



JIRA CONNECTOR OPTION - V19

The optional module "Jira Connector" allows to import projects from Atlassian's Jira into "Planforge Enterprise Server"-edition to automatically synchronize changes entered on Jira-side.

New tools or tool-groups which get enabled by this module:

- The tool "External Apps" will appear inside the System Settings in the tool group "ADMINISTRATE" to allow establishing the connection to the Jira-server (Can only be accessed by users with the access level "System")

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1. 1. PREREQUIREMENTS

1.1. 1.1. FOR "ENTERPRISE SERVER"-INSTALLATIONS

- Both, the "Planforge" and Atlassian's "Jira" web-applications must be hosted by separate Tomcat-installations (Libraries required by Jira for Tomcat are known to lead to conflicts)
- If you need to connect to Jira using a secure "HTTPS"-connection or using an additional web-server in front of "Tomcat", you might need to alter the configuration like described in the last chapter at the end of this document
- Make sure that the port the "Planforge" web-application will use to access your Jira-installation does not get blocked by a firewall or similar

1.2. 1.2. FOR YOUR JIRA-INSTANCE

- Jira version 6.0 or later is required for locally installed instances.
- The user-account in Jira which will be used for the connection between Planforge and Jira will need some permissions in Jira, which can be easily granted by adding the user to the following groups:
 1. "jira-administrators": Most easy way to ensure that the Planforge account has all necessary permissions
 2. "jira-developers": Simplifies getting Jira users from Jira projects.
 3. "jira-users": Your user-account will most likely already be part of this group
- Alternatively, it is also possible to grant the corresponding user the following permissions manually in Jira:
 - Browse Projects
 - Assignable User
 - Assign Issues
 - Close Issues
 - Create Issues
 - Delete Issues
 - Edit Issues
 - Modify Reporter
 - Move Issues
 - Resolve Issues
 - Schedule Issues

- Transition Issues
- Add Comments
- Delete All Comments
- Edit All Comments
- Create Attachments
- Delete All Attachments

1.3. 1.3. MAKE SURE THAT JIRA WILL ACCEPT REMOTE API CALLS (ONLY RELEVANT FOR JIRA 6)

To allow the "Planforge"-server to connect, Jira must be configured to listen to "remote API calls":

1. Sign on to your Jira-server with a user-account that owns administrative permissions
2. Click "Administration" in the upper right corner
3. From the pull-down menu "System", select the first item "General Configuration"
4. In the section "Options", you will find the setting "Accept remote API calls"

Please make sure that this setting is enabled. To alter the setting, click the button "Edit Configuration" below

1.4. 1.4. PLUGIN INSTALLATION

To allow real-time synchronization of changes made in your local Jira instance, a plugin must be installed on Jira-side.

Note that when using a Jira Cloud instance, this plugin will not be available. Instead, a webhook will be used to provide the same functionality for the synchronization. When initially testing the connection to your Jira Cloud instance, the creation of this webhook will either be done automatically or if that is not possible due to e.g. insufficient permissions, detailed steps will be provided describing the manual creation of this webhook.

1.4.1. 1.4.1. Installation through Atlassian's Marketplace

The easiest way to install our "Jira Connector"-plugin is to access Atlassian's Marketplace for Jira and installing the "Project & Portfolio Management for Jira"-add-on.

1.4.2. 1.4.2. Manual Upload of the Jira-plugin

1. Sign on to your Jira-server with a user-account that owns administrative permissions
2. Navigate to the "Plugin/Add-on"-administration
3. If you do not yet see a button labeled "Upload Plugin" or "Upload add-on" you might need to select the tab "Install" or click "Manage Add-ons"

4. Now click the button labeled "Upload Plugin" or "Upload add-on"
5. Click the "Browse"-button and select the file "onepoint-PROJECTS-Connector-3.1.1.jar" which can be found in the folder "jira_plugin" of our software-distributions

1.5. 1.5. ENABLE THE CONNECTION IN "EXTERNAL APPS"

1. Sign in to your Planforge-instance using a system-level user like the default "Administrator" user-account
2. Click the tool-shaped button in the upper right corner to open the system settings of Planforge
3. Select the tool "External Apps" inside the tool-group "ADMINISTRATE"
4. Enter your Jira connection settings by clicking on the "Jira URL" field. Jira cloud support can be enabled via the "Instance on Jira Cloud" checkbox
5. It is highly recommended that you test your Jira connection by clicking the "Test" button in the "Jira Connection Settings" dialog or on the main toolbar
6. Click the "Enable Jira"-checkbox

No tool "External Apps"?

