

# RunaWFE. Administrator guide

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## Version 3.0

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RUNA WFE is an open source end-user oriented system for enterprise business process management, fully implemented in Java. Designed for large and middle-size enterprises.

## Security System

The security system consists of subjects, objects and permissions to perform actions.

Subjects are granted permissions to perform actions with certain objects.

### The types of subjects in the security system are as follows.

- Executors
  - Actors
  - Groups of actors

### The types of objects in the security system are as follows:

- System
- Executors
  - Actors
  - Groups of actors
- Business process definitions
- Business process instances

Note. There is only one object of the “System” type in the security system. The number of objects of other types is not limited.

Note. Permissions to perform actions are added up for each subject. If an executor is a member of a group of actors, the permissions explicitly granted to this subject (its “own permissions”) are added to the permissions granted to the group. The latter are called “inherited permissions”.

## Types of Permissions

There are two types of permissions can be granted on any object:

- Read
- Update Permission

### Permission on Objects by Object Type

“System” object:

- Login
- Create Executor
- Deploy Definition
- Change its password

“Process Definition” object

- Start Process
  - Undeploy Definition
-

- Redeploy Definition

“Process Instance” object

- Stop Process

“Executor” object:

- Update Executor

If the executor is a group of actors, the following permissions can be granted:

- List Group
- Add to Group
- Remove from Group

### **Permission Type Descriptions and Default Values**

The Administrators group is always present in the system. It cannot be deleted from the system. If the subject is Administrators group, its “own” permissions on the “Administrators Group” object cannot be changed. The Administrators group is always granted all possible permissions on every newly created Executor. This group also has all possible permissions on the “System” object.

An Administrator actor is a member of the Administrators group by default. An Administrator can be removed, but the system cannot operate normally with all its administrators deleted.

Only executors with the “Create Executor” on the “System” object can create new actors and groups of actors. A newly created Executor has a “Read” permission on itself, and if the executor is a group, it also has a “List Group” permission. The creator of an Executor and the Administrators are granted all possible permissions on the newly created Executor.

By default, a newly created Executor has no “Login” permission on the “System” object, which means that a newly created Executor cannot enter the system. For a newly created Executor to enter the system, it is necessary to grant the “Login” permission to this Executor and to set a password (or passwords for all members of the group).

Only an Executor with a “Read” permission on an object can read this object. Only an Executor with an “Update Permission” on an object can change permissions on this object. An actor with an “Update Executor” permission on an Executor can change the properties of this Executor or remove it altogether.

Note. To update an Executor, it is also necessary to have a “Read” permission on this Executor.

Only an actor with a “List Group” permission on a group can view the members of this group. Only an actor with a “Add to Group” permission on a group can add new members to this group. To remove an Executor from a group, a “Remove from Group” permission is required.

By default, a Process Definition Administrators group is present in the system. This group has privileges on business process definitions and instances. It cannot be removed. The members of the Process Definition Administrators are granted all possible permissions on newly created business process definitions and samples. By default the Administrators group is a member of the Process Definition Administrators group.

A business process definition can only be loaded into the system by an actor with a “Deploy definition” permission on the “System” object. The actor who loads a business process and the Process Definition Administrators group are granted all possible permissions on the business process loaded.

If user or any group that he/she is in has permission to change his/her password (this is set on "System" tab), than he/she can change his/her password whether he/she has permission to change his/her properties or not.

## Working with Actors and Groups of Actors

### How to Create a New Actor

In the Executors menu choose “Create Actor”, and the Create Actor page will appear.

Mozilla Firefox

File Edit View History Bookmarks Tools Help

http://localhost:28080/wfe/crea... Google

Getting Started Latest Headlines

ALT Linux 4.0 Desktop http://loc... Type=actor

**RUNA WFE**  
simulation

Logged as: Administrator  
Logout

Menu	Create new Actor
Task List	Name <input type="text"/>
Process Definitions	Full Name <input type="text"/>
Process Instances	Description <input type="text"/>
Executors	Code <input type="text"/>
System	<input type="button" value="Apply"/>

Done

On this page, fill in the fields and press “Apply”.

