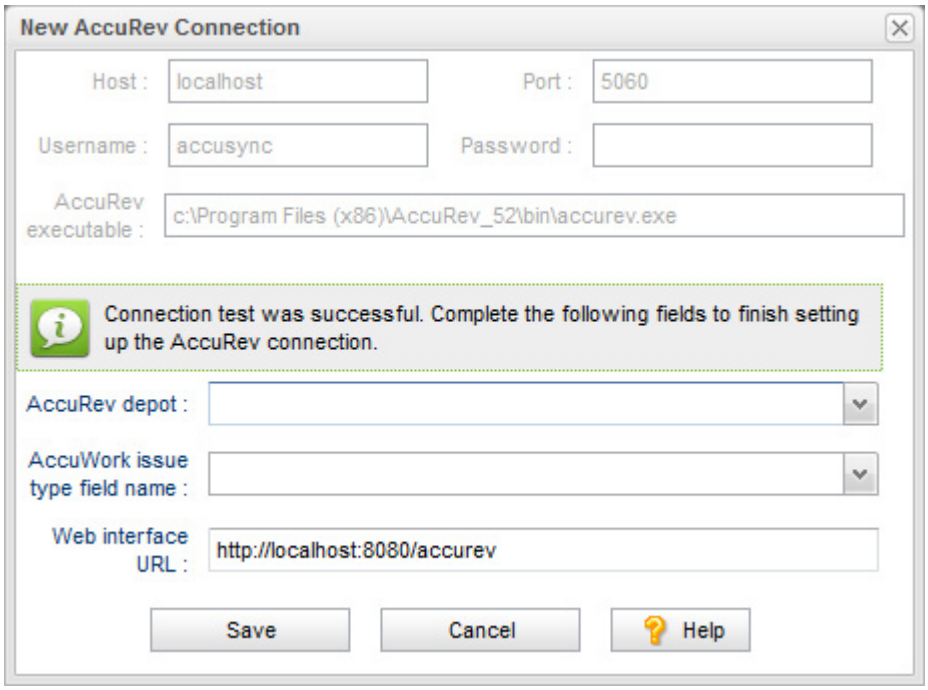


8. Specify the values required to connect to AccuWork. Note the following:

Host	The name of the machine hosting the AccuRev Server. `localhost`, for example.
Port	The port used to connect to AccuRev.

Username	The name of the AccuSync user. See *Create the AccuSync User*.
Password	The password associated AccuSync user.
AccuRev executable	The full path of the AccuRev executable (`accurev.exe`). This is typically in the \bin directory where you installed AccuRev.

9. Click the **Test Connection** button. When the connection succeeds, a new panel appears on the **New AccuRev Connection** dialog box that allows you to specify the AccuRev depot whose issues you want to synchronize with your ITS projects.



10. Complete the remaining fields as follows:

AccuRev depot	The name of the AccuRev depot whose issue records you want to synchronize with your issue tracking system (ITS).

Note: This field appears only after you test the connection.

Tip: When you select a depot, a default value appears in the **AccuWork Issue Type Field Name** field.

AccuWork issue type field name	AccuWork issue type field name The internal name of the field that displays the issue type (defect, task, and so on) on the **AccuWork Issue Edit Form**. Unless you have changed the name in the AccuWork schema, the name of this field is type.

Note: This field appears only after you test the connection.

Web interface	The URL for the machine hosting the AccuRev Web Interface. For example: `http://localhost:8080/accurev/`.

Note: This field appears only after you test the connection.

11. Click **Save**. The **New Connection** dialog box appears. You use this dialog box to specify connection settings for your ITS.

Note: Fields on the **Edit Connection** dialog box vary slightly based on ITS.

12. Specify the values required to connect to your ITS. See *New ITS Connection Dialog Box* if you need help with this step.
13. Click the **Test Connection** button. When the connection succeeds, new panels appear on the **New Connection** dialog box. Fields on this panel vary slightly based on your ITS.

Note: For JIRA users: If the connection to JIRA does not succeed, make sure that the JIRA plugin for AccuSync was installed and that JIRA has been configured to accept remote API calls. See *Configure JIRA for AccuSync* for more information.

Note: For Rally Users: You cannot select a Task project without also selecting the corresponding Defect or Story project.

14. Click **Save**. AccuSync displays a message indicating that the configuration was created successfully.
15. Click **OK** to clear the message. The new configuration appears in the **Configurations** table on the **AccuSync Management Console** main page.

Once you have successfully created connections to AccuWork and your ITS, and identified the AccuRev depot and ITS projects whose issues you want to synchronize, you can create mapping definitions as described in the following section.

Mapping Definitions

A mapping definition is a collection of settings that describes how AccuSync synchronizes AccuWork and ITS issues. Examples of mapping definition settings include:

Issue type	You create a mapping definition for each issue type you want to synchronize. You might create one mapping definition for defects and another for tasks, for example.
Field mappings	You use field mappings to specify the AccuWork issue fields and ITS issue fields whose data you want to synchronize. For example, you might want to synchronize the content of the AccuWork issue **Assigned To field** with the content of the **Owner** field in your ITS. Depending on the allowed values for a given field, and whether those values are the same on both systems, you also might need to create a mapping group. See *Mapping Groups* for more information.
Transformers	AccuSync uses transformers to convert values in one system to different values in the other. For example, valid user names in Rally systems are email addresses, `jdoe@accurev.com`, for example. AccuRev usernames do not take this form, so AccuSync provides a transformer that strips the `@domain_name` suffix from Rally user names when synchronizing Rally artifacts with AccuWork issues, and vice versa. AccuSync includes several predefined transformers, and you can create custom transformers using a Java project installed with AccuSync. See *Transformers* for more information.
Synchronization type override	The synchronization type determines whether AccuSync performs a two-way or one-way synchronization. By default, AccuSync uses the synchronization type specified for the synchronization pattern that the mapping definition is associated with. If you want, you can override the synchronization type for individual field mappings. See *Synchronization Types* for more information.
Filters	Filters provide a way for you to control which issues, or types of issues, are synchronized. For example you might create a filter that does not synchronize issues filed against a specific subsystem, or issues submitted by a specific user. You can define filters for both AccuWork and your ITS. See *Creating a Mapping Definition* Filter for more information.

Base Mapping Definitions

A *base mapping definition* is a mapping definition that contains a set of field mappings that are common to other mapping definitions. You can use a base mapping definition to speed the mapping definition process by reusing it as the foundation for more specialized mapping definitions, saving you the time and effort of manually redefining the same field mappings for each mapping definition you create.

For example, if your defect and story issues share a number of fields in common (issue number, short description, and comments, for example), you could create a base mapping definition called `shared` that specified those field mappings. You could then create the defect mapping definition and base it on the `shared` mapping definition. The defect mapping definition would inherit issue number, short description, and comments field mappings. Then, you could add to the defect mapping definition additional field mappings that are relevant only to defect issues, such as `severity`, for example.

You create a base mapping definition as you would any other mapping definition. See *Creating a Mapping Definition* for more information.

Required Field Mappings: Key and Link

In order to synchronize AccuWork data with data in your ITS, AccuSync needs to be able to locate an issue record in one system and match it with (or create it in) the corresponding record in the other system. It does this using unique IDs, keys that identify issue records in each system. Unique IDs are also used to specify URLs, links that allow users of one system to access issues in the other.

Each mapping definition must be associated with key and link field mappings:

- The key mapping lets you specify the AccuRev and ITS fields that store the unique ID that identifies each issue record.
- The link mapping lets you specify the AccuRev and ITS fields that store the URL used to access an issue in AccuRev or your ITS.

There are two ways to include required field mappings with each mapping definition:

- You can create a base mapping definition that includes required key and link field mappings, and use it as the foundation for all other mapping definitions you create. All values defined for a base mapping definition are inherited by any mapping definition that uses it. See *Base Mapping Definitions* for more information.
- You can create required key and link field mappings individually for each mapping definition. For example, if you create separate mapping definitions for defects and stories, you could specify the key and link mappings for both defect and story mapping definitions.

Regardless of which approach you choose, you always create required field mappings as part of the mapping definition. An abbreviated description of that process is described here. For more details, see *Creating a Mapping Definition*.

Other Field Mappings Required for IBM Rational ClearQuest, HP ALM, JIRA, and BMC Remedy

In addition to key and link field mappings, you must create additional field mappings to satisfy requirements for valid issue records in IBM Rational ClearQuest, HP ALM, JIRA, and BMC Remedy. See *Creating a Field Mapping* for more information.

Creating Required Key and Link Field Mappings

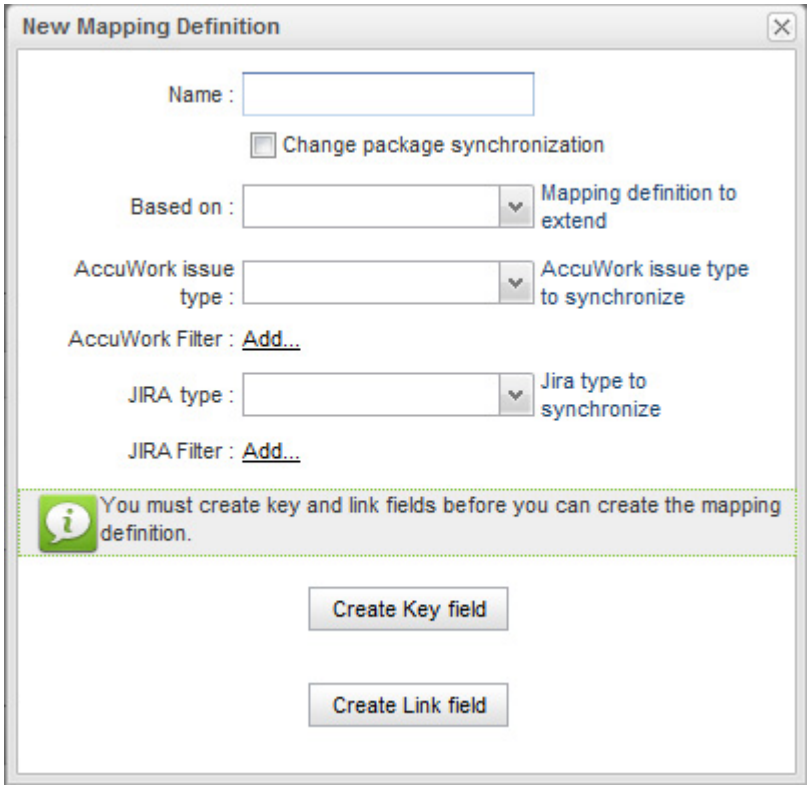
The values for the key and link fields are based on fields you added to the AccuWork schema. See *Set Up the AccuWork Schema* more information. Your ITS schema must also have been modified to store these values. If you are using JIRA, these changes are made for you by the JIRA plugin for AccuSync. See *Configure JIRA for AccuSync* for more information. If you are using Rally or HP ALM, see *Add AccuWork Fields to Your ITS Schema*.

To create required key and link field mappings for a mapping definition:

1. Go to the **AccuSync Management Console** main page.

   Tip: Clicking the AccuSync logo at the top of any page takes you to the main page.

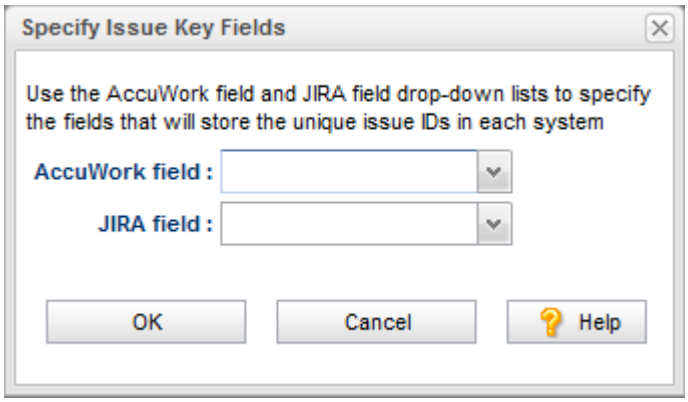
2. Click the **Edit Configuration** button . The **Configuration** page appears.
3. Above the **Mapping Definitions** table, click the **Add new...** button. The **New Mapping Definition** dialog box appears. The dialog box for JIRA is shown here. The dialog box for other ITSs contain the same fields.



4. In the **Name** field, enter a name for the mapping definition.

   Tip: If you are creating required field mappings as part of a base mapping definition, give it a name such as basic, common, or shared.

5. Click the **Create Key field** button. The **Specify Issue Key Fields** dialog box appears. The dialog box for JIRA is shown here. The dialog box for other ITSs contain the same fields.

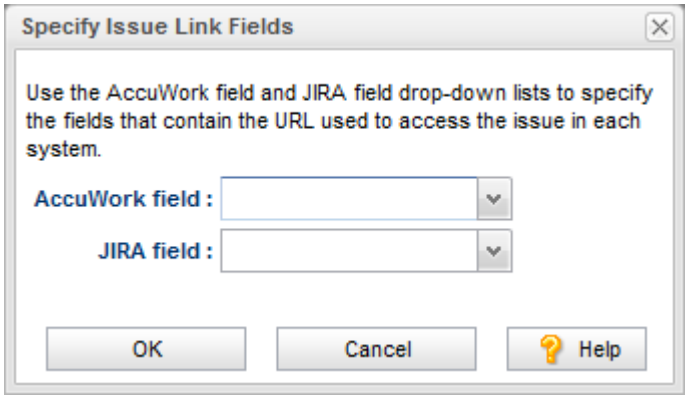


6. In the **AccuWork field** and **<ITS_name> field** fields, choose the schema values for the unique ID that represents the issue record on each system.

Tip: If you are using the default AccuWork schema installed with AccuSync, you can use the following mapping:

AccuWork Field	ITS Field
ClearQuest: `clearQuestKey` HP ALM: `hpKey` JIRA: `jiraKey` Rally: `rallyID` Remedy: `remedyKey`	`AccuWorkKey`

7. Click **OK**.
8. On the **New Mapping Definition** dialog box, click the **Create Link field** button. The **Specify Issue Link Fields** dialog box appears. The dialog box for JIRA is shown here. The dialog box for other ITSs contain the same fields.



9. In the **AccuWork field** and **<ITS_name> field** fields, choose the schema values for the URLs that will be used to access the issue record on each system.

Tip: If you are using the default AccuWork schema installed with AccuSync, you can use the following mapping:

AccuWork Field	<ITS_name> field
ClearQuest: `clearQuestLink` HP ALM: `hpLink` JIRA: `jiraIssueLink` Rally: `rallyIssueLink` Remedy: `remedyLink`	`AccuWorkIssueLink`

10. Click **OK**.
11. Specify other values of the mapping definition as needed. See *Creating a Mapping Definition*.

Creating a Mapping Definition

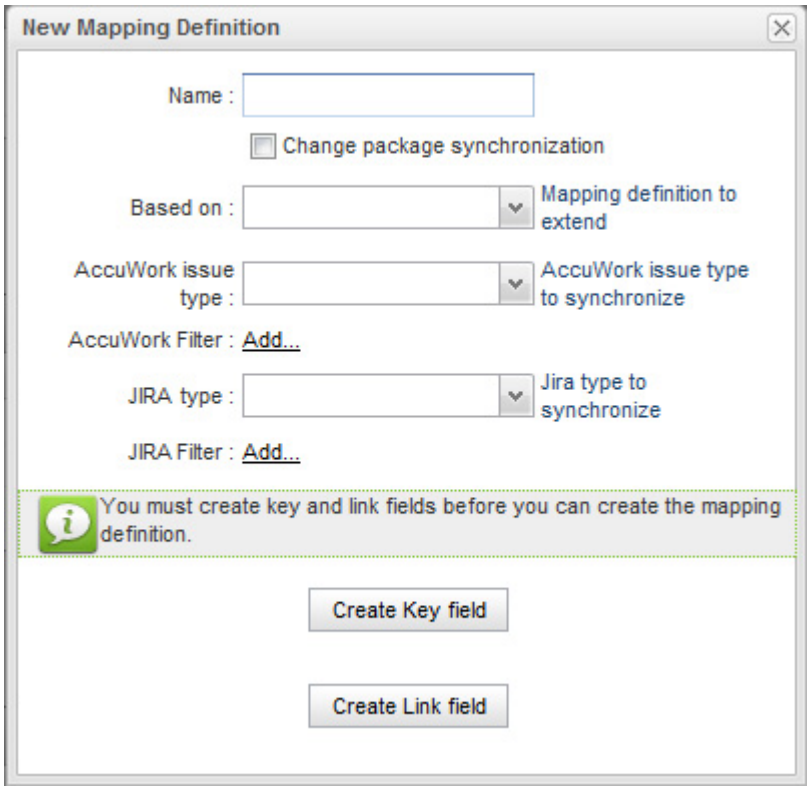
Use the following procedure to create a mapping definition.