If the tool "External Apps" is not visible then the "Jira Connector Option" is not activated for your server or your account.

API Token for Jira Cloud instances

For Jira Cloud instances, the user password can not be used for connections to the API and instead you will have to generate an API Token for the authentication. Details can be found at: <https://confluence.atlassian.com/cloud/api-tokens-938839638.html>

Afterwards all fields in the tool "External Apps" will allow you to enter the connection-parameters:

Instance	It is possible to connect Planforge to multiple Jira instances. Each Jira instance is configurable separately inside "External Apps" and can be selected in the drop-down menu "Instance" afterwards. When linking a Planforge project to a Jira project, all projects from both instances are selectable afterwards.
Description	A description of the Jira instance can be entered inside the corresponding field.
Jira URL	The URL to your Jira-server, for example "https://my.jira.server/jira", without "/secure/Dashboard.jspa" or similar.

Jira Username	The Jira-account's user-name that will be used to retrieve data from Jira.
Jira Password	The password or API token for the user-account entered above.
Synchronize Jira worklogs (timetracking)	This checkbox enables the automatic creation of work records according to logged work in Jira for all linked projects in Planforge.
Enable Jira two-way synchronization	This checkbox is enabled by default. In case you only want to create projects with kind "Jira", it is possible to deactivate the two-way-synchronization by disabling this checkbox.
Show issue number in activity lists	If you would like that the Jira keys are visible inside the activity lists in Planforge, enable this checkbox. Afterwards the corresponding Jira key of the issue is visible inside the tab "Planning/Activity List" and the issue can be accessed through this key.
Public Activity Levels for Jira	Depending on the entered outline level, the synchronized work packages of projects with kind "Jira" are public by default. The outline level can be set to "None", "All" or to a specific level (1st Level etc.).
Synchronization must not delete objects in Jira	If this checkbox is enabled, deleting work packages of projects which are linked to Jira, does not have any impact of the issue on Jira side.
Use Wiki Renderer for Jira fields	The formatting of the following default fields can now also be synchronized to Planforge or Jira: "Issue: Description", "Issue: Comment", "Log Work: Description" and "Project: Description". More details can be found in chapter 2.1.4.1.
Jira event poll interval (seconds)	This is the interval which Planforge uses to ask Jira for changes. 30 seconds is the recommended value from Planforge.

Instance full sync schedule (UTC)	This field can be used for configuring the daily sync. If this field is left empty, the "<jira-trigger>" from the configuration file or the default setting at 8am every day is used.
Last full sync start / finish	These fields display the duration of the last full sync.

Establishing the connection between Planforge and Jira

If the parameters are fine and the connection can be established, the "Status Mappings"-, "Issue Type Mappings"- and "Priority Mappings"-tables will get filled automatically with the values of your corresponding Jira-instance. Afterwards you can choose the corresponding values on Planforge-side.

If the connection does not get updated although it should be possible, please check the logfiles "atlassian-jira.log" of your Jira-server for errors or contact our support-team.

Jira Worklog-synchronization

If you need your tracked efforts to be synchronized from Jira to Planforge, please enable the checkbox "Synchronize Jira worklogs (timetracking)".

2. 2. "JIRA LINKED PROJECTS"

First of all, we would like to provide an overview of how the integration works. There are two different types of Jira linked projects, aggregated (methodology "Jira") and executed (methodology "Traditional") projects. In the following comparison chart you will find a details about these two projects:

Processes	Kind Jira Project (Aggregated)	Kind Traditional Project (Executed)

Properties	<ul style="list-style-type: none"> • one-way-synchronization from Jira to Planforge • planning and execution in Jira, controlling in Planforge 	<ul style="list-style-type: none"> • two-way-synchronization • controlling in Planforge and execution in Jira, planning on both sides depending on the department (project manager will most likely work in Planforge whereas the IT and technical departments will work in Jira)
Creation	Create a Planforge project with kind "Jira" and link it to a corresponding Jira project or fix version.	Create a Planforge project with methodology "Traditional" and link it to a corresponding Jira project or fix version.

