Manual

GR:Gravity

From RemainWiki

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CONTENTS

GRAVITY

INTRODUCTION VIDEO

Welcome to the Documentation pages of Gravity. You can read about the concepts below or

click here if you are evaluating Gravity.

click here if you want to get started now.

EVALUATE

Click here for to do a quick setup of Gravity for evaluation purposes

CONCEPTS

ALM

Gravity is an Application Lifecycle Management tool. The discipline of ALM covers the management of your software development. It enables you to create an administration that will manage your defects, feature requests and releases. Gravity also enables you to perform version control on your sources and Gravity is capable of promoting source and binary artifacts through the development life cycle.

CROSS PLATFORM

Gravity is a cross platform application which not only means that the application itself will run on various hardware platforms but, more importantly, it means that with Gravity, you are able to manage a large number of hardware and software platforms we call targets. More information about targets can be found here.

DEVELOPMENT ADMINISTRATION

The administration of the software development department may consist of software releases, iterations, defects, bug reports, change requests and the like. Gravity does not enforce a predefined structure but enables you to define your own. Gravity comes with a number of definitions based on a development process which includes Scrum, XP, Helpdesk and TD/OMS Classic. More information about definable can be found here.

EXTENSIBLE

You can plug in your own targets into Gravity. The Gravity Object Management Protocol (OMP) enables you to plug in your own management software to enable deployment to a new target platform. A description of the Gravity OMP API can be found here.

SERVICE ARCHITECTURE

Gravity is created using a service architecture. This enables application developers and system integrators to hook into the Gravity API with great ease. A description of the Gravity Service API can befound here.

REFERENCE GUIDE

INSTALL THE GRAVITY SERVER ON YOUR WINDOWS MACHINE

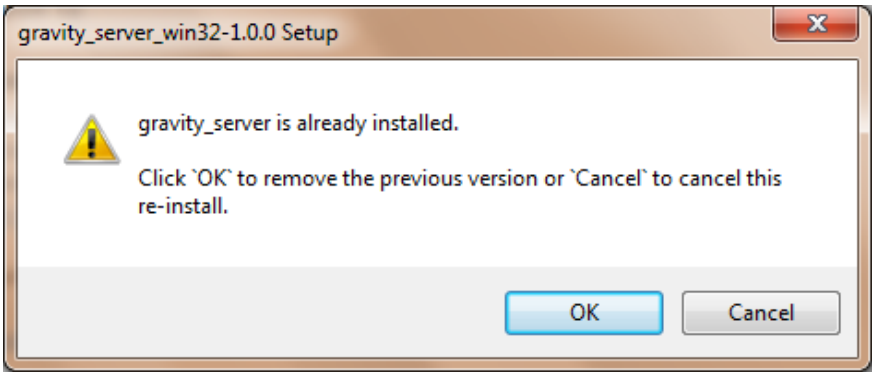
Download the Gravity Server from our download area by clicking on this linkand picking the correct server. The server download is named *Windows Server Installer*.

RUN THE INSTALLER

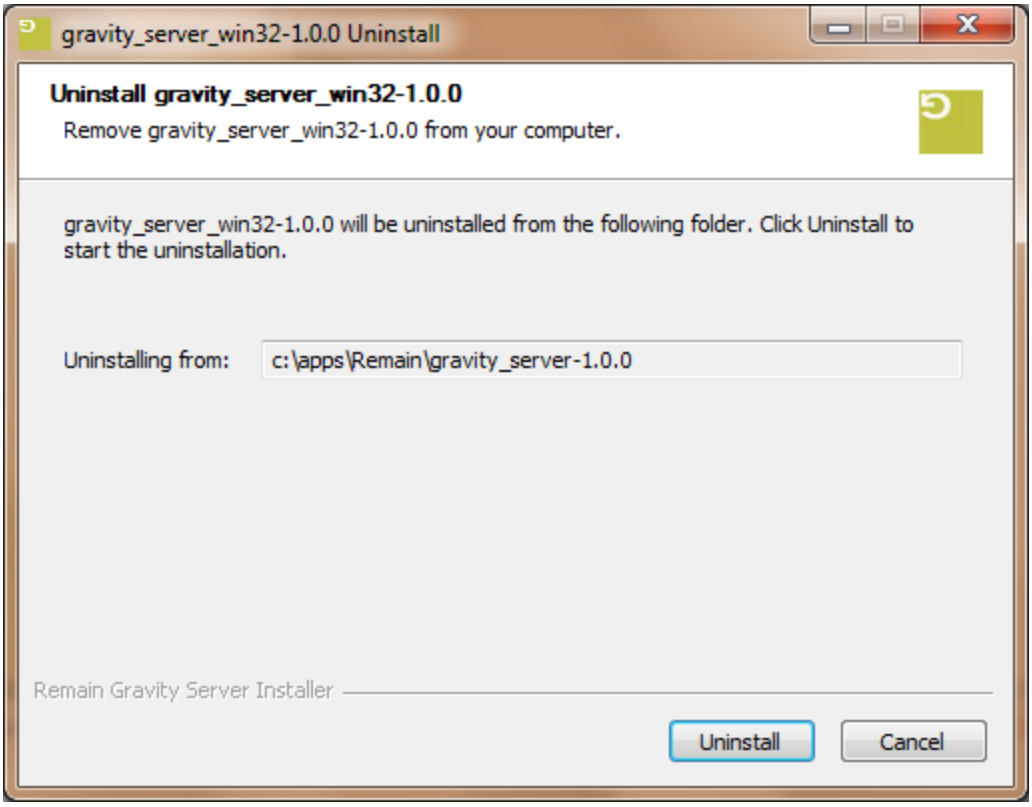
Run the executable after it has been downloaded and follow the installation instructions on screen. If you have previously installed Gravity Server then the old server will be uninstalled first. Your data will be retained.

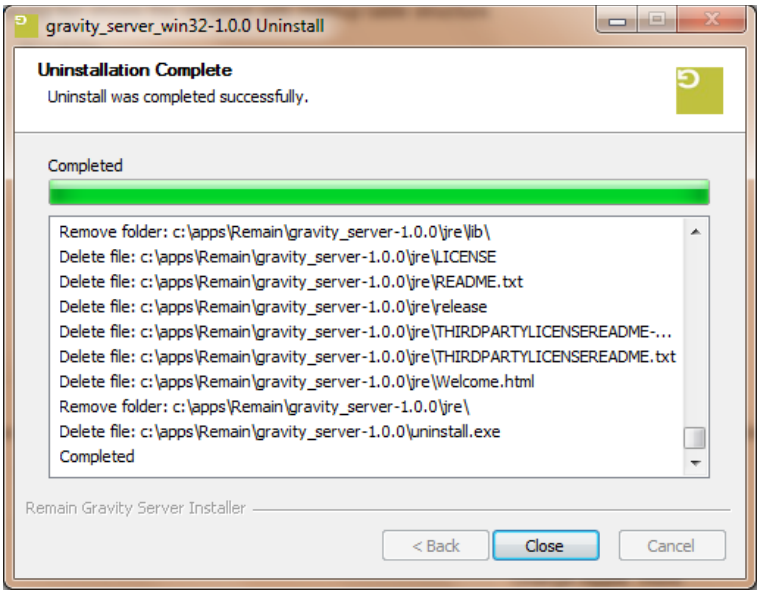
UNINSTALLING THE SERVER

Press OK



Press Uninstall





Press Close

INSTALLING THE SERVER

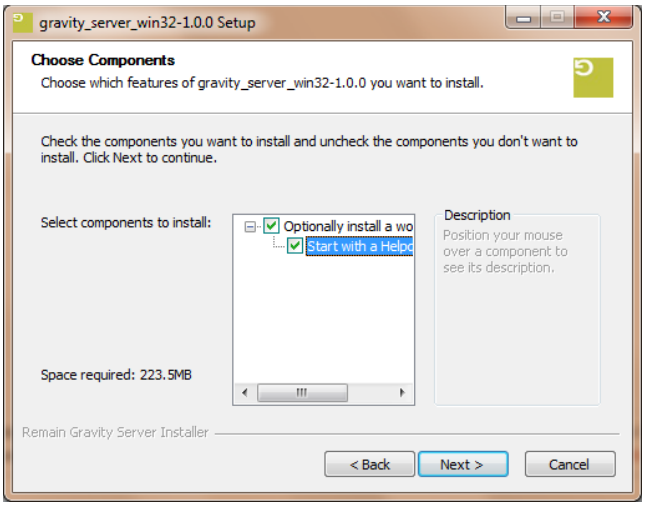
To install the server, follow the pages of the install wizard.

The first page introduces the Gravity Server installer.

Press Next.

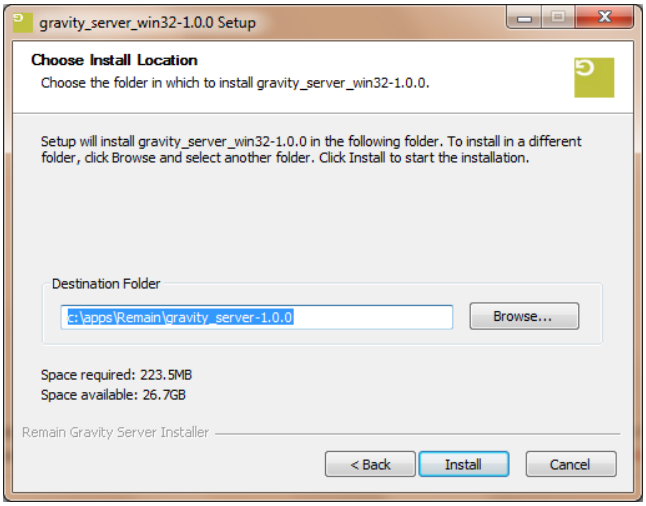
If you want to install a predefined database with some content then you can select this as an option here. The database is pre filled with a helpdesk type workflow and it already contains some workflow documents.

Press Next.



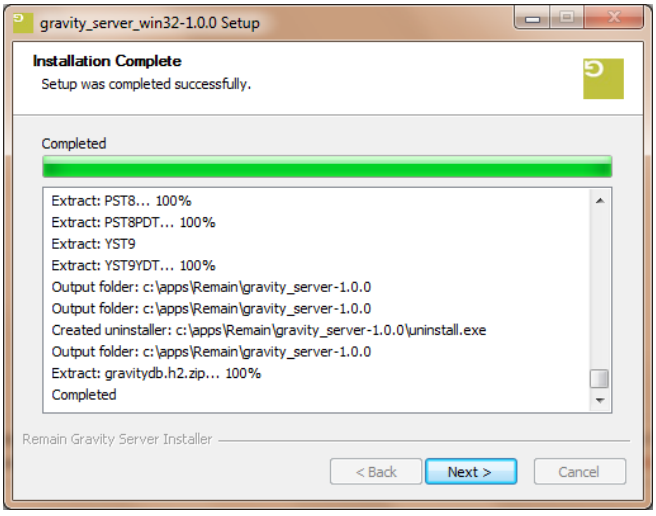
This next screen enables you to define the install location. Make any changes you want or accept the defaults.

Press Install.

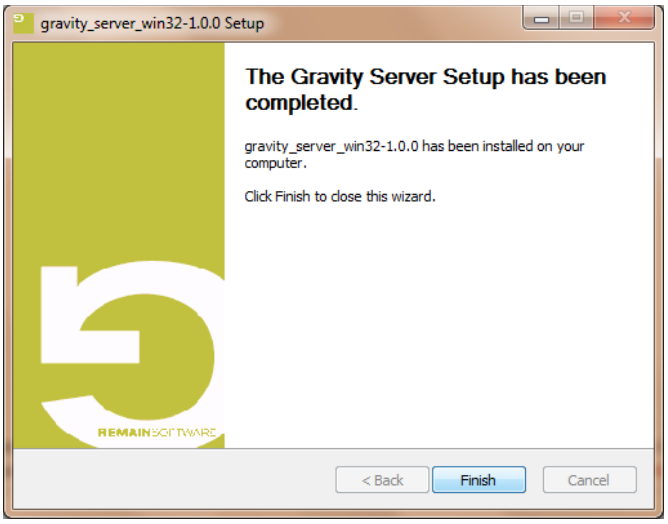


Wait until the installation has finished.

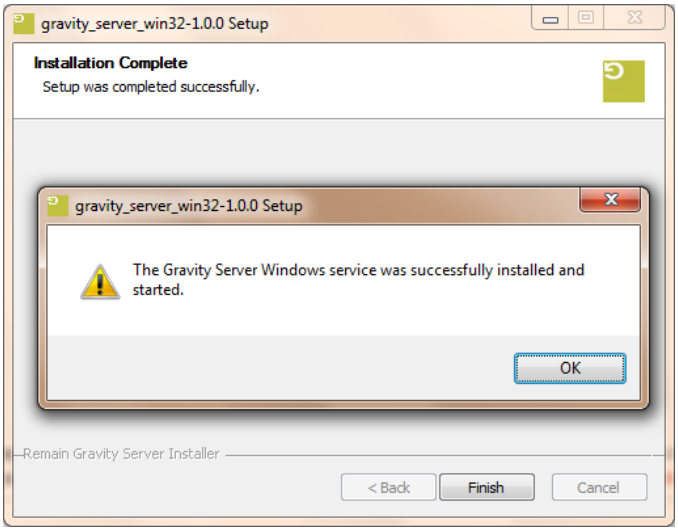
Press Next



Press Finish. A blank page will appear for a few seconds. During this time the Windows Server installer will be installed.



Press Finish to complete the installation.



THE ADMINISTRATION CLIENT

With the Administration Client you are able to;

- Install licenses;
- Change Definitions
- Add new document types
- Add fields to documents
- Manage applications
- Manage the workflows
- Add user and group types
- User Management;
- Manage Users
- Manage Groups
- Manage Roles

- Manage Authority
- Configuration Management
- Change web and mail configurations
- Create new databases
- Manage events
- Configure event handlers
- Change mail templates
- Manage your work
- Create work items
- Planning
- Full Text Search
- Connect work items to projects/milestones/etc..

INSTALL THE ADMIN CLIENT INSTRUCTION VIDEO

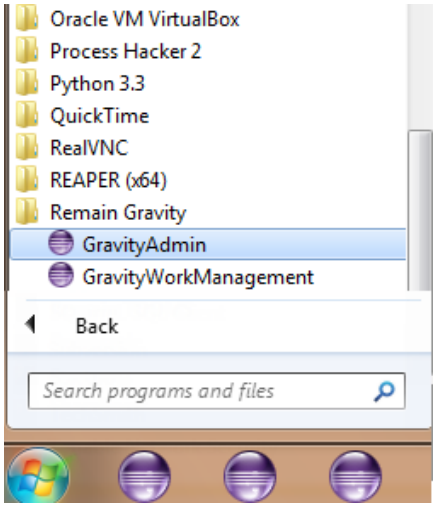
Instruction Video

INSTALLING THE ADMIN CLIENT

Download the Gravity Admin Client from our download area by clicking on this link [1] and picking the correct installer for your Operating System.

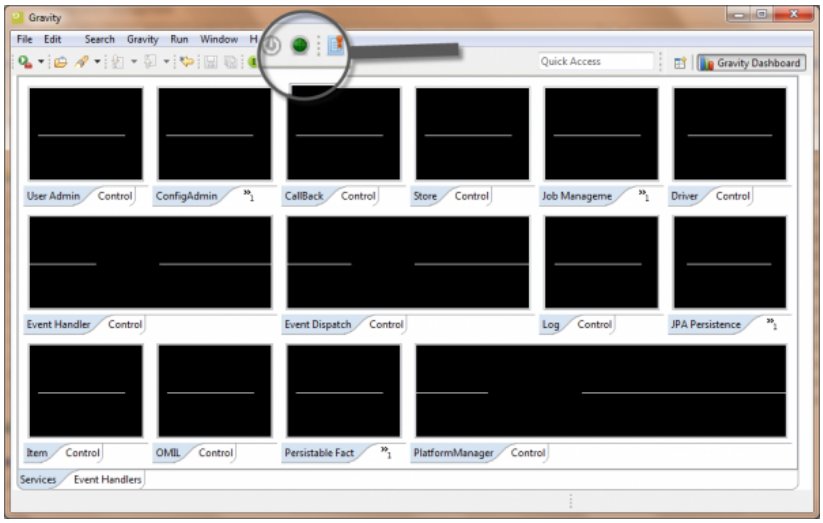
Once downloaded, run the installer and follow the instructions of the installer.

Once installed, Gravity is available from your programs menu in the Windows Task bar;



[1] (https://remainsoftware.com/extranet/software-downloads/admin-client)

RUNNING THE CLIENT FOR THE FIRST TIME



Discovery button

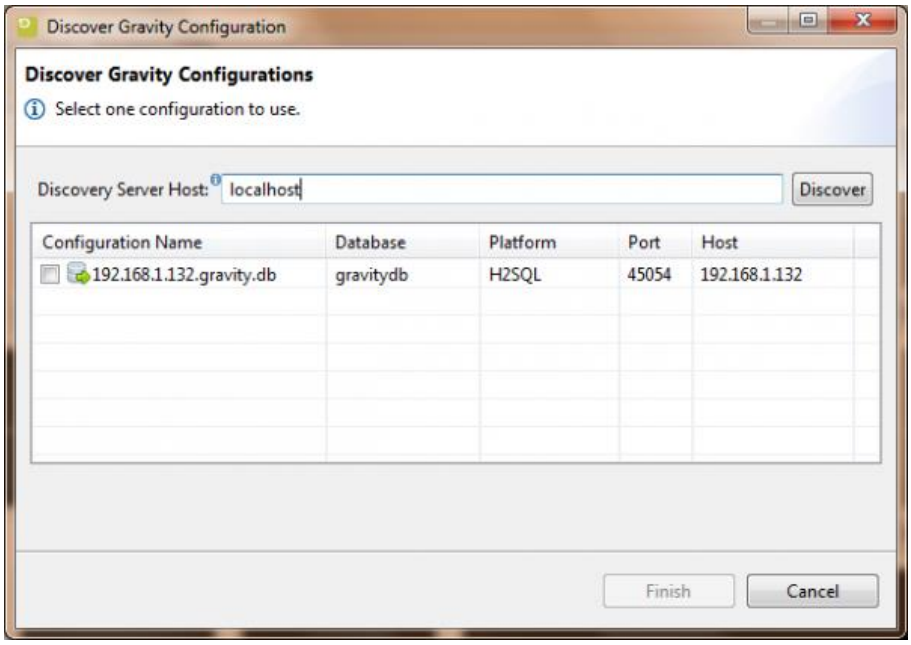
When the client starts up for the first time, it will show the Gravity Dashboard. On the toolbar there is a little radar shaped icon that will enable you to discover a Gravity server. Since we have already installed a Gravity server, we can discover that.

Press the Discovery icon and in the dialog that appears type the name of the server as indicated in the image below. If your server is running on your local host type "localhost" otherwise type the ip address or the domain name of your Gravity server and press the Discover button. The list will be populated with an entry. Check the entry in the table and press "Finish".

The server configuration will be retrieved and the client will restart. If this is the first time you access the server or if you did not change the admin password you can login with

user: admin

password: admin



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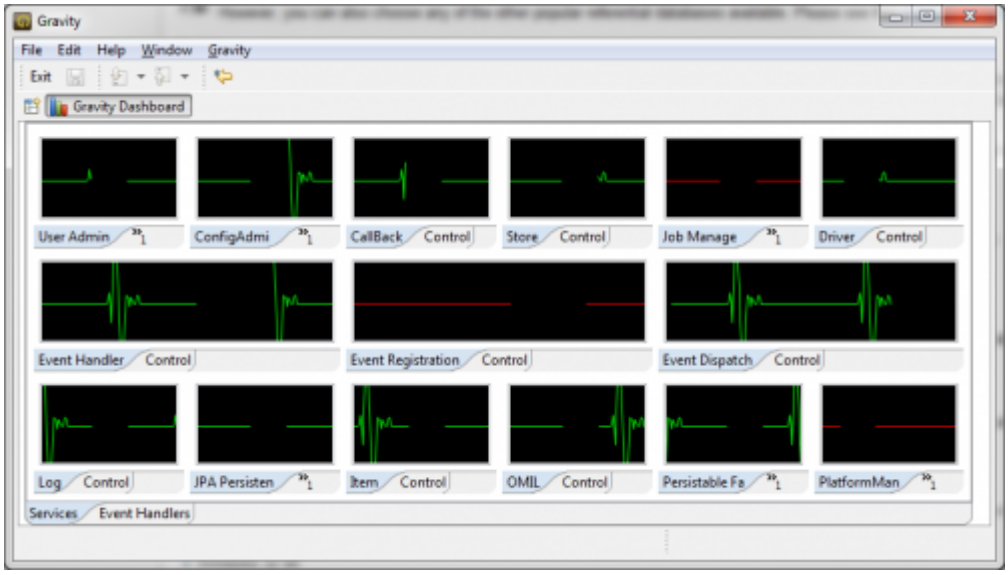
DASHBOARD



The Gravity Dashboard is an initial screen where the status of the main Gravity processes can be monitored. The Dashboard can consist out of multiple pages and each page can have a number of graphical elements. Each graphical element can have a configuration page where certain aspects of the graphical element or the process it represents can be changed.

In the bottom of the screen you see two pages with the text "Services" and "Event Handlers". This indicates that there is an additional page "Event Handlers" that monitors some other aspects of Gravity.

Just above the "Services" text in the bottom of the screen you will see the "Log" monitor. It represents a graphical element indicating the state of the Log service. The Log service is an internal part of Gravity that is used for logging. It is important that this service is running.

The graphical element itself consists of two pages. The second page is used to control the process in case it should not be running. It is possible that not all graphical elements have a control page.

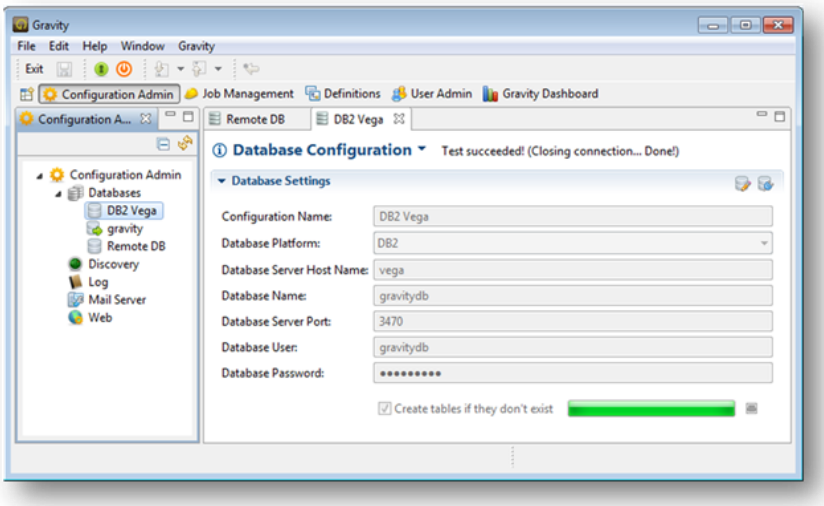
CONFIGURATION ADMIN

This section describes the Configuration Admin part of Gravity. The Configuration Admin contains all nuts and bolts configuration required for your Gravity installation.

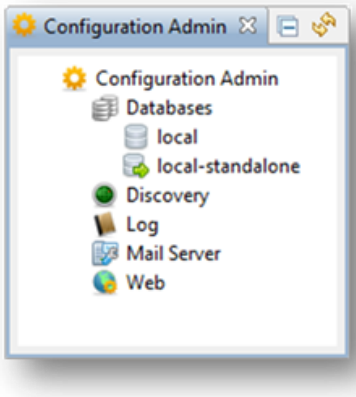
CONFIGURATION ADMIN PERSPECTIVE

Gravity Configuration is administrated centrally from within Configuration Admin perspective.(Please note that the words *configuration* and *settings* are used here interchangeably to mean the same thing.)

You can open the perspective by clicking on the *Open Perspective* shortcut on the Perspective bar.