The “Name” field corresponds to the actor’s login and is mandatory. The rest of the fields are optional. The “Code” field corresponds to the employee number.

Each newly created actor requires a password (see “How to Change the Parameters of an Actor”) and permissions to enter the system (see “How to Grant Permissions on a System Object to an Executor”).

## How to Change the Parameters of an Actor

In the “Executors” menu, click the Actor whose parameters need to be changed. A page will appear, where with appropriate permissions you can change the actor’s parameters and password.

In order to change his/her password it's sufficient to have permission to change the password (it's set on "System" tab). Also the password may be changed by anyone who has permission to change user's parameters.

The screenshot shows the RunaWFE web application interface in a Mozilla Firefox browser. The URL is `http://localhost:28080/wfe/manage_executor.do?id=25`. The user is logged in as 'Administrator'. The left sidebar shows the 'Menu' with options: Task List, Process Definitions, Process Instances, Executors (selected), and System. The main content area is titled 'Executor Details' and includes a 'Permission Owners' link. The form contains the following fields:

- Name:** julus
- Full Name:** Gaius Julius Caesar
- Description:** (empty)
- Code:** 11

Below these fields is an 'Apply' button. The 'Status' section has a checkbox for 'Is Active' which is checked, with an 'Apply' button below it. The 'Password' section has fields for 'New password' (containing two asterisks) and 'Confirm password' (empty), with an 'Apply' button below. The 'Executor Groups' section has a 'View' dropdown set to 'Default' and an 'Add' button. Below this is a table:

	Name	Full Name	Description
<input type="checkbox"/>	manager		group for managers
<input type="checkbox"/>	all		group for all employees

A 'Remove' button is located to the right of the table. The 'Substitutors' section has links for 'Add Substitution' and 'Add Terminator'. Below is a table with three columns: 'Organization Function', 'Substitutors Criteria', and 'Enabled'. An 'Ok' button is at the bottom left.

## How to Create a New Group of Actors

In the Executors menu, choose “Create Group”, and the Create Group page will appear.

On this page, fill in the fields and press “Apply”.

## How to Change the Parameters of a Group of Actors

In the “Executors” menu, click the Group of Actors whose parameters need to be changed. A page will appear, where with appropriate permissions you can change the parameters of the Group of Actors.

## How to Add an Actor to a Group of Actors

In the “Executors” menu click the Group of Actors to which you want to add a new Executor. In the Group Members table, choose “Add”. In the form that appears, check the Executors to be added to the group and choose “Add” (in the lower part of the page).

## How to Grant Permissions on a System Object to an Executor

Open the “Add” menu. If the Executor is not in the table add it using the “Add” command in the upper part of the table. In the Executor line check the necessary positions and press “Add”.