Workflow	<p>The issues will be created with or without fix versions in Jira. When the Planforge project gets linked to the Jira project, all issues will be synchronized immediately to the planning in Planforge. The issues are sorted below their fix versions and all issues without fix version appear at the end of the planning. Tasks, like tracking work, creating comments and attachments have to be done in Jira and will be synchronized to the "Planning"- and "Controlling"-tabs afterwards. In the tab "Controlling" the resources and costs can be controlled afterwards. Additionally the tab "RESOURCES/Utilization" is available which provides a more detailed overview regarding the resources.</p>	<p>In this type of project issues can either be created on Planforge or Jira side. Usually these projects are planned and controlled in Planforge by the corresponding project manager, but other departments or users work in Jira, therefore the execution happens on Jira side.</p> <p>When creating issues in Jira, they will be synchronized into the "Controlling"-tab in Planforge. Afterwards they can be converted into the "Planning"-tab with the button "Add ad-hoc-task to plan" which is visible in the button row below the planning when the project is edited. You are able to add work packages to the planning which will be synchronized to Jira after the next check-in. In conclusion, the planning of work packages is possible on both sides, so you can plan with whichever system you prefer. Creating comments and attachments is also possible on both sides, but please note that tracking work for issues is only possible on Jira side. These work logs will then be synchronized to the tab "MY WORK/Time and Costs" and into the properties of the corresponding issue. Again the project will be controlled on Planforge side, the resources and costs can be controlled in the tab "Controlling" and "RESOURCES/Utilization".</p>
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A detailed description of both project types can be found in the next chapters.

2.1. 2.1. JIRA MAPPINGS

2.1.1. 2.1.1. Status Mappings

A customizable status mapping is available in "External Apps". The default Jira statuses can be mapped to an Planforge status and will be set for all synchronized work packages according to the mapping. Custom statuses can be mapped and synchronized as well.

The "Status"-field of your Jira-issue does not affect the planning itself, but if needed, it can always be monitored inside the tab "Controlling/Activity List" in the column "Status" or additionally inside the "Edit Ad Hoc Activity"-dialog for ad hoc work packages.

2.1.2. 2.1.2. Issue Type Mappings

All default and custom activity types from "CUSTOMIZE/Activities" in Planforge can be mapped to any Jira issue type. All issues will be synchronized from Planforge to Jira and vice versa with the corresponding mapped issue type in the system settings. The synchronized issue type is additionally visible inside the "Edit Activity"-dialog in the field "Type". Changes which have been made to the issue type in Jira will only be synchronized for ad hoc work packages to Planforge. Issue Types are reportable as well by using the field "Activity.Sub Type".

2.1.2.1. 2.1.2.1. Excluding Issue Types from the synchronization

It is possible to exclude issue types from the synchronization by setting the issue type to "-- Not synchronized --" in Planforge's system settings in "ADMINISTRATE/External Apps". Some special cases need to be considered:

- If an issue type gets excluded which is already used for planned Planforge work packages, the corresponding work package won't be deleted in Jira. It remains in Jira, the mapping will be ignored in this case and all changes will still be synchronized to Jira.
- If an issue type gets excluded which is already used for an ad hoc work package in Planforge which is linked to a corresponding Jira issue, the ad hoc work package gets deleted in Planforge, but remains in Jira.
- When creating an issue in Jira with an issue type that is excluded from the synchronization, the issue won't be synchronized to Planforge.
- When creating a planned work package in Planforge with an issue type that is not mapped, the issue will be synchronized to Jira with the next valid issue type from the list in Planforge's system settings in "ADMINISTRATE/External Apps".

2.1.3. 2.1.3. Priority Mappings

A "Priority"-mapping has been implemented which allows to map the priorities from Jira ("Blocker", "Major", etc.) with the Planforge priorities inside the System Settings in "External Apps". Issues will be synchronized with the corresponding priority which has been set inside the System Settings afterwards, e.g. an issue with "Blocker" in Jira will be synchronized with the corresponding priority icon to Planforge and vice versa. If Jira priorities match more than one Planforge priority the highest priority inside the list in the System Settings will be used for the synchronization. If a priority in Planforge is not set, the mapped value before or afterwards depending on the order inside the list will be used for the synchronization.