Tip: You can create a new mapping definition by copying an existing one. See *Copying a Mapping Definition* for more information.

1. Go to the **AccuSync Management Console** main page.

Tip: Clicking the AccuSync logo at the top of any page takes you to the main page.

2. Click the **Edit Configuration** button . The **Configuration** page appears.
3. Above the **Mapping Definitions** table, click the **Add new...** button. The *New Mapping Definition Dialog Box* appears. The dialog box for JIRA is shown here. The dialog box for other ITSs contain the same fields.



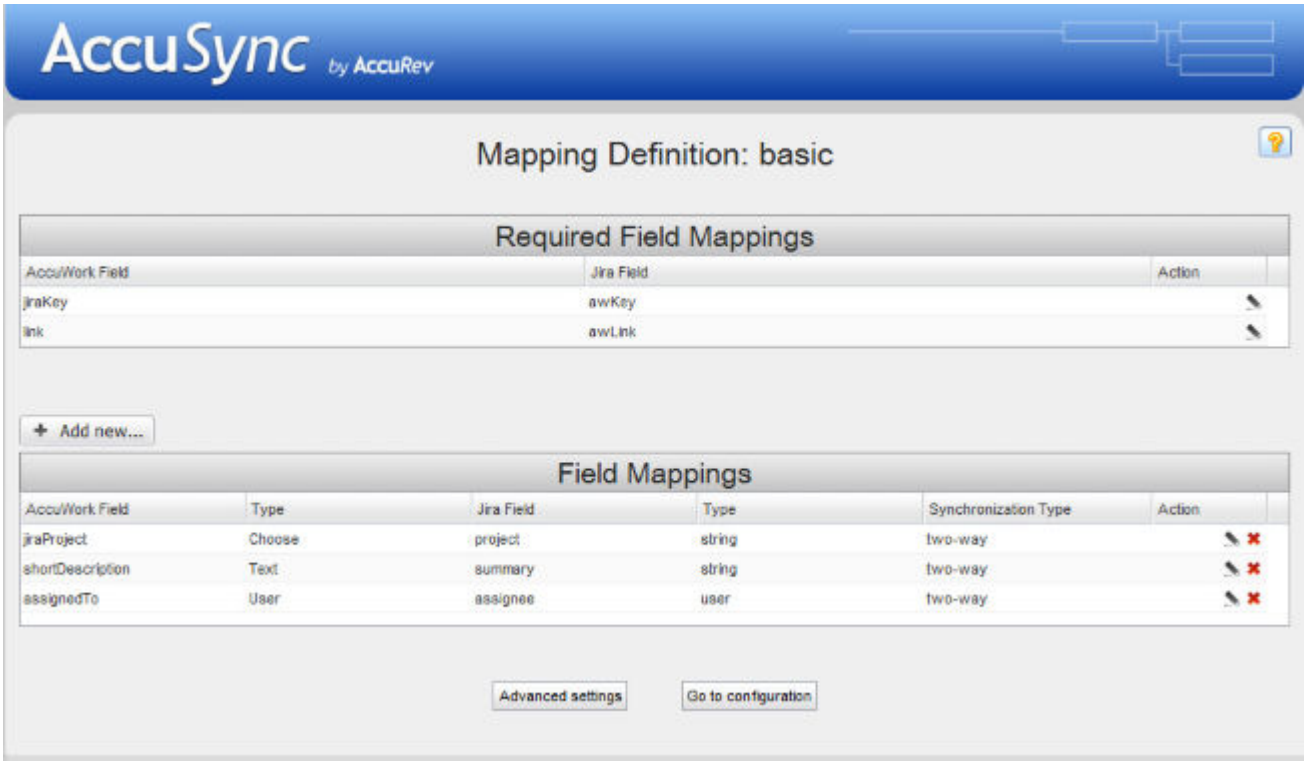
4. In the **Name** field, enter a name for the mapping definition.

   Tip: Consider naming the mapping definition for the issue type for which it is being created, `story` or `defect`, for example. If you are creating a base mapping definition that will be used with multiple mapping definition types, give it a name such as `basic`, `common`, or `shared`.

5. If this mapping definition will be used to synchronize change package information, select the **Change package synchronization** field.

   Note: Change package synchronization is always one-way, from AccuWork to your ITS. Because of this, you should always create the mapping definition for the AccuWork issue type (defect or enhancement, for example) before creating the corresponding mapping definition for the change package. Doing so ensures that your ITS has an issue record to which AccuSync can write the change package information from the corresponding AccuWork issue.

6. Optionally, in the **Based on** field, choose the mapping definition on which you are basing the mapping definition you are creating. If you specify a base mapping definition, the current mapping definition inherits all base mapping definition field mappings.
7. In the **AccuWork type** and **ITS type** fields, choose the issue types that will be synchronized using this mapping definition.
8. Optionally add filters for AccuWork and ITS issues. See *Creating a Filter* for more information.
9. If this mapping definition is not inheriting required key and link fields from a base mapping definition, you must specify them. See *Creating Required Key and Link Field Mappings* for more information.
10. Click **Save**. The **Mapping Definition** page appears for the mapping definition you just created.



The **Required Field Mappings** table displays the key and link required field mappings if they are defined for the mapping definition. (Otherwise, a message indicates that they are inherited from a base mapping definition). The **Field Mappings** table is empty, unless this mapping definition inherited field mappings from a base mapping definition, as shown in the preceding illustration.

Once you have created the mapping definition you can specify the individual field mapping pairs you want to include in it. See *Field Mappings* for more information.

Copying a Mapping Definition

You can copy an existing mapping definition. The copy feature can help speed the AccuSync configuration process as it allows you to easily reuse the field mappings and other settings associated with a mapping definition.

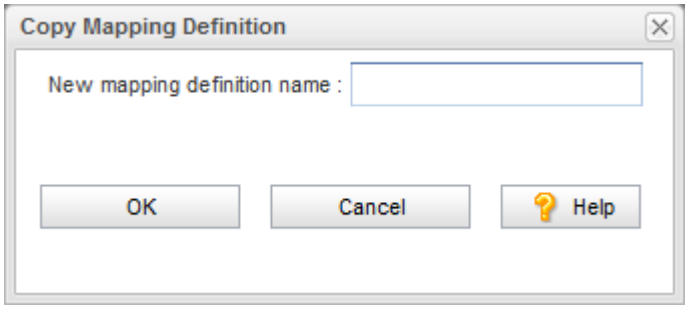
Note: You cannot copy a mapping definition if the synchronization pattern that uses it is running. See *Stopping Configurations and Synchronization Patterns* for more information.

1. Go to the **AccuSync Management Console** main page.

   Tip: Clicking the AccuSync logo at the top of any page takes you to the main page.

2. Click the **Edit Configuration** button . The **Configuration** page appears.

3. In the **Mapping Definitions** table, click the **Copy** button for the mapping definition you want to copy. The **Copy Mapping Definition** dialog box appears:



4. Enter a new name for the mapping definition and click **OK**. The new mapping definition appears in the **Mapping Definitions** table.
5. Click the **Edit Mapping Definition** button for the new mapping definition and make any necessary changes.

Mapping Definition Filter

A mapping definition filter is a set of user-defined conditions that allows AccuSync to select the issue records you want to synchronize (or those that you want to omit from synchronization). For example, you might decide to create a filter to exclude from synchronization any issue submitted by a particular user, or to include in synchronization only those issues associated with a specific project. You can create a filter for AccuWork issues, ITS issues, or both.

Tip: See *Considerations for Using Filters with HP ALM* for additional information about creating mapping definitions filters to work with HP ALM.

Examples

The following are a few examples of simple filters:

Include only issues whose current state is Submitted	`DefectState == "Submitted"`
Retrieve only new issues submitted by user jhasler	`status == "New"` `submittedBy == "jhasler"`
Exclude all records that were submitted by users oarmstrong or hrondo	`Owner != "oarmstrong"` `Owner != "hrondo"`
Exclude all issues that are associated with ChildProject1 or ChildProject2	`Project != "ChildProject1"` `Project != "ChildProject2"`

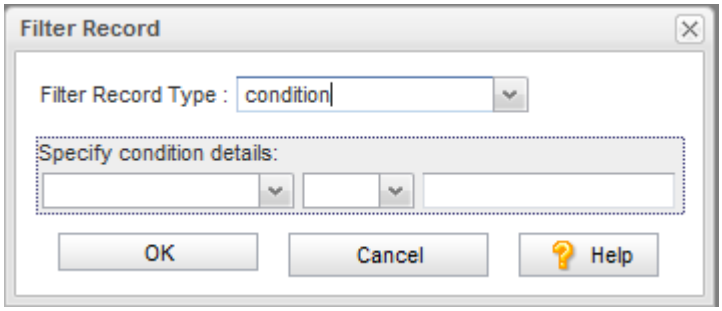
Note: Rally only: The use of a filter is very helpful for specifying which Rally projects to exclude or include when Rally has nested projects.

The AccuSync filter editor is similar to the **AccuWork Query Editor**. See your AccuRev documentation for more information.

Creating a Filter

You can create a filter at the same time you define the mapping definition, or you can add a filter to an existing mapping definition.

1. On the **New Mapping Definition** dialog box (or **Edit Mapping Definition** dialog box, if you are working with an existing mapping definition), click the **Add...** button for the **AccuWork Filter** or **ITS Filter Field**, as appropriate.
2. Click the **Add filter** button. The **Filter Record** dialog box appears. You use this dialog box to construct the conditions and clauses that define your filter.



3. In the **Filter Record Type** field, choose condition or the `AND` or `OR` clause you want to create.
   - If you chose condition, go to Step 6.
   - If you chose `AND` or `OR` clause, click **OK**.
   - The clause appears in the **Filter editor**. Go to Step 4.
4. Click the **New** button associated with the clause you just added. The **Filter Record** dialog box appears again.
5. Make sure the **File Record Type** field is set to `condition`.
6. In the **Specify Condition Details** fields, construct the condition.

   ```
   field name, condition, value
   ```

   For example:

   ```
   status = new
   ```
7. Click **OK**. The condition appears in the **AccuWork Filter** dialog box.
8. To add another clause or condition, go to Step 4. In Step 5, specify the clause or condition, as needed.
9. When you are done, click **Save**.

Considerations for Using Filters with HP ALM

AccuSync implements HP ALM filters using the filter services provided by the `HP ALM REST API`. HP ALM filter services support the functionality summarized below.

Logical `AND` operator	Supported between the same and different fields.
Logical `OR` operator	Supported between the same fields only. Logical `OR` operators created between different fields are converted to `AND` operators.
Nested queries	Not supported.
<, >, <>, <=, >=	Supported.

For additional information, refer to the `HP ALM REST API` documentation.

Field Mappings

Field mappings associate a field in an AccuWork issue with a field in an ITS issue: **Name** with **Name**, **Description** with **Description**, and so on. During synchronization, the value of a field in one system replaces the value of the corresponding field in the other system depending on the synchronization type specified. See *Overview* for a simple illustration of this process.

Required Field Mappings

In addition to key and link field mappings, which are used to associate issue records in AccuWork and your ITS, IBM Rational ClearQuest, HP ALM, JIRA, and BMC Remedy have several fields that are required in order to create issue records in their system. At a minimum, you must create field mappings for these required fields to ensure that issue records created in your ITS during synchronization are valid.

Tip: Create required field mappings as part of your basic mapping definition. This way, you only have to specify them once. See *Base Mapping Definitions* for more information on this topic.

ClearQuest: Required Field Mappings

AccuWork Field	AccuWork Type	ClearQuest Field	ClearQuest Type
assignedTo	User	**Owner**	reference
description	Text	**Description**	multilineString
project	Text	**project**	string
securityPolicy	Text	**SecurityPolicy**	reference
shortDescription	Text	**Headline**	string
state	Choose	**State**	string

HP ALM: Required Field Mappings

AccuWork Field	AccuWork Type	HP ALM Field	HP ALM Type
summary	Text	**Summary**	String
reporter	User	**Detected By**	User List
date submitted	Timestamp	**Detected on Date**	Date
severity	Choose	**Severity**	Lookup List

JIRA: Required Field Mappings

AccuWork Field	AccuWork Type	JIRA Field	JIRA Type
summary	Text	**summary**	string
description	Text	**description**	string
assignee	User	**assignee**	user
reporter	User	**reporter**	user
priority	Choose	**priority**	string
jiraProject	Choose	**project**	string
status	Choose	**status**	string

BMC Remedy: Required Field Mappings

Field mappings required by BMC Remedy can be customized and will vary based on application type. Consult your BMC Remedy administrator for the fields required for your implementation, and then create at least those mappings in your BMC Remedy configuration.

Mapping Groups

In most cases, simply mapping one field to another provides AccuSync with all the information it needs to synchronize the fields' values. The issue description you enter in AccuWork can be added, as is, to the issue's description in your ITS during synchronization, for example.

In some cases, however, your systems might use different values for the same field. Imagine a **Severity** field, for example. In AccuWork, this field might use values of `A`, `B`, and `C` to describe an issue's severity. The same field in your ITS, however, might use values of `Critical`, `High`, and `Moderate`. In cases such as this, you need to define a mapping group to provide AccuSync with the information it needs to synchronize fields that use different values (`A=Critical`, `B=High`, and `C=Moderate`, for example).

Using a Mapping Group in a Field Mapping

You choose the mapping group you want to use for a field mapping at the time you create the field mapping. For this reason, you must create the mapping group before you create the field mapping itself. See *Creating a Mapping Group* for more information.

Note: Mapping groups are created at the Configuration level and can be used by the field mappings of any mapping definition defined for the configuration.

Synchronization Types Inherited from Synchronization Pattern

Field mappings inherit the synchronization type (two-way or one-way) from the synchronization pattern associated with their mapping definition. If you want, you can override the synchronization type for individual field mappings. You might want to specify one-way synchronization for a particular field mapping and use two-way synchronization for the remaining field mappings in the mapping definition, for example. See *Synchronization Types* for more information.

Transformers

Transformers are bidirectional AccuSync utilities that convert values when synchronizing fields in one system with fields in the other. Transformers perform these conversions using predefined settings, except in the case of the *Special Value Transformer*, which uses the mapping group you specify. AccuSync includes several predefined transformers. You can also create custom transformers.

Predefined Transformers for All ITSs

AccuSync includes these predefined transformers for all supported ITSs:

AccuWork Change Package Data to String

Adds new lines to change package information to make the data more legible. For example, the this Transformer converts this change package information:

```
[id=3, type=text, element=/f1/s.txt, version=2/4, basisVersion=3/2] [id=4,
type=text, element=/f1/r.txt, version=2/2, basisVersion=3/2] [id=5, type=text,
element=/f1/newItem.txt, version=2/2, basisVersion=3/3] [id=6, type=text,
element=/
f1/123, version=2/1, basisVersion=3/2] [id=9, type=text, element=/f1/1234,
version=2/1, basisVersion=3/1] [id=10, type=text, element=/f1/df, version=2/3,
basisVersion=0/0] [id=11, type=text, element=/f1/123213123, version=2/1,
basisVersion=0/0]
```

to this:

```
[id=3, type=text, element=/f1/s.txt, version=2/4, basisVersion=3/2]
[id=4, type=text, element=/f1/r.txt, version=2/2, basisVersion=3/2]
[id=5, type=text, element=/f1/newItem.txt, version=2/2, basisVersion=3/3]
[id=6, type=text, element=/f1/123, version=2/1, basisVersion=3/2]
[id=9, type=text, element=/f1/1234, version=2/1, basisVersion=3/1]
[id=10, type=text, element=/f1/df, version=2/3, basisVersion=0/0]
[id=11, type=text, element=/f1/123213123, version=2/1, basisVersion=0/0]
```

AccuWork Change Package Promote Data to String

Adds new lines to change package promote information to make the data more legible. See the description of **AccuWork Change Package Data to String Transformer** for an example.