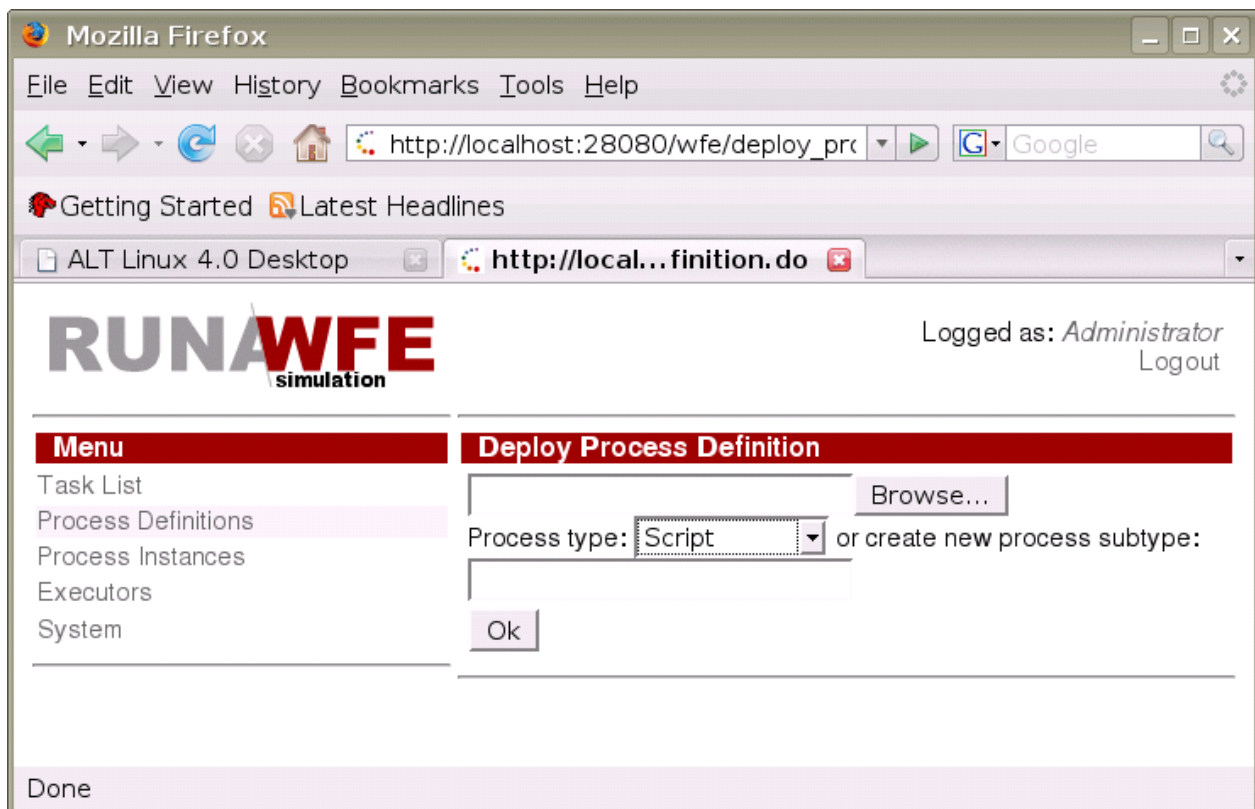
## How to Grant Permissions on an Executor to another Executor

Open the “Executors” menu and click the Executor on whom you want to give permissions. If the Executor to whom permissions need to be given is not in the “Permission Owners” table on the page that appears, it is necessary to add this Executor using the “Add” command. Then in the Executor line check the necessary positions and press “Apply”.

## Working with Business Process Definitions

### How to Deploy a New Business Process

Open the “Process Definitions” menu and choose “Deploy Definition”. On the page that appears, select the process type from a list of existing types (or enter a new one), enter the path to the process definition file and click “Execute”. If the process definition contains no errors, it will be loaded into the system.