Jira Priority	Jira Description	ONEPOINT Priority
Blocker	Blocks development and/or testing work, production could not run.	Critical
Critical	Crashes, loss of data, severe memory leak.	High
Major	Major loss of function.	Medium
Minor	Minor loss of function, or other problem where easy workaround is present.	Low
Trivial	Cosmetic problem like misspelt words or misaligned text.	Trivial

2.1.4. 2.1.4. Custom Field Mappings

This mapping allows to map Planforge custom fields to Jira custom fields in the System Settings in "External Apps". Additionally some default fields of Planforge can also be mapped to custom fields in Jira. The mapping table contains five columns:

- Planforge Activity Field: This column shows the name of the custom field or the default field in Planforge.
- Sync Direction: In this column you are able to define if the fields should be synchronized in both direction, from Planforge to Jira or from Jira to Planforge. For some of the default fields the sync direction is pre-defined, that means these fields can only be synchronized from Planforge to Jira.
- Active: By enabling or disabling this checkbox you can define which fields should be synchronized.
- Jira Issue Field (Jira Internal Field Name): This column shows the name of the custom field in Jira.
- Jira Wiki Markdown: We also support the synchronization of wiki formats in both directions now. This point will be further described in chapter 2.1.4.1.

Currently the custom field types "Checkbox", "Choice", "Date", "Decimal", "Memo", "Number" and "Text" are supported. These fields must be mapped to the same field types in Jira, e.g. a "Date"-custom field needs to be mapped to a "Date"-field in Jira, otherwise the synchronization won't work. For some of these fields more constraints need to be considered:

- Custom fields with the type "Checkbox" in Planforge needs to be mapped to a Jira custom field with the type "Single Choice". Afterwards the values "Yes" and "No" must be defined as possible choices for this field in Jira.
- Custom fields with the type "Choice" in Planforge needs to be mapped to a Jira custom field with the type "Single Choice". It is required to define the same choice options as in Planforge so that a successful synchronization is possible. If a choice option is available in Planforge, but not in Jira, the corresponding issue won't be synchronized.

Additionally, the following default fields from Planforge are supported and can be mapped to Jira custom fields. Please note, that these fields can only be synchronized from Planforge to Jira:

- Actual Costs: All activated cost types of your Planforge instance can be mapped to Jira custom fields.
- Assigned Resources: If a resource or pool is assigned in Planforge, the corresponding pool or resource name of the Jira user is shown in this field in Jira.
- Created
- Expanded Assigned Resources: If a pool is assigned in Planforge, all included resources that have a corresponding Jira users are shown in this field in Jira.
- Modified
- Plan Costs: All activated cost types of your Planforge instance can be mapped to Jira custom fields.
- Responsible Resource
- Start (start date of work packages)
- WBS Code (global): Synchronizes the project number and the wbs code to the mapped custom fields to Jira.

If you make changes on custom fields in Jira which are linked to work packages in Planforge which are part of the planning, a blue icon gets shown in the properties of the work packages in Planforge. Similar to the "Active Assignment"- and "Active Title/Description"-features you can take over the new value from Jira to planning in Planforge or you can reset the custom fields to the original planned values. After checking-in the project plan, Jira as well as Planforge should contain the same values.

2.1.4.1. 2.1.4.1. Synchronization of markdown formatting

The formatting of the following default fields can now also be synchronized to Planforge or Jira: "Issue: Description", "Issue: Comment", "Log Work: Description" and "Project: Description". That means if these fields are formatted with bold, italic etc. in Jira or Planforge, they will also be displayed with these formats in the second system. Additionally, it is also possible to enable the checkbox "JIRA Wiki Format" in the "Custom Field Mappings"-section for custom types with the type "Memo". Afterwards also the format of these fields will be synchronized depending on the sync direction. Please note, that currently

only the supported Planforge formats (headings, bold, italic, ordered list, unordered list, link and quote) are supported to be synchronized correctly.

2.2. 2.2. PROJECTS OF KIND "JIRA"

Projects with kind "Jira" are read-only in Planforge. The planning-hierarchy of projects of kind "Jira" only consists of the activity types "Sprint" and "Task". Such projects do not allow changes inside the planning on "Planforge"-side and get directly imported from your Jira-server.

The transferred data gets translated in the following way:

Jira	Planforge
Fix Version	Sprint (Jira's release-date gets translated to Sprint's "Finish"-date)
Issue (For example Bug, New Feature, Task, Sub-task Improvement, Epic, Story)	Task (At least 2nd outline-level, always has a parent-sprint which gets chosen according to the latest fix version entered for the issue in Jira)
Original Estimate/Estimated	"Base"-effort
Remaining Estimate/Remaining	"Open"-effort (Requires Jira-worklog synchronization and "Allow contributor estimations" both enabled)
Time Spent/Logged	"Actual"-effort (Requires Jira-worklog synchronization enabled)

2.2.1. 2.2.1. To create a project of kind "Jira"

