Manage Small and Medium projects with JIRA WBS Gantt Chart Plugin

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Outline

• JIRA Introduction
• Planning and Scheduling tips
• WBS Gantt Chart
Some questions

• Who is a MS Project user?
• Who has followed MS Project courses?
• Who has followed Open SE courses?
• Who needs planning and scheduling to do their job?
• Who uses already JIRA?
• Who uses a tool for planning and scheduling different from MS Project/JIRA?
• Which one?
Some words about JIRA
JIRA Introduction

- What is JIRA?
  - Gojira → Japanese word for Godzilla
  - Issue Tracking and Project Management
  - Developed by Atlassian
  - CERN runs JIRA 8.0.2 in https://its.cern.ch

- Three products
  - JIRA Core
  - JIRA Software
  - JIRA Service Desk

- CERN has unlimited number of licenses for JIRA Software Licenses that contains JIRA Core
WBS Gantt-Chart plugin

• What is Gantt-Chart plugin?
  • Third Party tool developed by Ricksoft
  • It provides visual project planning through Gantt charts
  • Some interesting functionality
    • Task dependencies with drag-and-drop interface
    • Modify schedules and dependent issues update automatically
    • Smart workload allocation with resource monitoring
    • Critical path
    • Baseline plan
  • CERN has now unlimited number of licenses for this plugin
  • CERN runs now version 9.9
JIRA Basics

• JIRA issues
  • JIRA building blocks
  • They could represent a story, a bug, a task, or another issue type in your project
  • For planning and scheduling
    • We will use them as tasks
    • Issues = Tasks or sub-tasks from now on
    • Tasks and sub-tasks are treated in the same way
Planning and scheduling tips
Project Master Schedule

- Starting point before defining the coordination schedule (Gantt Chart)
- The master schedule is a summary
- It should be intuitive
- It should contain the whole project overview
- Starting from the main phases of the master schedule, the remaining tasks can be defined
WBS Gantt-Chart
Create a JIRA Project

https://cernforge.web.cern.ch/jira

Select Advanced to see all the options
Project Template

- Projects should be created with:
  - Project Management template

- More information about project templates:
  https://cern.service-now.com/service-portal/article.do?n=KB0005975
Who will be notified in your project

- Projects are created with:
  - Default notification scheme
- You can change this in:
  https://cernforge.web.cern.ch/jira/myprojects/
- For more details on notification schemes:
  https://cernforge.web.cern.ch/jira/notificationschemes/
Task workflow

- Projects are created by default with the workflow defined in the Project Template
- However, the workflow can be reconfigured
  - For more information please check: https://cern.service-now.com/service-portal/article.do?n=KB0002999
- Learn more also about board workflows
  https://cern.service-now.com/service-portal/article.do?n=KB0001729
  - You can create your own workflow in the board configuration by adding status and columns
To display Gantt Chart fields

- Projects should be created with:
  - *Project management issue type screen scheme*
  - This allows to display Gantt Chart fields in the JIRA task
- This screen type is available for all project templates
  - Not only for Project Management template!
- For existing projects
  - Open a SNOW ticket requesting this type of screen to be activated for your project
Who can watch your Gantt

- Projects are created with:
  - Default Permission Scheme
    - This means the project is only visible to project members
    - The same for the Gantt Chart
- You can change this in:
  - https://cernforge.web.cern.ch/jira/myprojects/
- For more details on permission schemes:
  - https://cernforge.web.cern.ch/jira/permissionschemes/0/
Create a Gantt Chart

Create a Gantt Chart from project

Gantt name: GANTT example

Project: Gantt Test 1

Warning: Please avoid managing a single issue in multiple Gantt charts because it may cause unexpected behavior.

The default setting prepared by WBS Gantt-Chart for Jira is given as the initial setting of the created Gantt.
Add Tasks

- Task Name
- Assignee
- % of time allocated to the task
- Start and Finish date or Duration
- Percentage completed

Edit the values directly here or in the JIRA classic view.
Gantt Chart Fields

- Note that Gantt Chart fields are visible in the task only if the project was created with the right screen template.
- The fields are displayed in the task screen only if they have some value:
  - Edit the task
  - Check the Gantt tab
  - Fill in the fields
Task Dependencies

- The easiest is to drag and drop directly in the Gantt chart to create task dependencies
  - Start to End
  - End to Start
  - Start to Start
  - End to End
- In the **Edit** Menu you can also
  - Indent/Outdent to modify the task hierarchy
  - Move up or down to reorganise the task order
About Task bars