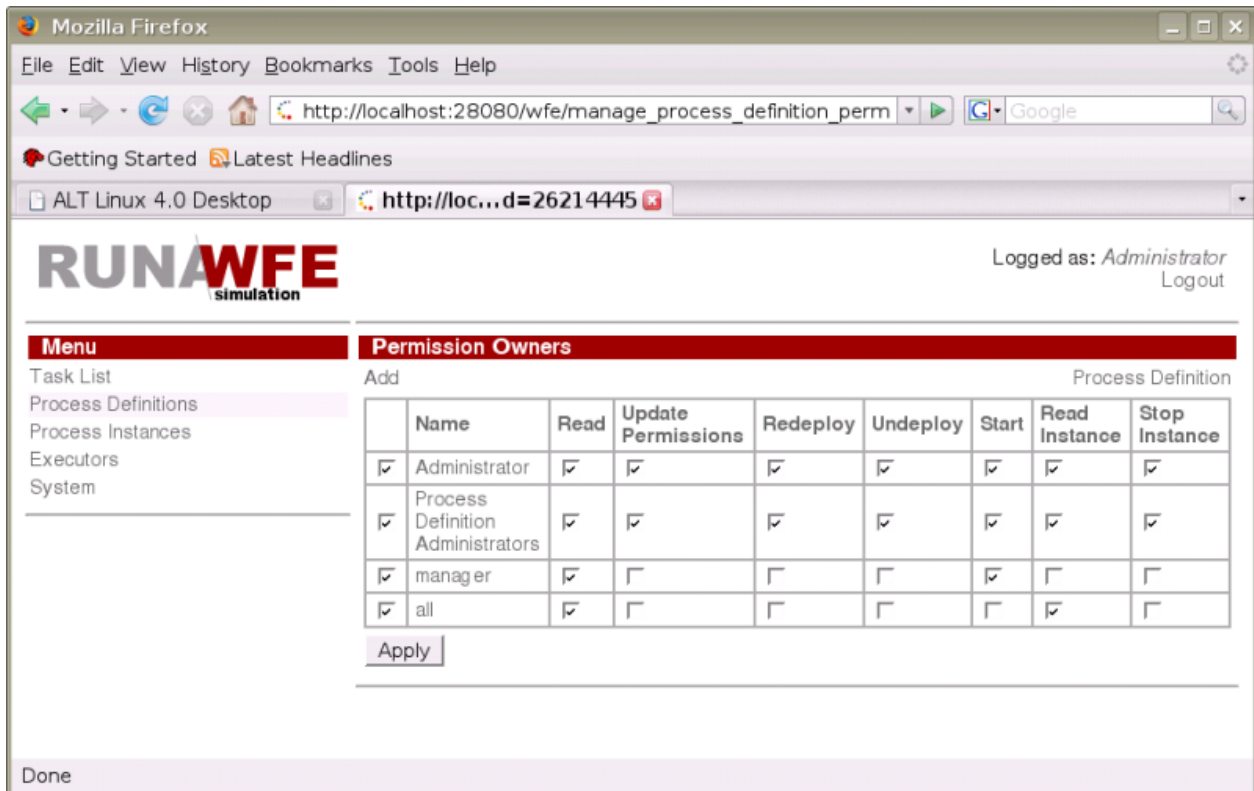


### How to Undeploy a Business Process

In the “Process Definitions” menu check the processes to be undeployed and click “Undeploy”. The marked processes will be removed from the system together with their instances.

### How to Grant Permissions on a Process Definition to an Executor

In the “Process Definitions” menu select the line with the required business process and execute the “Properties command” there. On the page that appears click “Permission Owners”. A page will appear with a table of permissions on the process definition.



If the Executor to whom permissions need to be given is not in the table, add this Executor using the “Add” command. Then in the Executor line check the necessary positions and press “Add”.

Note. The table of Executor permissions on the process definition has two fields that are not in the list of permissions on the “Process Definition” object (see “Security System”):

- Read Instance
- Cancel Instance

A checked box in this field means that by default this actor will be granted permissions on any newly created instance of this business process (Read Instance or Cancel Instance, as the case may be).

## How to Redeploy a Business Process Definition

In the “Process Definitions” menu find the line with the appropriate business process definition and click “Properties” there. On the page that appears in the Redeploy Definition section, enter the path to the process definition file and click “Execute”. If the process definition contains no errors it will be loaded into the system.

The screenshot shows the RunaWFE simulation web interface in a Mozilla Firefox browser. The URL is [http://localhost:28080/wfe/manage\\_process\\_definition.do?id=26214445](http://localhost:28080/wfe/manage_process_definition.do?id=26214445). The user is logged in as Administrator. The interface has a left menu with options: Task List, Process Definitions (selected), Process Instances, Executors, and System. The main content area is divided into three sections:

- Process Definition:** A table showing details for the 'Overtime Work' process.

Definition Name	Overtime Work
Version	1
Description	Participants of this process are members of manager and staff groups
- Redeploy Process Definition:** A section with a 'Browse...' button, a 'Process type' dropdown set to 'Script', and a checkbox for 'or create new process subtype:'. There is an 'OK' button at the bottom.
- Process Graph:** A flowchart diagram showing the process logic:

```
graph TD; Start(( )) --> Offer[Offer on overtime work:]; Offer --> Decision[Make a decision]; Decision --> IsAccepted{Is accepted?}; IsAccepted -- rejected --> NotifyRejection[Notify of rejection]; IsAccepted -- accepted --> NotifyAcceptance[Notify of acceptance]; NotifyRejection --> End((end)); NotifyAcceptance --> End;
```

Note. All the existing instances of the business process will continue to run according to the old definition, but newly created instances will correspond to the new one.