1. Select the tool-group "PROJECTS" and select a portfolio for which your user-account owns at least "Manager"-permissions
2. Click the button "New Project" (Will open the "Properties"-form of the new project)
3. Select "Jira" for the chooser "Kind"
4. Enter a name for your project
5. Click the button on the right side of the "Link to Jira Project"-chooser. This will open a subdialog allowing to choose a remote Jira-project or version from which tasks and versions should get imported
6. After the project or version on Jira-side was chosen, confirm the subdialog "Jira Project or Version" with "OK"
7. Next scroll down a bit inside the "Properties"-form to the section "Constraints" and enable or disable "Allow contributor estimations" as required

8. After confirming the project-creation with the button "Save" on the upper right side of the form the planning will get retrieved from Jira

Setting "Allow Contributor Estimations" for step 7 above

If you are using Jira-worklog-synchronization, having "Synchronize Jira worklogs (time-tracking)" enabled in the tool "External Apps" and you would like to monitor the tracked values in Planforge, please make sure to enable the setting "Allow contributor estimations" for the project, otherwise you are not able to monitor the actual and completed values in Planforge.

2.2.2. 2.2.2. Sort-order of "Sprints" and "Tasks"

These are the rules for the sort-order of Sprints and Tasks in the planning and controlling shown inside the tool "PROJECTS":

- Tasks will always first be sorted according their "Importance", starting with highest importance and then descending. All tasks with the same priority will be sorted alphabetically by their names afterwards.
- Sprints will always be shown in the same order like you would see them in Jira or Greenhopper's planning-views, except versions without a release-date - These will always be shown at the end of the "Activity List" of the tool "Planning".

2.2.3. 2.2.3. Start- and finish-dates of "Sprints"

The activity-type "Sprint" that is used to describe Jira's versions will always have a start- and finish-date. Since neither Planforge's nor Jira's projects will always have a release-date, some rules are needed:

- The first start-date:
 1. Will be the taken from the project's tab "Properties" in the tool "PROJECTS"
 2. If this start-date cannot be applied (If Jira's release-date is earlier than the project's start-date in the tab "Properties"), then use a fictive ten-day duration until the start-date was corrected.
- All other start-dates:
 1. if a new Sprint's finish-date is not identical to the previous Sprint's one, then use the previous Sprint's finish-date as start-date for the new one
 2. If the previous Sprint's finish-date is identical, then make both Sprints run parallel (Apply identical start- and finish-dates)
- If a Jira-version does not have a release-date:
 1. Inherit the project's finish-date from the project's tab "Properties" in the tool "PROJECTS"

2. Inherit the finish-date of the parent Sprint (For child-versions, when using Greenhopper)
 - If a child-version's release-date was defined to be later than the parent's, then this date will override the parent-Sprint's finish-date
 - If no finish-date was created for the project in the tab "Properties", then always use the start-date of the project as finish-date if no other is available (Will result in a one-day duration for all sprints if no finish- or release date was entered, neither on Planforge- nor on Jira-side)

Limited real-time synchronization for changes on JIRA's versions

Please note that changes on Jira's versions can in most situations not be synchronized in real-time because of technical limitations. Instead these changes will only be applied during the next daily synchronization-cycle. If needed, you can always force a full synchronization-cycle to update all changes by clicking the button "Synchronize" in the tool "External Apps", using the "Administrator"-login.

2.2.4. 2.2.4. Public levels when using projects of kind "Jira", combined with the "Program Management Option"

The optional module "Program Management" allows to include projects of kind "Jira" as sub-projects in other plannings. If tasks or sprints of sub-projects shall be shown in the master-planning, they will have to be marked as "Public". For projects of kind "Jira" we included a setting which allows to apply this setting automatically:

- Depending on the entered outline level, the synchronized work packages of projects with kind "Jira" are public by default when the chooser "Public Activity Levels for Jira" is activated in "External Apps" (Can only be accessed after signing on with the "Administrator"-account). The outline level can be set to "None", "All" or to a specific level (1st Level etc.).

2.3. 2.3. PROJECTS OF KIND "TRADITIONAL"

This latest way to connect Planforge to Jira is similar to a project of kind "Jira", but here any existing project of kind "Traditional" can be linked to a project or version stored in your Jira-server, allowing to maintain a planning in Planforge while executing the project on Jira-side.