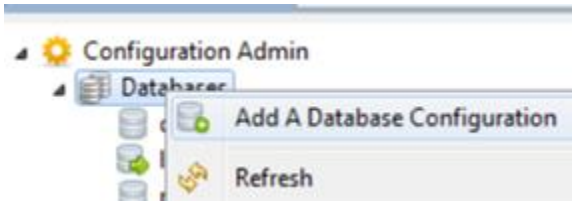
CONFIGURATION ADMIN VIEW



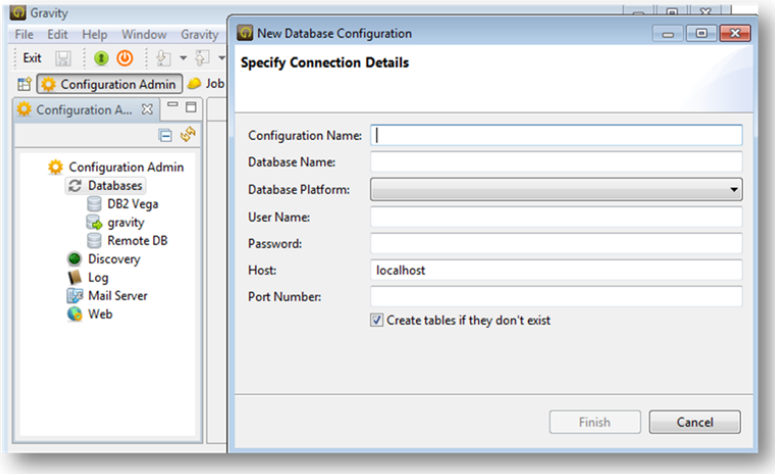
The configuration admin view shows all the configurable items in a tree like structure. You can either invoke a context menu on the tree items by using mouse right-click or you can double-click on the item to open an additional configuration screen.

Databases

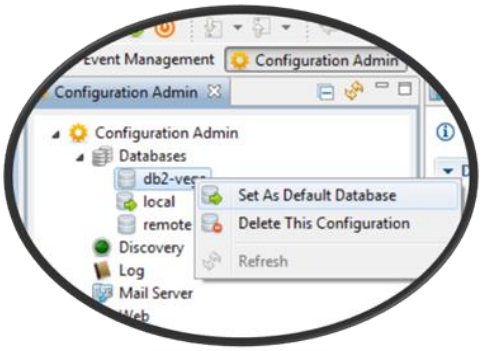
To add a new database configuration, right click on **Databases** then **Add A Database Configuration**:



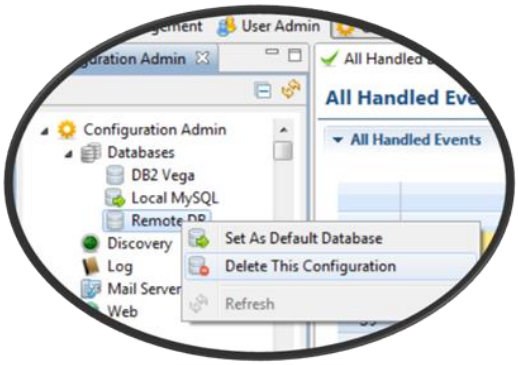
A new dialog opens for you to fill in your new database settings. Click **Finish** once done.



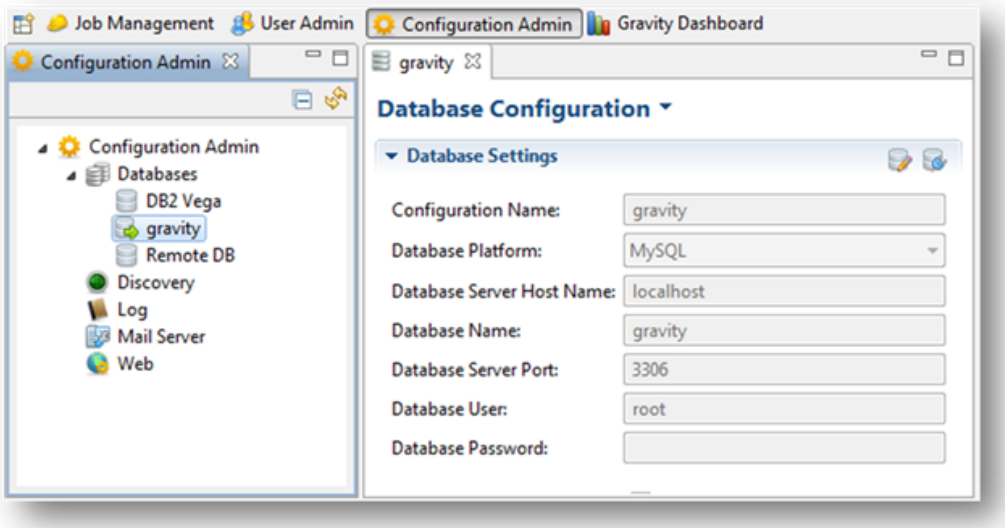
To set Gravity default database, right click on the configuration you want to use then choose **Set As Default Database**:



To delete a database configuration, right click on the configuration you want to delete then choose **Delete This Configuration**:



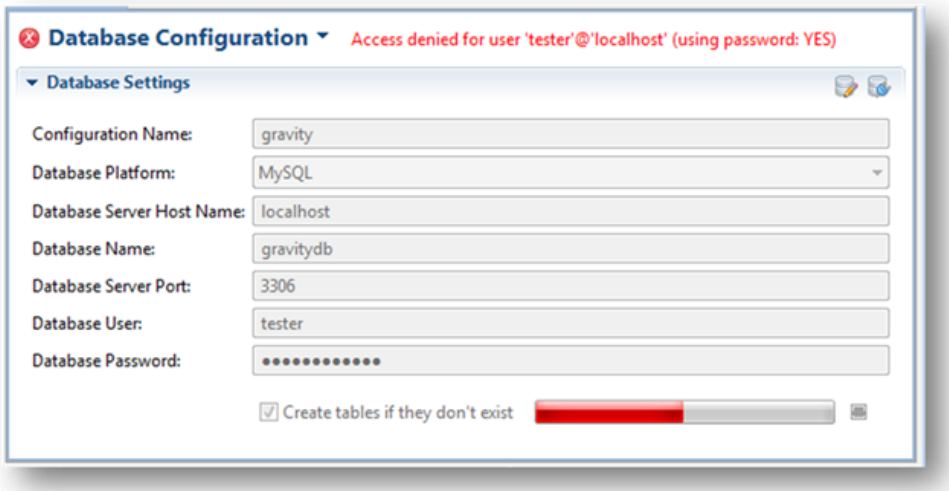
To view a database configuration, double click on its name. A new editor is opened.



To edit this configuration, click on the edition icon:  . All fields are, then, made editable. Save your new settings by clicking  (or **CTRL + S**).

Within the same editor, you can test your database settings by clicking on the connection test icon: 

The connection test result is shown on the same editor:



Mail Server

One of Gravity abilities is to automatically send email notifications. To do so, Gravity needs some mail settings. Double click **Mail Server** from the view to open the editor.

SMTP Server

Specify the outgoing SMTP server, port and authentications (if required by your SMTP server/provider).

Mail Client

- Web Url Pattern

  Defines the path to the Work Management module. Leave it to /wm

- Fill in the email suffix.

  A Gravity service sending emails will need to append this suffix to its name/identifier to build a sender header.
  For instance, a Gravity service sending email notifications would have the following as sender address: *gravity-event-handler@**remainsoftware.com*** using *@remainsoftware.com* as email address suffix.

- e-mail character set

  Select a set to use as the character set to use for mails. The default is UTF-8

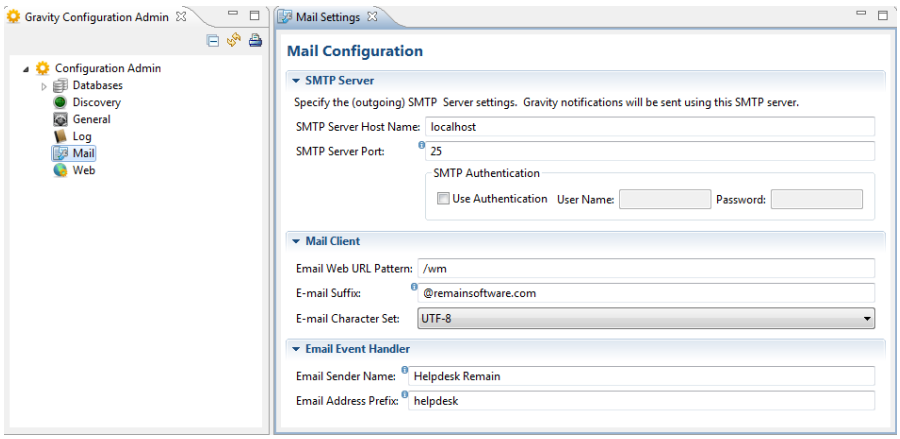
Email Event Handler

- Email Sender Name

  Defines the human readable part of the e-mail: "**Helpdesk Remain** <helpdesk@remainsoftware.com>"

- Fill in the email prefix.

  A Gravity service sending emails will need to prefix its name to build a sender header.
  For instance, a Gravity service sending email notifications would have the following as sender address: ***gravity-event-handler***@remainsoftware.com using *@gravity-event-handler* as email address suffix. If you don't want to receive mails back on this address, consider to use "no-reply".



Web

To configure Gravity web server side, double-click on "Web" from the configuration Admin view.

- An editor is opened

Web Server

- Fill in the web server URL. That is the domain name that one can reach Gravity on from the web. This address will be used by Gravity as base to generate reachable links.
  For instance, one may follow a link from within an email sent by a service to access Gravity online.
- Gravity can handle Rest communications. To enable Gravity restfulness:
- Fill in the Rest server host. That is the host a Gravity instance is running and where Rest calls will be directed to. Gravity services use this addrss as base appending their sub-urls to do Rest calls.
- Fill in the Rest server port. That is the port a Gravity instance is expecting Rest calls in.

Lucene Search

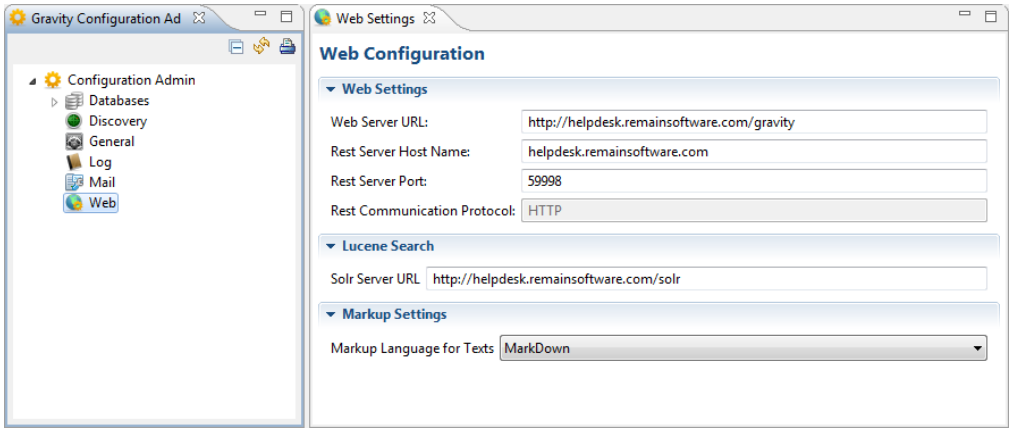
Apache Lucene and Apache Solr are used to index the Gravity documents and attachments so that they can be searched quickly.

- Fill in the name of the Lucene Indexing Server

Markup Settings

You can use markup to format descriptions and comments. From this drop-down you can select the required syntax. The currently supported languages are:

- MarkDown
- MediaWiki

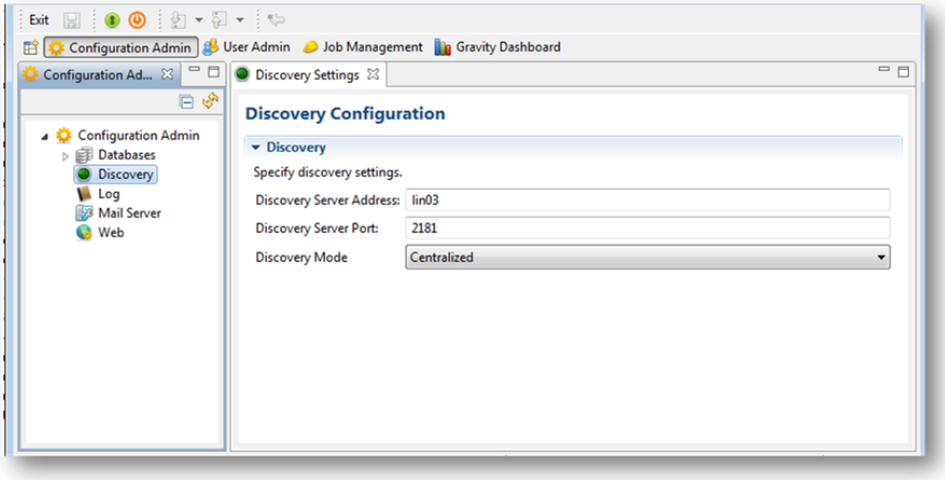


Discovery

Technical Details About Gravity Discovery

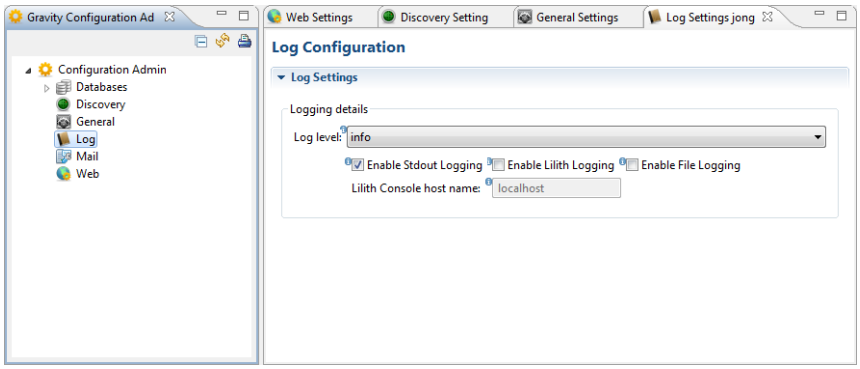
To configure Gravity discovery, double-click on "Discovery" from the configuration Admin view.

- An editor is opened
- Fill in the host address Gravity discovery server is running at.
- Fill in the host port.
- Fill in discovery mode:
- Centralized: One and only one discovery server will be running on which all Gravity services will rely. All Gravity instances pointing to this central point are able to see each other's services automatically.
- Replicated: This distributed and failure tolerant mode allows multiple discovery servers to run simultaneously. They will try and sync their knowledge
  about published services.
  This way, services discovery is fine as long as some of these servers are running, regardless which ones.
- Standalone: This is an end-to-end discovery mode. You want to point to one or more host machines to discover services running there. Others cannot see your exposed services unless they point back to you, specifically and explicitly.



Log

This section configures Gravity logs. Please don't change any of these unless asked so by our helpdesk.



USER ADMIN

This section describes the User Admin part of Gravity.

USER ADMIN PERSPECTIVE

There is a special perspective with all views related to the user administration. You can open the perspective by clicking on the *Open Perspective* shortcut on the Perspective bar. This perspective will open the*User Admin view* and the *Authorities Customization view*.

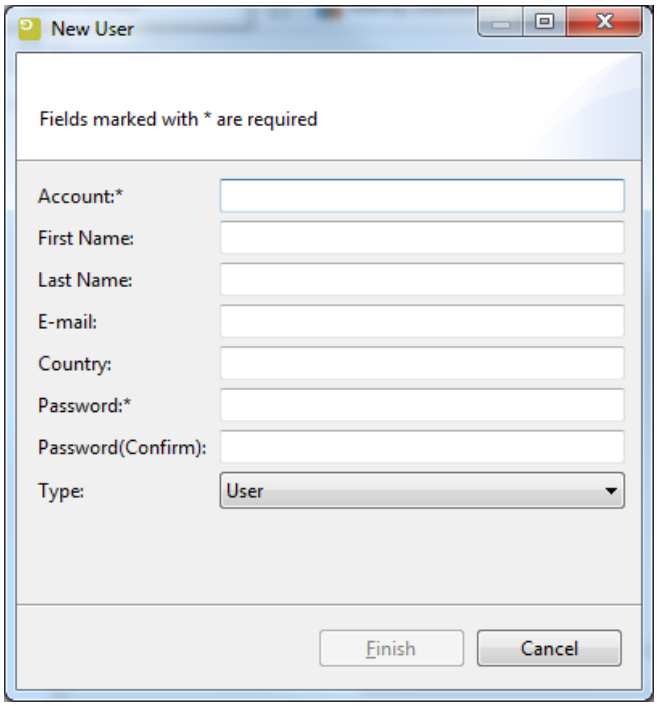
CONCEPTS

The main elements of the Gravity user admin are **User**, **Group**, **Role** and **authorities**.

User

User is a person who uses the Gravity application. After the first start-up of the Gravity, the admin user profile will be created.

A user profile has initially the fields shown in the following figure and can be extended with more fields:



How to Create a User Profile

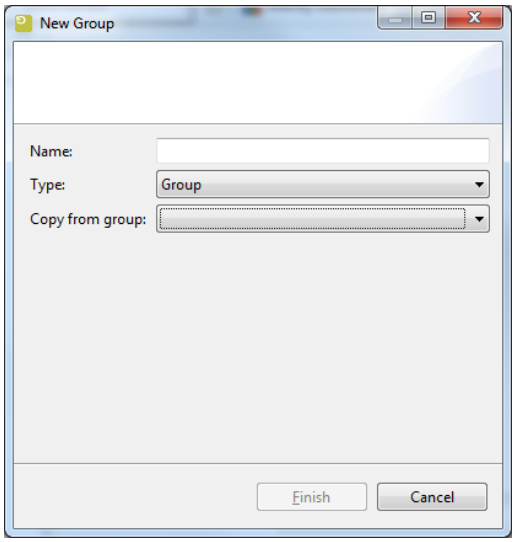
Open the *User Admin view* -> mouse right click on the 'Users' node -> click on the context menu 'New User' -> the user wizard will be displayed (see figure above) -> fill the fields and click on 'Finish'.

How to Edit a User Profile

Open the *User Admin view* -> expand the 'Users' node until you find the relevant user -> select the user and then mouse right click -> select the option 'Edit' -> update the fields and click on 'Finish'.

Group

Group is a collection of users that can be used to minimize the amount of administration required. The group consists of three different sets, namely, *basic members*, *inactive members* and *required members*. Each user that can be added to the group, must be added to one (or more) of these sets. Basic members define the set of members that can get access and required members reduce this set by requiring the initiator to *imply* each required member.
The group has initially only the name field and can be extended with more fields.



How to Create a Group

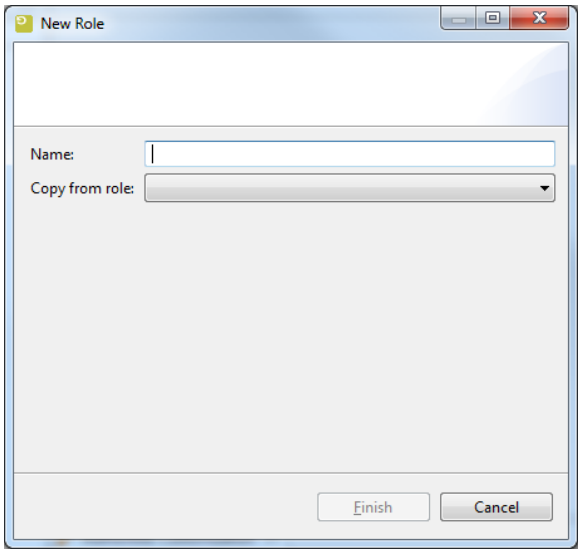
Open the *User Admin view* -> mouse right click on the 'Groups' node -> click on the context menu 'New Group' -> the group wizard will be displayed (see figure above). A new group can be automatically filled from another group by selecting a group in the "Copy from group" combobox. Fill the remaining fields and click on 'Finish'.

How to Edit Group

Open the *User Admin view* -> expand 'Groups' node -> select a group and mouse right click -> update the fields and click on 'Finish'.

Role

Role is a collection of authorities (authorized entities) that can be assigned to a user(s) or group(s). After the first start-up of the Gravity an *administrator role* will be created and assigned to the *admin user*. The users or the groups that are assigned to the *administrator role* have all rights to execute all actions of all entities.



How to Create a Role

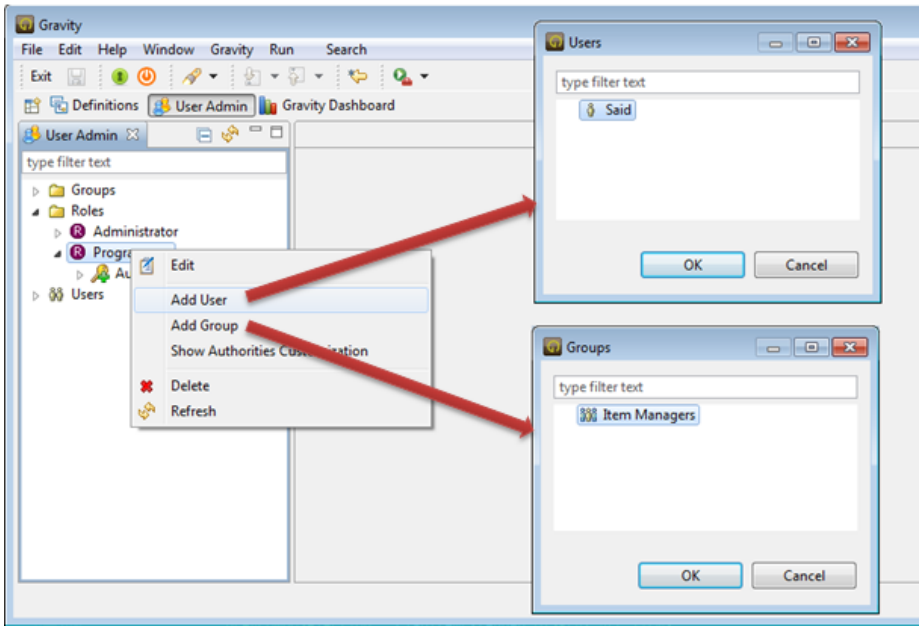
Open the *User Admin view* -> mouse right click on the 'Roles' node -> click on the context menu 'New Role' -> the role wizard will be displayed (see figure above). A new role can be automatically filled from another role by selecting a role in the "Copy from role" combobox. Fill the fields and click on 'Finish'.

How to Edit a Role

Open the *User Admin view* -> expand 'Roles' node -> select a role and mouse right click -> update the fields and click on 'Finish'.

How to Assign a Role to User(s) or Group(s)

Open the *User Admin view* -> expand 'Roles' node -> select a role and mouse right click -> select the option 'Add User' or 'Add Group' -> select the users or groups and click on 'Ok'.



- **User Rights Scenarios**
- Scenario 1: no entity action is added

  If a user is assigned to a role and there is no action added to the authorities of this role, then the user has no right to perform any action of any entity.

- Scenario 2: only the entity global actions (actions on the entity type level) are added

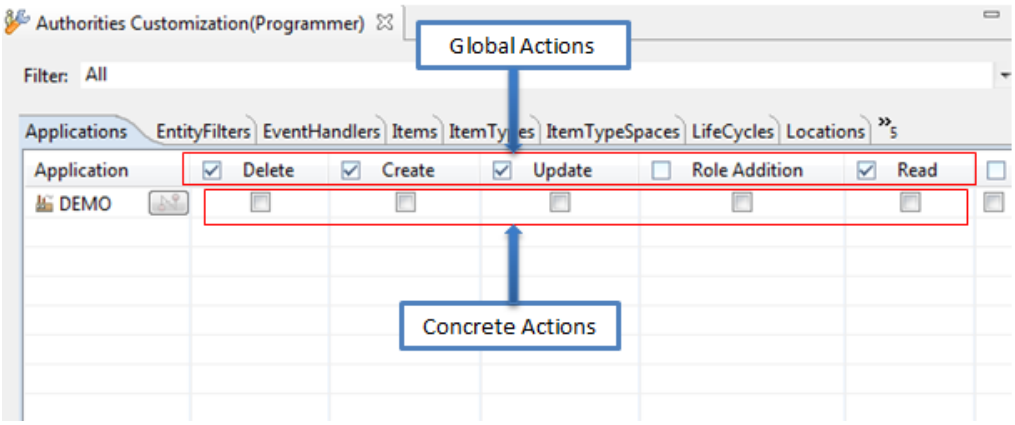
  If a user is assigned to a role and there is one or more global action added to the authorities of this role, then the user has right to perform the associate actions of the appropriate entities.