Note. Permissions for the new process definition will be the same as for the old one.

## Working with Business Process Instances

### Viewing the State and Values of Business Process Variables

In the “Process Instances” menu find the line with the appropriate business process instance and click on this line.

Menu

- Task List
- Process Definitions
- Process Instances
- Executors
- System

Process Instances

View Default

Id	Name	Started	Ended	Version
32768044	Hello World	19.06.2008 21:30	19.06.2008 21:30	1
32768047	TimerDemo	19.06.2008 21:30	19.06.2008 21:31	1
32768052	Report	19.06.2008 21:30	19.06.2008 21:33	1
32768057	Overtime Work	19.06.2008 21:30	19.06.2008 21:33	1
32768065	Vacation	19.06.2008 21:31	19.06.2008 21:34	1
32768073	Businessstrip	19.06.2008 21:31		1

Total:6

Done

A page will appear with the name of the Action being executed by the process, the values of all process variables, the swimlane table and a link to the table of permissions on the process instance (“Permission Owners”).



## How to Cancel a Business Process

In the “Process Instances” menu, find the line with the appropriate business process instance and click on this line. On the page that appears click “Stop”.

The screenshot shows the RunaWFE simulation interface in a Mozilla Firefox browser window. The address bar shows the URL: `http://localhost:28080/wfe/manage_process_instance.do?id=32768073`. The page is titled "RUNA WFE simulation" and shows the user is logged as "Administrator".

**Menu:** Task List, Process Definitions, Process Instances (selected), Executors, System.

**Process Instance:**

Name	Businessstrip
Id	32768073
Version	1
Started	19.06.2008 21:31

Buttons: Stop, Permission Owners

**Process Roles:**

Name	Executor	Organization Function
human resource inspector	cleopatra	ExecutorByNameFunction (human resource)
staff	galus	
bookkeeper		ExecutorByNameFunction (bookkeeper)
boss	nero	

**Process Variables:**

State	Role	Variables	
Sign the order	staff	Name	Value
		comment	
		businessTripType	toAnotherRegion
		official order number	5
		official order date	Thu Jun 19 00:00:00 MSD 2008
		till	Fri Jun 27 00:00:00 MSD 2008
		reason	/1/1/1
		since	Thu Jun 19 00:00:00 MSD 2008

**Process Graph:**

```

graph TD
    boss[boss] --> Send[Send an employee]
    Send --> HRInspector[human resource inspector]
    HRInspector --> HRInspector2[human resource inspector]
    HRInspector2 --> Staff[staff]
  
```

## Working with bot stations and bots

### How to view the bot stations list

Enter the «Bot Stations» menu:

The screenshot shows the RunaWFE simulation interface in a Mozilla Firefox browser window. The address bar shows the URL: `http://localhost:28080/wfe/manage_bot_station.do`. The page is titled "RUNA WFE simulation" and shows the user is logged as "Administrator".

**Menu:** Task List, Start process, Started processes, Executors, Bot Stations (selected), System.

**Deploy Bot Station:**

☐ Replace tasks

**Bot stations:**

Add Bot Station

id	Name	Address
<input type="checkbox"/> 2	localbotstation	localhost

SourceForge.NET Feedback forum

click the bot station name:

<b>Menu</b>	<b>Bot Station Details</b>								
Task List	Name <input type="text" value="localbotstation"/>								
Start process	Address <input type="text" value="localhost"/>								
Started processes	<input type="button" value="Apply"/>								
Executors	<input type="button" value="Export Bot Station"/>								
Bot Stations	<b>Bot Station status</b>								
System	Bot Station on								
	Periodic bots invocation on								
	<input type="button" value="Stop periodic bots invocation"/>								
	<b>Deploy Bot</b>								
	<input type="checkbox"/> Replace tasks								
	<input type="text" value=""/> <input type="button" value="Browse..."/>								
	<input type="button" value="Deploy Bot"/>								
	<b>Bots</b>								
	Add Bot								
	<table border="1"> <tr> <td><input type="checkbox"/></td> <td>Workflow user</td> </tr> <tr> <td><input type="checkbox"/></td> <td>UniversalBot</td> </tr> <tr> <td><input type="checkbox"/></td> <td>StopBot</td> </tr> <tr> <td><input type="checkbox"/></td> <td>бот_запуска_подпроцессов</td> </tr> </table>	<input type="checkbox"/>	Workflow user	<input type="checkbox"/>	UniversalBot	<input type="checkbox"/>	StopBot	<input type="checkbox"/>	бот_запуска_подпроцессов
<input type="checkbox"/>	Workflow user								
<input type="checkbox"/>	UniversalBot								
<input type="checkbox"/>	StopBot								
<input type="checkbox"/>	бот_запуска_подпроцессов								
	<input type="button" value="Remove"/>								