1. Select the tool-group "PROJECTS" and select a project of kind "Traditional" in the navigator for which your user-account owns at least "Manager"-permissions
2. Click the button on the right side of the "Link to Jira Project"-chooser. This will open a subdialog allowing to choose a remote Jira-project or version

3. After the project or version on Jira-side was chosen, confirm the subdialog "Jira Project or Version" with "OK"

When linking an existing project plan to a Jira project, all issues get immediately synchronized to Jira. If you are currently editing the planning, the last submitted plan version will be synchronized to Jira. All new changes will be synchronized to Jira after checking-in a new version of the project plan.

Please note that after checking in a new version, all tasks or work packages in your planning will be mirrored to your Jira project and all existing issues in Jira will appear on Planforge-side as "Issues" or "Tasks" depending on the entered values inside the "Issue Type Mapping", inside the tab "Controlling", too.

Further information on the "Jira Executed" project can be found in the following document:

<https://www.planforge.io/en/integrations/jira-project-management>

2.3.1. 2.3.1. Active Assignments

An active assignment is shown when the assignee in Jira differs from Planforge's planning, but it will not replace the planned assignment automatically. The described functionality works as follows:

An active assignment is auto-generated when a synchronized issue is reassigned in Jira. In this case an icon appears beside the "Resource"-column in the tab "Planning/Activity List". By clicking on this icon when the planning is in edit-mode a new dialog will be available in which you are able to accept the assignment from Jira or to reset it to the planned assignment. Due to this functionality, reassignments do not get lost in the re-planning cycle, but it is still easily possible to reset the assignment to the previously planned value.

A few special cases need to be considered when using this functionality:

- In case that the assigned resource from Jira does not exist on Planforge side, the planned resource will be marked with an asterisk in Planforge, but it won't be synchronized to Jira.
- Resources which were not part of the project team in Planforge so far, will be automatically added to the project team as soon as an assignment is available for them on Jira side.
- If multiple resources are assigned to a work package in Planforge, the issue in Jira remains unassigned. If a user, who is not part of the planned resources in Planforge, is assigned to the task in Jira afterwards, that user will be shown as an active assignment in Planforge.

2.3.2. 2.3.2. Active Work Package Title and Description

Similar to the functionality "Active Assignments", this functionality has been implemented for the title and the description of work packages as well. If the title or description of an issue in Jira gets changed and the corresponding linked work package is planned in Planforge, a blue icon appears in the activity list and in the properties of the work packages. When editing the project plan, you can either take the new value over into the planning or reset it to the original planned value. After checking-in the project plan, Jira as well as Planforge should have the same value.

Please note, that there is one restriction when using this functionality: If the description of an issue is empty and adding a description in Jira, resetting it to an empty description in Planforge does not work anymore. The description remains in Jira although the field is empty in Planforge.

2.3.3. 2.3.3. Asynchronous check-in

This functionality improves the waiting time for check-in operations and works as follows: When checking-in a project plan, users will not have to wait for the following Jira sync to finish anymore and instead a "Lock"-icon will appear beside the project name which says "Project plan is currently being locked by Jira System". As soon as this icon is shown, the user is able to switch to another project or tab and can continue his work, while the usual Jira sync runs in the background.

2.3.4. 2.3.4. Draft work packages

It is possible to exclude work packages from the synchronization with Jira by enabling the checkbox "Draft" in the properties of the corresponding work package. When enabling this checkbox, no data (including work records, comments, attachments etc.) regarding such work packages will be synchronized between Jira and Planforge, but the effort of the work package will still be shown in the resource utilization and allocation. Please be aware of the following behavior when using this setting:

- If the work package is created in Planforge and marked as draft before the check in, this work package will not be created in Jira until the draft setting is deactivated. No Jira ID will be shown in the activity lists.
- If the work package has already been synchronized, but is marked as draft afterwards, no further changes to this work package will be synchronized to either system after the check in. The corresponding Jira ID will be struck through in the activity lists. When deactivating the draft setting again, the synchronization will be re-established and the current state of the work package properties in Planforge will be synchronized to Jira.

- If the work package is marked as draft in Planforge and deleted in Jira, the Jira ID will be removed from the work package in Planforge and when deactivating the setting at a later point, a new task will be created in Jira.
- If the work package is marked as draft and is deleted in Planforge, the task will also be deleted in Jira, if possible.

2.3.5. 2.3.5. Manager Estimations

With this functionality, it is possible to control the "Remaining Estimate" in Jira by adjusting the "Revised Effort" in Planforge within the tab "PROJECTS/Controlling/Resources/Progress". After saving the changes in this tab, the updated "Remaining Estimate" will also be set in the corresponding Jira tasks. Please note however that it is not possible to change the status of a task with this functionality, as it will always be controlled by Jira due to respective Workflows.