Special Values

Uses the mapping group you specify to convert the value of a field in one system to an appropriate value in the other system. See *Mapping Groups*.

ClearQuest, HP ALM, BMC Remedy

No special transformers are required.

JIRA: Predefined Transformers

AccuSync includes these predefined transformers for JIRA:

AccuWork Change Package Data to JIRA Custom Field	Displays change package information in a JIRA custom field as HTML. Information includes element ID, file type, path, and actual and basis version numbers.
AccuWork Change Package Promote Data to JIRA Custom Field	Displays change package promote information in a JIRA custom field as HTML. Information includes transaction ID, date, user, type, element ID, path, and virtual and real versions, and comments.
JIRA User to AccuWork User	Uses the email suffix specified in the JIRA connection combined with the AccuRev user name to create the email name required for JIRA users. See *Creating the AccuWork and ITS Connections* for more information. A mapping group, if specified, can be used to synchronize fields that take user names when the users were created with different names on the two systems (`oarmstrong` on one and `owen.armstrong` on the other, for example). See *Mapping Groups* for more information.
Special JIRA Values	Uses the mapping group you specify to convert the value of a field in AccuWork to an appropriate value for a JIRA custom field. See *Mapping Groups*.

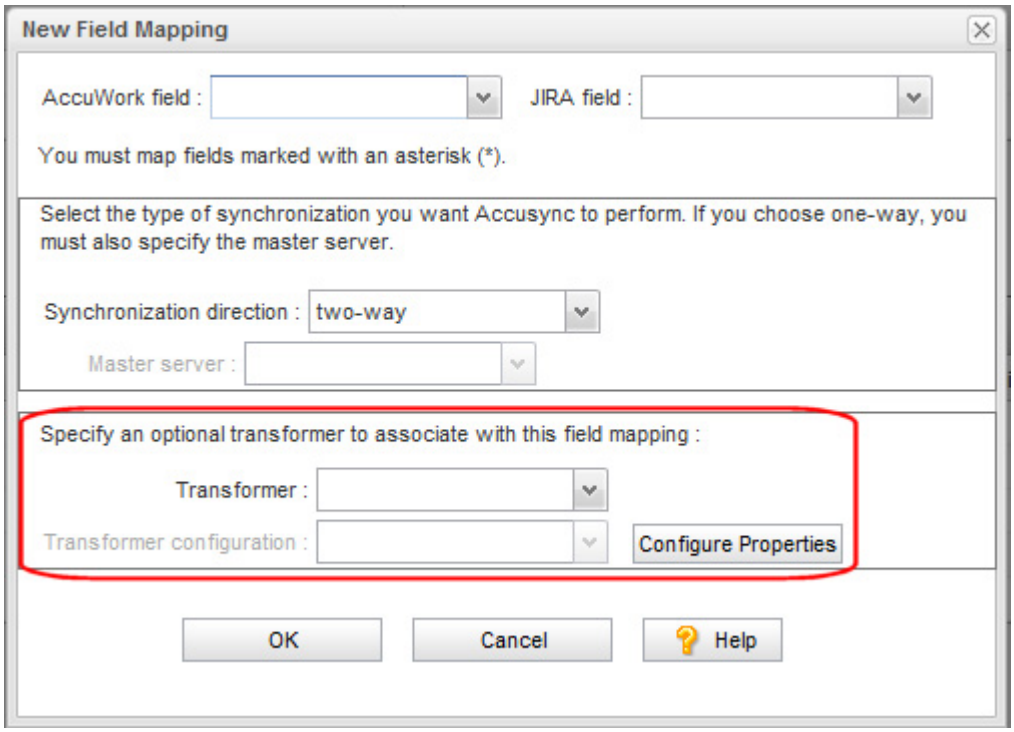
Rally: Predefined Transformers

AccuSync includes these predefined transformers for Rally:

Rally Discussion to AccuWork Comments (Text) Transformer	Retains any formatting used in Rally Discussion and AccuWork Comments fields.
Rally Username to AccuWork Username Mapper	For Rally to AccuWork synchronizations, strips the email suffix (specified as part of the Rally connection) from Rally usernames so they can be added to AccuWork. For AccuWork to Rally synchronizations, the email suffix is added to the username before the name is added to Rally. For example, if `@accurev.com` is specified as the email suffix, when a Rally issue with the username `hrondo@accurev.com` is synchronized with AccuRev, the AccuWork issue is given the user `hrondo`. See *Creating the AccuWork and ITS Connections* for more information on specifying the email suffix.  **Note:** You can use a mapping group with this transformer to override its default behavior. You might need to do this if the same user was defined using different usernames on the systems you are synchronizing (`jhasler` on one, and `haslerj` on the other, for example). In this case, AccuSync would use the mapping group to ensure that `jhasler` was synchronized as `haslerj`, in addition to performing the usual email suffix conversion.

Using Transformers

You choose the transformer you want to use for a field mapping in the **Transformer** field. You can associate a transformer with a field mapping when you create or edit the field mapping:



Some transformers are selected automatically based on the fields you map if they are specified for your ITS. For example, if you are using JIRA and map the owner field, AccuSync automatically selects the JIRA **Username** to AccuWork **Username** transformer.

If the transformer takes an argument, you specify the argument using the **Transformer configuration** field. Clicking the **Configure Properties** button displays the **Mapping Groups** page, which allows you to create a mapping group if one does not exist already.

Creating Custom Transformers

AccuRev includes a Java project you can use to create a custom transformer, which you can use to manipulate field mapping data as your needs require. The custom transformer Java project is installed to the `userTransformersSampleProject` directory where you installed AccuSync (`c:\Program Files (x86)\AccuSync\userTransformersSampleProject\`, for example).

1. In Eclipse, import the `userTransformersSampleProject`.
2. Write the code needed for your custom transformer. The installation includes sample Java programs you can use to model your custom transformer. The programs are in `userTransformersSampleProject\src\com\accurev\its\bridge\` where you installed AccuSync.
3. Compile the code.
4. When the code compiles successfully, build the project from the command line using `build.xml`. This file is in the `userTransformersSampleProject` directory where you installed AccuSync. The build process creates a .jar file in the `userTransformersSampleProject\build` directory where you installed AccuSync.
5. Copy the .jar file to the `transformers` directory where you installed AccuSync. The custom transformer is now available and appears in the Transformer drop-down list box on the **Field Mapping** dialog box.

Creating a Mapping Group

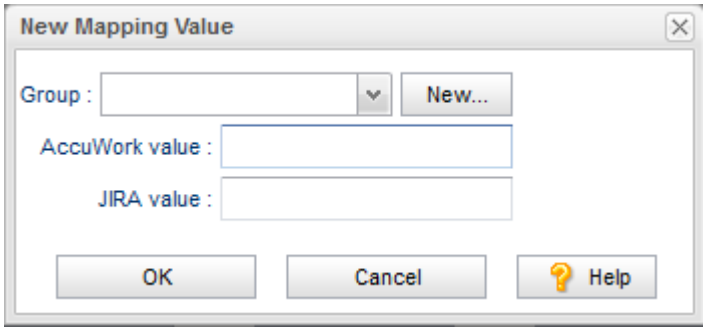
You need to create a mapping group for any field whose values differ across the systems you are synchronizing. You specify that mapping group as the argument for the Special Value Transformer when you create the field mapping for that field. See *Mapping Groups* and *Using Transformers* for more information.

To create a mapping group:

1. Go to the **AccuSync Management Console** main page.

   Tip: Clicking the AccuSync logo at the top of any page takes you to the main page.

2. Click the **Edit Configuration** button . The **Configuration** page appears.
3. Click the **Edit Admin Details** button. The **Admin Details for Configuration** page appears.
4. Click the **New Group/Value** button. The **New Mapping Value** dialog box appears. The dialog box for JIRA is shown here. The dialog box for other ITSs contains the same fields.



5. Click the **New...** button to define the new group. The **New Group** dialog box appears.
6. In the **Group Name** field, enter a name for the group you want to create and click **OK**. The **New Mapping Values** dialog box reappears. The name of the group you just created appears in the **Group** field.
7. In the **New Mapping Values** dialog box **AccuWork value** and **ITS value fields**, enter the value pair for this group. For example, a value of A in AccuWork might correspond to a value of `Critical` in your ITS.
8. Click **OK**. The new group is created. It appears in the **Mapping Groups** table with the value pair you specified.
9. To add additional value pairs, click the **Add Mapping Group Value** button in the **Action** column. The **New Mapping Value** dialog box appears.
10. Choose the group to which you want to add another value pair from the **Group** list.
11. Repeat the steps for the next value pair.
12. Click **OK**.

Creating a Field Mapping

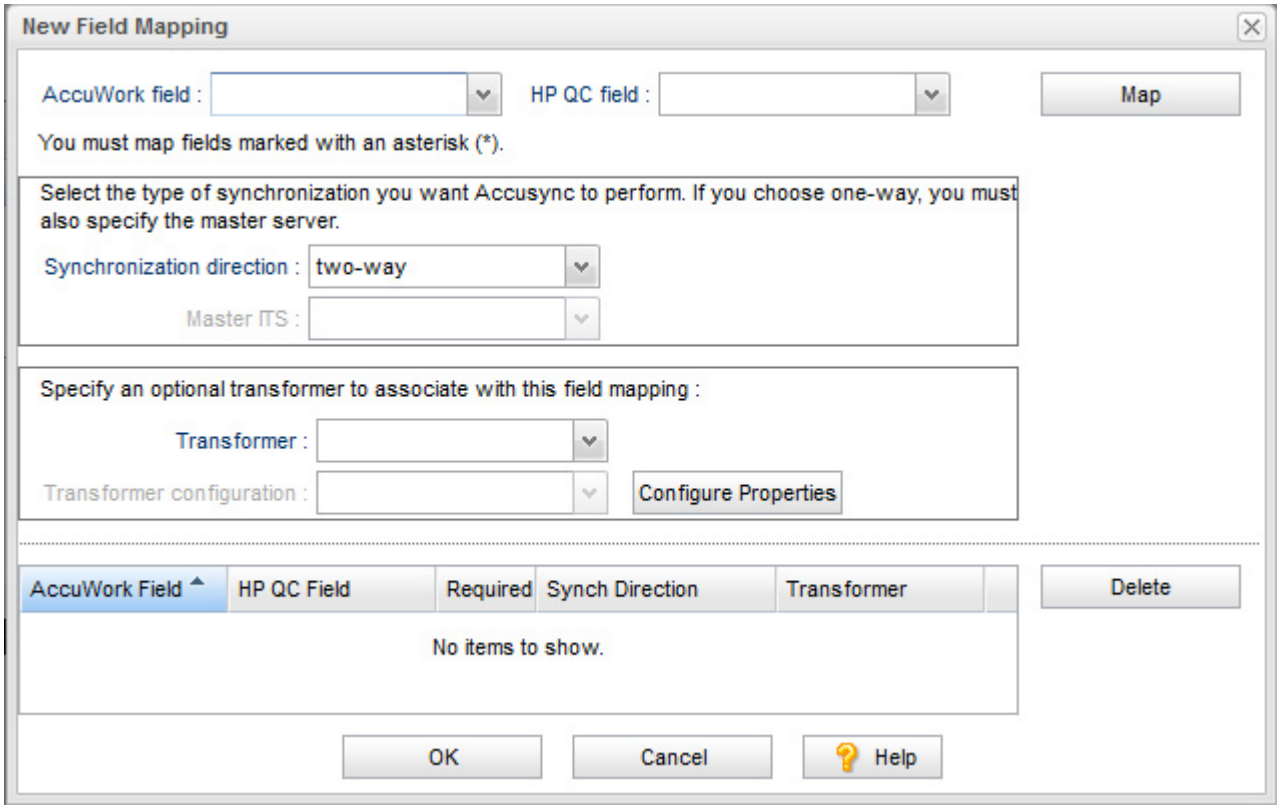
This procedure describes how to create a field mapping.

Tip: If you are mapping fields whose values differ across the systems you are synchronizing, you must first create a mapping group for that field. See *Mapping Groups* for more information.

1. Go to the **AccuSync Management Console** main page.

   Tip: Clicking the AccuSync logo at the top of any page takes you to the main page.

2. Click the **Edit Configuration** button . The **Configuration** page appears.
3. In the **Mapping Definitions** table, click the **Edit Mapping Definition** button . The **Mapping Definition** page appears.
4. In the **Field Mappings** table, click the **Add new...** button. The **New Field Mapping** dialog box appears. The dialog box for HP ALM is shown here. The dialog box for other ITSs contain the same fields.



5. In the **AccuRev field** and **<ITS_name> field**, choose the pair of fields you want to map.

   Note: Fields required for your ITS are displayed with an asterisk in the lists.

6. Optionally, change the synchronization direction.

   The default is two-way. If you choose one-way, you must also specify a value for the **Master ITS** field. The **Master ITS** is the ITS whose data you want to use to update the issue records on the other ITS.

   Note: By default, every field mapping inherits the synchronization type specified for the synchronization pattern to which the mapping definition belongs. You can override that synchronization type for an individual field mapping. See *Synchronization Types Inherited from Synchronization Pattern* for more information.

7. Optionally, choose a transformer from the **Transformer** list for this field mapping.

   Note: If you use the **Special Values Transformer**, you must specify the mapping group you want to use. To use an existing mapping group, choose one from the **Transformer configuration** list. If you have not already created the mapping group for this field mapping, click the **Configure Properties** button to open the **Mapping Groups** page. See *Transformers* for more information.

8. Click the **Map** button. The new field mapping appears in the table at the bottom of the dialog box.
9. When you are done creating field mappings, click **OK**.

The **New Field Mapping** dialog box closes and you are returned to the **Mapping Definition** page. The field mappings you created appear in the **Field Mappings** table. The table also displays type information for each of the mapped fields, as well as the synchronization type.

Once you have created the field mappings for a mapping definition, you can define the synchronization pattern that uses the mapping definition. See *Synchronization Patterns*.

Synchronization Patterns

A *synchronization pattern* is a collection of settings that describes details about a given synchronization. These include:

- The mapping definition used when performing the synchronization. A synchronization pattern is associated with only one mapping definition.
- The type of synchronization you want to perform (two-way or one-way).
- How often you want to perform the synchronization.

You can define multiple synchronization patterns for a given Configuration. You might create one synchronization pattern for defects and another for tasks, for example.

Synchronization Types

A synchronization pattern can be defined with a one-way or two-way synchronization type. This section describes the differences between these synchronization types and considerations for their use.

One-way Synchronization

In a *one-way synchronization* you specify one system, typically your ITS, as the master. Changes made to issue records on the master system are reflected on the other system, but not vice versa, when the synchronization is run. For example, if you specify your ITS as the master system, data from the ITS issue records is written to the corresponding issue records in AccuWork. Changes made to issue records in AccuWork are not reflected in your ITS and, in fact, might be overwritten with changes made in the ITS the next time the records are synchronized. If you use AccuWork as the master, change package information, including affected files, version, and basis version information, is also written to your ITS during a one-way synchronization.

The behavior of a synchronization pattern defined with a one-way synchronization type is similar to that of AccuBridge. Typical uses of a one-way synchronization pattern include:

- Overriding the two-way synchronization type specified for a synchronization pattern for individual field mappings for fields whose values you do not want updated.
- Initial population of one issue tracking system with issue records from another.

Two-way Synchronization

The *two-way synchronization* type is completely bidirectional: changes made to issue records in one system are updated on the other when the synchronization is run. The most recent data at the time of the synchronization is used to update the record on the other system. Change package information is written from AccuWork to your ITS.

Note that any validation logic or constraints that have been defined for a field in one system should also be defined in the other. For example, if you have defined the Assigned To field in your AccuWork schema as a required field, you should ensure that your ITS schema enforces that rule for whatever field you mapped to Assigned To.