You can edit bot's parameters after clicking on the bot's name

<b>Menu</b>	<b>Bot Details</b>		
Task List	Bot name	<input type="text" value="StopBot"/>	
Start process	Bot password	<input type="text" value="*****"/>	
Started processes	Bot timeout	<input type="text" value="200"/>	
Executors	<input type="button" value="Apply"/>		
Bot Stations	<input type="button" value="Export Bot"/>		
System	<b>Tasks</b>		
	Add		
	<input type="checkbox"/>	<input type="text" value="stole1"/>	<input type="text" value="ru.runa.wf.logic.bot.CancelOldProcesses"/>
	<input type="button" value="Apply"/>	<input type="text" value=""/>	<input type="button" value="Browse.."/>

### How to add bot and a task for bot

If a user obtains permission to create bots, then he would have an "add bot" command in the botstation properties and an "add task" command in bot's properties. Every bot has a login (which should match with a login on one of the executors) and a password (which should also match). A task has a task name, task handler name and configuration. The task name is an arbitrary string. A task handler name is the name of the class that implements TaskHandler interface. The name of the task handler should be chosen from the drop down list. (This list is formed from all the classes names that implement TaskHandler interface and placed in .jar files, that are enumerated in common\_settings.properties file in wfe.bots.jar.filename property value). The configuration is a text file with the task handler parameters set for the particular task.

## An example of System Setup

The same setup is used in the demo configuration.

Enter the system as Administrator. (By default the password at initial install is “wf”.)

On the page corresponding to the “Executors” menu item create the following groups:

- manager
- human resource
- bookkeeper
- staff
- all

Create the following actors:

- julius
- nero
- cleopatra
- octavia
- tiberius
- marcus
- gaiua
- attila
- caligula

Set passwords for all demo logins – 123

The final configuration should look as follows.

Logged as: Administrator  
Logout

**Menu**

- Task List
- Process Definitions
- Process Instances
- Executors**
- System

**Executors**

View: **Default**

Create Actor Create Group

**Total:17**

Name	Full Name	Description
<input type="checkbox"/> Administrator		Default System Administrator
<input type="checkbox"/> Administrators		Default Group For System Administrators
<input type="checkbox"/> Process Definition Administrators		Executors that have all rights on all process definition
<input type="checkbox"/> manager		group for managers
<input type="checkbox"/> human resource		group for human resource department
<input type="checkbox"/> bookkeeper		group for bookkeepers
<input type="checkbox"/> staff		group for main work personal
<input type="checkbox"/> all		group for all employees
<input type="checkbox"/> julius	Gaius Julius Caesar	
<input type="checkbox"/> nero	Nero Claudius Caesar	
<input type="checkbox"/> cleopatra	Cleopatra VII The Daughter of the Pharaoh	
<input type="checkbox"/> octavia	Octavia Minor	
<input type="checkbox"/> tiberius	Tiberius Claudius Drusus	
<input type="checkbox"/> marcus	Marcus Aurelius Antoninus	
<input type="checkbox"/> gaiua	Gaius Flavius Valerius Constantinus	
<input type="checkbox"/> attila	Attila the King of Huns	
<input type="checkbox"/> caligula	Gaius Julius Germanicus	

**Total:17**

Remove

Done

Enter actors into the following groups:

Group	Group Members
manager	<ul style="list-style-type: none"> <li>julius</li> <li>nero</li> </ul>
human resource	<ul style="list-style-type: none"> <li>cleopatra</li> <li>octavia</li> </ul>
bookkeeper	<ul style="list-style-type: none"> <li>tiberius</li> <li>caligula</li> </ul>
staff	<ul style="list-style-type: none"> <li>marcus</li> <li>gaiua</li> <li>attila</li> </ul>
all	<ul style="list-style-type: none"> <li>julius</li> <li>nero</li> <li>cleopatra</li> <li>octavia</li> <li>tiberius</li> <li>caligula</li> <li>marcus</li> <li>gaiua</li> <li>attila</li> </ul>

For the group “all” you should get the following:

Menu

- Task List
- Process Definitions
- Process Instances
- Executors
- System

Executor Details

Name: all

Description: group for all employees

Apply

Executor Groups

View: Default

Add

Name	Full Name	Description
<input type="checkbox"/>	julius	Gaius Julius Caesar
<input type="checkbox"/>	nero	Nero Claudius Caesar
<input type="checkbox"/>	cleopatra	Cleopatra VII The Daughter of the Pharaoh
<input type="checkbox"/>	octavia	Octavia Minor
<input type="checkbox"/>	tiberius	Tiberius Claudius Drusus
<input type="checkbox"/>	marcus	Marcus Aurelius Antoninus
<input type="checkbox"/>	gaiua	Gaius Flavius Valerius Constantinus
<input type="checkbox"/>	attila	Attila the King of Huns
<input type="checkbox"/>	caligula	Gaius Julius Germanicus