2.3.6. 2.3.6. Surrogates and the hierarchy of tasks

In Jira, you can create sub-tasks for tasks, which work like regular tasks for the most part. In Planforge however, activities will either be a work package or a phase, containing other activities, which means that some data from Jira in this case requires some specific handling to reflect the data properly. Therefore, sub-tasks from Jira are handled as follows:

- After the creation of a sub-task in Jira, it will be created in Planforge as an Ad Hoc Work Package, which will also be shown below their corresponding parent task, if it has been taken over into the planning. At this point, the aggregation of the initial estimate of the sub-task is not possible due to Planforges data structure.
- If the sub-task is then also taken over into the planning, the corresponding parent task will automatically be converted to a project phase to show the task hierarchy as accurately as possible in Planforge. At this point, the aggregated estimates of both the parent and sub-tasks will be shown for the newly created project phase.
- During the creation of the project phase, a surrogate for the parent task will also be created to show data from Jira that can not be stored for project phases in Planforge like base effort, work records and assignments. This surrogate will be shown in cursive text.

3. 3. RESOURCE-ASSIGNMENTS FOR JIRA-PROJECTS

3.1. 3.1. AUTOMATIC RESOURCE-ASSIGNMENTS

Resources will be automatically assigned if an automatic synchronization of changes takes place (either during a daily synchronization-cycle or if changes were applied to issues in Jira). Our web-application always retrieves the field "Username" from Jira and compares it with Planforge's resources and user- accounts, following these rules:

- First of all, the user can only be automatically assigned to issues in Jira by Planforge if the user has the "Assignable User" issue permission for the corresponding Jira project.
- If a resource has the "Jira Username" property then only this property is compared to the name of the Jira user. Specifically, the resource- and the user-name in Planforge will **not** be checked. For more details see section: The "Jira Username" property of resources
- If the "Jira Username" property of the resource in Planforge is identical to the username in Jira then the resource is assigned in Planforge or the corresponding user is set as assignee in Jira.
- If the resource has no "Jira Username" then the resource-name is compared to the "Jira Username". For exceptions see the section below: The "Jira Username" property of resources
- If no "Name"-field can be matched to the given "Username", then the user-name of Planforge user-accounts are checked. If the names match then the primary resource of the matching Planforge user is taken as the matching resource.

Asterisk beside Resource Name

In the following cases an asterisk is shown beside the resource name in Planforge:

- Inactive assignments are shown if multiple resources are planned in Planforge, but only one is active - the one that is assigned in Jira. All others are inactive and are shown with an asterisk.
- Inactive assignments are shown with an asterisk in case that the resources are not planned in Planforge, but tracked work in Jira.
- Inactive assignment are shown with an asterisk if they were assigned to work packages and tracked work in the past, but have been deleted from the work package. The work logs must still be shown, therefore the resource gets also shown, but with an asterisk.

Handling of multiple resource assignments

In Planforge it is possible to assign multiple resources to work packages. Please note that these multiple assignments can not be automatically assigned to Jira issues, because in Jira there is always only one assignee. When creating a new task with multiple assignments in Planforge, the responsible resource will be set as the assignee in Jira.

Resource Names when synchronizing with Jira Cloud

Due to some differences in the API for Jira Cloud instances, the names (or Jira Username property) of the resources need to be matched with the full mail address of the Jira users, that they use to login to the Jira instance!

In case the resources name or Jira Username property is configured correctly, but the assignments are still not synchronized as expected, please check in the user administration of your Jira cloud (<https://id.atlassian.com/manage-profile/profile-and-visibility>), if the visibility setting (Who can see this?) of the email address field is set to either "Organization", which should be sufficient in most cases, or "Anyone", if Organization does not work either. Any users affected by this issue should also be listed in "PROJECTS/Properties/History" of any synchronized project, that they are a part of.

3.2. 3.2. THE "JIRA USERNAME" PROPERTY OF RESOURCES

This property is needed in the rare case when the resource name in Planforge should be different from the names of the Jira users. It is unique for resources, however, the "Jira Username" of one resource may be the same as the resource-name of a different resource (e.g. Planforge resource with the name "Jane Doe" may have the "Jira Username" "jd" and a different resource with name "jd" - without a Jira Username or with a different one - may also exist). For details see below.

This property can be set via API, XLS import or via the <OpResource.JiraUsername> section of the Planforge configuration when configuring external systems like LDAP, Atlassian Crowd or Azure AD.