Synchronization patterns are defined with a two-way synchronization type by default.

Synchronization Type Can Be Overridden

The synchronization type specified in the synchronization pattern applies to all the field mappings defined for the mapping definition associated with the synchronization pattern. If you want, you can override the

synchronization type for individual field mappings. See *Synchronization Types Inherited from Synchronization Pattern* for more information.

Creating a Synchronization Pattern

1. Go to the **AccuSync Management Console** main page.

   Tip: Clicking the AccuSync logo at the top of any page takes you to the main page.

2. Click the **Edit Configuration** button . The **Configuration** page appears.
3. In the **Sync Patterns** table, click the **Add new...** button. The *New Sync Pattern Dialog Box* appears.
4. In the **Sync pattern name** field, enter a name for the synchronization pattern.

   Tip: Consider using an intuitive name for the synchronization pattern. For example, if you are creating a synchronization pattern to synchronize defect issue types, you might name the synchronization pattern `defects`.

5. In the **Mapping Definition** to use field, choose the name of the mapping definition you want to use with this synchronization pattern.
6. In the **Synchronization** field, choose the:

   Type The type of synchronization you want to perform. By default, AccuSync performs a two-way synchronization. See *Synchronization Types* for more information.

   Frequency How often (in minutes) you want to perform the synchronization. A value of 1, for example, means AccuSync performs the synchronization every minute.

7. Click **Save**. The synchronization pattern appears in the **Sync Pattern** table on the **Configuration** page.

See Running an *AccuSync Configuration* and *Running a Synchronization Pattern* to learn more about how to run synchronizations.

Configuration Reference

This sections contains the mapping definitions, field mappings, and synchronization patterns included for the supported ITSs.

BMC Remedy Configuration Reference

This sections summarizes the mapping definitions, field mappings, and synchronization patterns included in the default configuration for BMC Remedy ITSM (BMC Remedy).

Mapping Definitions Summary

The following table summarizes the mapping definitions included in the default configuration. Details for individual mapping definitions follow this table.

If you create a new AccuSync Configuration (as opposed to using the default configuration), you need to create one mapping definition for each type of issue (defect, enhancement, and so on) you want to synchronize. Separate mapping definitions must be created to manage change package information for each type.

The basic mapping definition is optional. however, if you choose not to create it, all of the field mappings it defines must be created manually for every mapping definition. See *Base Mapping Definitions* for more information.

Note: You can name these mapping definitions as you choose, but if you change them, make sure you do so throughout your Configuration.

Important: It is highly recommended, that AccuSync bridge user's credentials such as AccuWork users' and other ITS users' credentials are not used for other operations like creating or modifying issues in individual ITS applications such as AccuWork, JIRA, HP ALM, ClearQuest and so on.

Mapping Definition Name	Inherits this Mapping Definition	AccuWork Issue Type	BMC Remedy Issue Type
Basic	--	--	--
Incidents	*Basic*	`incident`	`incident`

Basic Mapping Definition

Required Field Mappings

AccuWork Field	BMC Remedy Field
remedyKey	AccuWorkKey
remedyLink	AccuWorkIssueLink

Field Mappings

AccuWork Field	Type	BMC Remedy Field	Type	Synchronization Type
AssignedGroup	Text	Assigned Group	CharacterField	two-way

AccuWork Field	Type	BMC Remedy Field	Type	Synchronization Type
AssignedSupport Company	Text	Assigned Support Company	CharacterField	two-way
AssignedSupport Organization	Text	Assigned Support Organization	CharacterField	two-way
assignedTo	User	Assigned To	CharacterField	two-way
ClientSensitivity	Choose	Client Sensitivity	SelectionField	two-way
Company	Choose	Company	SelectionField	two-way
ContactCompany	Text	Contact_Company	CharacterField	two-way
dateSubmitted	Timestamp	Detected on Date	DateTimeField	two-way
description	Text	Description	CharacterField	two-way
FirstName	Text	First Name	CharacterField	two-way
Impact	Choose	Impact	SelectionField	two-way
LastName	Text	Last_Name	CharacterField	two-way
PhoneNumber	Text	Phone_Number	CharacterField	two-way
priority	Choose	Priority	SelectionField	two-way
productName	Choose	Product Name	CharacterField	two-way
ReportedSource	Choose	Reported Source	SelectionField	two-way
Service_Type	Choose	Service Type	SelectionField	two-way
shortDescription	Text	Summary	CharacterField	two-way
status	Choose	Status	SelectionField	two-way
submittedBy	User	Submitter	CharacterField	two-way
Urgency	Choose	Urgency	SelectionField	two-way
VIP	Text	VIP	SelectionField	two-way

Incidents Mapping Definition

AccuWork Issue Type	BMC Remedy Issue Type
incident	Incident

Required Field Mappings	Inherited from *Basic*.
Field Mappings	Inherited from *Basic*.

Synchronization Patterns Summary

The following table summarizes the synchronization patterns included in the default configuration.

If you create a new AccuSync Configuration (as opposed to using the default configuration), you need to create one synchronization pattern for each type of issue you want AccuSync to synchronize. Separate synchronization patterns must be created to manage change package information for each type.

Note: You can name these synchronization patterns as you choose.

This Synchronization Pattern	Uses This Mapping Definition	Type	Frequency
SyncIncidents	*Incidents*	two-way	1 minute

HP ALM Configuration Reference

This section summarizes the mapping definitions, field mappings, and synchronization patterns included in the default configuration for HP ALM.

Mapping Definitions Summary

The following table summarizes the mapping definitions included in the default configuration. Details for individual mapping definitions follow this table.

If you create a new AccuSync Configuration (as opposed to using the default configuration), you need to create one mapping definition for each type of issue (defect, enhancement, and so on) you want to synchronize. Separate mapping definitions must be created to manage change package information for each type.

The basic mapping definition is optional. however, if you choose not to create it, all of the field mappings it defines must be created manually for every mapping definition. See *Base Mapping Definitions* for more information.

Note: You can name these mapping definitions as you choose, but if you change them, make sure you do so throughout your Configuration.

Important: It is highly recommended, that AccuSync bridge user's credentials such as AccuWork users' and other ITS users' credentials are not used for other operations like creating or modifying issues in individual ITS applications such as AccuWork, JIRA, HP ALM, ClearQuest and so on.

Mapping Definition Name	Inherits this Mapping Definition	AccuWork Issue Type	HP ALM Issue Type
basic	--	--	--
basicCpk	--	--	--
DefectMapping	*basic*	defect	Defect
DefectCPKMapping	*basicCpk*	defect	Defect

basic

Required Field Mappings

AccuWork Field	HP ALM Field
hpKey	AccuWorkKey
hpLink	AccuWorkIssueLink

Field Mappings

AccuWork Field	Type	HP ALM Field	Type	Synchronization Type
assignedTo	User	Assigned To	User List	two-way

AccuWork Field	Type	HP ALM Field	Type	Synchronization Type
comments	Text	Comments	Memo	two-way
dateClosed	Timestamp	Closing Date	Date	two-way
dateSubmitted	Timestamp	Detected on Date	Date	two-way
description	Text	Description	Memo	two-way
priority	Choose	Priority	Lookup List	two-way
severity	Choose	Severity	Lookup List	two-way
shortDescription	Text	Summary	String	two-way
status	Choose	Status	Lookup List	two-way
submittedBy	User	Detected By	User List	two-way

basicCpk

Required Field Mappings

AccuWork Field	HP ALM Field
hpKey	AccuWorkKey
hpLink	AccuWorkIssueLink

Field Mappings

AccuWork Field	Type	HP ALM Field	Type	Synchronization Type
cpkData	changes	AccuWorkChangePackage	hp_cpk_info (Custom Field)	one-way (AccuWork master)
cpkPromoteData	transactions	AccuWorkChangePackage History	hp_cpk_promote_data (Custom Field)	one-way (AccuWork master)

DefectMapping

AccuWork Issue Type	HP ALM Issue Type
defect	Defect

Required Field Mappings Inherited from *basic*.

Field Mappings Inherited from *basic*.

DefectCPKMapping

AccuWork Issue Type	HP ALM Issue Type
defect	Defect

Required Field Mappings Inherited from *basicCpk*.

Field Mappings Inherited from *basicCpk*.

Synchronization Patterns Summary

The following table summarizes the synchronization patterns included in the default configuration.

If you create a new AccuSync Configuration (as opposed to using the default configuration), you need to create one synchronization pattern for each type of issue you want AccuSync to synchronize. Separate synchronization patterns must be created to manage change package information for each type.

Note: You can name these synchronization patterns as you choose.

This Synchronization Pattern	Uses This Mapping Definition	Type	Frequency
SyncDefects	*DefectMapping*	two-way	1 minute
SyncDefectsCPK	*DefectCPKMapping*	one-way (AccuWork master)	1 minute

JIRA Configuration Reference

This chapter summarizes the mapping definitions, field mappings, and synchronization patterns included in the default configuration for JIRA.

Mapping Definitions Summary

The following table summarizes the mapping definitions included in the default configuration. Details for individual mapping definitions follow this table.

If you create a new AccuSync Configuration (as opposed to using the default configuration), you need to create one mapping definition for each type of issue (defect, enhancement, and so on) you want to synchronize. Separate mapping definitions must be created to manage change package information for each type.

The basic mapping definition is optional. however, if you choose not to create it, all of the field mappings it defines must be created manually for every mapping definition. See *Base Mapping Definitions* for more information.

Note: You can name these mapping definitions as you choose, but if you change them, make sure you do so throughout your Configuration.

Important: It is highly recommended, that AccuSync bridge user's credentials such as AccuWork users' and other ITS users' credentials are not used for other operations like creating or modifying issues in individual ITS applications such as AccuWork, JIRA, HP ALM, ClearQuest and so on.

Mapping Definition Name	Inherits this Mapping Definition	AccuWork Issue Type	JIRA Issue Type
basic	--	--	--
basicCpk	--	--	--
DefectMapping	*basic*	Bug	Bug
CpkDefectMapping	*basicCpk*	Bug	Bug
TaskMapping	*basic*	Sub-task	Sub-task
CpkTaskMapping	*basicCpk*	Sub-task	Sub-task

Mapping Definition Name	Inherits this Mapping Definition	AccuWork Issue Type	JIRA Issue Type
NewFeatureMapping	*basic*	New Feature	New Feature
CpkNewFeatureMapping	*basicCpk*	New Feature	New Feature
ImprovementMapping	*basic*	Improvement	Improvement
CpkImprovementMapping	*basicCpk*	Improvement	Improvement
SubTaskMapping	*basic*	Sub-task	Sub-task
CpkSubTaskMapping	*basicCpk*	Sub-task	Sub-task

basic

Required Field Mappings

AccuWork Field	JIRA Field
jiraKey	AccuWorkKey
jiraIssuelink	AccuWorkIssueLink

Field Mappings

AccuWork Field	Type	JIRA Field	Type	Synchronization Type
summary	Text	summary	string	two-way
description	Text	description	string	two-way
assignee	User	assignee	user	two-way
reporter	User	reporter	user	two-way
priority	Choose	priority	string	two-way
jiraProject	Choose	project	string	two-way
status	Choose	status	string	two-way

Epic Feature

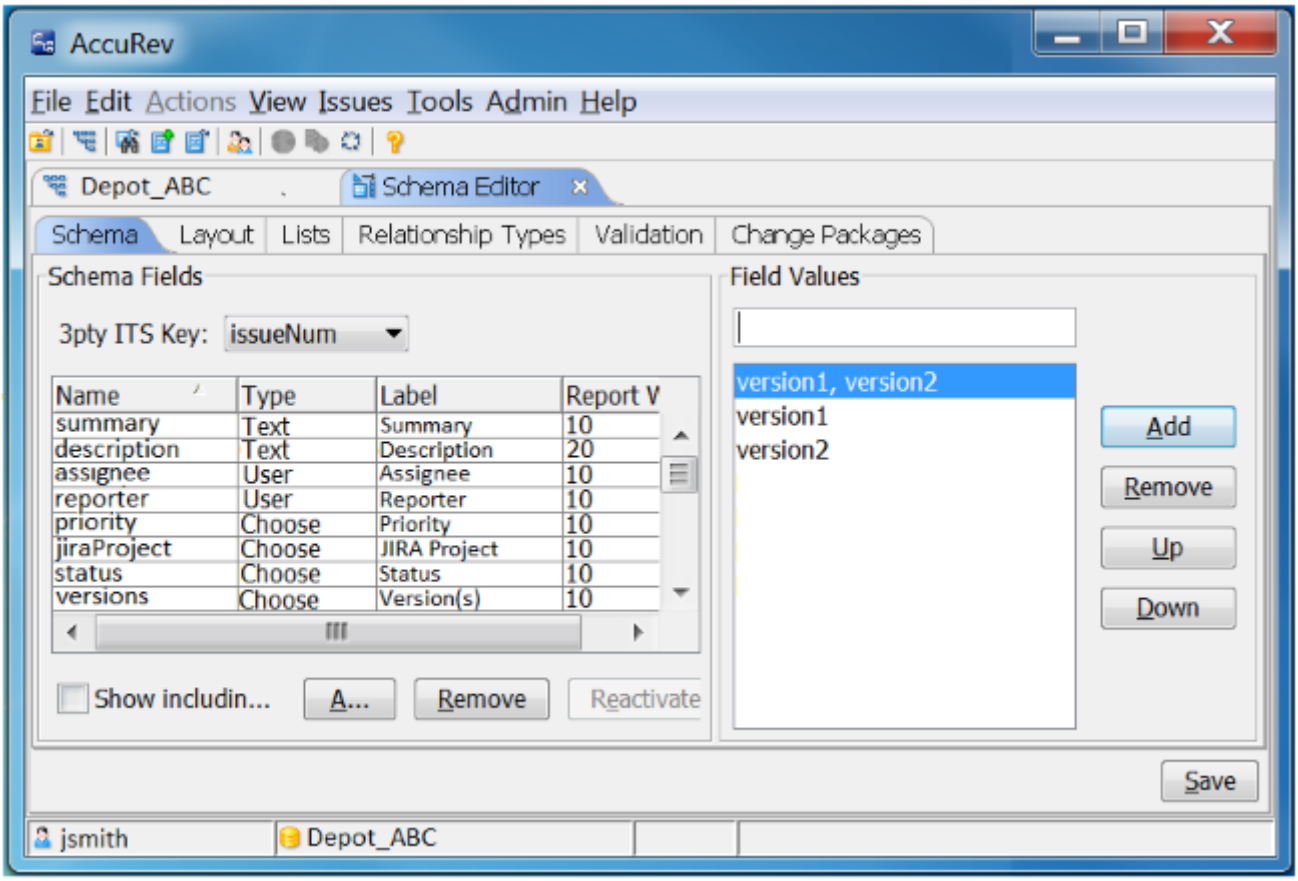
In JIRA, you can create `Epic` and `IssueType` fields. While creating or editing `Issue Type`, you can associate an `Epic Link` to the `Issue Type`. This establishes a relationship between the `Epic` and the `Issue Type`. To synchronize the same linked `Epic` and `Issue Type` from JIRA to AccuWork, you must define the `tracking issue` field as listed in the table below, in the basic **Field Mapping** page.