• Colours
  • Parent bars: blue
  • Children bars: green
  • Completed issues: light blue or green
  • Baselines (see later): light grey bar

• Task Names
  • They appear on the left
  • Feature request to allow to drag and drop: WGC-856
Milestones

- Create first a Task
- Then convert to Milestone from **Edit** Menu
Add Users
Add Users

• Add users to Developers role (permissions to modify issues)
• Note that Users role are users who can create issues. Maybe this is not what you want if using JIRA for project management
• Note that you can change the permissions of each user type anyway
• Be aware that CERN users need to have logged in at least once in JIRA to be able to see them as JIRA users!
Adding users through e-groups

• You can add all the users of an e-group by adding the e-group to a role
  • But please, note that tasks can only be assigned to a single user
• If your e-group is not recognised by JIRA
  • Go to https://cernforge.web.cern.ch/jira/egroup/sync/
  • Add the e-group
  • You should now be able to see it in JIRA
Dummy Users

- Dummy users may be needed for your project
  - For short term tasks
  - To calculate needed resources and estimate effort
- In order to create dummy users:
  - Create a service account
  - Log in once in JIRA with the new account
  - You can now assign that account to your project
Resource View

- Basic resource management and allocation
- Tasks have fixed duration: changing units won’t have an impact on the duration of the tasks
- Tip: calculate the duration of the tasks taking into account the availability of the resources and adjust both units and duration if necessary
Baseline

Right-Click on the project task
Baseline

The grey bars show the baseline: your original plan
Enable/Disable it in the View Menu
## Progress

- **Warnings**
  - Tasks about to start
  - Task not started by the start date
  - Task not finished by the end date
- **Percent done**

### Current date: see whether you are late or ahead of schedule
Progress

• Criteria to update progress needs to be defined
  • Frequency
    • Every week?
    • Every project review?
  • Who?
    • Any user?
    • Project leader?
• Accuracy depends on the criticality of this information
  • Find a balance between progress reporting overhead and usefulness for project control and follow-up
Export (I)

- In the Data Menu
  - Export to Excel
  - Export to MS Project (xml)
    - It could be useful for people working with subcontractors who may use MS Project
  - Import from MS Project (see next slides)
Export (II)

- Print Button suggested by some users
  - To print on paper? on PDF?
  - Feature request for printing: WGC-855

- Several Workarounds:
  - Export to Excel and then print from PDF (From the Data Menu)
  - Feature request to display task names in the Gantt Chart: WGC-859
Export (III)

- DHTMLX viewer tool that will be soon available in CERNbox
- Export to MS Project (XML)
- Open on CERNbox
- Export to PDF, PNG, etc…
Importing MS Project files

- Make sure user importing MS Project file has «Assignable» permission
  - User needs to have a Developer role!
- Be patient, the progress bar displays status per task!
- When start or finish dates are not defined
  - WGC-858
Other Useful Functionality

• Holiday calendar
  • https://rissupport.atlassian.net/wiki/spaces/WGCE0909/pages/350289943/Configuring+the+holiday+calendar

• Critical Path
  • https://rissupport.atlassian.net/wiki/spaces/WGCE0909/pages/350290112/Information+on+analysis+tools+and+functions#Informationonanalysistoolsandfunctions-Viewingthecriticalpath

• Progress line
  • https://rissupport.atlassian.net/wiki/spaces/WGCE0909/pages/350290112/Information+on+analysis+tools+and+functions#Informationonanalysistoolsandfunctions-Viewingtheprogress

• Adding more columns
  • https://rissupport.atlassian.net/wiki/spaces/WGCE0909/pages/350289989/Configuring+additional+columns

• Complete documentation
  • https://rissupport.atlassian.net/wiki/spaces/WGCE0909/overview
JIRA Python API

- Python API
  - https://pypi.org/project/jira/
- Gitlab project
  - https://gitlab.cern.ch/it-dep-cda/jira-api-utils
  - Python libraries and functions to interact and manipulate JIRA projects
  - I would like to offer this through SWAN service (work in progress)
JIRA REST API

- REST API
- https://cern.service-now.com/service-portal/article.do?n=KB0002188
Keeping up to date

- Egroup *jira-gantt-chart-plugin-forum*:
- Community forum:
  - [https://discourse.web.cern.ch/c/pm-jira-gantt-chart](https://discourse.web.cern.ch/c/pm-jira-gantt-chart)
Documentation

• Get started with JIRA KB
  https://cern.service-now.com/service-portal/article.do?n=KB0005904

• WBS Gantt Chart for JIRA Demo
  https://www.youtube.com/watch?v=nkUbKEaveXA