- Scenario 3: only entity concrete actions (actions on the concrete entity level) are added

If a user is assigned to a role and there is one or more concrete action added to the authorities of this role, then the user has right to perform only permitted actions of the appropriate concrete entities.

- Scenario 4: concrete or global entity actions are added and the role is connected to an authorized entity

If a user is assigned to a role and there is one or more concrete or global action added to the authorities of this role and this role is connected to an entity, then the user has right to perform only permitted actions of this entity.

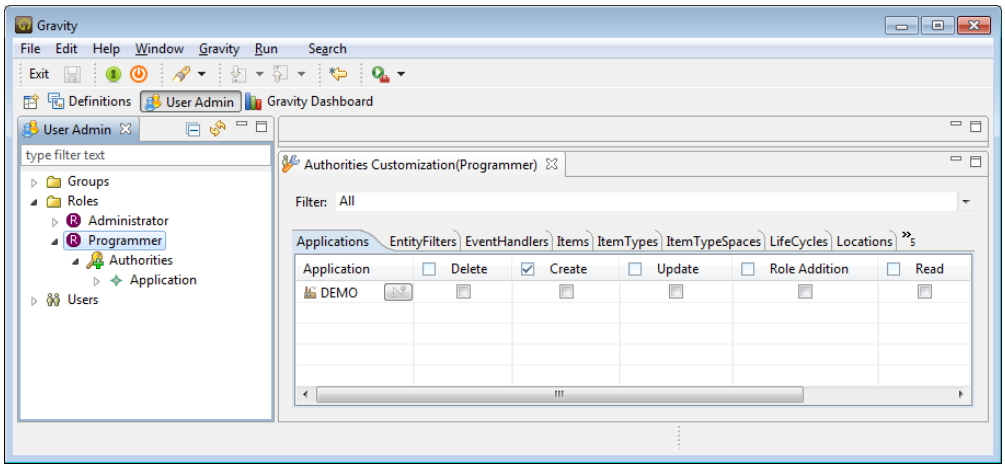


Authorities

Authorities are set of authorized entities associated with a role.

How to Add an Authority to a Role

1) Open the *User Admin view* and the *Authorities Customization view*.
2) Select a role from the *User Admin view* and the content of this role will be displayed in the *Authorities Customization view*.
3) The tabs of the *Authorization Customization view* represent the authorities which are authorized entities. Select one of the tabs and the associated entity actions will be displayed.
4) Select one or more actions.
5) Save the view changes.
6) The result will be shown under the *Authorities* node of the *User Admin view* as shown in the following figure :

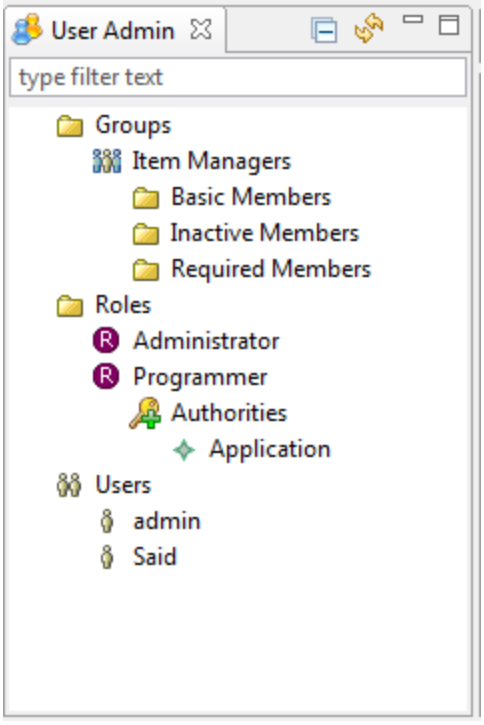


How to Disconnect an Authority from a Role

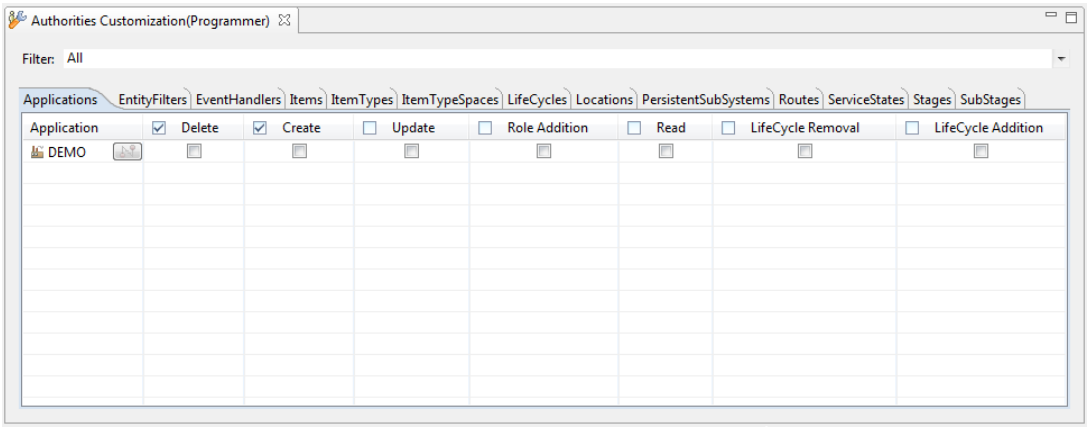
To disconnect the authority (entity) from a role, you have to deselect all action (both concrete and global actions) of the connected entity from the *Authorities Customization view* and save the changes.

USER ADMIN VIEW

The above described elements are displayed in the user admin view as shown in the following figure:



AUTHORIZATION CUSTOMIZATION VIEW

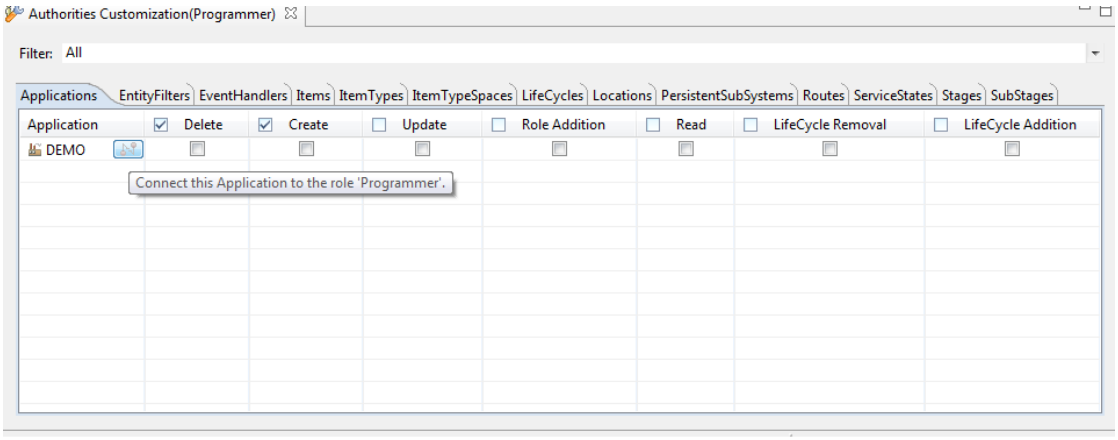


The above figure displays the authorized entities and their actions. The tabs represent the type of entities, and their content is represented as table. The check boxes of the table header represent the global actions of the type entity. If one of these actions is selected, means that this action can be executed for every entity under this type entity. The table items represent the concrete entities of the selected type (tab). The check boxes on the row represent the actions

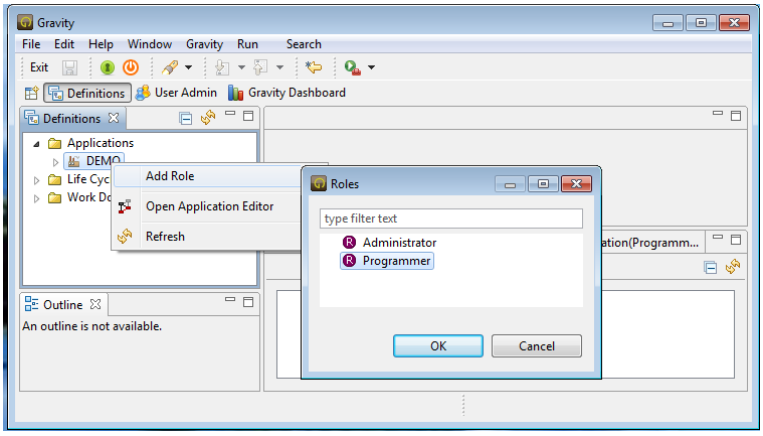
of the concrete entity and will be used to reduce the execution of the actions from global permissions to concrete permissions (a selected action can be executed only for the appropriate concrete entity).

HOW TO CONNECT AN AUTHORIZED ENTITY TO A ROLE

There are two ways to connect an entity (concrete entity) to a role :
1- Open the *Authorities Customization view* -> select a role -> select an entity -> click on the right button of the entity -> The button color will be changes to green, this means the entity is successfully connected to the selected role.

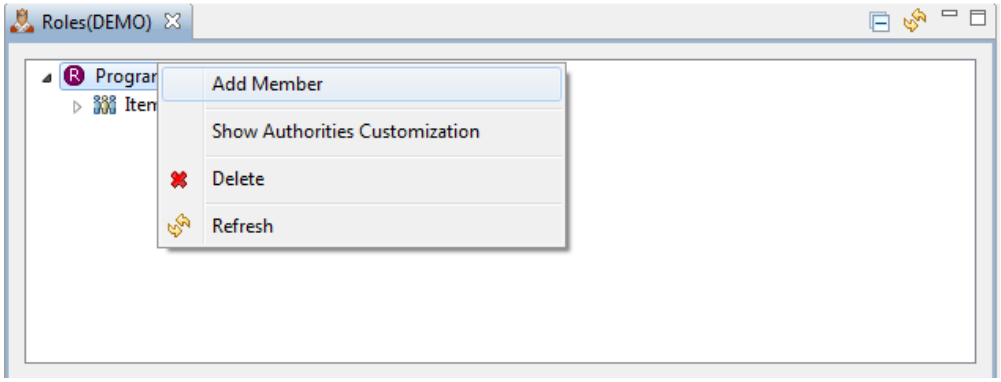


2- Open the *Definitions view* -> select an entity -> select the option 'Add Role' -> select a role form the roles dialog and click on 'Ok'.



HOW TO MANAGE MEMBERS OF CONNECTED ROLE

If a role is connected to an entity, basic members of the role will be associated with this entity. In this case the members have rights to perform the actions of the entity that are permitted in the role. A member (user or group) can be added or removed from the connected role using the *roles view* as shown in the following figure. The view displays the content of the selected role from another view.



DEFINITIONS

The definitions system of Gravity takes care of all the definitions that together form an application.

CONCEPTS

APPLICATIONS

Applications are the highest level of definition within Gravity. An Application is a container for the source code and binary files which together define the function of the Application. Examples of Applications are:

- Logistic Applications

  an application that help control the production process.

- Web Applications

  applications that can be reached through web browsers.

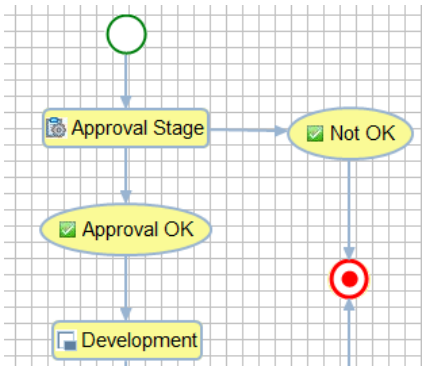
- Smart Phone Applications

  or Apps. These applications live on a handheld device

These are all examples of applications that need to be controlled. The Gravity system provides an integrated controlling system that guards all aspects of the application Workflow. From end-user request to deployment of development artifacts in the production environments.

Every Application can use multiple *WorkFlows* which define the flow of software changes.

WORKFLOWS



A WorkFlow is a predefined path from development to production. It is only a logical path and it defines the workflow for the applications you develop. A Life Cycle contains physical steps which are meant to transfer your development artifacts to a different physical location. It also contains logical steps that take care of certain aspects of your development cycle, like ratification of changes, code review, starting of secondary processes like starting systems or sending e-mails.

Gravity comes with a Graphical Workflow editor that is used to visually lay out the shape of the workflow. The WorkFlow is then used as a template to create applications.

The current parts of the Life Cycle are:

- Stages

  Stages define a complete step in the Cycle. Examples of Stages are *Development*, *Test* and *Production*

- Events

  Events can be caught an acted upon.

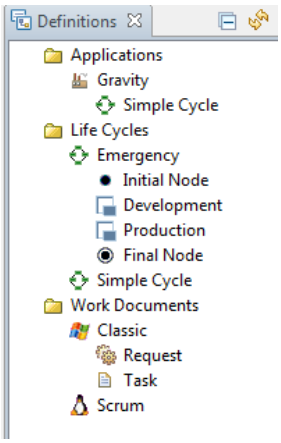
- Actions

  An action is a direct call of a user defined function.

- Decisions

  A Decision is a step in the workflow that blocks until it is resolved by the responsible persons.

WORK DOCUMENT TYPES



Work Documents are the base of the administration that you do with Gravity. A Work Document is an abstraction of everything you deal with and can manifest in a Change Request, a Task, a Ticker or Bug Report. It can also be a release document or a user story. When you start with Gravity, you have to define your different types of Work Documents. After this is done, the Work Documents must be arranged in an hierarchical structure.

Suppose you use the classical structure of a Change Request and a Task. These are two types of Work Documents. Then you have to decide their relationship. You can say that the Request / Task relationship is *1 to many*, *many to 1* or *1 to 1*. The available relationship combinations by defining Dependency Types.

DEPENDENCY TYPES

A Dependency Type determines the kind of relationship (cardinality)that is available between a *Source* and a *Target*. There are only a few possible *Source* and *Target*selections available (Item, User Application, Lifie Cycle and ItemType) and both will contain the same value in most situations (eg the Request / Task relationship requires a Dependency Type definition with a ItemType selection in both *Source* and *Target*).

DOCUMENT TYPE SPACE

A set of Work Document Types is said to be arranged in a *Type Space*. In the example to the right there is a Type Space called *Classic* which contains the Request and Task types and a type space called *Scrum* which contains Work Document Types related to the Scrum development methodology.

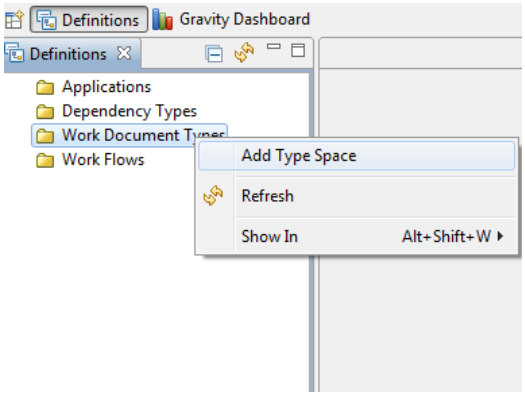
Depending on your organization, you can create many of these type spaces. You are therefore not confined to one development method but you can create as many as you need. However, each life cycle can only use one *Type Space*. In one application, you can have multiple life cycles so it is possible to use more than one *Type Space* per application.

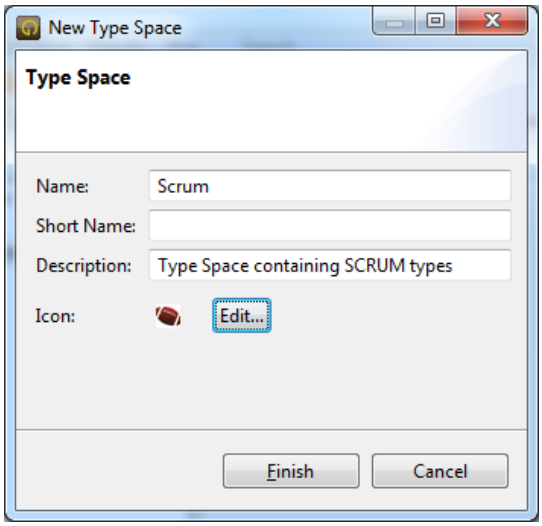
CONFIGURING GRAVITY

This section describes how to configure Gravity with the concepts described above. We are going to build a Document Type Space and various Document Types. You can use this information to create your own Type Spaces and Document Types. Then we are going to create a Life Cycle with various stages. After this, the Life Cycle will be assigned the Type Space and then we are going to create an Application which uses the Life Cycle and the Type Space.

When this is done, you are able to start creating Documents.

DOCUMENT TYPE SPACE





Open the Definitions View to maintain Document Type Spaces.

Right click on the "Work Documents" tree item and select "Add Type Space". This will popup the Type space wizard. Enter the Name and the Description of the Type Space and select an icon by pressing the "Edit..." button. This enables you to add icons to the Gravity database which can be re-used for this and other purposes.

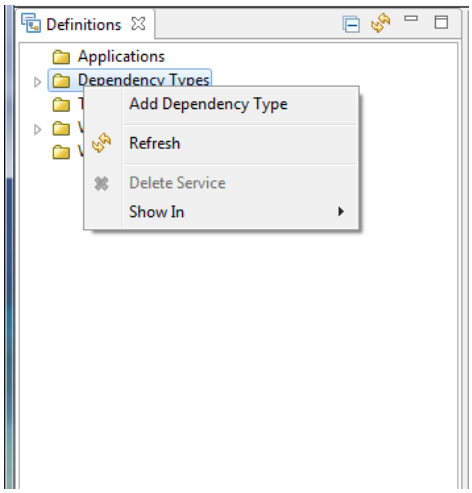
A good place to find icons is the icons directory of the "plugins/com.remainsoftware.gravity.icons" directory in your Gravity installation.

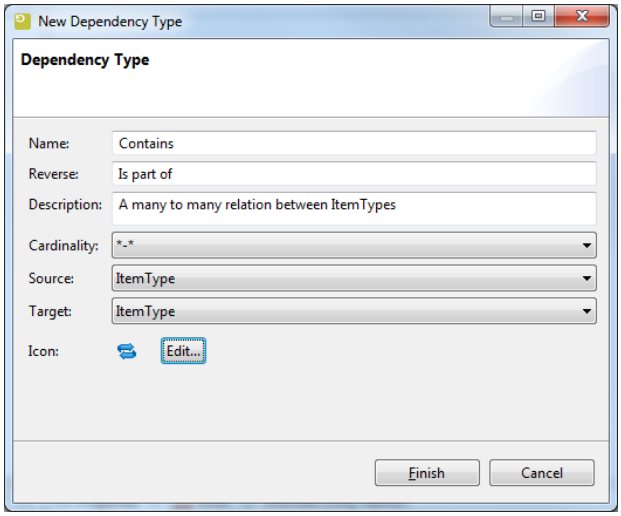
In this example we are creating a Type Space called Scrum. We have selected an appropriate icon and specified the Name and the Description of this Type Space.

A Type Space will be used in a Life Cycle. All Documents that are created for a specific Life Cycle must be of a type in the same Type Space.

Please see the section on Document Types for more information about Document Types in a Type Space.

DEPENDENCY TYPES





Open the Definitions View to maintain Dependency Types.

Right click for the context menu and select "Add Dependency Type". This will popup the Dependency Type wizard.

Enter the Name, Reverse name and the Description of the Dependency Type. Select the Cardinality (1 to 1, 1 to Many, Many to 1 or Many to Many). Select Source and Target type (Item, User, Application, LifeCycle or ItemType)and finally select an icon by pressing the "Edit..." button. This enables you to add icons to the Gravity database which can be re-used for this and other purposes.

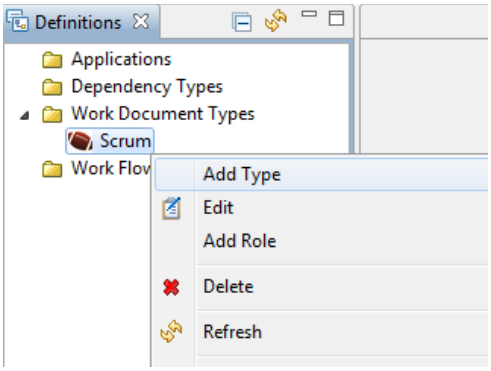
A good place to find icons is the icons directory of the "plugins/com.remainsoftware.gravity.icons" directory in your Gravity installation.

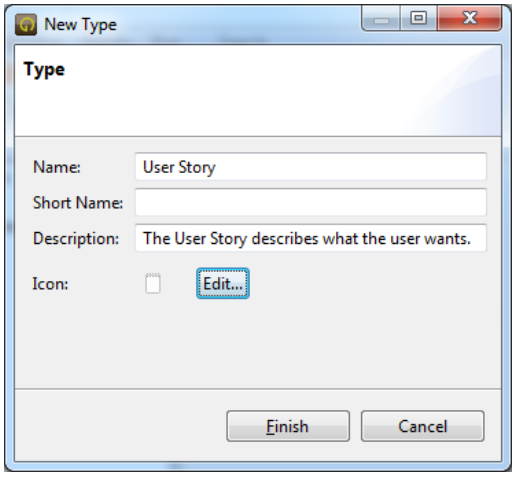
In this example we are creating a Dependency Type called Contains. The Reverse name is *Is part of*. We have defined the Cardinality as *Many to Many*, selected ItemType for both Source and Target and selected an appropriate icon for our new Dependency Type.

After you have finished creating the Contains Dependency Tye create another Dependency type called *Many* which is a 1 to many relation between ItemTypes.

Document Type

Document Types are stored in "Document Type Spaces". Click here to create a Type Space if you have not already done so.





Open the Definitions View to maintain Document Types.

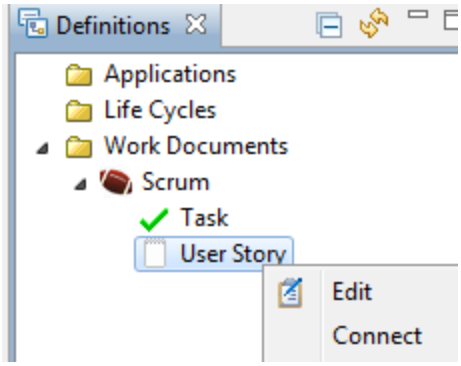
Open the "Work Document Types" tree item and click on a Type Space. Then right click for the context menu and select "Add Type". This will popup the Document Type wizard.

Enter the Name and the Description of the Document Type and select an icon by pressing the "Edit..." button. This enables you to add icons to the Gravity database which can be re-used for this and other purposes.

A good place to find icons is the icons directory of the "plugins/com.remainsoftware.gravity.icons" directory in your Gravity installation.

In this example we are creating a Document Type called User Story. We have selected an appropriate icon and specified the Name and the Description of our new Document Type.

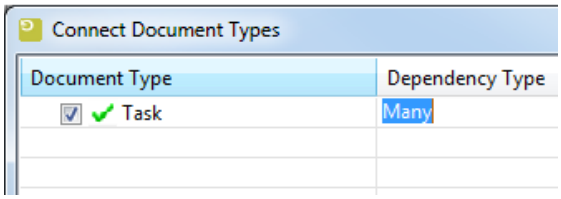
A Document Type is used in a Life Cycle. All Documents that are created for a specific Life Cycle must be of a Document Type of the Type Space that is associated with the Life Cycle. Click for more information about assigning a Type Space to Work Flow and Applications



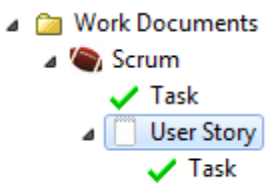
After you have finished creating the User Story type, create another Document Type with the name "Task".