AccuWork Field	Type	JIRA Field	Type	Synchronization Type
trackingissue	Relationship	Epic Link	string	two-way

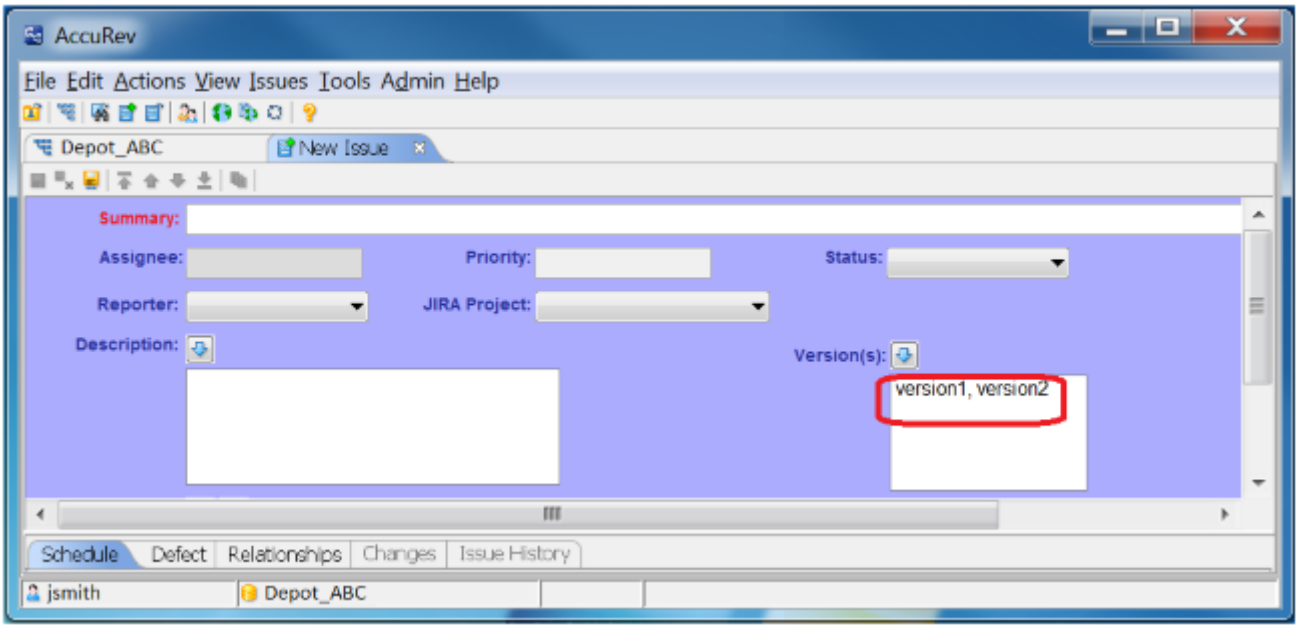
JIRA Versions Field

The **versions** field in JIRA is not included in the default mapping definition, but can be set up in your mapping definitions. See *Creating Mapping Definitions* for more information.

The **versions** field can be defined as `Choose` or `Text` type. If the version is a combination of more than one version, the combination should be set up as comma separated in the AccuWork schema as shown in the following example.



If the field is a text field and the version is a combination of more than one version, the end user should be instructed to enter the combined versions as comma separated. For example, when entering the combined versions in AccuWork, the user types: `version1`, `version2` as shown in the following example.



If the user enters a version in AccuWork that does not exist in JIRA, that version will be created in JIRA when the issues are synchronized.

If the user enters a version in JIRA that does not exist in AccuWork, that version will not be shown when the issue is displayed in AccuWork. However, that version will appear in the .xml file (if the `accurev` XML command is used to *get* the issue).

If the user fails to separate combined versions with a comma (`version1 version2`), a version will be created in JIRA with that name (`version1 version2`).

basicCpk

Required Field Mappings

AccuWork Field	JIRA Field
jiraKey	AccuWorkKey
jiraIssuelink	AccuWorkIssueLink

Field Mappings

AccuWork Field	Type	JIRA Field	Type	Synchronization Type
cpkData	changes	AccuWorkChangePackage	String (Custom Field)	one-way (AccuWork master)
cpkPromoteData	transactions	AccuWorkChangePackageHistory	String (Custom Field)	one-way (AccuWork master)

DefectMapping

AccuWork Issue Type	JIRA Issue Type
Bug	Bug

Required Field Mappings Inherited from *basic*.

Field Mappings Inherited from *basic*.

CpkDefectMapping

AccuWork Issue Type	JIRA Issue Type
Bug	Bug

Required Field Mappings Inherited from *basicCpk*.

Field Mappings Inherited from *basicCpk*.

TaskMapping

AccuWork Issue Type	JIRA Issue Type
Task	Task

Required Field Mappings Inherited from *basic*.

Field Mappings Inherited from *basic*.

CpkTaskMapping

AccuWork Issue Type	JIRA Issue Type
Task	Task

Required Field Mappings Inherited from *basicCpk*.

Field Mappings Inherited from *basicCpk*.

NewFeatureMapping

AccuWork Issue Type	JIRA Issue Type
New Feature	New Feature

Required Field Mappings Inherited from *basic*.

Field Mappings Inherited from *basic*.

CpkNewFeatureMapping

AccuWork Issue Type	JIRA Issue Type
New Feature	New Feature

Required Field Mappings Inherited from *basicCpk*.

Field Mappings Inherited from *basicCpk*.

ImprovementMapping

AccuWork Issue Type	JIRA Issue Type
Improvement	Improvement

Required Field Mappings Inherited from *basic*.

Field Mappings Inherited from *basic*.

CpkImprovementMapping

AccuWork Issue Type	JIRA Issue Type
Improvement	Improvement

Required Field Mappings Inherited from *basicCpk*.

Field Mappings Inherited from *basicCpk*.

SubTaskMapping

AccuWork Issue Type	JIRA Issue Type
Sub-task	Sub-task

Required Field Mappings

Inherited from *basic*.

Field Mappings

AccuWork Field	Type	JIRA Field	Type	Synchronization Type
subTask	Relationship	parent	string	two-way

SubTask unlinking

In both AccuWork and JIRA, issues can have sub issues. This relationship is often used to breakdown large units of work into sub-issues. Using JIRA terminology, a task is the top most item and a task can have one or more sub-tasks. Just as it is possible to link a tub-task to a task, it is now possible, to unlink these tasks. This is called *SubTask Unlinking*. The sub-task unlinking performed in JIRA is visible to AccuSync post-synchronization, but a sub-task unlinking performed in AccuSync by deleting a sub-task is not updated in JIRA post synchronization.

Users wanting to retain the current sub-task unlinking intact, do not have to make any changes in their existing configuration.

SubTask Unlinking Methods

Sub-task unlinking can be obtained in JIRA in two ways:

- Convert the sub-task to another issue type.
- Move the issue from one parent to another.

Ensuring SubTask Unlinking is reflected in AccuWork post synchronization

In order to ensure that the sub-task unlinking performed in JIRA is reflected in AccuWork post synchronization, perform the following:

1. In addition to the existing configuration for sub-task mapping, add the *subTask-parent* (the table shown below) mapping in the **basic mapping** page as well.

AccuWork Field	Type	JIRA Field	Type	Synchronization Type
subTask	Relationship	parent	string	two-way

2. Once the new *subTask-parent* entry is added to the AccuSync configuration, run a synchronization of that configuration to ensure that it is working as expected.

SubTask Unlinking (deleting) in AccuWork

In AccuWork, you can delete (unlink) a sub-task by navigating to it's parent and selecting the delete option. Unlinking of a sub-task is generally not performed in AccuWork as post synchronization, the deleted sub-task still remains visible in JIRA.

CpkSubTaskMapping

AccuWork Issue Type	JIRA Issue Type
Sub-task	Sub-task

Required Field Mappings	Inherited from *basicCpk*.
Field Mappings	Inherited from *basicCpk*.

Synchronization Patterns Summary

The following table summarizes the synchronization patterns included in the default configuration.

If you create a new AccuSync Configuration (as opposed to using the default configuration), you need to create one synchronization pattern for each type of issue you want AccuSync to synchronize. Separate synchronization patterns must be created to manage change package information for each type.

Note: You can name these synchronization patterns as you choose.

This Synchronization Pattern	Uses This Mapping Definition	Type	Frequency
SyncDefects	*DefectMapping*	two-way	1 minute
SyncCpkDefects	*CpkDefectMapping*	one-way (AccuWork master)	1 minute
SyncNewFeature	*NewFeatureMapping*	two-way	1 minute
SyncCpkNewFeature	*CpkNewFeatureMapping*	one-way (AccuWork master)	1 minute
SyncTasks	*TaskMapping*	two-way	1 minute
SyncCpkTasks	*CpkTaskMapping*	one-way (AccuWork master)	1 minute
SyncImprovement	*ImprovementMapping*	two-way	1 minute
SyncCpkImprovement	*CpkImprovementMapping*	one-way (AccuWork master)	1 minute
SyncSubTasks	*SubTaskMapping*	two-way	1 minute
SyncCpkSubTasks	*CpkSubTaskMapping*	one-way (AccuWork master)	1 minute

Comment Field Synchronization Behavior

The **Comment** field is available in JIRA as well as in AccuWork. When data is added to this field in JIRA and a synchronization is performed, it is reflected in the **Comment** field of AccuWork just as an extra line of comment. Whereas if the **Comment** field in AccuWork is updated and a synchronization is performed, when viewed in JIRA, you will see the new comments appear in a new block under the old block of comments.

Example: When a user adds a comment (`Line 1`, `Line 2`) in JIRA and synchronizes it with AccuWork, the comments are visible in AccuWork in the same block. If the user adds a comment (`Line 3`) from AccuWork and synchronizes it again, in JIRA this comment is shown as (`Line 1` and `Line 2`) in the same block but `Line 3` in a new block) under the **Comment** field. This is the general behavior of the **Comment** fields post JIRA and AccuWork synchronization.

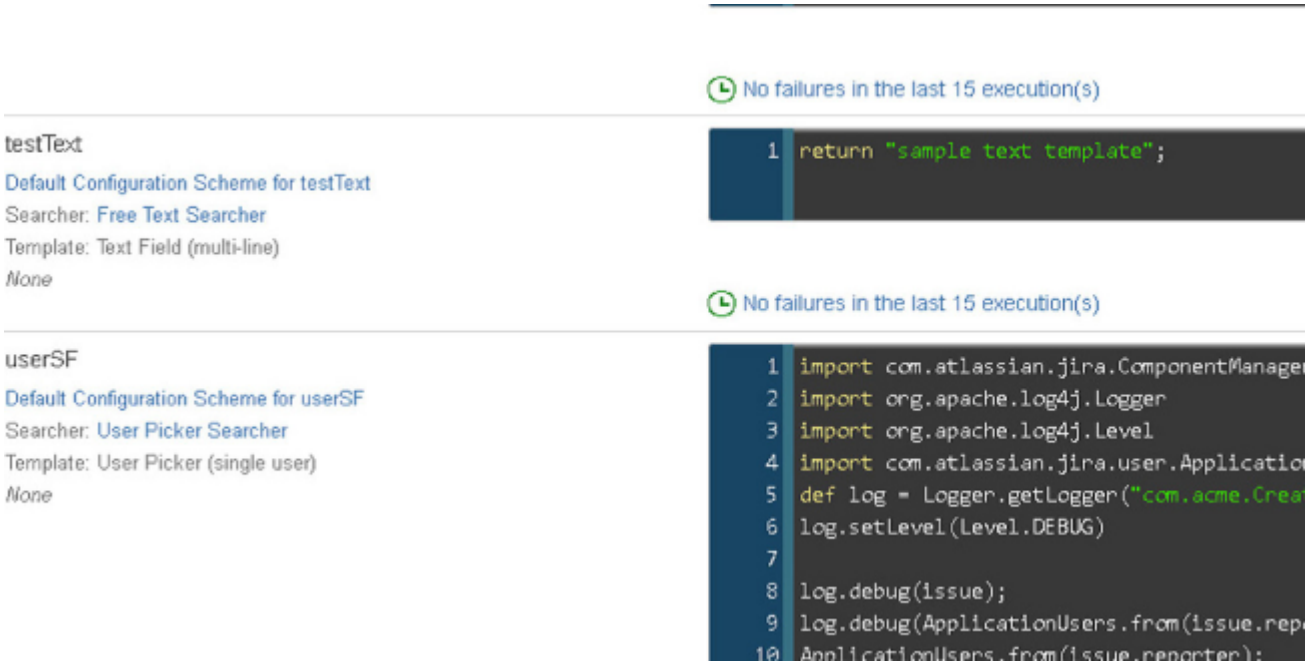
Synchronization of Scripted and Custom fields

Scripted fields (also known as *calculated* fields) can be synchronized in one direction only. Example: AccuSync can synchronize the value from JIRA to `AccuWorkKey` but the reverse action (synchronize value from AccuWork to JIRA) is not possible.

Scripted field Synchronization

To synchronize the scripted fields perform the following steps:

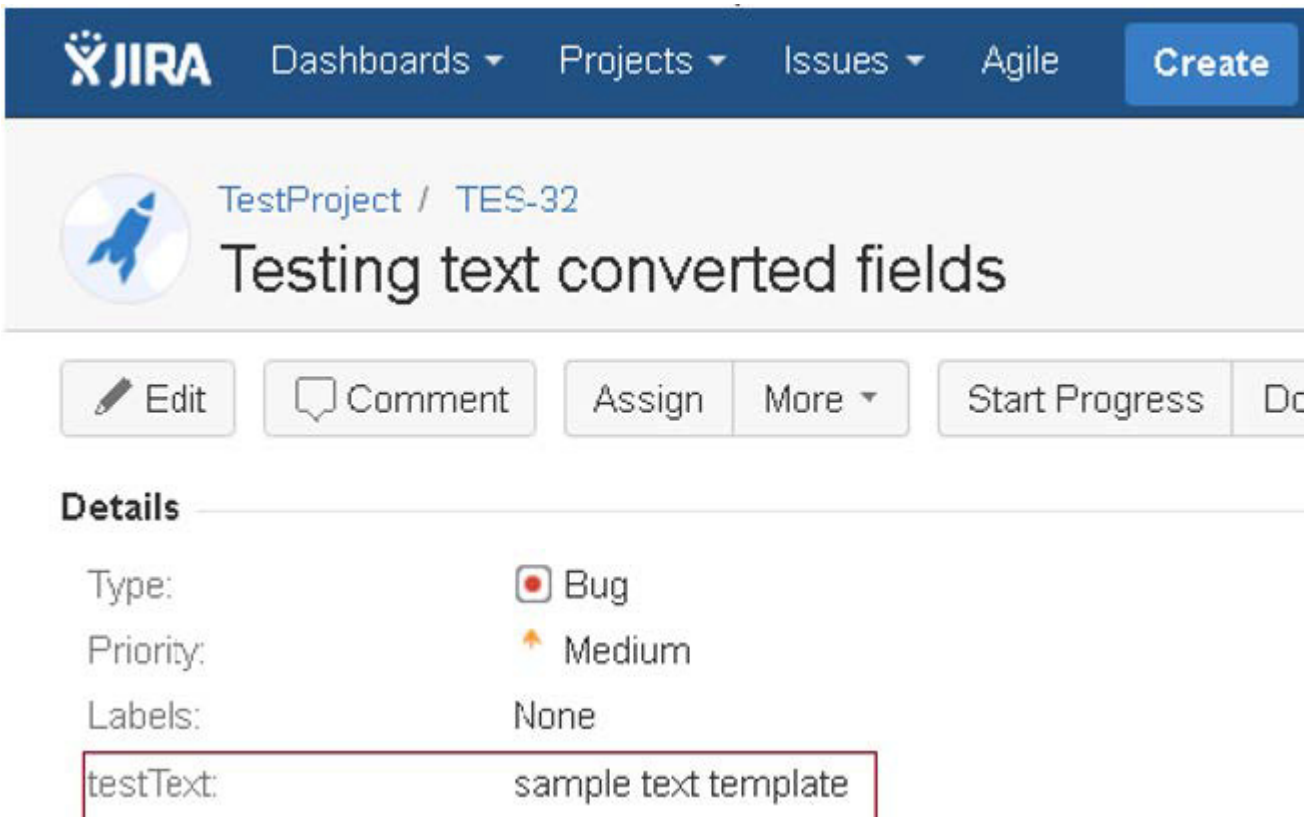
1. Select a JIRA-supported template and searcher.
2. Create the appropriate scripted field according to requirement.