The "Jira Username" property is the ultimate truth when mapping Planforge resources to Jira users:

- If a Jira user matches a resource with a specific "Jira Username" and second resource would have a matching resource-name then the second resource is ignored.
- If a resource with a "Jira Username" is assigned in Planforge then only the "Jira username" is checked when synchronizing to Jira. If no direct match is found then the resource is not assigned in Jira, even if the resource-name would match a user in Jira.
- If user is assigned in Jira, this user matches a resource-name in Planforge and this resource has a different "Jira Username" then the resource is not assigned in Planforge.

4. 4. ADVANCED CONFIGURATION OPTIONS

These optional configuration parameters can only be applied to a "Enterprise Server" web-application hosted by your own servers. These configuration parameters will require changes to be made to the file "configuration.oxc.xml", which can usually be found in the folder "Planforge Project Home/Planforge". More information about the file "configuration.oxc.xml" can be found in the "Planforge" installation manual.

4.1. 4.1. CONNECTING TO JIRA VIA HTTPS

In most situations it is not essentially required to follow these steps to connect to your https-enabled Jira-server, so for trial setups you could usually skip this part. But for HTTPS-enabled production-servers please make sure to configure your "Planforge"-server like shown below.

To configure your "Planforge"-server to allow access to Jira using HTTPS perform the following steps:

1. Download the X.509 certificate of your Jira-server using your favourite browser and save it to a local file (We'll call this file, including its path "path_to_jira_cert" during these steps)
2. Run the command "keytool" in the terminal or command-line (A small tool that was installed along with Java, you'll find it in your Java-installations "bin"-folder) to add the downloaded certificate to a keystore-file (We'll call the filename and its full path "path_to_keystore_file"). Here's an example:
3. `keytool -importcert -file path_to_jira_cert -keystore path_to_keystore_file -storepass keystore_password`

The given keystore will be created if it does not exist. The "keystore_password" should be a strong password which will be needed to access the keystore-file.

4. Add the path to the keystore and the required password from above to the configuration-file of your Planforge-server's installation (The file "configuration.oxc.xml" in the folder "Planforge Project Home/Planforge"):
5.
6. `</database>`
- 7.
8. `<!-- Insert your configuration parameters here -->`
9. `<ssl-trustStore>path_to_keystore_file</ssl-trustStore>`
10. `<ssl-trustStorePassword>keystore_password</ssl-trustStorePassword>`
- 11.
12. `</configuration>`

After applying the changes please make sure to restart the Tomcat application-server.

4.2. 4.2. FORWARDING THE URL OF YOUR "PLANFORGE"-SERVER TO JIRA

In some situations the Jira-plugin could fail to connect back to your "Planforge" Server, for example when using an additional webserver connected to the "Tomcat" application-server or due to proxy-issues. If this is the case, the URL of the "Planforge"-server can be forwarded

to Jira using the following entry in the configuration-file (The file "configuration.xml" in the folder "Planforge Project Home/Planforge"):

```
....  
</database>  
  
<!-- Replace HOMEURL with your Planforge-server's full base-URL  
      (Including http:// or https://, but without /service or /login) -->  
  
      <connect-url>HOMEURL</connect-url>  
  
</configuration>
```

After applying the changes please make sure to restart the Tomcat application-server. If the parameters are fine and the connection can be established

4.3.4.3. CONFIGURING THE JIRA TIMEOUT

The default timeout for the Jira connection is 20 seconds, but for larger Jira installations some queries can take longer, which lead to follow-up-issues. To avoid these situations it is possible to increase the Jira timeout by adding the following parameter to the "configuration.xml"-file which can be found inside the "Planforge Project Home"-folder.

```
<jira-connection-timeout>50</jira-connection-timeout>
```

5. 5. APPENDIX

5.1.5.1. ENABLE INCREASED LOGGING FOR THE PLUGIN

To solve communication issues between Jira and the "Planforge"-server it will be required to alter the logging-level of the Jira-server. These are the required steps for Jira 6 and higher:

1. Open the "Administration"-section in Jira
2. Navigate to "System" to the section "Troubleshooting and Support"
3. Select "Logging & Profiling" in the navigator (left side)
4. Scroll down to the section "Default Loggers"
5. Click "Configure logging level for another package"
6. Enter "Planforge" for the field "Package name"
7. Set the "Logging Level" at "DEBUG"

Confirm the changes by clicking the button "Add". The increased logging parameters will only be kept temporarily until the next restart of the Jira-server.