Now that we have two Document Types, we can connect them to each other. We are going to define that the User Story can contain many Tasks. To do this, we select the User Story and open the context menu. From the context menu we can select "Connect..." to connect another Document Type to the User Story.

This will open the Connect dialog in which you can select one of the available Document Types. In our case we have a Document Type called "Task" which we can select.



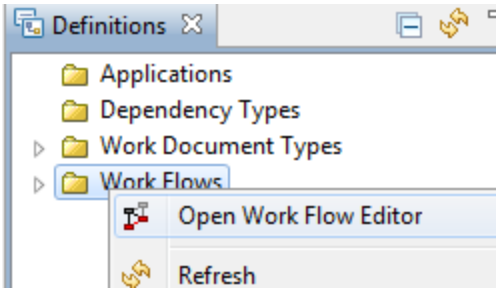
We can also specify the Cardinality. This indicates how many Tasks can be connected to the User Story. Check the box before Tasks and select "One to Many" to indicate that more than one Task can be connected to a User Story and that a Task can be connected to only one User Story.



The final result will look like this.

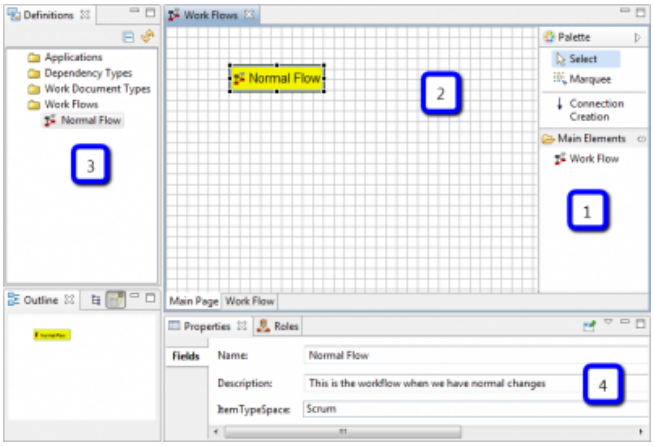
WORK FLOW

Work Documents define a certain amount of work to be done. In order to get from start to finish you can define a Work Flow that these documents must follow. A Work Flow consists of a number of steps before a Work Document can be completed.



To open the Work Flow editor you can open the context menu on the "Work Flows" tree item. Select the "Open Work Flow Editor" menu item. This will open the editor.

CREATING A WORK FLOW

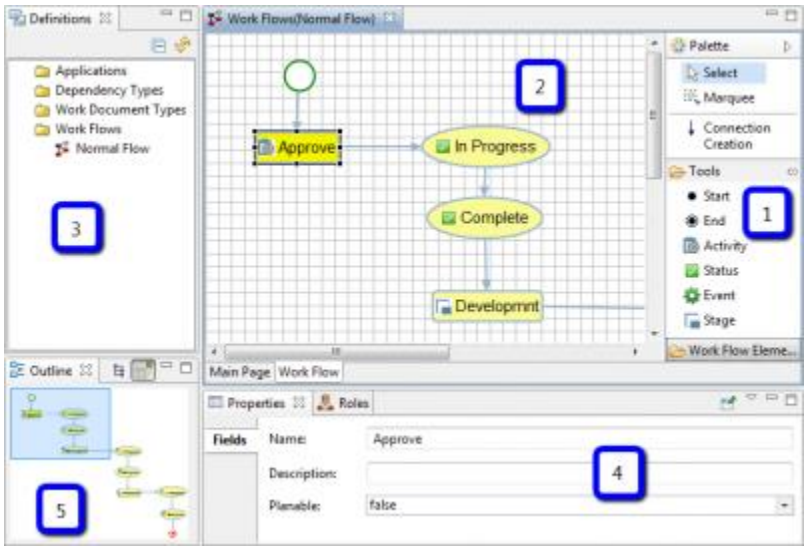


To create a new Work Flow, click on the "Work Flow" tool in the "Main Elements" section of the Palette [1]. Then click again on an empty spot in the canvas [2]. This will create a new Work Flow.

If you click on the just created Work Flow, its properties will appear in the Properties View [4]. If you do not see the view, you can reset the perspective or open the view through the Gravity or Window top level menus. You can also open the context menu of the canvas and select "Show in.../Properties".

In the properties view you can change various attributes. One particular important one is the Type Space. Please open it an select the "Scrum" type space that we have created earlier.

DEFINING THE WORK FLOW



To define the Work Flow steps, you have to double-click it. This will open the Work Flow details where you can define the actual flow [2]. To go back, just click on the tab "Main Page" in the bottom left of the canvas [2].

The various tools that can be used from the Paletter are explained here.

To define a flow , start by

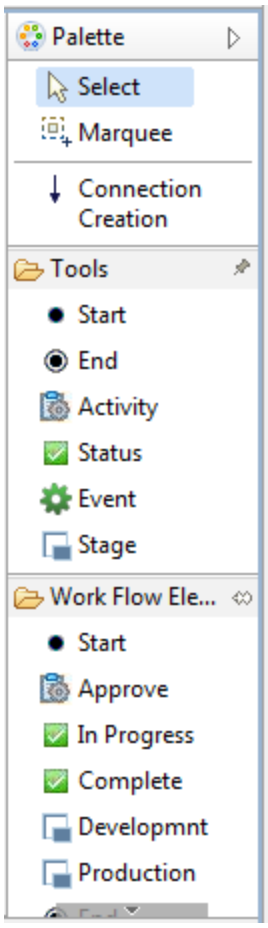
1. click on the "Start" tool in the Palette [1]. After this is done, click anywhere on the canvas [2].
2. click on the "End" tool in the Palette.
3. Next, click on the "Activity" tool and then click on the canvas.
4. Click on the "Activity" that was just created on the canvas and change the name into "Approve" in the properties view.
5. Next, click on the "Status" tool and then click on the canvas.
6. Click on the "Status" that was just created on the canvas and change the name into "In Progress" in the properties view.

Add additional elements until you are satisfied with the result. If your workflow becomes to big, you can see the overview in the Outline view [5]. You can toggle between tree and graphical view by using the buttons on the Outline view toolbar.

Connecting the Elements

To create an actual flow, we need to connect the various elements. To do this, click on the "Connection Creation" tool and click on the first element and then click on the next element. Do not click-hold (dragging).

TOOLS



START

This is the start of the Work Flow and is the required first element of any Work Flow.

END

This is the end of the Work Flow and is the required last element of any Work Flow.

ACTIVITY

The Activity tool denotes some manual work that needs to be done before the process can continue. The Role that is assigned to the Activity must perform the work that is associated with the Activity.

It is also possible to assign an automated task to a Activity. The Activity may execute a script or program. The Activity can also call a service on the web through a URL. Finally, the special Gravity Activities can be attached to the Activity.

STATUS

A Status is field associated with the Activity or the Stage that defines its progress. An Activity of "Create Documentation" may be connected to several Statuses that define the current status of that Activity or Stage.

EVENT

An Event is a step in the Work Flow that can send an Event through the Gravity Event System. The Event System will then deliver the event to the interested parties.

STAGE

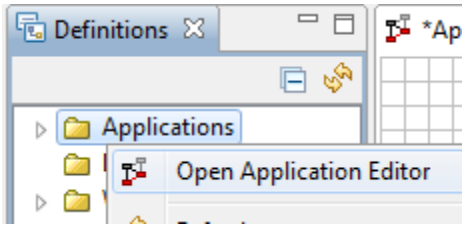
A Stage is a physical step in the Work Flow that in the Application will point to a physical location to store binary or source software Artifacts.

RE-USE OF ELEMENTS

Be sure to re-use elements instead of creating a new element every time. You can re-use elements by not clicking a tool in the "Tools" section of the Palette but by selecting an already defined item of the "Work Flow Elements" of the Palette.

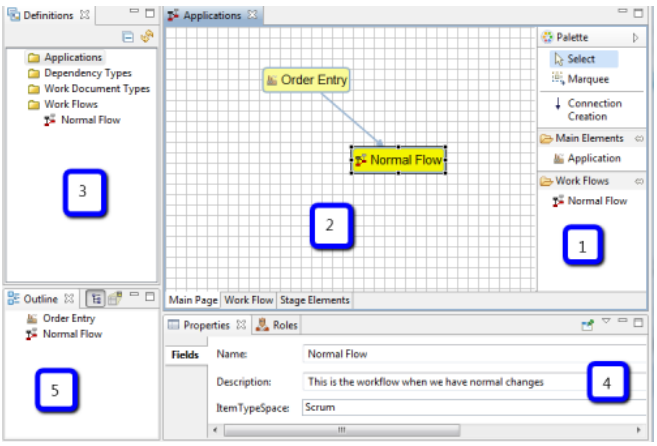
APPLICATIONS

Work Flows define the logical steps in an development or helpdesk process along with some general attributes. It is in the Application where this Work Flow is used. An Application can be changed using various Work Flows.



To open the Application editor you can open the context menu on the "Applications" tree item. Select the "Open Application Editor" menu item. This will open the editor.

CREATING AN APPLICATION



To create a new Application, click on the "Application" tool in the "Main Elements" section of the Palette [1]. Then click again on an empty spot in the canvas [2]. This will create a new Application.

If you click on the just created Application, its properties will appear in the Properties View [4]. If you do not see the view, you can reset the perspective or open the view through the Gravity or Window top level menus. You can also open the context menu of the canvas and select "Show in.../Properties".

In the properties view you can change various attributes.

ASSIGNING A WORK FLOW

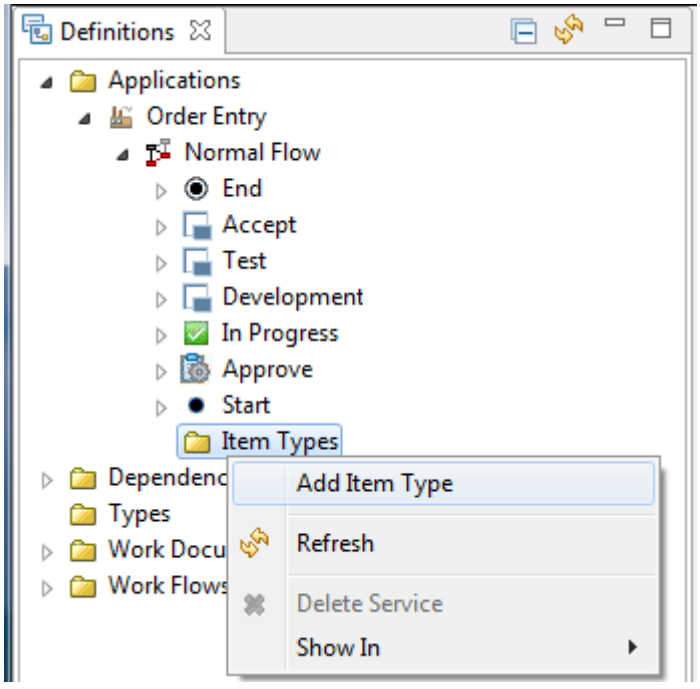
To assign a Work Flow, you click on the desired Work Flow in the "Work Flows" section of the Palette. Then click on an empty section of the canvas.

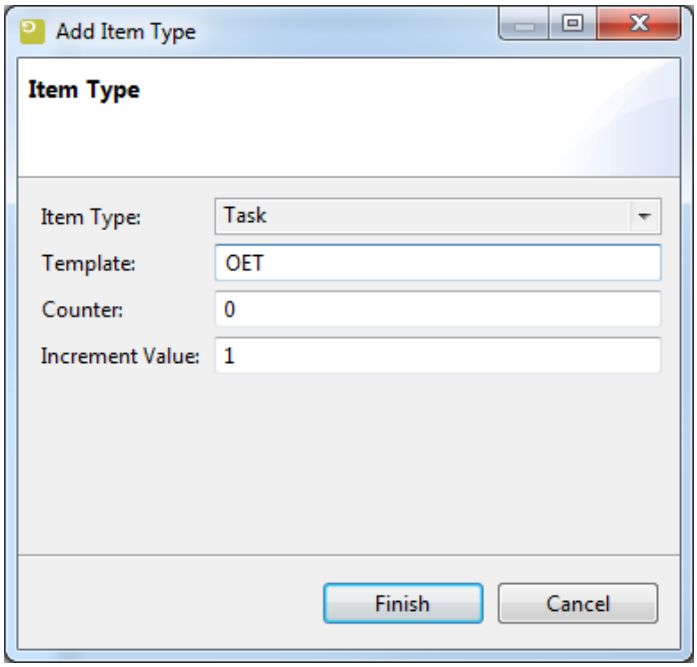
After this has been done, select the "Connect Relation" tool from the Palette and click on the Application and then on the Work Flow element.

Press Ctrl+S or close the editor and select yes to save the changes and create the new application.

ASSIGNING ITEM TYPES TO THE APPLICATION

Document Types are stored in "Document Type Spaces". A "Document Type Space" is used within a "Work Flow" and a "Work Flow" is related to an "Application". This results in "Document Types" being available within the "Application". To use a "Document Type" within the "Application" some additional information must be defined.





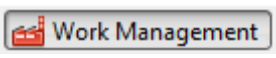
Open the Definitions View to maintain Document Types.

Open the "Applications" tree item, open the Application (eg Order Entry) tree item and open the WorkFlow (eg Normal Flow) tree item. Click on the Item Types folder. Then right click for the context menu and select "Add Item Type". This will popup the Item Type wizard.

The Item Type combobox will only show Document Types for which no Item Type definition has been created yet within the Application. The Template can be used to define the starting characters of each Item that is created for this Item Type. The counter and Increment value are used to determine the sequence number when a Item is added. The default values will result in the first Item being created with sequence 1. A Counter of 999 and a Increment Value of 1 will result in the first Item being created with sequence 1000.

In our example we have defined a Task Item Type which will start with OET (Order Entry Task). The code assigned to the first Item of this Task Item Type will be OET1.

After you have finished creating the Task Item Type, create another Item Type for the User Story which starts with OEUS.

Use the 

perspective to see the effect of your definition changes.

GRAVITY EVENT MANAGEMENT

Event management lies at the hart of Gravity's user collaboration support, so much so that events and event handling are built right into the core fabric of Gravity's software DNA.

In its basic form Gravity event-management is similar to OSGI event-management, we can speak of event-handlers registering themselves, of topics the event-handlers can handle and of event-handler-services processing triggered

events. We even have the concept of an Event Admin, a service that that will match a triggered event to an event-handler. So those of you familiar with OSGI event-management as dictated by the OSGi event and event admin specification will feel pretty comfortable with this guide on how to configure Gravity event-management :).

But not everyone is familiar with the OSGI event-management specification so a short explanation and some graphics should help the uninitiated to get up to speed on how Gravity handles its events.

We start-of with some theory and follow swiftly with a how-to.

TOPICS

The role event-management plays within Gravity is one that primarily helps you, as a Gravity user , be kept up-to-date on Gravity changes of interest to you. What is of interest to you is defined by the event topics you subscribe to and, of which you would like to be told about in some manner.

Event topics are in essence a representation of a specific state change within Gravity. For example the topic 'gravity/login/loggedIn' represents the 'User has logged-in' state change for the Gravity Login service. Here it is the Gravity Login service (which handles the user log-in) that has the responsibility of creating an event with the topic 'gravity/login/loggedIn' and making sure the created event is fired into Gravity event-management.

Once you have set your eye on an interesting topic, you then have to decide how you would like the state change information presented to you. This is where event-handlers come into play.

HANDLERS

Event-handlers are topic savvy, they represent a mechanism that is capable of processing an event in a way that is event-handler service intrinsic. Simply said, an event-handler will do something with an event in a way unique for the event-handler service.

Using the previously fired log-in event as an example, we can ask event-management to display a notification pop-up window when a log-in event occurs. To accomplish this the topic 'gravity/login/loggedIn' first has to be connected to the 'Notification EventHandler Service'.

Once connected the topic will be tracked by the aforementioned event-handler service. From this point on Gravity event-management will see to it that every time a log-in event occurs the 'Notification EventHandler Service' gets the opportunity to take care of this event.

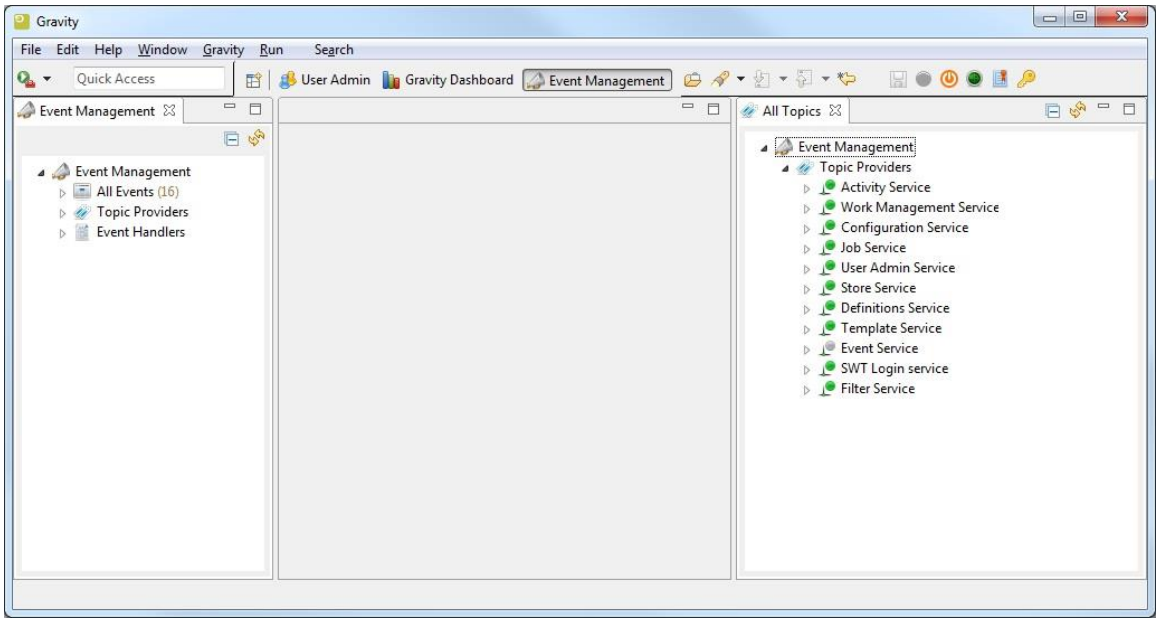
So now when you log into Gravity you will also be notified of this fact by a pop-up window, which gracefully fades a way after a few seconds.

Event-handlers are capable of tracking any topic you can throw at it, but as already mentioned, logic dictates that an event-handler can only handle event information in a way it was built for.

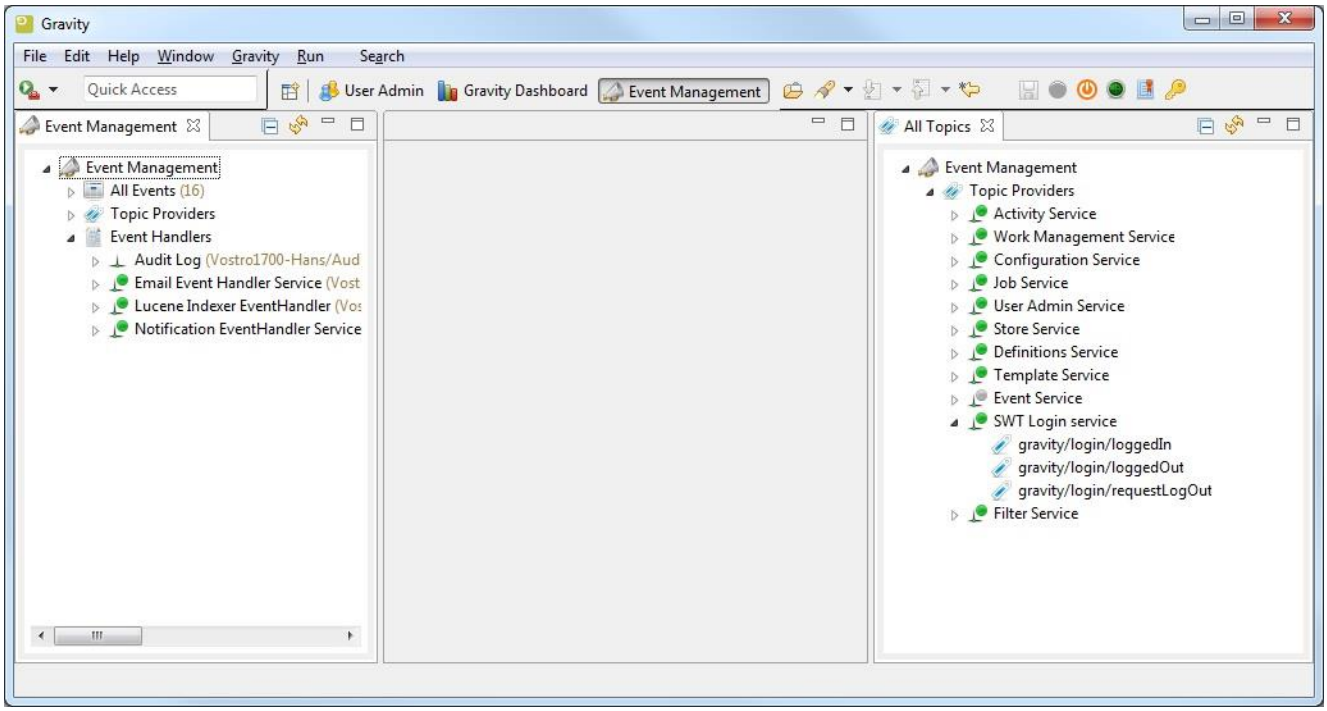
ENGAGING IN SOME EVENT ACTIVITY

First of we need to bring the 'Event Management' perspective to the foreground and if necessary the view 'All Topics' (which can be selected from main menu Gravity → Show View → Other – All Topics).