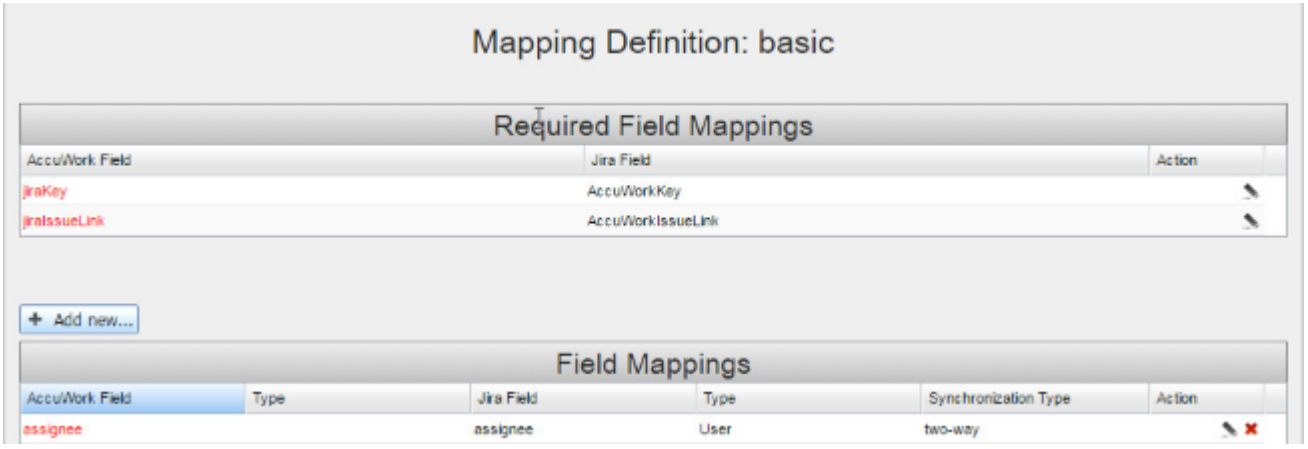
The table below lists the **Scripted** Fields supported in the current version of AccuSync.

AccuWork Field	Type	JIRA Field	Type	Synchronization Type
ScriptedFields	Text	ScriptedField1	Scripted field(Text Field multilne))	One Way (JIRA Master)
ScriptedFields	Text	ScriptedField2	Scripted field(Date Time Picker))	One Way (JIRA Master)
ScriptedFields	Text	ScriptedField3	Scripted field(Number multilne))	One Way (JIRA Master)
ScriptedFields	Text	ScriptedField4	Scripted field(Single User Picker))	One Way (JIRA Master)
ScriptedFields	Text	ScriptedField5	Scripted field(Multi User Picker))	One Way (JIRA Master)

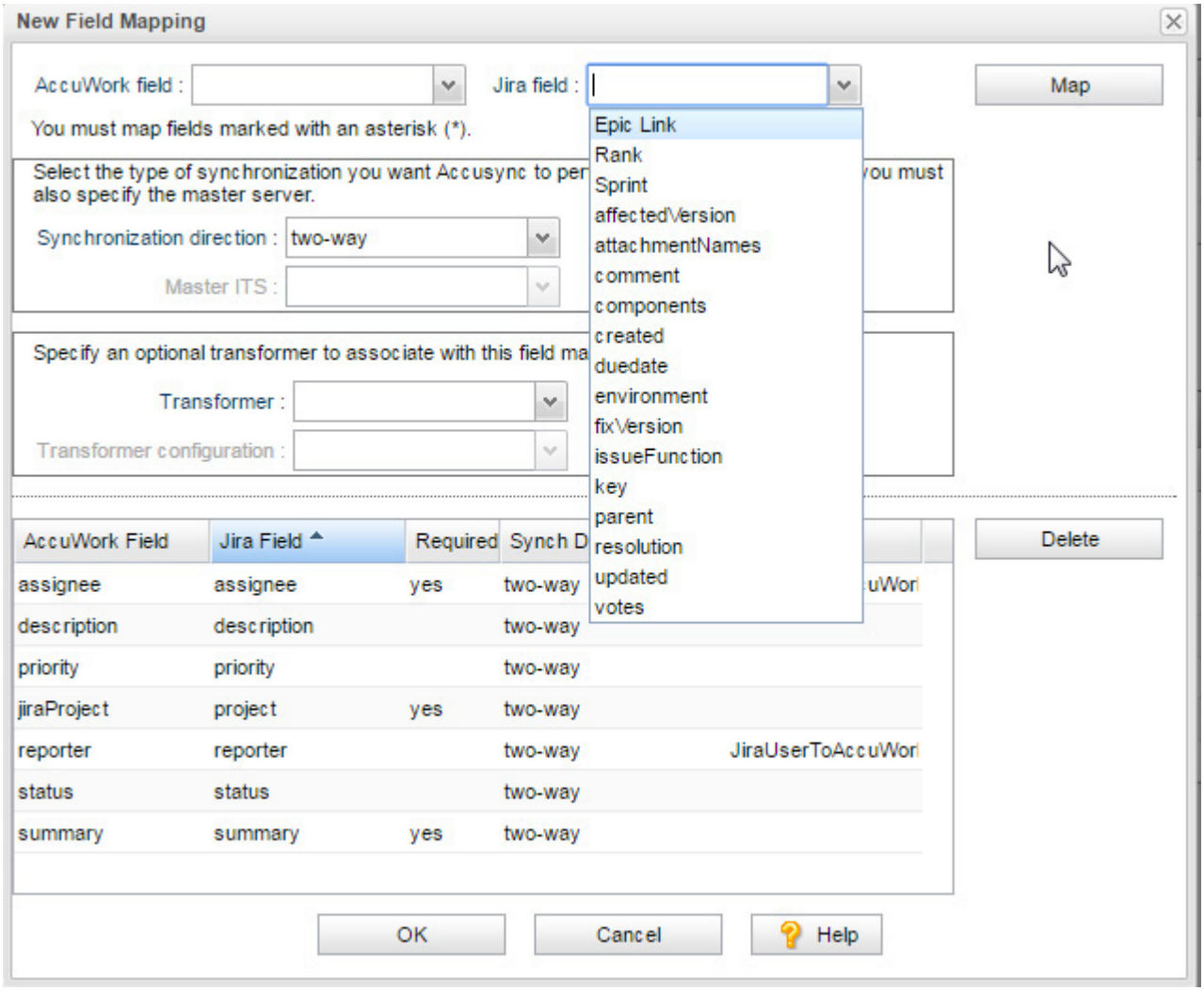
3. Navigate to **Create** button on the JIRA window to check if the scripted field is displayed. For example, `testText sample texttemplate` is displayed under the section **Details**.



4. Navigate to **AccuSync Management Console**.
5. Click the **Edit Configuration** button , the **Configuration: Default JIRA Configuration** window is displayed.
6. Navigate to **Mapping Definitions** section, click in the appropriate row. The **Mapping Definition: basic** widow is displayed.



7. Click **+ Add new..**. button. The **New Field Mapping** dialog box is displayed.



8. Enter the following values:

AccuWork Field	Select existing AccuWork field from the list or enter a new field name, which is to be mapped to the JIRA field.
JIRA Field	Select the JIRA field from the list to which the AccuWork field is to be mapped.
Synchronization Direction	Select one way or synchronization from the list.
Master ITS	Select the appropriate Issue Tracking System, for example: `JIRA`.
Transformer	Leave this field blank.
Transformer Configuration	Leave this field blank.

9. Click the **Map** button. The mapped fields are displayed below, under the headings **AccuWork Field**, **JIRA Field**, **Required Synchronization** and **Transformer**.
10. To delete a row, select a row and click the **Delete** button.
11. To confirm the mapping, click **OK**. The mapped fields are displayed in the **Field Mappings** section of **Mapping Definition: basic** window.
12. Navigate to AccuSync Management Console, click the play button  to run the synchronization.

Custom Field Synchronization

A custom field is required when a field available in JIRA (for example, **issue_number**) is not available in AccuWork. In order to synchronize data or information between JIRA and AccuWork a new field (for

example, **issue_number**) is created in AccuWork. This is done so that the field **issue_number** in JIRA can be mapped to the field **issue_number** in AccuWork. This ensures that any change made to the value of the field **issue_number** in JIRA are immediately reflected in the value of **issue_number** field in AccuWork.

The table below lists the **Custom Fields** supported in the current version of AccuSync.

AccuWork Field	Type	JIRA Field	Type	Synchronization Type
DateTimePicker	Timestamp	DateTimePicker	Date/Time(Custom Field)	two-way
DatePicker	Timestamp	Date Picker	Date (Custom Field)	two-way
SingleSelectList	Choose	SingleSelectList_SingleChoice	String(Custom Field)	two-way
SingleUserPicker	User	SingleUserPicker_SingleChoice	User	two-way
RadioButtons	Choose	RadioButtons	String(Custom Field)	two-way
SingleVersionPicker	Choose	SingleVersionPicker_SingleChoice	String(Custom Field)	two-way
NumberField	Text	NumberField	Float(Custom Field)	two-way
TextFieldSingleLine	Text	TextFieldSingleLine_TextChoice	String(Custom Field)	two-way
TextFieldMultiLine	Text	TextFieldMultiLine_TextChoice	String(Custom Field)	two-way
Labels	Text	Labels	String(Custom Field)	two-way
Checkboxes	Text	Checkboxes	String(Custom Field)	two-way
SelectListMultipleChoices	Text	SelectListMultipleChoices	String(Custom Field)	two-way
Components	Text	Components	Component	two-way
Comment	Log	Comment	String	two-way

1. Create a custom field in the AccuSync schema.

   Note: Ensure that the custom field is one of the fields listed in the table above.

2. Create the same field in JIRA.
3. Map the JIRA fields to the AccuWork fields. Follow from step 3 onwards provided in the *Scripted Field Synchronization*.

Component Fields

Synchronization of issues logged in the system takes place in between JIRA and AccuWork. On the AccuWork end, it is mapped as `Text Field` and the values are separated by commas. When sending the component field value from AccuWork, ensure that they are separated by a comma. Additionally, you must ensure that the corresponding component field value is present in JIRA.

Retrieving Missing Fields

The fields **AccuWorkIssueLink**, **AccuWorkKey**, **AccuWorkChangePackage** and **AccuWorkChangePackageHistory** are not visible after a fresh installation of JIRA.

To retrieve these fields you must perform the following tasks:

1. Launch **AccuSync Management Console** and navigate to the **Connections** tab and select `JIRA`.
2. Add JIRA details and validate the test connection.
3. As soon as the test connection is successful, refresh the **AccuSync** page several times. The fields will be visible in the **JIRA View Custom Fields** page.

Moving Issues Between JIRA Projects

AccuSync will seamlessly handle the synchronization of a JIRA Issues that are moved from one JIRA project to another. The associated AccuWork Issues will be updated accordingly. Examples:

- In JIRA: `Issue A(JiraKey-1)` is found within `Project-1`, this Issue is synchronized with `Accu-Work Depot D`.
- In JIRA: `Issue A(JiraKey-1)` is moved to `Project-2`. As a result it becomes `Issue A (JiraKey-100)`.
- If `Issue A` is synchronized to the same `Depot D`, or to a new `Depot N`, the synchronization between AccuWork and JIRA is seamless. The fields in both JIRA and AccuWork are updated to reflect the changed references to the other system.

JIRA Data Center

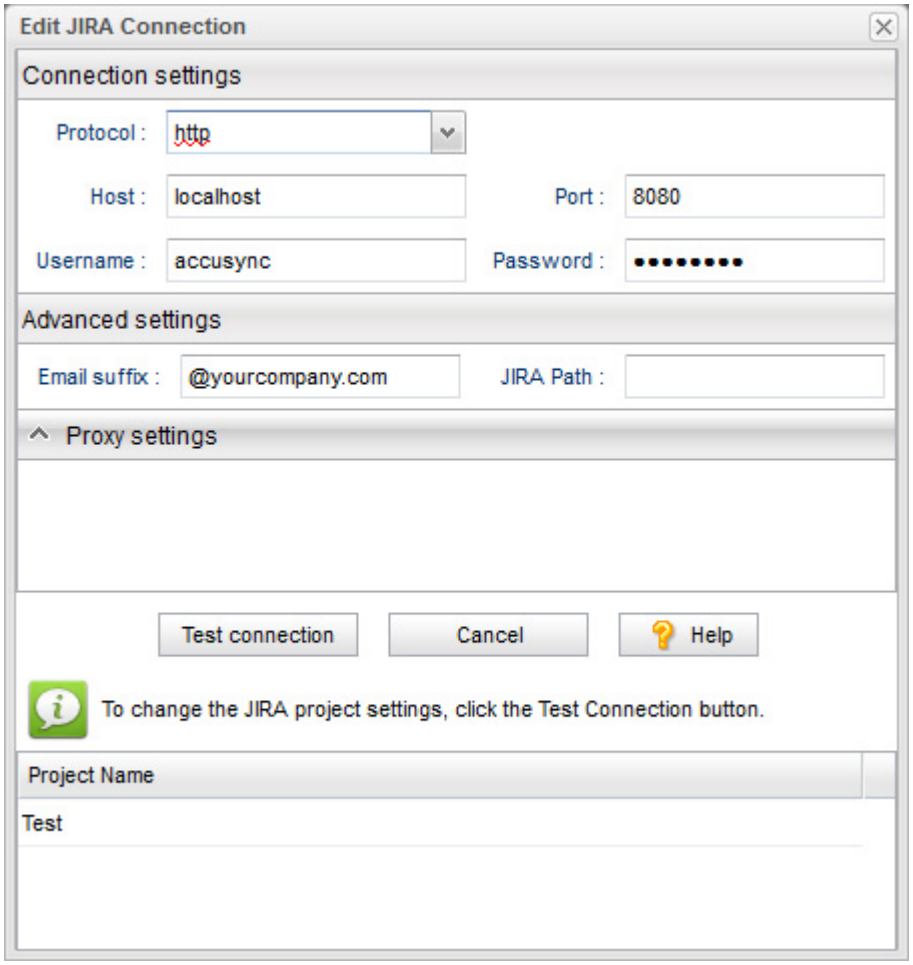
AccuSync supports JIRA server/JIRA Data Center (JDC). JDC is an enhanced feature of JIRA which uses a cluster of servers and a load balancer to achieve high availability and performance for the JIRA servers.

The plug-ins supported are:

- `AccuSyncJiraPlugin-6.jar`. For JIRA 6. Same as single server.
- `AccuSyncJiraPlugin-7.jar`. For JIRA 7. Same as single server.

To work with the JDC:

1. Install AccuSync and locate the plug-in files in the `\AccuSync\jiraPlugin folder`.For example, `C:\Program Files (x86)\AccuSync \jiraPlugin\`. See *How to Install the JIRA Plugin for AccuSync* for more information.
2. Ensure that the JIRA plugins are added in the respective **JIRA Add-ons** page and restart the AccuSync Server.
3. Edit the JIRA connection as specified in the image, see *Edit ITS Connection Dialog Box* for more information.



Rally Configuration Reference

This chapter summarizes the mapping definitions, field mappings, and synchronization patterns included in the default configuration for Rally.

Mapping Definitions Summary

The following table summarizes the mapping definitions included in the default configuration. Details for individual mapping definitions follow this table.

If you create a new AccuSync Configuration (as opposed to using the default configuration), you need to create one mapping definition for each type of issue (defect, enhancement, and so on) you want to synchronize. Separate mapping definitions must be created to manage change package information for each type.

The basic mapping definition is optional. however, if you choose not to create it, all of the field mappings it defines must be created manually for every mapping definition. See *Base Mapping Definitions* for more information.

Note: You can name these mapping definitions as you choose, but if you change them, make sure you do so throughout your Configuration.

Important: It is highly recommended, that AccuSync bridge user's credentials such as AccuWork users' and other ITS users' credentials are not used for other operations like creating or modifying issues in individual ITS applications such as AccuWork, JIRA, HP ALM, ClearQuest and so on.