SELECTING A TOPIC

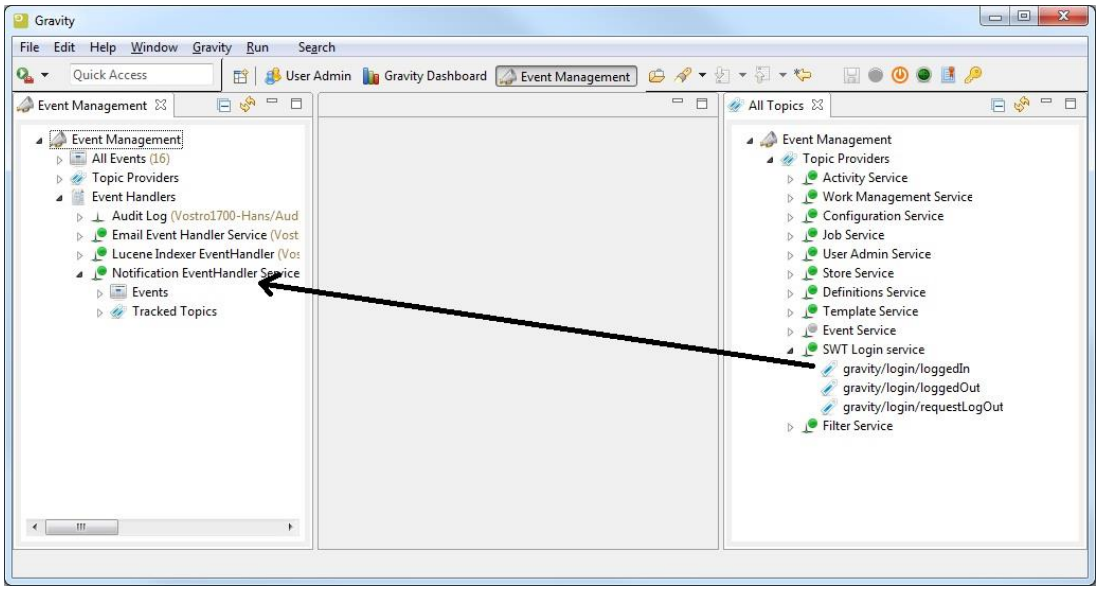


In the 'All Topics' view (right pane) click on SWT Login Service to expand and reveal Login Service topics, in the 'Event Management' view click on Event Handlers to expand and reveal available topic event handlers, a view similar to the one below should be displayed;

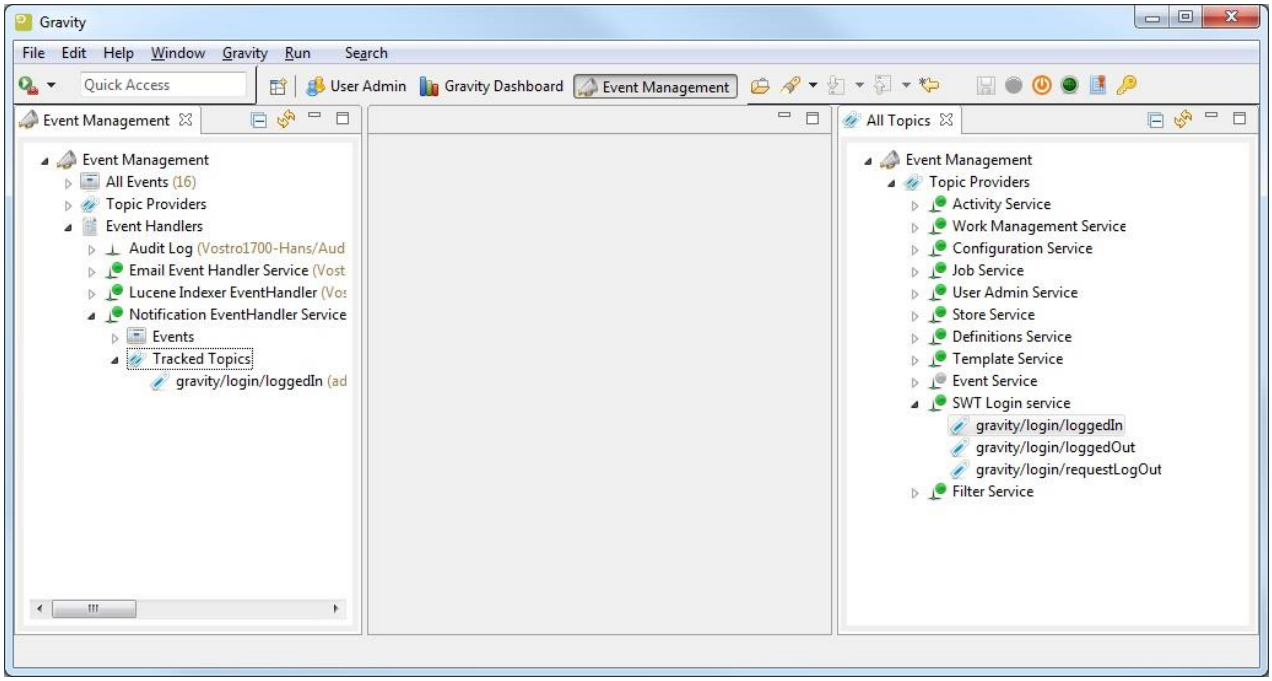


CONNECTING A TOPIC TO AN EVENT-HANDLER

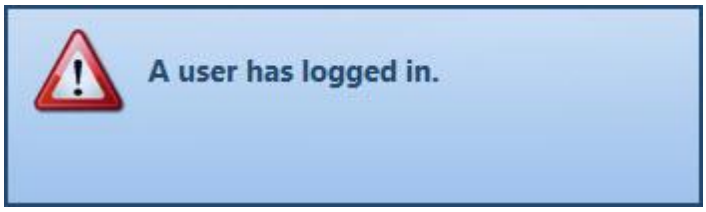
To connect a topic to an event handler the topic needs to be dropped on the event-handler of choice, in the example below, the topic 'gravity/login/loggedIn' will be dragged and dropped on the Notification EventHandler service:



As a result of the drag and drop action the Notification EventHandler service will have the topic 'gravity/login/loggedIn' included in its Tracked topics list.



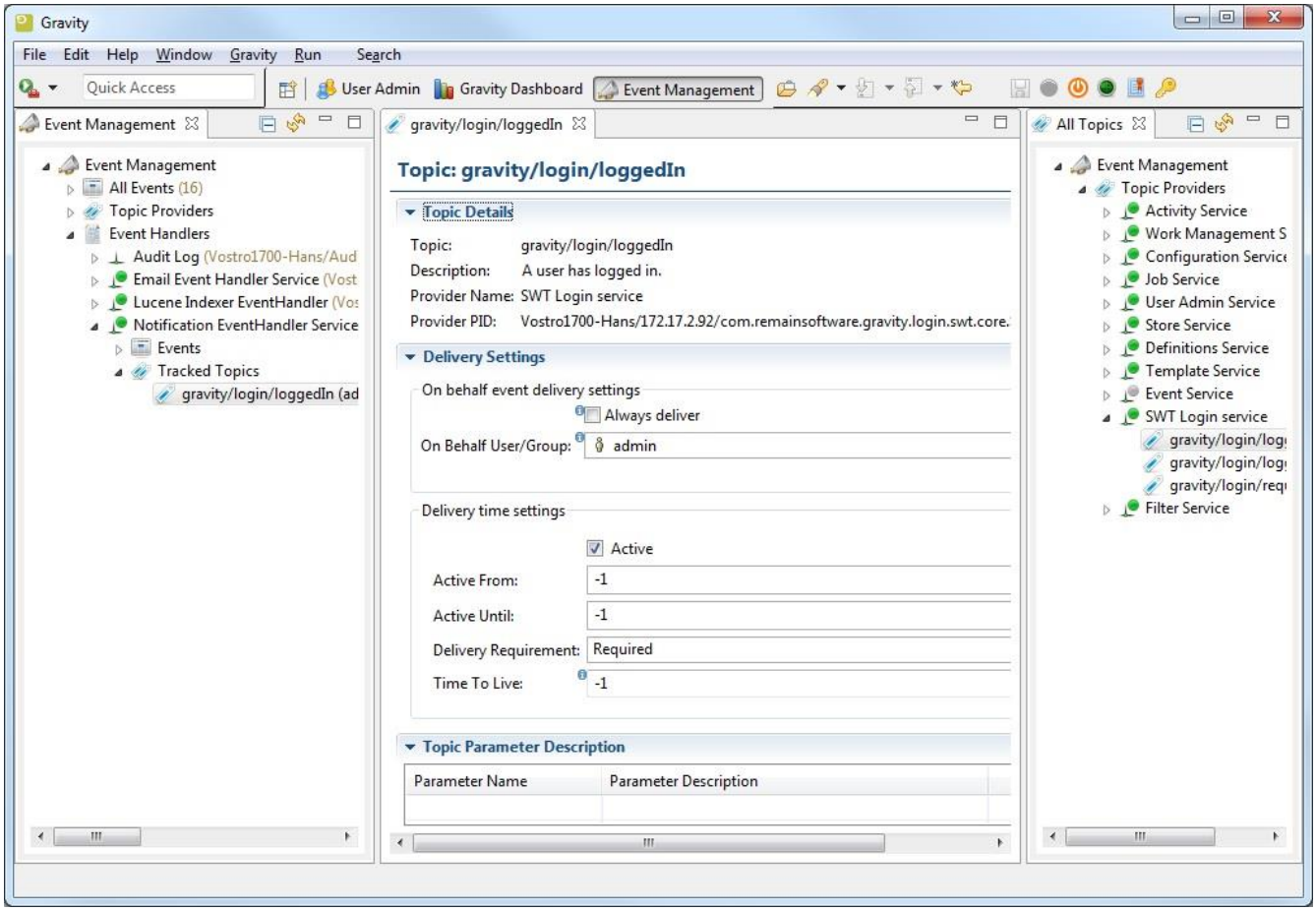
Unless configured otherwise the tracked topic will be processed by the Notification EventHandler service every time a 'log-in' event (represented by the topic 'gravity/login/loggedIn') is brought into existence. In our example a notification will be displayed as soon as a local log-in occurs. For a user log-in the Notification service's notification pop-up window will display the following:



CONFIGURING A TRACKED TOPIC

If you are not happy with the default processing characteristics of a tracked topic then you can alter the behavior of a tracked topic by **editing** and **saving** available tracked topic details. Default topic attributes always allow you to change the 'when' and 'how long' of a tracked topic.

To configure a tracked topic detail, 'double click' on the tracked topic of interest (under Event Handler management) and click on the 'Delivery Settings. You may need to adjust the existing view layout to sufficiently accommodate the new Topic Details' dialog, but if you do some view extending left and right Topic detail information should come in to picture.



The following attributes directly influence the way event-management treats gravity events. Gravity event-management will use these attributes to decide when to pass an event on to an event-handler:

- Always deliver/On Behalf User/Group

- Active
- Active From
- Active Until
- Delivery Requirement
- Time to Live

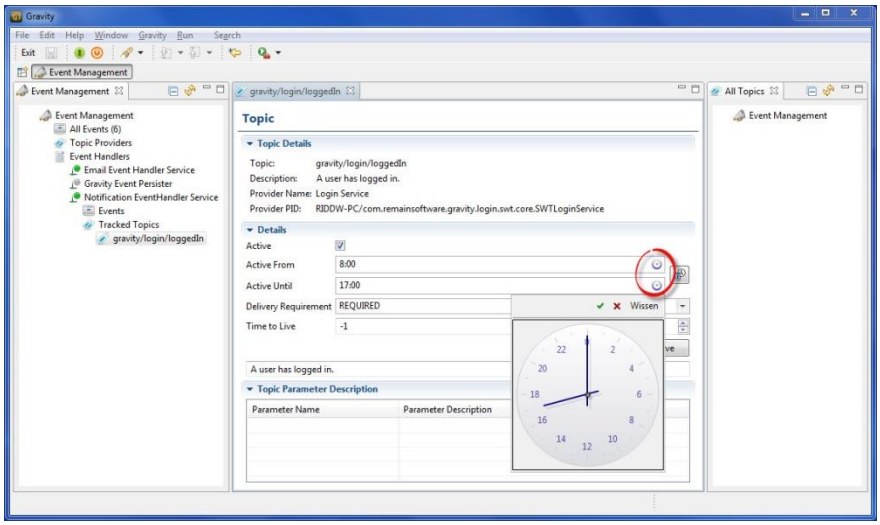
The attribute '***Always deliver'*** denotes that User/Group information will NOT be used to determine who should bereceiving the information. The '***On Behalf User/Group'*** enable specifying that the selected user or the users belongong to the selected group will be notified. The User/Group must be related to the document in case of a document related topic.

The attribute '***Active'*** denotes the current state of the tracked topic. If the state is switched to in-active, de-flagged, then the topic related event will not be delivered to the event-handler service. De-activate a tracked topic only if you temporarily do not want to receive events of this kind. If you decide that you never want to receive these events then it is advised that the tracked topic be removed from the '***Tracked Topics'*** list (right mouse click on the tracked topic and select delete).

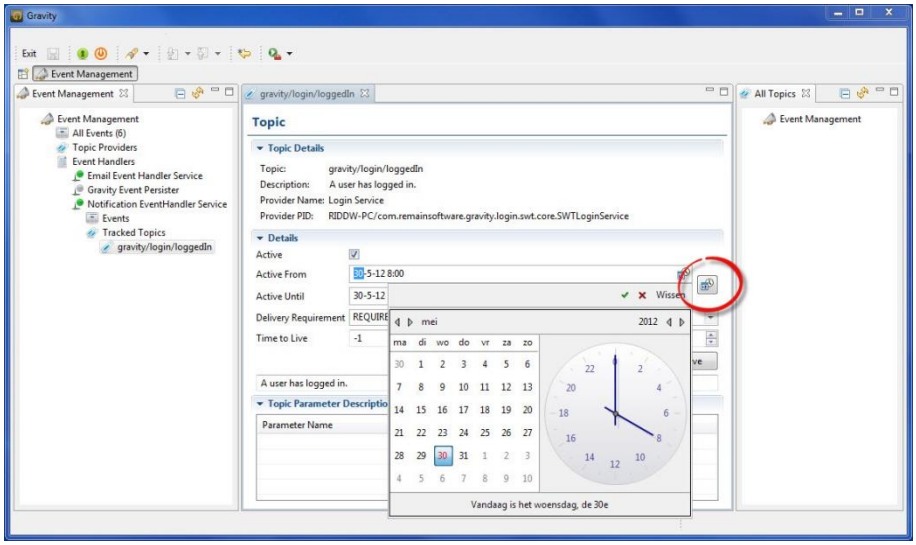
As long as the '***Active'*** attribute is flagged (true), a tracked topic event is passed on to an event-handler based on the values set in 'Active From', 'Active Until' and 'Time to Live'. If the values have a default value of -1 then an event will be delivered to a user, any time, any day for the period that the user is logged-in to Gravity.

Setting Active-From & Active-Until

Both the ***Active-From*** and ***Active-Until*** fields can be entered directly or can be graphically manipulated by clicking on the icon located at the end of the field. Initially the fields are day-time bound and only a time period between 0 and 24 hours can be set as illustrated below. Here an event delivery time setting has been chosen starting at 8 am and ending at 5 pm. For both fields the setting was done by clicking the time related icon (encircled in red) and moving the clock arms to the desired time.



The Active-From and Active-Until fields support a number of time and date notations that help you set the required time and or date constraints. As we have seen the default time based values have the net result that an event will be delivered in a daily 24 hour setting. If this does not cover your requirements then you can switch to a date or date & time setting by toggling the larger icon beside the Active-From/Until field.



Toggling the icon changes the smaller in-field icon and sets the field to be sensitive to the chosen time-date type. There are 3 selectable time-date types: time only, date only and time & date.

Be aware that if a value has been set in one time-date type then toggling to another type will automatically transform that value to become compatible with the newly chosen time-date type.

Setting Delivery Requirement

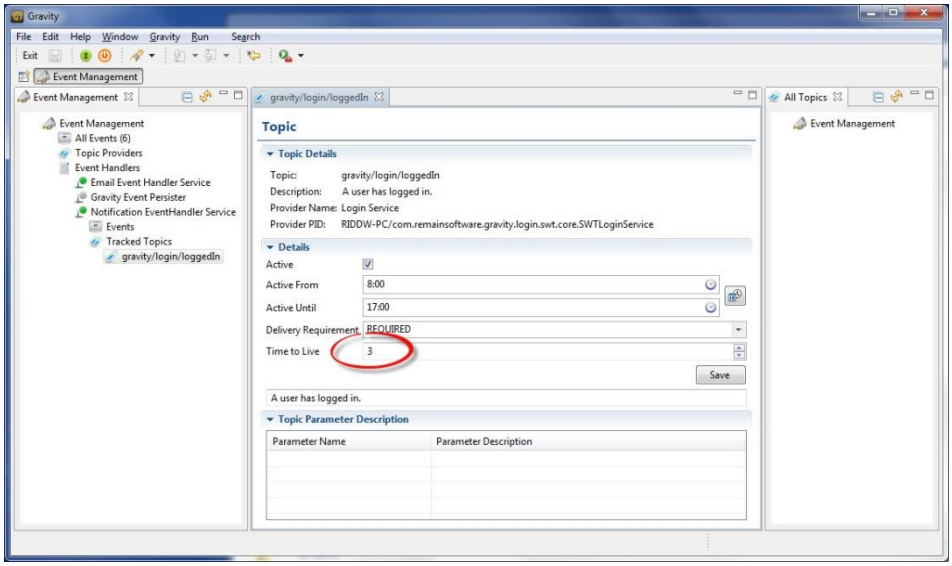
If you don't mind missing an event every now and then, then you can change the attribute **Delivery Requirement** from the default value 'Required' to the value 'Optional'. You would set this option only in the situation where it is not

relevant that you receive all events emanating from an event service. With this option Gravity event-management will set an event to ´Unhandled´ if an event cannot be delivered because the event-handler service is in-active or because the user is not logged-in.

Setting Time to Live

Event expiration, how long an event stays in the system, is determined by the '***Time to live'*** attribute. When an event expires it is removed from active event-management by being marked as 'Unhandled'. The default value of -1 denotes that an event will never expire, meaning that Gravity event-management will try to deliver an event to an event-handler for as long it takes (of course as soon as an event is delivered it no longer partakes in event delivery).

In the example below the user has opted for a Time to Live of 3 days indicating that the user has no desire to be notified about a log-in event that occurred more than 3 days ago.

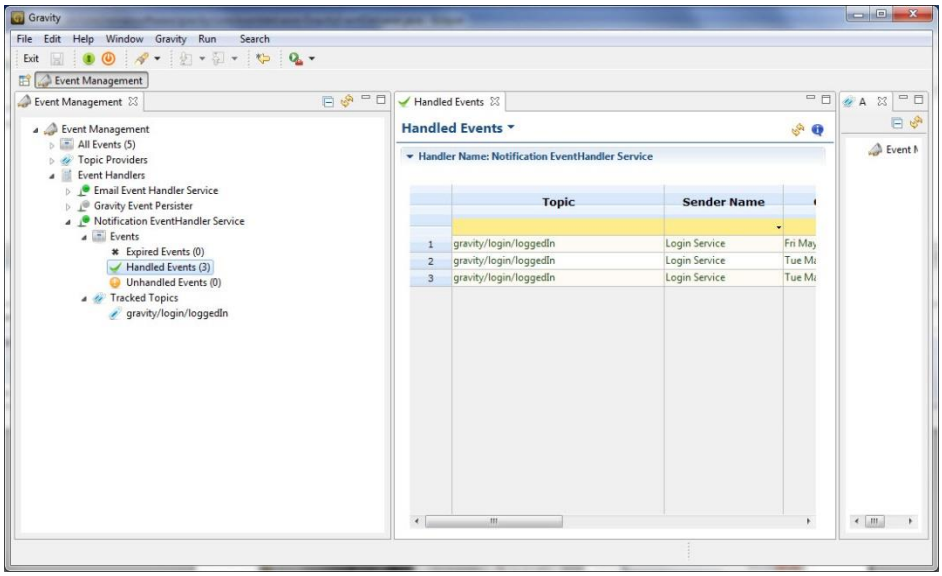


Setting Topic Parameter Description

Topic parameters are key value pairs that can be passed on to the event-handler service. An event-handler service can retrieve and use the parameters as context for a delivered event.

VIEWING THE STATE OF EVENTS

To see which events have been processed or still have to be processed, expand the 'Events' section just below event-handler service name. This will show the event-management event-handle types, of which each will display a total number of events processed or to be processed. For the example Notifcation EventHandler service the following totals are displayed:



In total, the service has zero events that have expired, 3 events processed by way of a window pop-up and and zero events that could not be delivered (unhandled). Double clicking on an event type will display a detailed list of involved events.

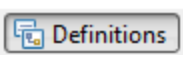
WORK MANAGEMENT

This section describes the Work Management part of Gravity.

WORK MANAGEMENT PERSPECTIVE

There is a special perspective with all views related to the *work management*. You can open the perspective by clicking on the *Open Perspective* shortcut on the Perspective bar.

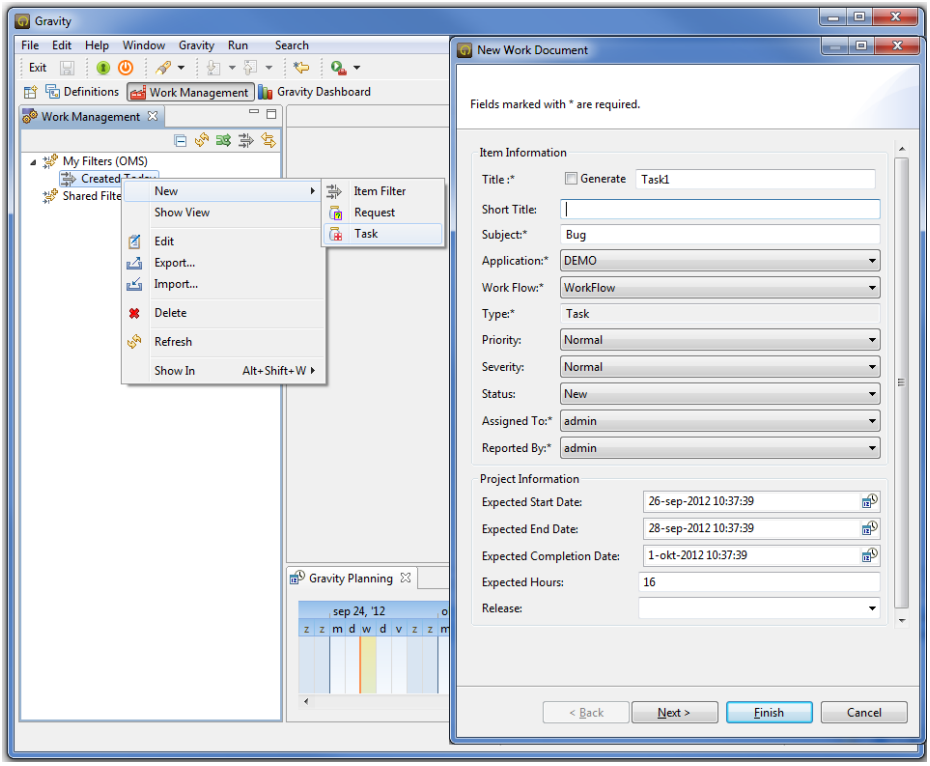
WORK DOCUMENT

A Work document can be task, request or any other type. The user is free to define the type of the work document as described in the 

side of Gravity.

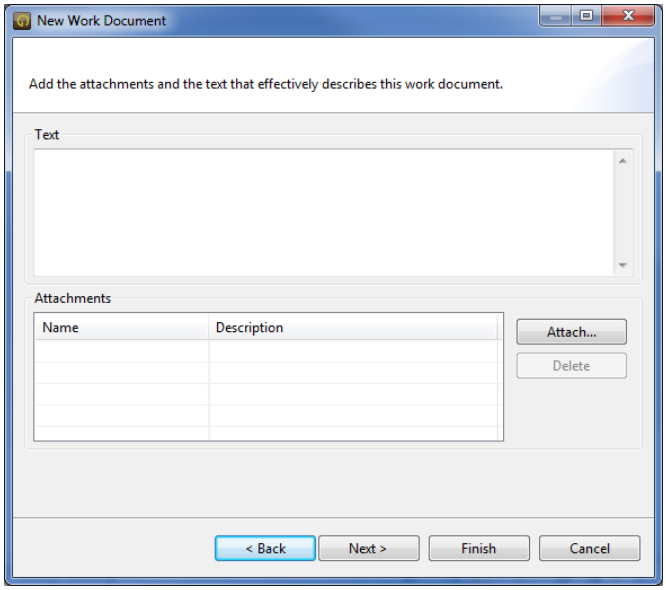
How to Create a Work Document

Mouse right click on any item of the *Work Management view* -> select option **New** -> select the Work Document to be created -> fill the fields of the wizard and click on finish.
In the example the created Work Document will be displayed under the filter **Created Today**.



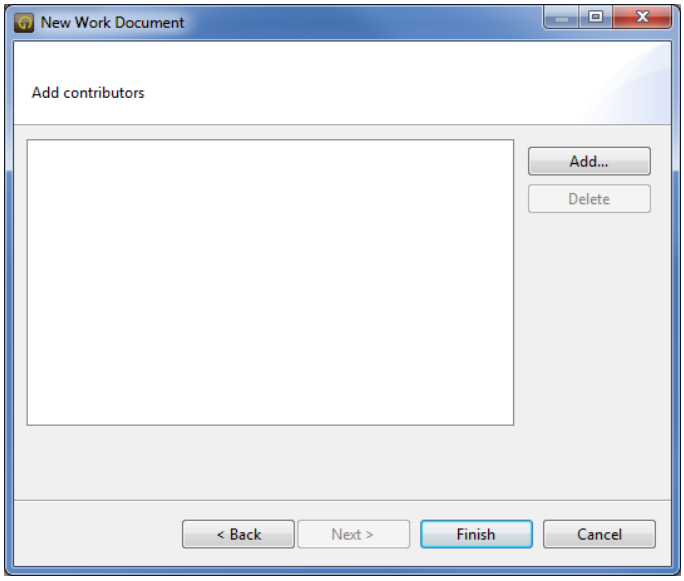
Add attachments and Work Document Description

Click on **Next** button of the wizard shown above and the following page will be displayed. Add the text that describes the work document and the files to be attached and click on **Finish** to create the work document or **Next** to add contributors.



Add Contributors

Click on **Next** button of the wizard page shown above and the following page will be displayed. Add the contributors and click on **Finish**. Adding contributors for a Work Document will only be possible when a User relation has been defined in the Definitions for the Document Type.

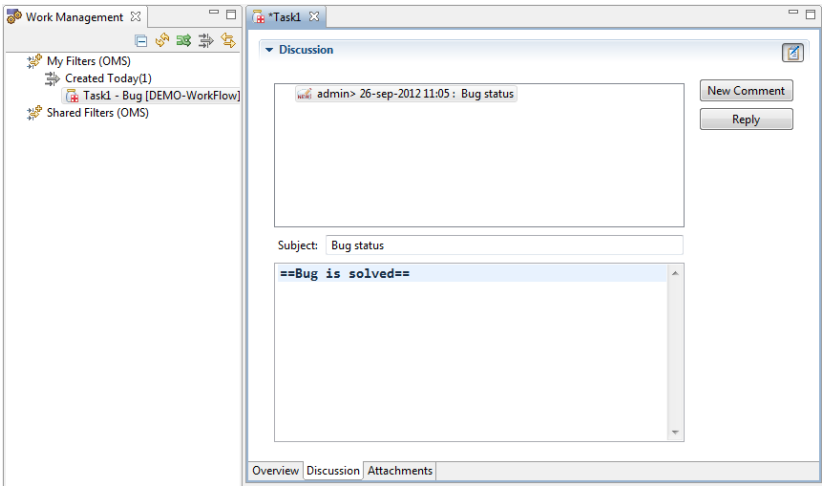


How to Edit or Delete Work Document

Select an work document -> mouse right click on this work document -> select the option **Edit** or **Delete**.

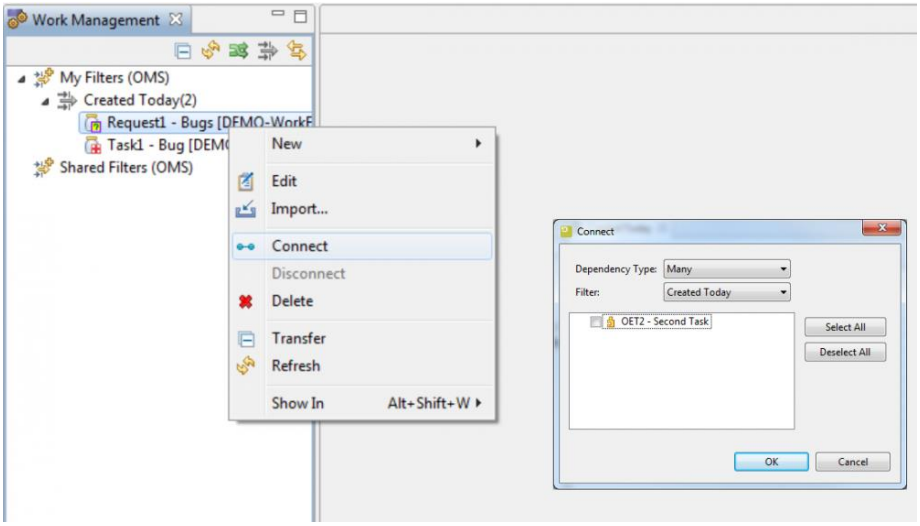
How to Add Discussion to Work Document

Mouse right click on created work document (Work Management view) -> select **Edit** option -> select the **Discussion tab** of the displayed work document editor -> add new comment and save the changes.
Use the **New Comment** button to add new comment. Each comment has a subject and description text.
The **Wikitext** (lightweight markup language) editor is used to provide editable formatted text. Use the edit button on the top right of the section to switch between *preview* and *edit* the description text.
To reply to a comment you have first to select the comment and then click on **Reply** button.



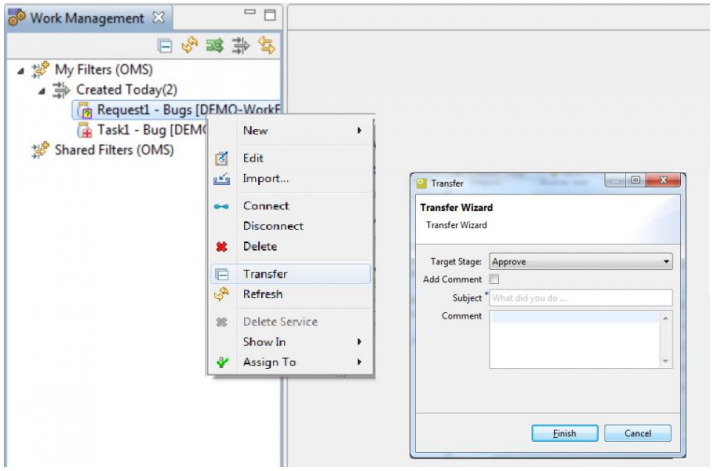
How to Add Work Document Relations

A work document can be connected to another work document with cardinality one or many. The connection between two work documents must be first customized in the *Definitions view* so that it can be used in the *Work Management* view.
To add a work document relation follow the steps:
1) Select a work document from the *Work Management view*.
2) Mouse right click on the work document.
3) Select the option **Connect** . If the option **Connect** is disabled this means that there is no relation defined for the work document.
4) Select the desired **Dependency Type** and work documents **Filter** to display the work documents, select the work documents to be connected and click on **OK** button.
5) The connected work documents will be displayed under the selected work document, expand the work document if it is not yet expanded.



How to Transfer a Work Document through the Work Flow

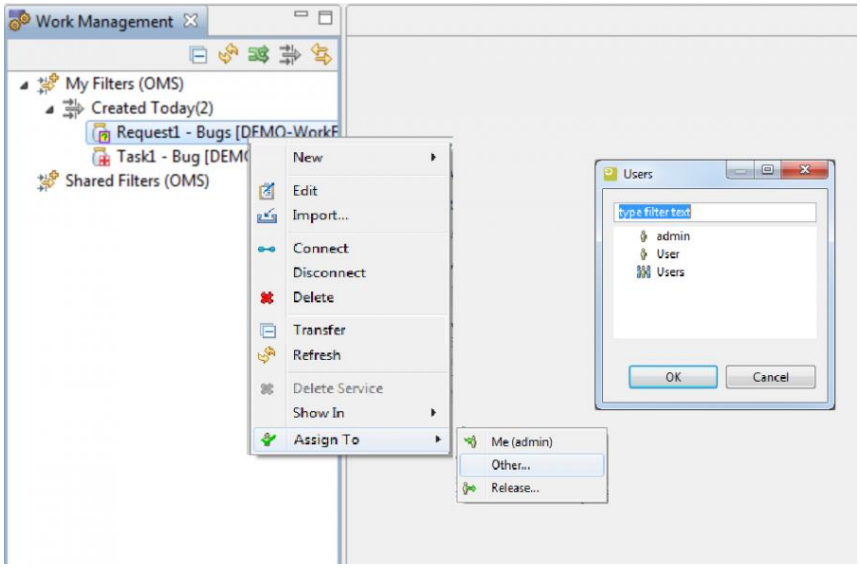
A work document can be transfered to a related step in the Work Flow by performing the following steps:
1) Select a work document from the *Work Management view*.
2) Mouse right click on the work document.
3) Select the option **Transfer** .
4) Select the **Target Stage**.
5) Enter text in **Subject** and **Comment** or deselect the **Add Comment** checkbox to enable the **Finish** button.
6) Click on the **Finish** button.
7) The new stage will be displayed behind the selected work document, hoover over the work document if it is not shown.



How to Re-assign a Work Document

A work document can be re-assigned by changing the **Assigned To** in edit mode. Another (faster) way to re-assign a work document is done by performing the following steps:

1) Select a work document from the *Work Management view*.
2) Mouse right click on the work document.
3) Select the option **Assign To**.
4) Select **Me** to assign the work document to your account. **Other** and **Release** to select the **user** or **group** to assign it to.You can only select a **group** in case of **Release**.
5) Click on the **OK** button.
6) The selected work document will be shown in bold when it is assigned to your account.

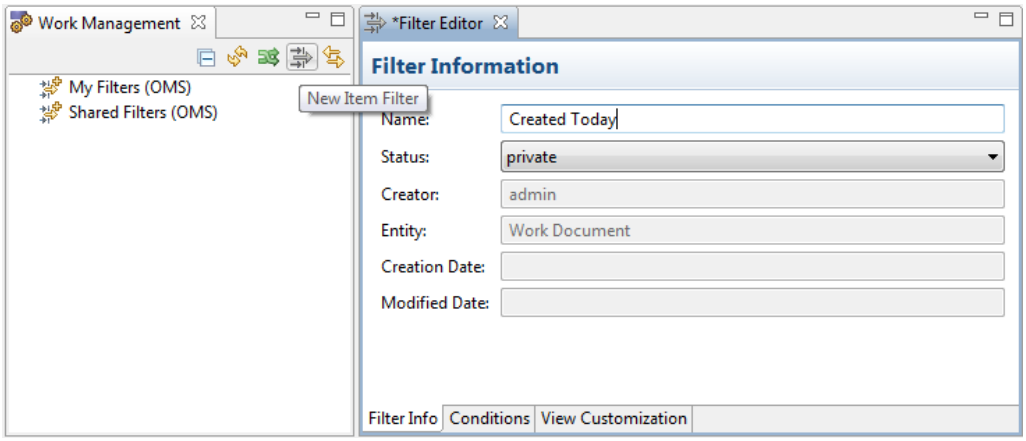


WORK DOCUMENT FILTER

Work document filter is used to reduce the amount work documents to be shown. Each filter can be a private filter (user depending) or pubic filter (all users can use it). The work document filter is very flexible which can filter the work documents on all their fields.

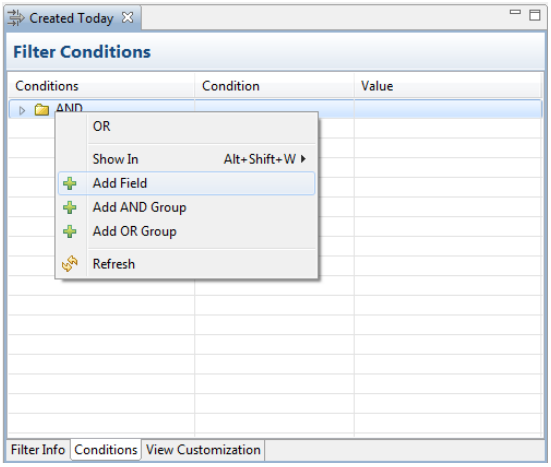
How to Create Work Document Filter

Click on the filter toolbar of Work Management view to open the filter editor -> fill the filter name and the status in the displayed editor and save the editor changes.
If filter has status private, it will be displayed only under **My Filters** holder of Work Management view.
If filter has status public, it will be displayed under **My Filters** and **Shared Filters** holders of Work Management view.



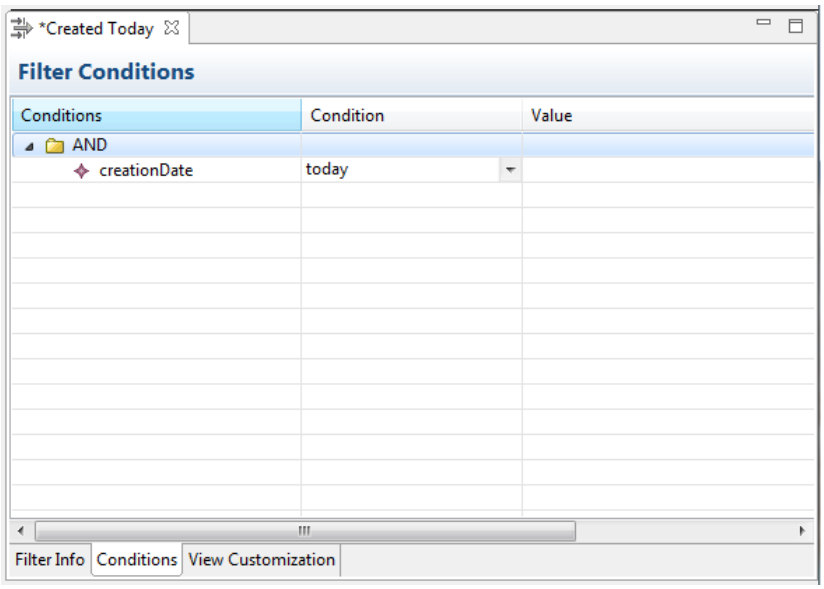
How to Add Work Document Filter Conditions

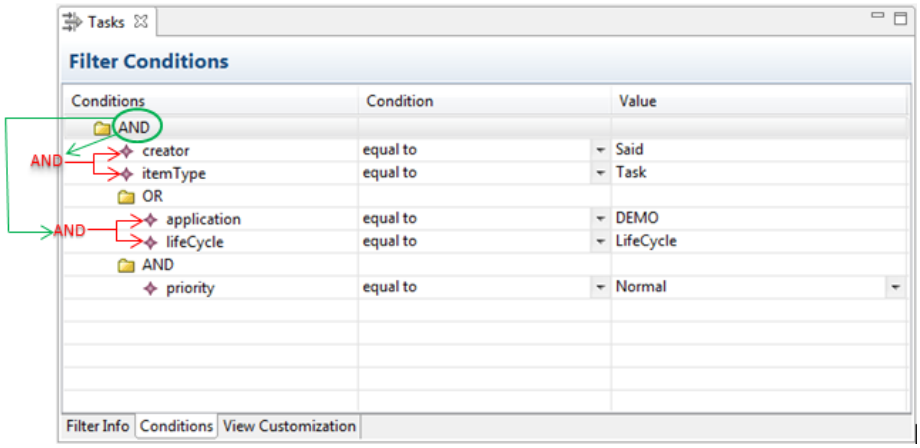
Select the **Conditions tab** of the work document filter editor -> mouse right click on root condition -> Select **Add Field** to add work document field conditions. Select **Add AND Group** to add the condition AND to the selected condition. Select **Add OR Group** to add the condition OR to the selected condition.
Root condition is initialized with **AND** but it can be changed to **OR** condition by right click on it and select **OR** option form the popup menu.



Work Document Filter Example

The following definition is required to show Work Documents that were created today.





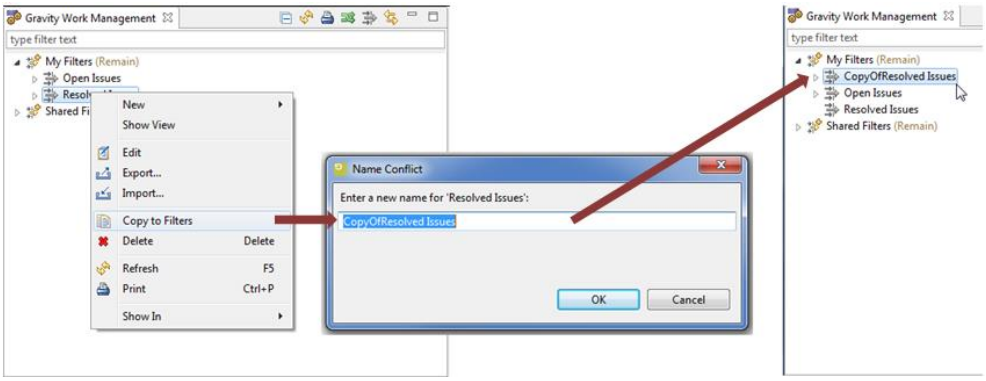
The filter example showing in the figure above will execute the following query:
SELECT * FROM WorkDocument WHERE
(itemType= 'Task' **AND** creator = 'Said')
OR(application = 'DEMO' **AND** lifeCycle = 'LifeCycle')
AND(priority = 'Normal')

- Red **AND** in the above query represents the root condition.
- Green **OR** and **AND** in the above query represent the group conditons.

How to Copy Filter

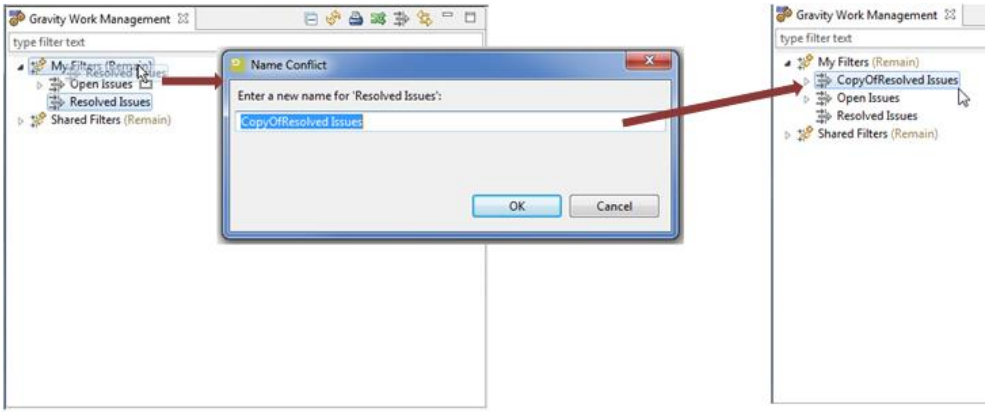
Each displayed filter can be copied to the filter container, namely, My Filters and Shared Filters.
There are two ways to copy a filter:
1)Copy Filter Using Pop Menu

Select a filter -> click on the right mouse button -> rename the filter -> click on Ok.
In this case the filter will be copied to the filter container that includes the selected filter.



2)Copy Filter Using Drag and Drop

Drag a filter into one of the filter containers-> rename the filter -> click on Ok.

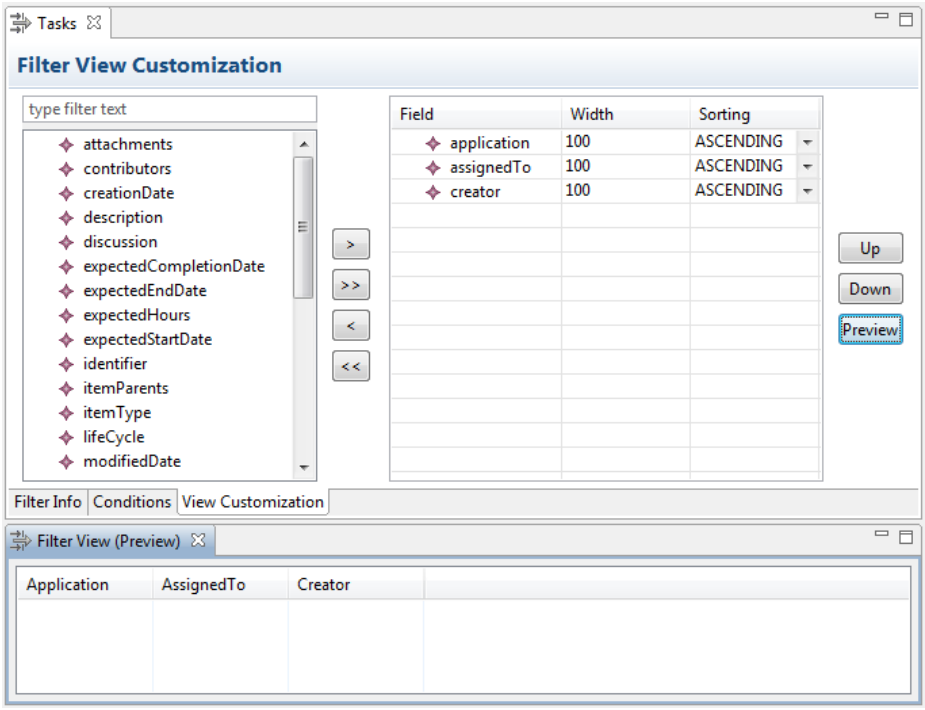


WORK DOCUMENT FILTER VIEW CUSTOMIZATION

View customization is used to define the **fields** of the work documents that can be show in the ***filter view*** and eventually the **width** and the **sorting** of columns. Each work document filter can be associated with a customized view.

How to Add Customized View to Work Document Filter

Select *View Customization tab* from the work document filter editor -> move the fields to be filtered from the left table to the right table -> adjust the column width and the sorting direction -> save the editor changes.
The top down fields order of the right table is corresponding to the columns left right order of the *filter view*.
Before saving the customized view you can preview the results by clicking on the **Preview** button. To display the complete result of the *work document filter* you have first to select the filter and mouse right click on it and then select the option **Show View**.



JOB MANAGEMENT

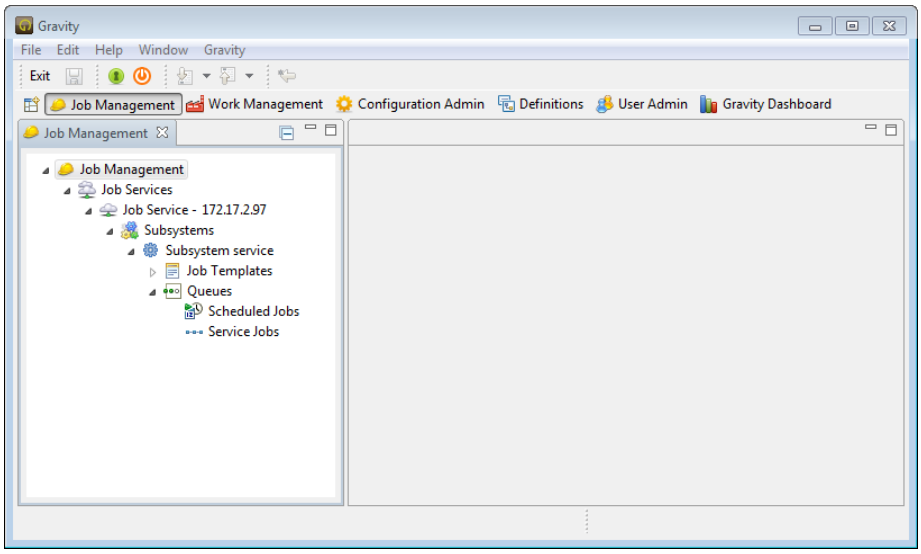
This section describes the Job Management in Gravity which is the task of a job service. Before delving into the details, this is the essence of all that Gravity Job management tale is about:

Gravity manages job services → A job service manages subsystems → A subsystem manages job queues and job templates → A job queue manages jobs.

In addition to being OSGi-ready, job and subsystem services are REST-ful as well enabling a Gravity user to manage jobs both on local and remote machines seamlessly from the same UI.

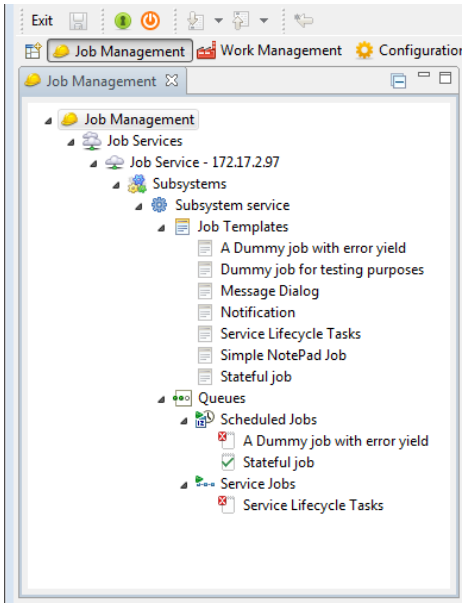
JOB MANAGEMENT PERSPECTIVE

You can open the perspective by clicking on the *Open Perspective* shortcut on the Perspective bar



JOB MANAGEMENT VIEW

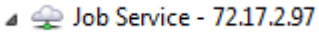
The following is a screenshot of the Job Management view which is the entry point to interact with jobs.
Let's have a look at this view and see how it's built.