Mapping Definition Name	Inherits this Mapping Definition	AccuWork Issue Type	Rally Issue Type
basic	--	--	--
basicCpk	--	--	--
DefectMapping	*basic*	defect	defect
cpkDefectMapping	*basicCpk*	defect	defect
StoryMapping	*basic*	story	Story
cpkStoryMapping	*basicCpk*	story	Story
TaskMapping	*basic*	Task	Task
CpkTaskMapping	*basicCpk*	Task	Task

basic

Required Field Mappings

AccuWork Field	Rally Field
rallyObjectID	AccuWorkKey
rallyIssueLink	AccuWorkIssueLink

Field Mappings

AccuWork Field	Type	Rally Field	Type	Synchronization Type
Name	Text	Name	STRING	two-way
Description	Text	Description	TEXT	two-way
Project	Choose	Project	Project	two-way
Workspace	Choose	Workspace	Workspace	two-way
Owner	User	Owner	user	two-way
rallyID	Text	FormattedID	STRING	two-way
Iteration	List	Iteration	Iteration	two-way
Release	List	Release	Release	two-way

basicCpk

Required Field Mappings

AccuWork Field	Rally Field
rallyID	AccuWorkKey
rallyIssuelink	AccuWorkLink

Field Mappings

AccuWork Field	Type	Rally Field	Type	Synchronization Type
cpkData	changes	ChangePackageInfo	TEXT	one-way (AccuWork master)
cpkPromoteData	transactions	CpkPromoteData	TEXT	one-way (AccuWork master)

DefectMapping

Required Field Mappings

Inherited from *basic*.

Field Mappings

AccuWork Field	Type	Rally Field	Type	Synchronization Type
DefectState	Choose	State	RATING	two-way
Priority	Choose	Priority	RATING	two-way

cpkDefectMapping

Required Field Mappings Inherited from *basicCpk*.

StoryMapping

Required Field Mappings Inherited from *basic*.

Field Mappings Inherited from *basic*.

cpkStoryMapping

Required Field Mappings Inherited from *basicCpk*.

Field Mappings Inherited from *basicCpk*.

TaskMapping

Required Field Mappings

Inherited from *basic*.

Field Mappings

AccuWork Field	Type	Rally Field	Type	Synchronization Type
State	Choose	State	STRING	two-way
subTask	Relationship	WorkProduct	WorkProduct	two-way

CpkTaskMapping

Required Field Mappings Inherited from *basicCpk*.

Field Mappings Inherited from *basicCpk*.

Synchronization Patterns Summary

The following table summarizes the synchronization patterns included in the default configuration.

If you create a new AccuSync Configuration (as opposed to using the default configuration), you need to create one synchronization pattern for each type of issue you want AccuSync to synchronize. Separate synchronization patterns must be created to manage change package information for each type.

Note: You can name these synchronization patterns as you choose.

Synchronization Pattern Name	Mapping Definition	Type	Frequency
SyncDefects	*DefectMapping*	two-way	1 minute
SyncDefectCpk	*cpkDefectMapping*	one-way (AccuWork Master)	1 minute
SyncStory	*StoryMapping*	two-way	1 minute
SyncStoryCpk	*cpkStoryMapping*	one-way (AccuWork Master)	1 minute
SyncTask	*TaskMapping*	two-way	1 minute
SyncTaskCpk	*CpkTaskMapping*	one-way (AccuWork Master)	1 minute

IBM Rational ClearQuest Configuration Reference

This chapter summarizes the mapping definitions, field mappings, and synchronization patterns included in the default configuration for IBM Rational ClearQuest.

If you want to synchronize other ClearQuest fields with AccuWork, see *ClearQuest Users*.

Mapping Definitions Summary

The following table summarizes the mapping definitions included in the default configuration. Details for individual mapping definitions follow this table.

If you create a new AccuSync Configuration (as opposed to using the default configuration), you need to create one mapping definition for each type of issue (defect, enhancement, and so on) you want to synchronize. Separate mapping definitions must be created to manage change package information for each type.

The basic mapping definition is optional. however, if you choose not to create it, all of the field mappings it defines must be created manually for every mapping definition. See *Base Mapping Definitions* for more information.

Note: You can name these mapping definitions as you choose, but if you change them, make sure you do so throughout your Configuration.

Important: It is highly recommended, that AccuSync bridge user's credentials such as AccuWork users' and other ITS users' credentials are not used for other operations like creating or modifying issues in individual ITS applications such as AccuWork, JIRA, HP ALM, ClearQuest and so on.

Mapping Definition Name	Inherits this Mapping Definition	AccuWork Issue Type	ClearQuest Issue Type
basic	--	--	--
RequestMapping	*basic*	Request	ALMRequest

Mapping Definition Name	Inherits this Mapping Definition	AccuWork Issue Type	ClearQuest Issue Type
TaskMapping	*basic*	Task	ALMTask

basic

Required Field Mappings

AccuWork Field	ClearQuest Field
cqKey	AccuWorkKey
cqLink	AccuWorkIssueLink

Field Mappings

AccuWork Field	Type	ClearQuest Field	Type	Synchronization Type
assignedTo	User	Owner	reference	two-way
description	Text	Description	multilineString	two-way
project	Text	project	string	two-way
SecurityPolicy	Text	securityPolicy	reference	two-way
shortDescription	Text	Headline	string	two-way
state	Choose	State	string	two-way

RequestMapping

Required Field Mappings

Inherited from *basic*.

Field Mappings

AccuWork Field	Type	ClearQuest Field	Type	Synchronization Type
severity	Choose	Severity	reference	two-way

TaskMapping

Required Field Mappings

Inherited from *basic*.

Field Mappings

AccuWork Field	Type	ClearQuest Field	Type	Synchronization Type
priority	Choose	Priority	reference	two-way
request	Text	Request	reference	two-way

Synchronization Patterns Summary

The following table summarizes the synchronization patterns included in the default configuration.

If you create a new AccuSync Configuration (as opposed to using the default configuration), you need to create one synchronization pattern for each type of issue you want AccuSync to synchronize. Separate synchronization patterns must be created to manage change package information for each type.

Note: You can name these synchronization patterns as you choose.

Synchronization Pattern Name	Mapping Definition	Type	Frequency
SyncRequests	*RequestMapping*	two-way	1 minute
SyncTasks	*TaskMapping*	two-way	1 minute

AccuSync Services

This section provides procedures for starting and stopping the AccuSync Service and the Apache Tomcat server for AccuSync using Microsoft Windows services and Linux processes.

AccuSync Service

This section provides procedures for starting and stopping the AccuSync Service. The AccuSync Service is typically started as part of the AccuSync installation process and continues to run until you explicitly stop it.

Starting AccuSync Service on Microsoft Windows

1. Open the **Services** window. For example: Type `services.msc` in the Microsoft Windows **Start Search** box and then press `Enter`.
2. Select `AccuSync Service`.
3. Click **Start the service**.

Tip: If you have not already done so, consider changing the **Startup Type** to `Automatic`.

Starting AccuSync Service on Linux

Click the `AccuSync_Server` shortcut on your desktop.

Note: If shortcuts are not available on your desktop, start the AccuSync Service manually by running `startup.sh` in the `/bin` directory where you installed AccuSync.

Stopping AccuSync Service on Microsoft Windows

1. Open the **Services** window. For example: Type `services.msc` in the Microsoft Windows **Start Search** box and then press `Enter`.
2. Select `AccuSync Service`.
3. Click **Stop the service**.

Stopping AccuSync Service on Linux

Run `shutdown.sh` in the `/bin` directory where you installed AccuSync.

Starting/Stoping Tomcat Server

This section provides procedures for starting and stopping the Tomcat server for AccuSync. The Tomcat server for AccuSync is typically started as part of the AccuSync installation process and continues to run until you explicitly stop it.

Starting the Tomcat Server on Microsoft Windows

1. Open the **Services** window. For example: Type `services.msc` in the Microsoft Windows **Start Search** box and then press `Enter`.
2. Select the `AccuSyncTomcat service`.
3. Click **Start the service**.

Starting the Tomcat Server on Linux

Click the `AccuSync_Tomcat` shortcut on your desktop.

Note: If shortcuts are not available on your desktop, start the Tomcat server for AccuSync manually by running `startup.sh` in the `/tomcat/bin` directory where you installed AccuSync.

Stopping the Tomcat Server on Microsoft Windows

1. Open the **Services** window. For example: Type `services.msc` in the Microsoft Windows **Start Search** box and then press `Enter`.
2. Select the `AccuSyncTomcat service`.
3. Click **Stop the service**.

Stopping the Tomcat Server on Linux

Run `shutdown.sh` in the `/tomcat/bin` directory where you installed AccuSync.

Management Console Reference

This section provides reference information for the screens and dialog boxes in the **AccuSync Management Console**.

AccuSync AccuSync Management Console

The **AccuSync Management Console** page displays existing Configurations, including default configurations for supported issue tracking systems (ITSs).

Systems	The information tracking systems that AccuSync synchronizes using this configuration.
Configuration Name	The name of the AccuSync Configuration.
Actions	The types of actions you can perform on existing mapping definitions.
Status	Indicator of the configuration status. Clicking this button displays the Status Page.

For More Information

Summary of AccuSync Actions and Status Symbols

Creating a New Configuration

Running an AccuSync Configuration

Making Changes to Configurations

Understanding Synchronization Status

Configuration Page

The **Configuration page** displays summary information for the selected configuration. It is organized using **Connections**, **Sync** Patterns, and **Mapping Definitions** tables, which are described here.

For more information, see *Making Changes to Configurations*.

Connections Table

Displays the AccuRev and information tracking system (ITS) connections defined for the current configuration.

Sync Patterns Table

Displays the synchronization patterns defined for the current configuration, including the mapping definition associated with the pattern.

Name	The synchronization pattern name.
Mapping Definition	The name of the mapping definition used by this synchronization pattern.
Action	The types of actions you can perform on existing mapping definitions.

For more information, see *Creating a Synchronization Pattern*, *Editing Synchronization Patterns*, *Running a Synchronization Pattern*, and *Understanding Synchronization Status*.

Mapping Definitions Table

Displays the mapping definitions defined for the selected configuration. The table includes the following fields:

Name	The mapping definition name.
Inherited Mapping Definition	The name of the mapping definition on which this mapping definition is based, if any.
AccuWork Issue Type	The type of AccuWork issue this mapping definition is used to synchronize.
ITS Issue Type	The type of ITS issue this mapping definition is used to synchronize.
Action	The actions you can perform on existing mapping definitions.

For more information, see *Creating a Mapping Definition*, *Copying a Mapping Definition* and *Editing Mapping Definitions*.

Mapping Definition Page

Displays required and standard field mappings for the current mapping definition. Required and standard field mappings are displayed in their own tables.

Required Field Mappings

Displays required field mappings defined for the current mapping definition.

AccuWork Field	The name of the AccuWork field mapped to the field in your ITS issue.
ITS Field	The name of the field in your ITS that is mapped to the field in AccuWork.
Action	You can edit a required field mapping.

Field Mappings

Displays standard field mappings defined for the current mapping definition.

AccuWork Field	The name of the AccuWork field mapped to the field in your ITS issue.
Type	The type of the AccuWork field as defined in the AccuWork schema.
ITS Field	The name of the field in your ITS that is mapped to the field in AccuWork.
Type	The type of the field defined in your ITS schema.
Synchronization Type	The synchronization type associated with this field mapping.
Action	You can edit or delete a standard field mapping.

For more information, see *Creating a Field Mapping*, *Editing Field Mappings*, *Creating a Mapping Definition*, *Copying a Mapping Definition*, and *Editing Mapping Definitions*.

Status Page

Displays the status for the selected configuration. The **Status** table includes the following fields:

Server Status	Displays the servers associated with the selected configuration. When you select a server, the Last transaction watermark field displays the watermark for the last transaction. You can use the **Change Watermark** button to change the watermark.

Synchronization Pattern	Displays a list of all the synchronization patterns associated with the selected configuration. When you select a synchronization pattern the **Errors** table displays the errors, if any, associated with that synchronization pattern.

Errors Table

The **Errors** table includes the following fields and controls:

Search issue number	Allows you to locate an issue directly, rather than scrolling through the **Errors** table.
Delete Error	Check box that, when selected, allows you to delete the error. When you delete an error, AccuSync evaluates the associated issue during the next synchronization.
Last Occurred	The date AccuSync last encountered this error.
Error Message	A brief description of the error AccuSync encountered when running the selected synchronization pattern.
Issue Number	The issue number that triggered the error.
Ignore Issue	Check box that, when selected, instructs AccuSync to ignore this issue the next time synchronization is run. AccuSync ignores selected issues until you clear this checkbox.

For more information, see *Setting Watermarks* and *Error Reporting*.

Admin Details for Configuration Page

The **Admin Details** page displays the mapping groups, if any, associated with the selected configuration. It also provides access to AccuSync advanced settings and settings for email notification.

Mapping Groups Table

The Mapping Groups table includes the following fields:

Group	The group name.
AccuWork	The value of the AccuWork field managed by this group.
ITS	The value of the ITS field managed by this group.
Action	The actions you can perform on a field mapping pair defined for the mapping group.

For more information, see *Creating a Mapping Group* and *Editing Mapping Groups*.

Advanced Settings

Advanced settings allow you to:

Modify network settings	AccuWork allows you to specify both the number of retries and the retry interval that AccuSync should attempt in the event of a network error. For more information, see *Changing Network Settings*.
Turn off issue key validation	AccuSync validates AccuWork and JIRA keys before synchronizing records. In some situations, such as upgrading from AccuBridge for JIRA, you might want AccuSync to skip the key validation process. For more information, see *Running the Initial Synchronization*.

Mail Settings

Mail settings allow you to enable email notification of synchronization errors. For more information, see *Email Notification for AccuSync Events*.

New Configuration Dialog Box

You use the **New Configuration** dialog box to enter a name and specify the issue tracking system (ITS) you want to synchronize with AccuWork when this configuration is run. Once you complete this information and click the **Create** button, AccuSync displays the *New AccuRev Connection Dialog Box* dialog box.

Fields

Configuration name	The name you want to give the configuration you are creating.
AccuWork	Read-only. Indicates that you are synchronizing your issue tracking system (ITS) with AccuWork.
ITS	List that lets you specify the ITS you want to synchronize with AccuWork.

For more information, see *Creating a New Configuration*.

Copy Configuration Dialog Box

You use the **Copy Configuration** dialog box to create a new configuration based on an existing configuration. Copying a configuration is often the easiest way to create a new configuration.

Fields

New configuration name	The name you want to give the configuration you are creating.

See *Copying an AccuSync Configuration* and *Creating a New Configuration*.

New AccuRev Connection Dialog Box

You use the **New AccuRev Connection** dialog box to specify the connection settings for the AccuRev Server. When you save the connection settings, AccuSync displays the dialog box you use to specify the connection settings for the server hosting your issue tracking system (ITS).

Fields

Host	The name of the machine hosting the AccuRev Server. `localhost`, for example.
Port	The port used to connect to AccuRev.
Username	The name of the AccuSync user. See *Create the AccuSync User*.
Password	The password associated AccuSync user.
AccuRev executable	The full path of the AccuRev executable (`accurev.exe`). This is typically in the \bin directory where you installed AccuRev.
AccuRev depot	The name of the AccuRev depot whose issue records you want to synchronize with your issue tracking system (ITS).  **Note:** This field appears only after you test the connection.

Tip: When you select a depot, a default value appears in the **AccuWork Issue Type Field Name** field.

AccuWork issue type field name	AccuWork issue type field name The internal name of the field that displays the issue type (defect, task, and so on) on the **AccuWork Issue Edit Form**. Unless you have changed the name in the AccuWork schema, the name of this field is type. **Note:** This field appears only after you test the connection.
Web interface	The URL for the machine hosting the AccuRev Web Interface. For example: `http://localhost:8080/accurev/`. **Note:** This field appears only after you test the connection.

For more information, see *Creating the AccuWork and ITS Connections*.

Edit AccuRev Connection Dialog Box

You use the **Edit AccuRev Connection** dialog box to make changes to an existing AccuRev connection.

Fields

Host	The name of the machine hosting the AccuRev Server. `localhost`, for example.
Port	The port used to connect to AccuRev.
Username	The name of the AccuSync user. See *Create the AccuSync User*.
Password	The password associated AccuSync user.
AccuRev executable	The full path of the AccuRev executable (`accurev.exe`). This is typically in the \bin directory where you installed AccuRev.
AccuRev depot	The name of the AccuRev depot whose issue records you want to synchronize with your issue tracking system (ITS). **Note:** This field appears only after you test the connection. **Tip:** When you select a depot, a default value appears in the **AccuWork Issue Type Field Name** field.
AccuWork issue type field name	AccuWork issue type field name The internal name of the field that displays the issue type (defect, task, and so on) on the **AccuWork Issue Edit Form**. Unless you have changed the name in the AccuWork schema, the name of this field is type. **Note:** This field appears only after you test the connection.
Web interface	The URL for the machine hosting the AccuRev Web Interface. For example: `http://localhost:8080/accurev/`. **Note:** This field appears only after you test the connection.