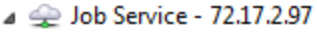


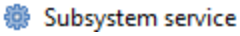
The Job Management view will show locally running job and subsystem services as well as those running on a remote machine which are discovered by Gravity.
Each node in this tree view reacts on double and/or right clicks.
The Job Management view (the screenshot above) has, roughly speaking, the following tree structure: (*Nodes within **[ ]** are variable ones.*)

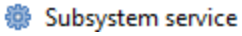
› **Job Management** This is the tree root

› **Job Services** All discovered job services (both local and remote ones) will show up under this node.

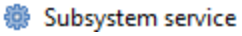
› [**some job service**], for example:  running on machine with the shown IP address

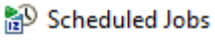
› **Subsystems** All discovered subsystems belonging to the parent job service  will show up under this node.

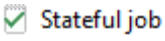
› [**some subsystem service**], for example: 

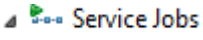
› **Job Templates** All discovered job templates within the parent subsystem  will show up under this node.

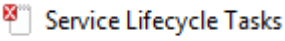
› [**some job template**] , for example: 

› **Queues** All job queues defined within the parent subsystem  . Queues are either trigger-time, FIFO or priority based

› **Scheduled Jobs** A full-fledged time-triggered 'queue' based on Quartz scheduling. There is only one of such queues per system and it's created by Gravity itself:  .

› [**some time-trigger based job**]. For example: 

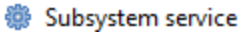
› [**some user-created job Queue**] A job queue which is either FIFO(First In, First Out) or priority based. Such queues are created by the user. For example: 

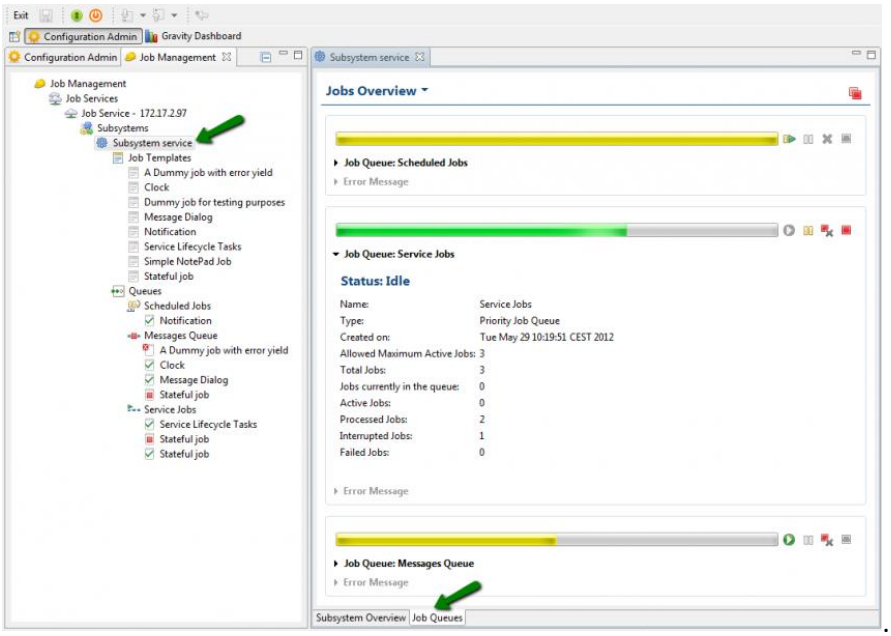
› [**some FIFO or priority based job instance**]. For example:  .

SUBSYSTEM

A job service manages one or more subsystem services. A subsystem service is responsible for job queues and job templates within its borders.

Subsystem Overview

Double-click the subsystem node you want to open. In our case:  . An editor is opened. Click on the editor's foot-tabs to manage the subsystem's info, queues and jobs in action.



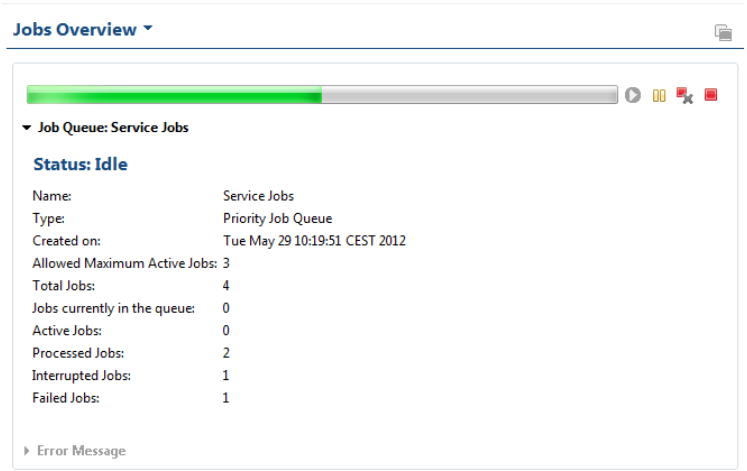
JOB QUEUE

in Gravity, you can queue a job for execution based on its insertion order (FIFO), priority or trigger-time:

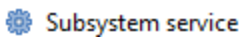
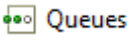
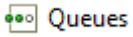
- For the first two cases, you create and use either a FIFO or Priority queue. (See how to create a new job queue here.)
- For the last case you use the provided trigger-based queue **Scheduled Jobs** (..having this icon Scheduled Jobs).

Job Queue Overview

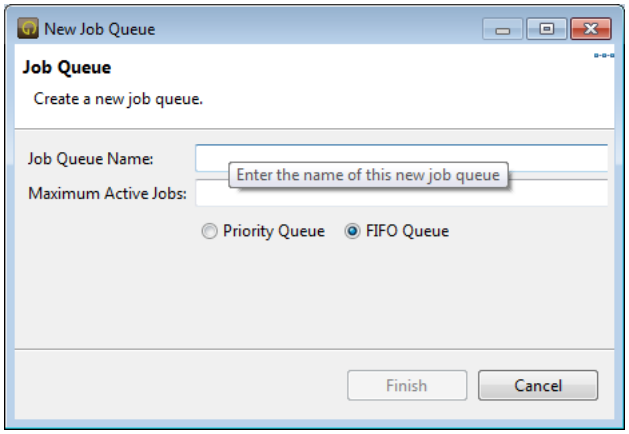
Double-click a job queue to see its overview.



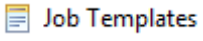
Create a New Job Queue

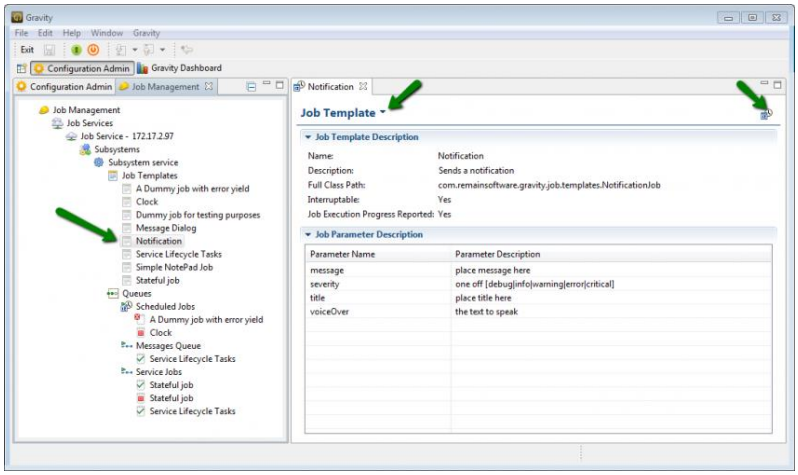
To create and add a new job queue to a subsystem, right-click on node  or  , then choose for **New Job Queue** from the pop-up menu.
A wizard shows up prompting for this new job queue's fields, fill them in then press **Finish**. Your new job queue shows up in the view under  node. (It may take a bit longer to show up if you're creating it on a remote subsystem).

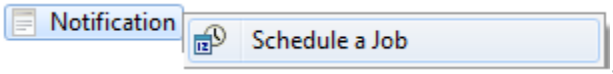
Tip: Hover with your mouse over a field to get its tool tip with more details.



Queueing Jobs

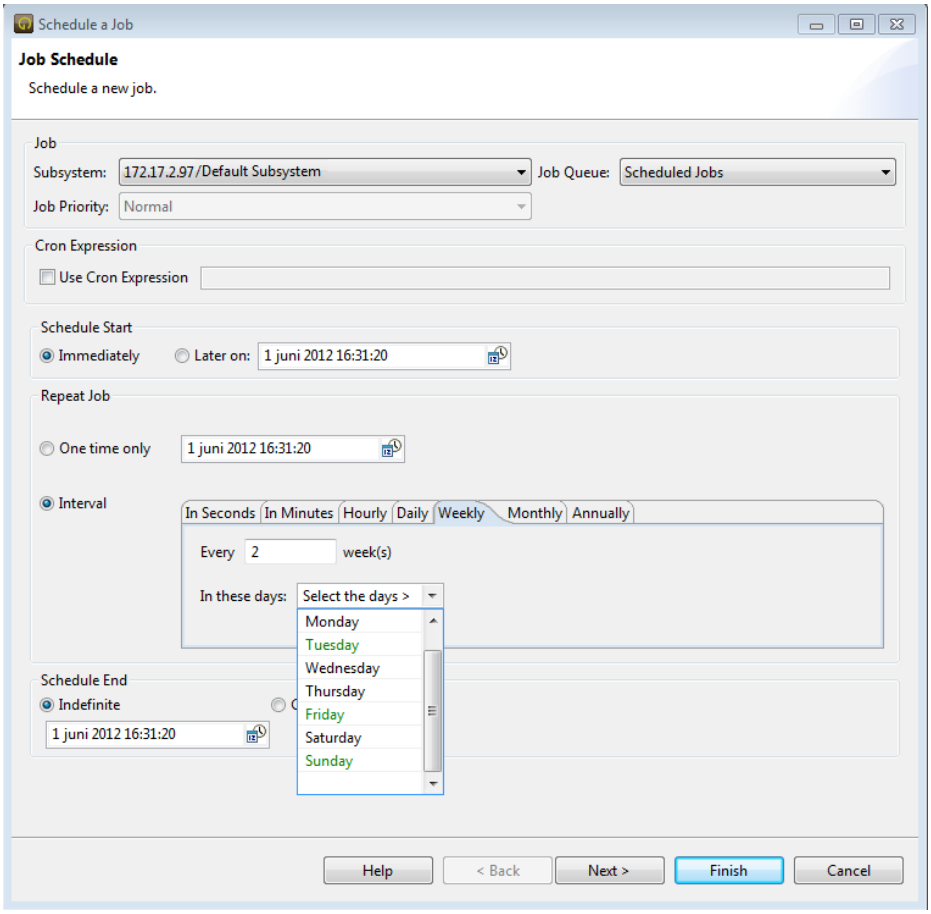
Jobs are instances created from templates. What Gravity will execute is a job instance, not the template itself. So, you can instantiate and execute as many jobs (instances) as you like from the same unique template and have each job run with its own context/parameters. In the view, job templates are visible under node: **Job Templates** ().
You can open a template's editor by double-clicking its name.



You can queue/schedule your job by first right-clicking a template 

.
Or by clicking one of the two places in the template's editor as shown in the screenshot above.

You get, then, a wizard opened where you can step by step configure your job. This wizard provides some useful info by clicking **Help** button.



From your new job wizard, select the queue you want your job to be added to.

- Selecting **Scheduled Jobs**, which is time-based, requires entering either a CRON expression (click wizard's **Help** for some CRON details) or the job's start, repeat and end time sections.
- Selecting a FIFO/Priority queue omits the rest of the fields as they're not needed.

Click '**Next**' if you want to pass specific parameter values to this job instance. Then click **Finish**'. Your newly created job should show up in the view under your queue of choice. GR:Gravity/Platform Management

LICENSE MANAGEMENT

A SHORT INTRO

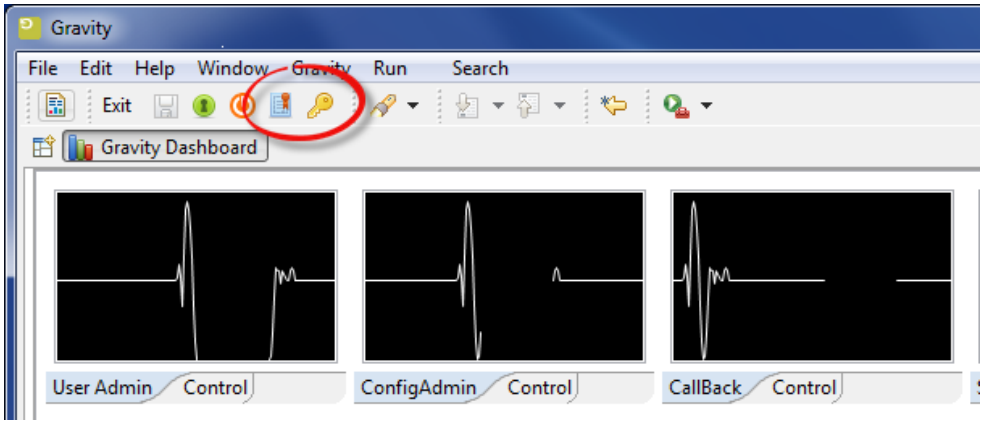
The Gravity license system is based around a public key infrastructure. The provided infrastructure gives Remain the means to supply licenses in a secure and user friendly manner. Gravity licensing consists of two licensing parts, the Gravity license (also mentioned as product license) and the Gravity license Confirm Key. The Gravity product license contains information regarding the actual license, for example the name of the Gravity product being licensed and the number of users that can use the license. The Gravity license Confirm Key contains information on how license details can be extracted from the Gravity license.

With respect to licensing Gravity can run in either trial or non-trial mode. The difference being that a trial mode with a trial license is usually short lived. The default mode for Gravity is trial. In this mode Gravity does not require you to import a Confirm key or Base license simplifying setup and use of Gravity. In trial mode it is sufficient to import a trial Work-management license to get Gravity up and running.

A non-trial Gravity system requires a Base license and a commercial Work-management license. The Base license fully enables the Gravity licensing system. If no Base license and or product related licenses are imported then only the initial Admin can log-in and use the Gravity system.

IMPORTING A LICENSE CONFIRM KEY AND PRODUCT LICENSES

License files can be imported by pressing the appropriate toolbar button. As shown below, the large single key icon depicts the button to press when importing a license Confirm Key file and the small-key-in-document icon depicts the button to press when 1 or more licensed product files are to be imported. These tool buttons are only available in the Gravity Admin product.



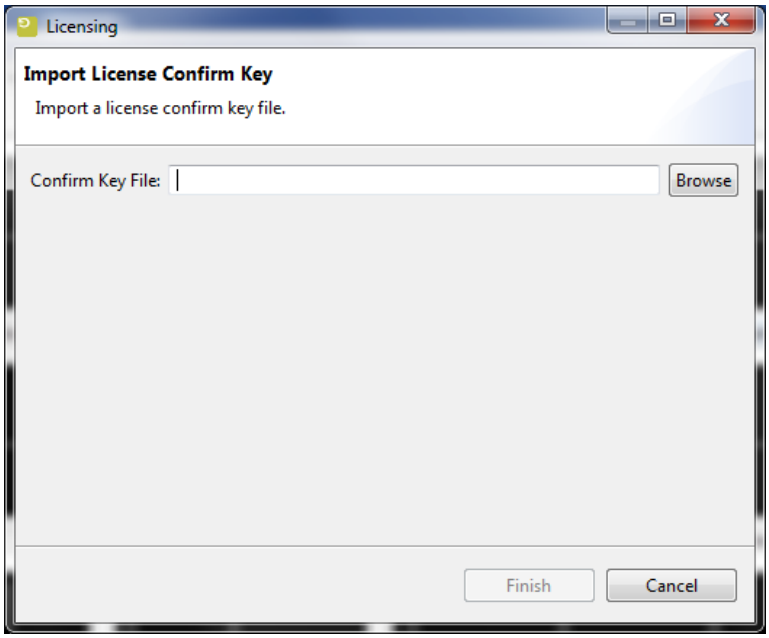
Pressing either button will evoke a wizard dialog that will prompt for a location of either the license confirm key file or the product license file(s).

Note.

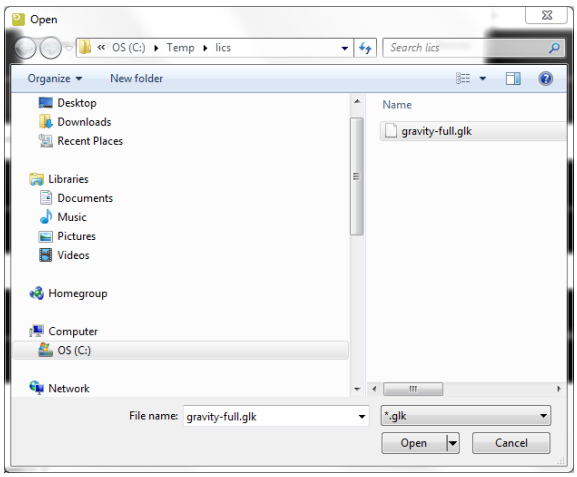
Order of import is of importance here. As the license confirm key is used to extract information from a product license, a confirm key must already exist in the system before any product license files can be imported.

IMPORT A LICENSE CONFIRM KEY FILE

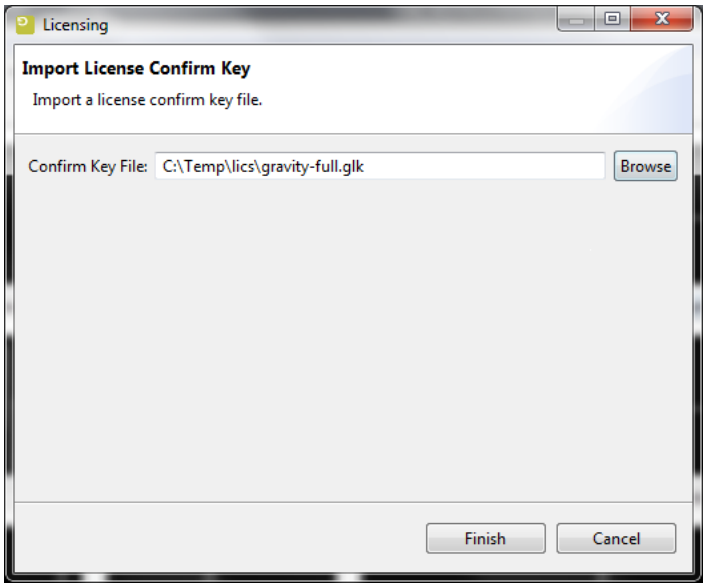
Press the toolbar 'large-key ' button to start the 'License Key file' import:



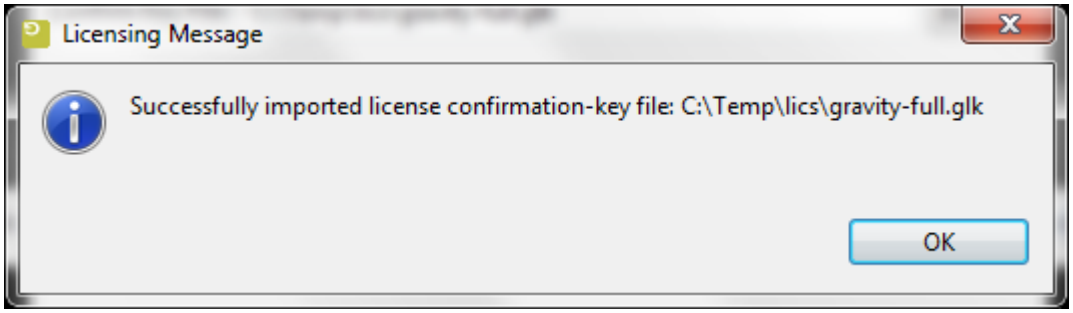
By pressing the <Browse> button a file dialog will be shown where you can select the license confirm key file, from the location where it was saved (after receiving it by email or by other means). The browse option will only show files that match the file extension of the Gravity license confirm key file, in this case it expects to find a file with the extension 'glk' (Gravity License Key). For example :



Selecting the appropriate file and pressing enter or clicking on the <Open> button will set the file as the license confirm key file to be imported:

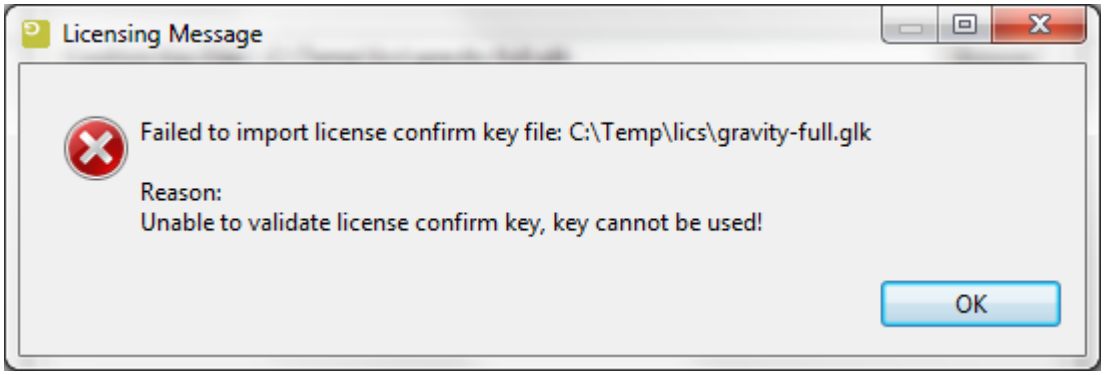


At this point pressing <Finish> will load the license confirm key into the Gravity system. This will be confirmed by a pop-up info panel, for example:



FAILED IMPORT OF A LICENSE CONFIRM KEY FILE

Importing a license key can fail if the licensing system detects that the key file being imported is not a Gravity license key file (possibly corrupt) or is not a valid (revoked) license key file. If this is detected an error message will be displayed that states the problem at hand, for example:

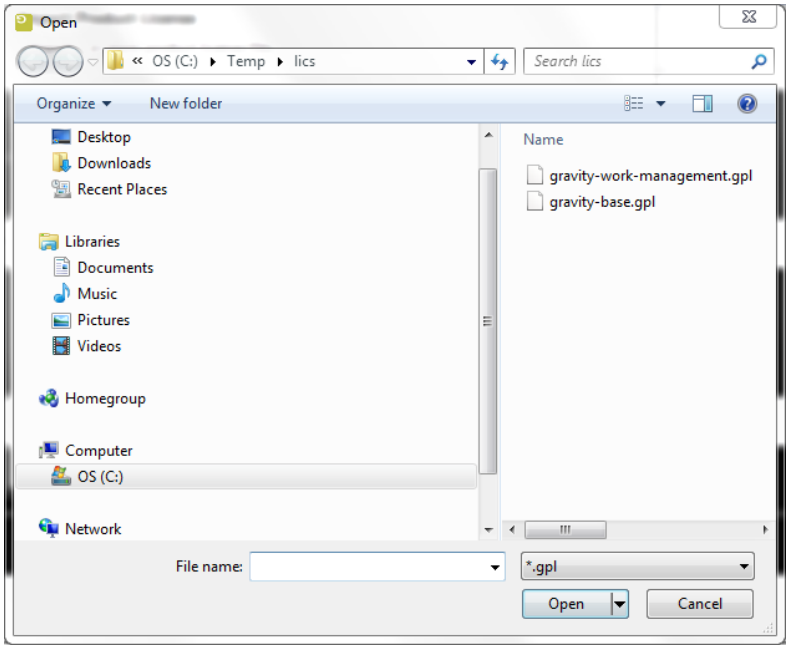


Recovery from this type of error is only possible by requesting a new confirm key from your distributor.