For more information, see *Edit the AccuWork and ITS Connection Settings* and *Creating the AccuWork and ITS Connections*.

New ITS Connection Dialog Box

You use the **New ITS Connection** dialog box to specify the connection settings for your issue tracking system's server. The fields in the dialog box vary based on the ITS you selected when creating the configuration.

Fields

Connection Settings	**Protocol**	JIRA and HP ALM only: Lets you specify whether you connect to the JIRA server using the `http` or `https` protocol.
	Host	The name of the machine hosting your ITS server. `localhost`, for example.
	Port	The port used to connect to your ITS server.
	Username	The name of the AccuSync user. See *Create the AccuSync User*.
	Password	The password associated AccuSync user.
	Domain	HP ALM only: The domain associated with the projects you want to synchronize with AccuWork.
	Project	HP ALM only: The project you want to synchronize with AccuWork.
Advanced Settings	**Email suffix**	The domain name typically associated with email addresses for your ITS users. AccuSync appends the email suffix to the AccuWork user name when AccuWork users are created in your ITS.
	JIRA Path	JIRA only: By default, JIRA is installed to `host_name:port_number/secure/ Dashboard.jspa` (`http://localhost:8086/secure/Dashboard.jspa`, for example). You use the **JIRA Path** field to specify an alternate location on the host machine; AccuSync uses the **Host** and **Port** values to build the complete URL. For example, if you installed JIRA in a folder called `/its_jira`, you would enter `its_jira` in the **JIRA Path** field. AccuSync would construct the following URL to access the JIRA server: `http://localhost:8086/its_jira/secure/Dashboard.jspa`.
Proxy Settings	**Host**, **Port**, **Username**, and **Password** fields that you need to specify only if you connect to the Internet using a proxy server.	

After you test the connection, AccuSync displays additional fields on the **New ITS Connection** dialog box. Again, the fields in the dialog box vary based on the ITS you selected when creating the configuration.

Note: No fields are added to the **New ITS Connection** dialog box after you test the connection.

BMC Remedy Fields

Remedy Application	Lets you select the Remedy application (Knowledge Management or Remedy Task Management, for example) you want to synchronize with AccuWork.

IBM Rational ClearQuest Fields

DB Name	The name of ClearQuest database.
Repository	The name of the ClearQuest repository.

HP ALM Fields

DB Name	The name of HP ALM database.
DB Host	The name of the server hosting the database.
DB Port	The port number of the database server.
DB Username	The user name for the user accessing the database.
DB Password	The user's password.

JIRA Fields

Project Name	Lets you select the JIRA projects you want to synchronize with AccuWork.

Rally Fields

Rally Artifact	The Rally artifacts you want to synchronize (defects, stories, and task), and the appropriate workspaces and projects for those artifacts.

For more information, see *Creating the AccuWork and ITS Connections* and *Creating a New Configuration*.

Edit ITS Connection Dialog Box

You use the Edit ITS Connection dialog box to make changes to an existing connection to your issue tracking system's server. The fields in the dialog box differ slightly based on the ITS for which the connection is specified.

Fields

Connection Settings	**Protocol**	JIRA and HP ALM only: Lets you specify whether you connect to the JIRA server using the `http` or `https` protocol.
	Host	The name of the machine hosting your ITS server. `localhost`, for example.
	Port	The port used to connect to your ITS server.
	Username	The name of the AccuSync user. See *Create the AccuSync User*.
	Password	The password associated AccuSync user.
	Domain	HP ALM only: The domain associated with the projects you want to synchronize with AccuWork.
	Project	HP ALM only: The project you want to synchronize with AccuWork.
Advanced Settings	**Email suffix**	The domain name typically associated with email addresses for your ITS users. AccuSync appends the email suffix to the AccuWork user name when AccuWork users are created in your ITS.
	JIRA Path	JIRA only: By default, JIRA is installed to `host_name:port_number/secure/ Dashboard.jspa` (`http://localhost:8086/secure/Dashboard.jspa`, for example). You use the **JIRA Path** field to specify an alternate location on the host machine; AccuSync uses the **Host** and **Port** values to build the complete URL. For example, if you installed JIRA in a folder called `/its_jira`, you would enter `its_jira` in the **JIRA Path** field.

AccuSync would construct the following URL to access the JIRA server: `http://localhost:8086/its_jira/secure/Dashboard.jspa`.

Proxy Settings	**Host**, **Port**, **Username**, and **Password** fields that you need to specify only if you connect to the Internet using a proxy server.

After you test the connection, AccuSync displays additional fields on the **New ITS Connection** dialog box. Again, the fields in the dialog box vary based on the ITS you selected when creating the configuration.

Note: No fields are added to the **New ITS Connection** dialog box after you test the connection.

BMC Remedy Fields

Remedy Application	Lets you select the Remedy application (Knowledge Management or Remedy Task Management, for example) you want to synchronize with AccuWork.

JIRA Fields

Project Name	Lets you select the JIRA projects you want to synchronize with AccuWork.

Rally Fields

Rally Artifact	The Rally artifacts you want to synchronize (defects, stories, and task), and the appropriate workspaces and projects for those artifacts.

For more information, see *Edit the AccuWork and ITS Connection Settings* and *Creating the AccuWork and ITS Connections*.

New Field Mapping Dialog Box

You use the **New Field Mapping** dialog box to specify how you want AccuWork fields mapped to the fields in your ITS issue record, as well as whether you want that synchronization to be two-way or one-way, and whether or not you want field values transformed during synchronization.

Fields

AccuWork Field	The name of the AccuWork field you want to map to the field in your ITS issue.
ITS Field	The name of the field in your ITS that you want to map to the field in AccuWork.
Synchronization direction	Whether you want AccuSync to perform a two-way or one-way synchronization on this field. The default is two-way.
Master ITS	For one-way synchroniztions, the ITS (AccuRev or your ITS) whose issue record values you want to use to update values in the other system.
Transformer	An optional utility that transforms the values in one system so that it is acceptable in the system in which it is being synchronized. For example, you might have a transformer that trims the `@company.com` suffix from user names for compatibility with AccuRev.
Transformer configuration	Allows you to select a mapping group to be used by the transformer. For example, a mapping group would allow you to substitute `j.hasler` for `haslerj` if the same user has two equivalent usernames.

For more information, see *Creating a Field Mapping*, *Transformers*, and *Creating a Mapping Definition*.

Edit Field Mapping Dialog Box

You use the **Edit Field Mapping** dialog box to modify the field mappings between AccuWork fields and the fields in your ITS issue record.

Fields

AccuWork Field	The name of the AccuWork field you want to map to the field in your ITS issue.
ITS Field	The name of the field in your ITS that you want to map to the field in AccuWork.
Synchronization direction	Whether you want AccuSync to perform a two-way or one-way synchronization on this field. The default is two-way.
Master ITS	For one-way synchroniztions, the ITS (AccuRev or your ITS) whose issue record values you want to use to update values in the other system.
Transformer	An optional utility that transforms the values in one system so that it is acceptable in the system in which it is being synchronized. For example, you might have a transformer that trims the `@company.com` suffix from user names for compatibility with AccuRev.
Transformer configuration	Allows you to select a mapping group to be used by the transformer. For example, a mapping group would allow you to substitute `j.hasler` for `haslerj` if the same user has two equivalent usernames.

For more information, see *Creating a Field Mapping*, *Transformers*, and *Creating a Mapping Definition*.

New Group Dialog Box

You use the **New Group** dialog box to specify the name for a mapping group. A mapping group provides AccuSync with the information it needs to synchronize fields that use different values in each system.

Fields

Group name	The name you want to give to the mapping group.

For more information, see *Creating a Mapping Group*.

New Mapping Value Dialog Box

You use the **New Mapping Value** dialog box to:

- Create a new mapping group.
- Add one or more field value pairs to a mapping group.

Fields

Group	List that displays the names of existing mapping groups. You can use the **New...** button to create a new mapping group.
AccuWork value	The value of the field in AccuWork that you want to convert to the corresponding value in your ITS when the systems are synchronized.

ITS value	The value of the field in your ITS that you want to convert to the corresponding value in AccuWork when the systems are synchronized.

For more information, see *Creating a Mapping Group*.

New Mapping Definition Dialog Box

You use the **New Mapping Definition** dialog box to create a new mapping definition. A mapping definition is a collection of settings that describes how AccuSync synchronizes AccuWork issues and issues from your ITS.

Note: You must define key and link fields for a new mapping definition unless the mapping definition you are creating uses a base definition for which a key field and link field have been defined.

Fields

Name	The name you want to give to the mapping definition.
Change package synchronization	If selected, indicates that this mapping definition will be used to synchronize change package information.
Based on	If selected, specifies an existing mapping definition that will be used as the base for the new mapping definition. If you specify a base mapping definition, the current mapping definition inherits all base mapping definition field mappings.
AccuWork issue type	The AccuWork issue type that will be synchronized using this mapping definition.
AccuWork filter	Allows you to specify a filter for the mapping definition. A mapping definition filter is a set of user-defined conditions that allows AccuSync to select the issue records you want to synchronize (or those that you want to omit from synchronization).
ITS issue	The ITS issue type that will be synchronized using this mapping definition. **Note:** The name of this field varies based on your ITS.
ITS filter	Allows you to specify a filter for the mapping definition. A mapping definition filter is a set of user-defined conditions that allows AccuSync to select the issue records you want to synchronize (or those that you want to omit from synchronization). **Note:** The name of this field varies based on your ITS.

For more information, see *Creating a Mapping Definition*, *Copying a Mapping Definition*, *Mapping Definition Filter*, *Required Field Mappings: Key and Link*, and *Base Mapping Definitions*.

Copy Mapping Definition Dialog Box

You use the **Copy Mapping Definition** dialog box to copy an existing mapping definition. A mapping definition is a collection of settings that describes how AccuSync synchronizes AccuWork issues and issues from your ITS.

Fields

New Mapping Definition Name	The name you want to give to the mapping definition.

For more information, see *Copying a Mapping Definition*, *Creating a Mapping Definition*, *Mapping Definition Filter*, *Required Field Mappings: Key and Link*, and *Base Mapping Definitions*.

Edit Mapping Definition Dialog Box

You use the New Mapping Definition dialog box to create a new mapping definition. A mapping definition is a collection of settings that describes how AccuSync synchronizes AccuWork issues and issues from your ITS.

Note: You must define key and link fields for a new mapping definition unless the mapping definition you are creating uses a base definition for which a key field and link field have been defined.

Fields

Name	The name you want to give to the mapping definition.
Change package synchronization	If selected, indicates that this mapping definition will be used to synchronize change package information.
Based on	If selected, specifies an existing mapping definition that will be used as the base for the new mapping definition. If you specify a base mapping definition, the current mapping definition inherits all base mapping definition field mappings.
AccuWork issue type	The AccuWork issue type that will be synchronized using this mapping definition.
AccuWork filter	Allows you to specify a filter for the mapping definition. A mapping definition filter is a set of user-defined conditions that allows AccuSync to select the issue records you want to synchronize (or those that you want to omit from synchronization).
ITS issue	The ITS issue type that will be synchronized using this mapping definition. **Note:** The name of this field varies based on your ITS.
ITS filter	Allows you to specify a filter for the mapping definition. A mapping definition filter is a set of user-defined conditions that allows AccuSync to select the issue records you want to synchronize (or those that you want to omit from synchronization). **Note:** The name of this field varies based on your ITS.

For more information, see *Editing Mapping Definitions*, *Creating a Mapping Definition*, *Required Field Mappings: Key and Link*, and *Base Mapping Definitions*.

AccuWork Filter Dialog Box

You use the **AccuWork Filter** dialog box to create a filter to associate with a mapping definition. A mapping definition filter is a set of user-defined conditions that allows AccuSync to select the issue records you want to synchronize (or those that you want to omit from synchronization).

For more information, see *Creating a Filter* and *Mapping Definition Filter*.

ITS Filter Dialog Box

You use the **ITS Filter** dialog box to create a filter to associate with a mapping definition. A mapping definition filter is a set of user-defined conditions that allows AccuSync to select the issue records you want to synchronize (or those that you want to omit from synchronization).

For more information, see *Mapping Definition Filter* and *Creating a Filter*.

Filter Record Dialog Box

You use the **Filter Record** dialog box to define the conditions an issue record must meet in order to be selected for synchronization.

Fields

Filter record type The type of issue record for which this filter is being defined.

For more information, see *Creating a Filter* and *Mapping Definition Filter*.

Specify Issue Key Fields Dialog Box

You use the **Specify Issue Key Fields** dialog box to specify the AccuRev and ITS fields that store the unique ID that identifies each issue record.

Fields

AccuWork field The name of the field in the AccuWork schema used to store the ITS issue record key.

Tip: If you are using the default schema installed with AccuSync, this value is `jiraKey` (for JIRA) or `rallyID` (for Rally).

ITS field The name of the field in your ITS schema used to store the AccuWork issue record key. This value is typically `AccuWork Key`.

Note: If you are using JIRA, this value is created automatically by the JIRA plugin for AccuSync. If you are using Rally, you must manually add this value to the Rally work product.

For more information, see *Required Field Mappings: Key and Link* and *Creating a Mapping Definition*.

Specify Issue Link Fields Dialog Box

You use the **Specify Issue Link Fields** dialog box to specify the AccuRev and ITS fields that store the URL used to access an issue in the AccuRev or ITS system.

Fields

AccuWork field The name of the field in the AccuWork schema used to store the URL used to access the issue record.

Tip: If you are using the default schema installed with AccuSync, this value is `jiraIssueLink` (for JIRA) or `rallyIssueLink` (for Rally).

ITS field	The name of the field in your ITS schema used to store the URL used to access the issue record. This value is typically `AccuWorkIssueLink`.

Note: If you are using JIRA, this value is created automatically by the JIRA plugin for AccuSync. If you are using Rally, you must manually add this value to the Rally work product.

For more information, see *Required Field Mappings: Key and Link* and *Creating a Mapping Definition*.

New Sync Pattern Dialog Box

You use the **New Sync Pattern** dialog box to create a new synchronization pattern.

Fields

Sync pattern name	The name you want to give to the synchronization pattern.
Mapping definition to use	The name of the mapping definition you want to associate with this synchronization pattern.
Synchronization type	Whether you want AccuSync to perform a two-way (the default) or one-way synchronization when this synchronization pattern is run.
Synchronization frequency	How often, in minutes, you want AccuSync to run the synchronization pattern.

For more information, see *Creating a Synchronization Pattern*, *Synchronization Types*, and *Running a Synchronization Pattern*.

Edit Sync Pattern Dialog Box

You use the **Edit Sync Pattern** dialog box to modify an existing synchronization pattern.

Fields

Sync pattern name	The name you want to give to the synchronization pattern.
Mapping definition to use	The name of the mapping definition you want to associate with this synchronization pattern.
Synchronization type	Whether you want AccuSync to perform a two-way (the default) or one-way synchronization when this synchronization pattern is run.
Synchronization frequency	How often, in minutes, you want AccuSync to run the synchronization pattern.

For more information, see *Creating a Synchronization Pattern*, *Synchronization Types*, and *Running a Synchronization Pattern*.

Change Watermark Dialog Box

You use the **Change Watermark** dialog box to set the current watermark to a previous level. You might want to do this in order to synchronize issue records that were skipped in a previous synchronization.

The style of the **Change Watermark** dialog box varies based on which server (AccuWork or your ITS) is selected when you click the **Change watermark** button. There are two styles:

Transaction The transaction style **Change Watermark** dialog box lets you set the watermark based on the AccuRev transaction number. This style is available when you have selected the AccuWork server from the **Server Status** field on the *Status Page*.

Calendar The calendar style **Change Watermark** dialog box lets you set the watermark based on the date you select. This style is available when you have selected the ITS server (JIRA or Rally, for example) from the **Server Status** field on the *Status Page*.

For more information, see *Setting Watermarks*.

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