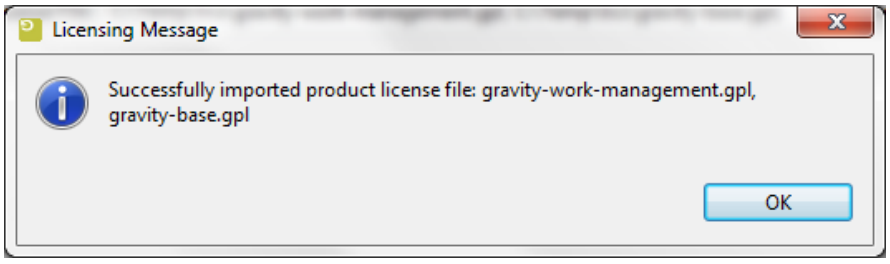
IMPORT 1 OR MORE PRODUCT LICENSE FILES

A similar procedure is to be followed for the import of 1 or more product license files. To start the 'Product License file' import, press the small-key-in-document icon.

Major difference with the previous import wizard is that with this import 1 or more files with the extension 'gpl' (Gravity Product License) are to be selected for the import, for example:

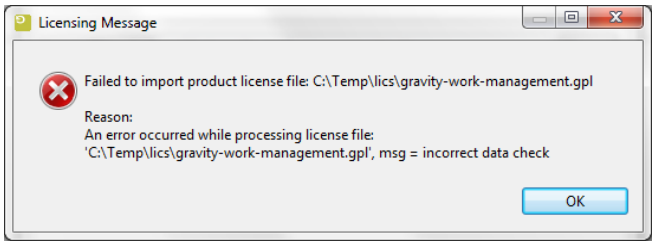


By selecting both gravity-base.gpl and gravity-work-management.gpl and pressing enter or clicking on <Open> will set the 2 licenses as the product licenses to be imported. Pressing finish on the next dialog will finalize the import request. A pop-up info panel will confirm that the licenses were successfully imported:



FAILED IMPORT OF A PRODUCT LICENSE FILE

Importing a product license file can fail if the licensing system detects that the file being imported is not a Gravity license file (possibly corrupt) or cannot be validated against the current license confirm key. If this is detected an error message will be displayed that states the problem at hand.

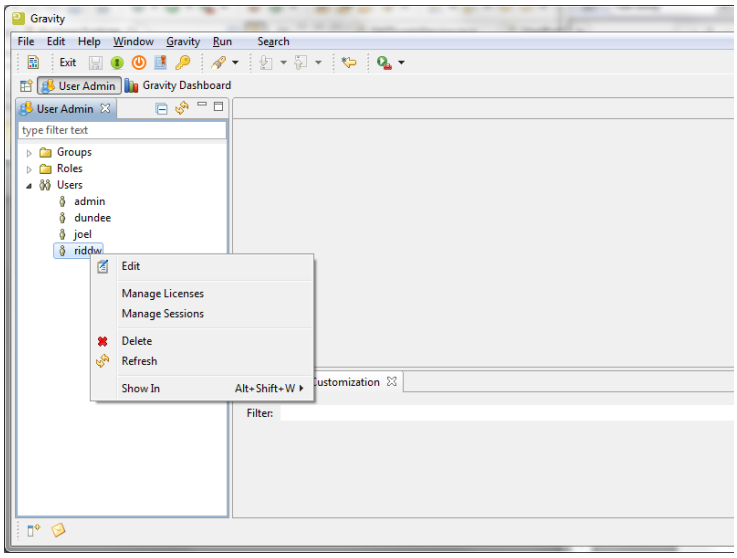


The above error occurred due a to corrupt product license file, but an error can also occur if the imported license confirm key is not compatible with the offered product license file. There is an enforced incompatibility between trial and commercial keys and licenses, it is not possible to interchange a commercial license with a trial key and visa versa.

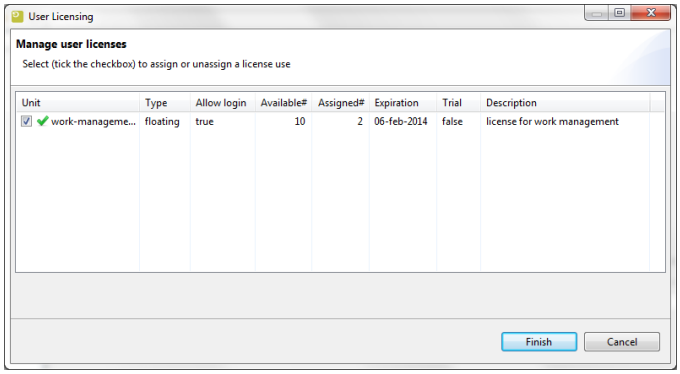
Recovery from most errors is only possible by requesting a new product license from your distributor.

LICENSE ADMINISTRATION

The license administration, i.e. to register or deregister a user to or from a product license, is performed by the Admin from the User Admin perspective. By opening the 'Users' container and by right clicking on an available user, the menu option 'Manage Licenses' will appear:



Selecting 'Manage License' will show the Manage User Licenses dialog. Based on previously import license products this will show for example:



By ticking the check box the user can be registered to a license and by unticking, deregistered from a license. In the example above the selected user will be registered to the work-management license. Pressing <Finish> confirms the (de)registration request and the request is processed by the licensing system.

PRODUCT LICENSE DETAILS

As can be seen in the 'Manage user licenses' dialog a license product consists of a number of licensing related fields, some fields are informative of nature but others influence the usability and availability of a license.

LICENSE UNIT

The license unit is the product unique name. During license import the unit unlocks or makes available specific Gravity features to a registered user or in the case of the Gravity base license the unlocking of the Gravity user licensing system.

LICENSE TYPE

Gravity Licensing supports to license types, they are:

1. Named license.
2. Floating license.

NAMED LICENSE

A named license is a license that is registered to a user. The number of users that can be registered to a named license is determined by the license unit count (above displayed as the column Available#). A named license is hard-wired to a user and cannot be shared amongst users in the way possible with a floating license. That being said, a license can be re-used by re-assigning it to another user. With a named license the amount of available licenses determines the maximum number of users that can be assigned to a unit. The column 'Assigned#' displays the number of users currently registered to the license.

FLOATING LICENSE

With a Floating license there is a pool of Gravity users that can make use of an available unit. As with the named license, each user is registered to a unit but the difference here is that with a floating license the amount of licenses available (within a unit) does not determine the number users that can be registered to a license. The blocking factor here is that the number of concurrent (logged-in) registered licensees cannot exceed the available unit count. In our example we can register 100 users to the work-management license but only 10 users can log-in and use it concurrently.

Note.

If a user tries to log-in with a license that has log-in capabilities (Allow log-in) but the use count has already reached its maximum then the log-in request will be rejected. In this case a notification will be displayed with the reason of rejection.

LICENSE ACTIVATION AND EXPIRATION

A license has a start and an end date. The start date is the date from which a license can be actively used and the end date is the date the license can no longer be used. In 'Manage user licenses' only the end date is displayed as 'Expiration'. Technically the license expires at midnight of the displayed date.

BASE LICENSE SYSTEM-ID

The base license system-id is the hardware id of a system that will run a Gravity server installation. The system-id is requested from the user and tied into a product base license, specific to the user's Gravity Server installation. The system-id that is used to create a base license can be retrieved by running the command gSHI from the Gravity Server osgi console.

SWITCHING FROM A TRIAL LICENSE TO A COMMERCIAL LICENSE

If you have engaged in a Gravity trial license and you of course want to use Gravity commercially then a switch from trial to commercial is a trivial task. After receiving the appropriate key and licenses from your distributor the switch can begin.

If the product licenses are the same as the trial licenses (unit names are the same) then perform the following steps:

1. import the commercial license confirm key
2. import the commercial base product license
3. import the rest of the commercial product licenses

If the trial product licenses are not the same then you will have to first delete the trial licenses before importing the new commercial licenses, in this case the steps to be performed are:

1. delete all product licenses
2. import the commercial license confirm key
3. import the commercial base product license
4. import the rest of the commercial product licenses
5. optionally re-assign users to appropriate licenses

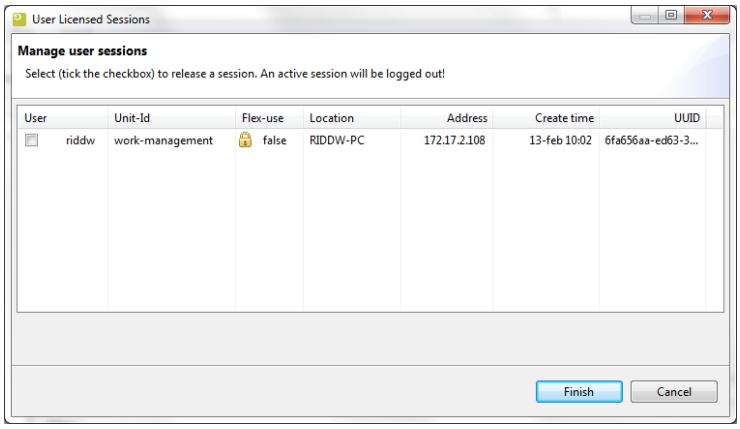
As you can see you don't necessarily have to remove users or definitions already applied in Gravity during the trial period. You can continue without data loss when switching from trial to commercial use of Gravity.

To delete a product license the Admin must go to the User Admin perspective and on the 'Users' container right click and select the menu option 'Delete Licenses'. Of course once a license is deleted then license registration will also be cleaned-up and users will no longer be able use the license,. If the license had the 'Allow log-in' attribute set then at this point only Admin can use the Gravity system, all other users will be locked out.

MANAGING LICENSE SESSIONS

A side effect of actively managing licenses is that there are situations that a user log-out cannot be tracked and license usage not properly updated to reflect an up-to-date license usage count. This for example happens when a user is logged in to Gravity and the system the user is working on crashes unexpectedly. In this case the license registration system cannot be updated to reflect the fact that the user is not using a specific license anymore. If this situation occurs to often then the license use count can inappropriately reach its maximum possibly prohibiting a user from logging in to Gravity or from using specific license related Gravity features.

To help manage and cleanup inactive license usage there is a menu option 'Manage Licenses'. This menu option is available at the same level as the previously mentioned 'Manage Licenses'. Selecting this menu option displays the following dialog:



The dialog will display license sessions for the selected user. A user can only see his/her own license sessions and cannot see sessions of other users (although the Admin does have the privilege to manage sessions for others). By ticking the check box under the 'User' column and pressing <Finish> license session will be removed from the license registry system(freeing up precious license resources).

There is 1 important effect of removing a session s that if the session is a live session (the user is currently logged in more than once) then removing the session will have the effect of a remote log-out for that session. The running Gravity instance for that session will be requested to log-out , if the user does not respond within a certain time limit then the selected Gravity instance will be automatically logged out (freeing up the license usage).

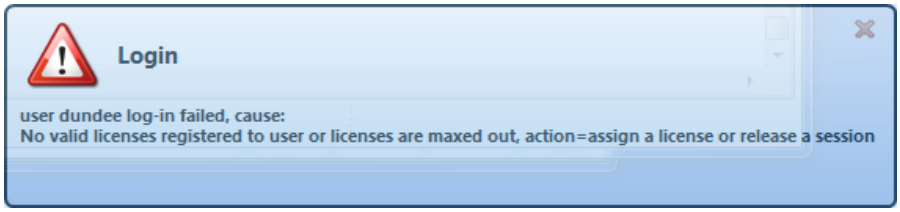
As already stated users can only manage there own sessions and only the Admin user has the ability to manage all sessions (Admin can right click on the 'User' container, select 'Manage sessions' and see all sessions).

MANAGE LICENSE SESSIONS WHEN LOGGING IN

The possibility to manage a user's own session has been added to the User log-in process. If at time of log-in the licensing system detects that there are insufficient license resources to allow the user to log-in but it also detects that

there are registered license sessions for this user, then the user is given the opportunity to manage his/her sessions at time of a log-in. At this point removing 1 or more license sessions should allow the user to log in to Gravity.

If a user cannot log in to Gravity because the user has no license assigned or license usage has reached a maximum then the Admin must assign a license to the user or clean-up in-active license usage as shown above. If clean-up is not possible then you must wait for a license to become available or consider acquiring extra licenses. The following notification will pop-up in the right hand corner of the display:

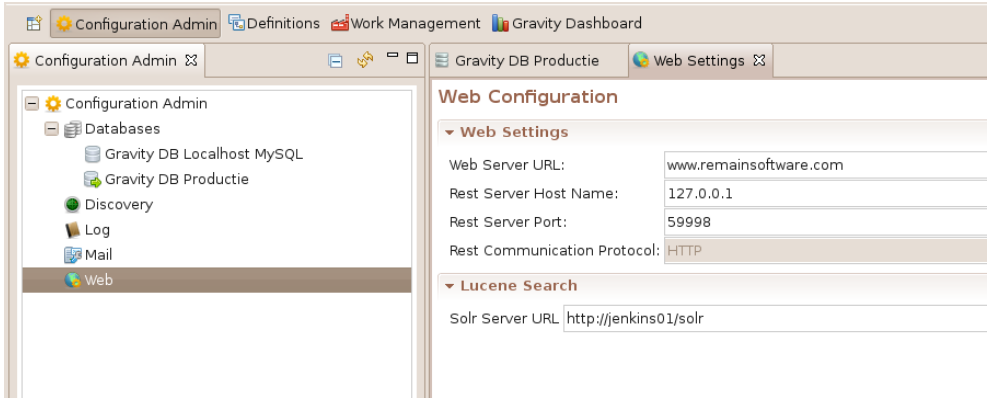


If a user cannot log in because the 'base' license has not been imported then the following notification will pop-up in the right hand corner of the display:

STANDALONE SOLR INSTALLATION

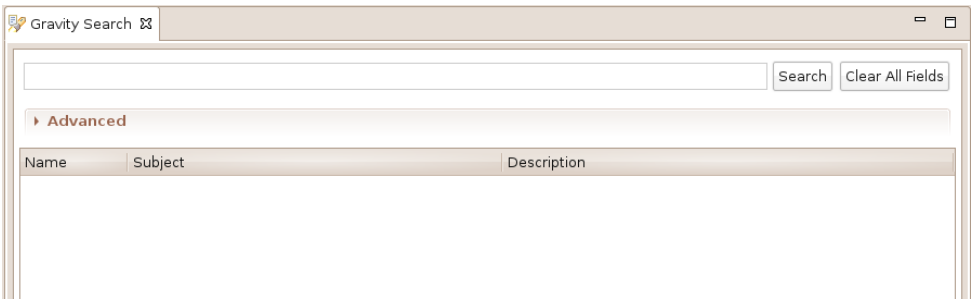
GR:Gravity/StandaloneSolr

WEBCONFIG



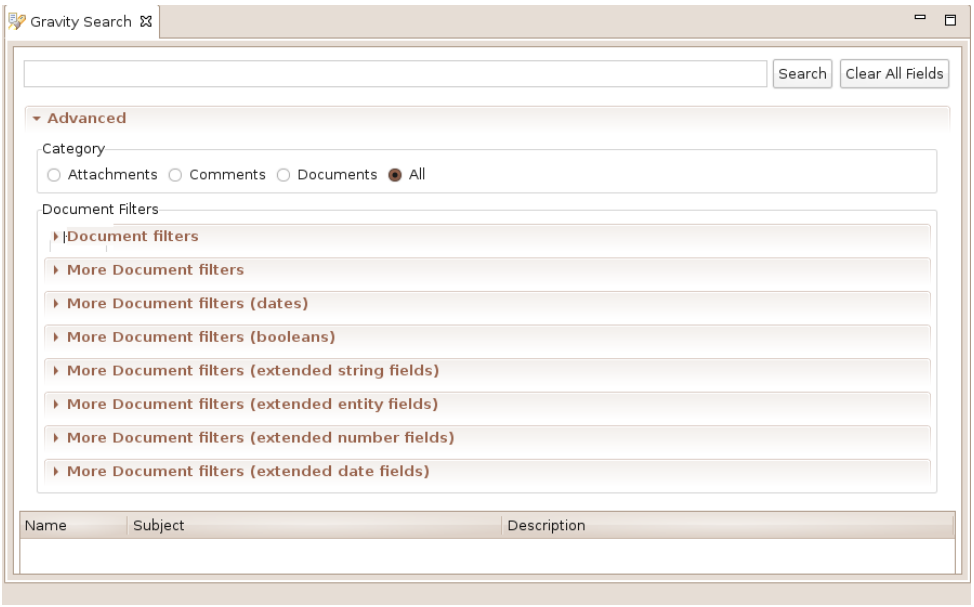
Make sure you have specified a Solr Server. In this example http://jenkins01/solr is used.

SEARCHVIEW



Just type what you want to search for like: *string* and press on the search button. If you want to search for a string in a specific field for example description do it like this: *description:string* If you want to search for everything in Solr's index do it like this : **:** or just use an empty string. If you want to clear all search fields press the "Clear All Fields" button.

Advanced



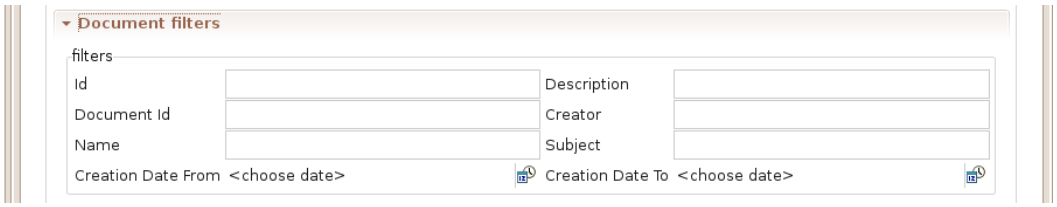
Click on the advanced button to see this section.

The advanced section (with all it's subsections) provides a way to easily pass Filter Queries to Solr.

For example if you want your query to only return Comments you can select the category Comments.

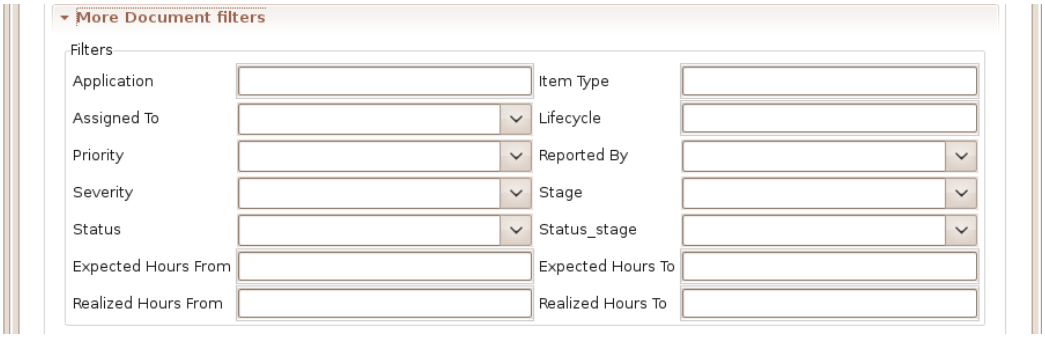
To use creation_date as a Filter Query you have to provide both creation_date From and creation_date To. In this way you can search for a string with a creation_date between creation_date From and creation_date To.

Document Filters



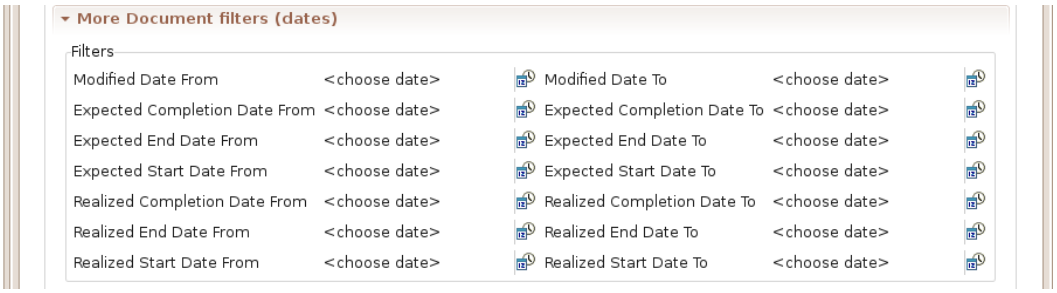
When you are inside the advanced section click on the "Document Filters" button to see this section.

More Document Filters



When you are inside the advanced section click on the "More Document Filters" button to see this section.

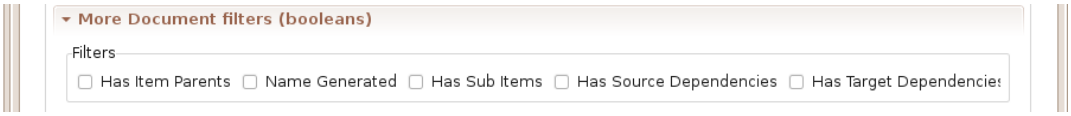
More Document Filters (Dates)



When you are inside the advanced section click on the "More Document Filters (Dates)" button to see this section.

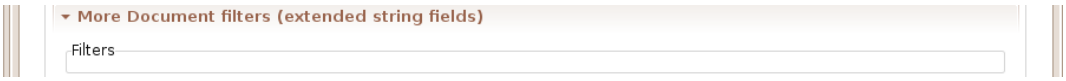
To use a date as a Filter Query you have to provide both From and To dates.

More Document Filters (Booleans)



When you are inside the advanced section click on the "More Document Filters (Boooleans) " button to see this section.

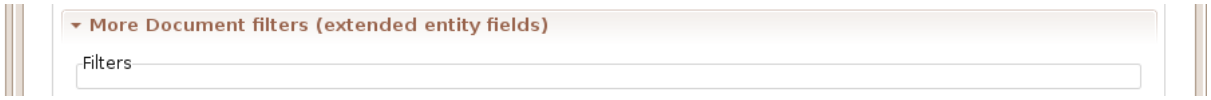
More Document Filters (extended string fields)



When you are inside the advanced section click on the "More Document Filters (extended string fields)" button to see

this section.
Fields of type IStringFieldExtended show up here.

More Document Filters (extended entity fields)

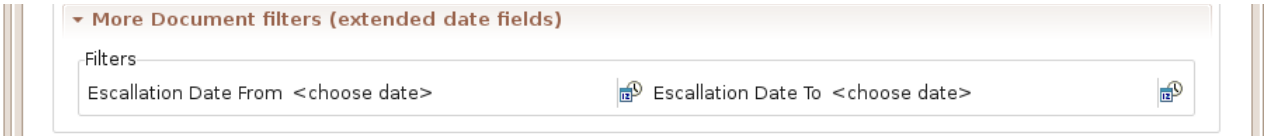


When you are inside the advanced section click on the "More Document Filters (extended entity fields)" button to see this section.
Fields of type IEntityTypeFieldExtended and IEntityFieldExtended show up here.

More Document Filters (extended number fields)

When you are inside the advanced section click on the "More Document Filters (extended number fields)" button to see this section.
Fields of type INumberFieldExtended show up here.

More Document Filters (extended date fields)



When you are inside the advanced section click on the "More Document Filters (extended date fields)" button to see this section.
Fields of type IDateFieldExtended show up here.

COMMANDS

LIST OF CONSOLE COMMANDS

Command Short explanation

ghelpsolr	Solr Command Overview
tgsolrri	Solr reindex
tgsolrdi	drop Solr index
tgsq	search Solr index with querystring
tgsqf	search Solr index with querystring and filterstring

tgsqmf	search Solr index with querystring and multiple filterstrings
tgsqfd	search Solr index for documents with querystring
tgsqfc	search Solr index for comments with querystring
tggrbi	get all Solr results by Id
tggrbdi	get all Solr results by document_id
tggar	get all Solr results
tggad	get all Solr documents from Solr index
tggac	get all Solr comments from Solr index
tggaa	get all Solr attachments from Solr index
tgssolrs	set solr server !DO NOT RUN on Gravity Standalone instances, SOLR server is already pre-configured!
tggsolrs	get solr server

BACK LINKS

Provided for reference:

File:Gr introduction.mp4 GR:Gravity/DevOps

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