Remove

Group Members

View: Default

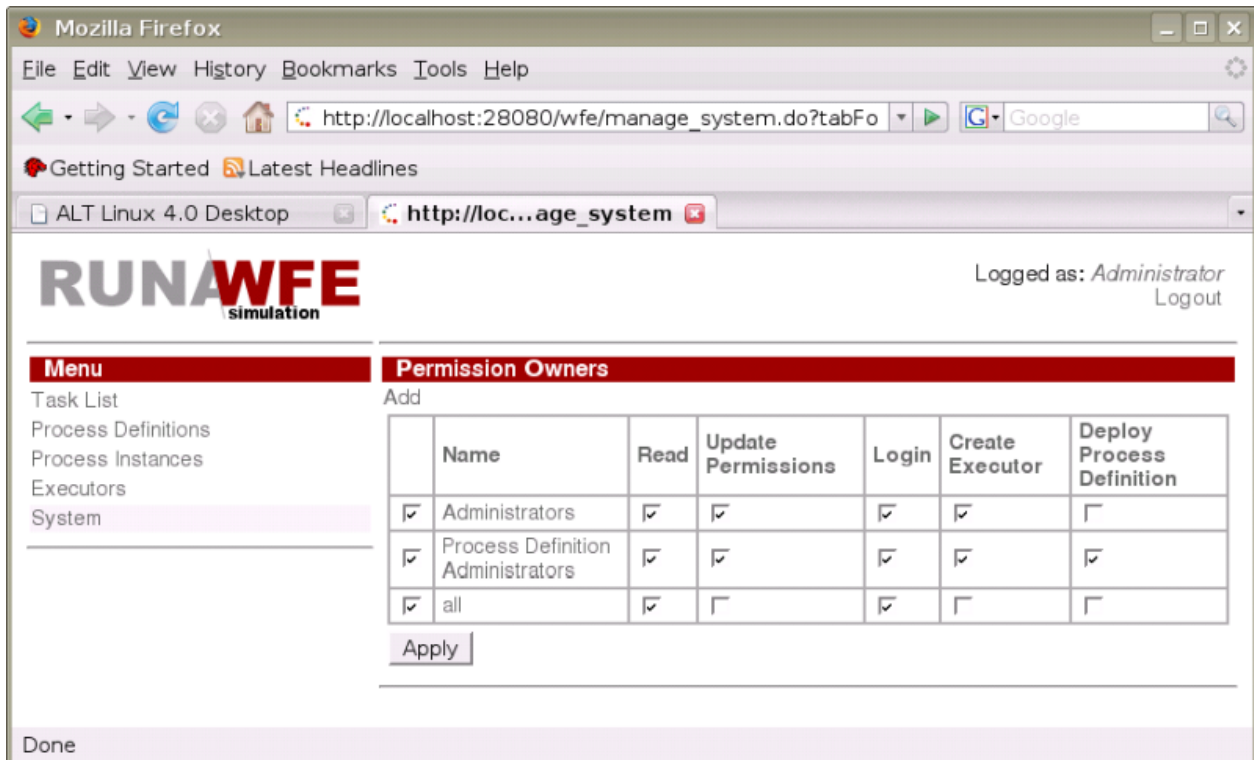
Add

Name	Full Name	Description
<input type="checkbox"/>	julius	Gaius Julius Caesar
<input type="checkbox"/>	nero	Nero Claudius Caesar
<input type="checkbox"/>	cleopatra	Cleopatra VII The Daughter of the Pharaoh
<input type="checkbox"/>	octavia	Octavia Minor
<input type="checkbox"/>	tiberius	Tiberius Claudius Drusus
<input type="checkbox"/>	marcus	Marcus Aurelius Antoninus
<input type="checkbox"/>	gaiua	Gaius Flavius Valerius Constantinus
<input type="checkbox"/>	attila	Attila the King of Huns
<input type="checkbox"/>	caligula	Gaius Julius Germanicus

Remove

Done

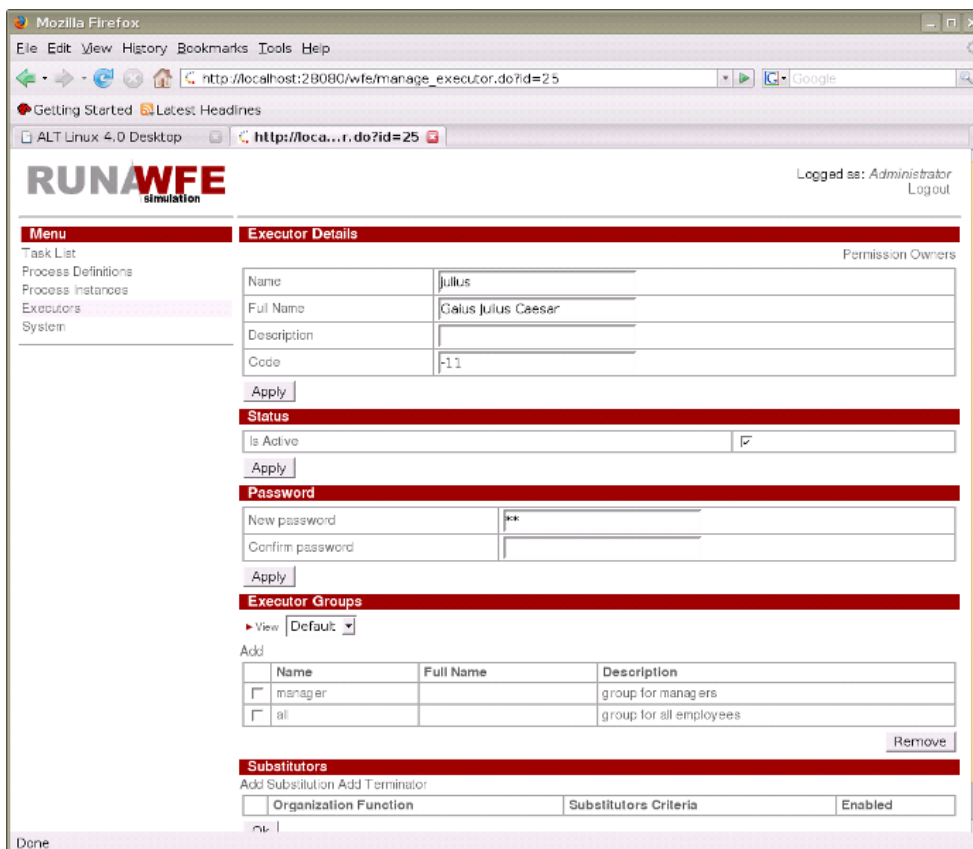
On the page of the “System” menu item give the login permission to the group “all”.

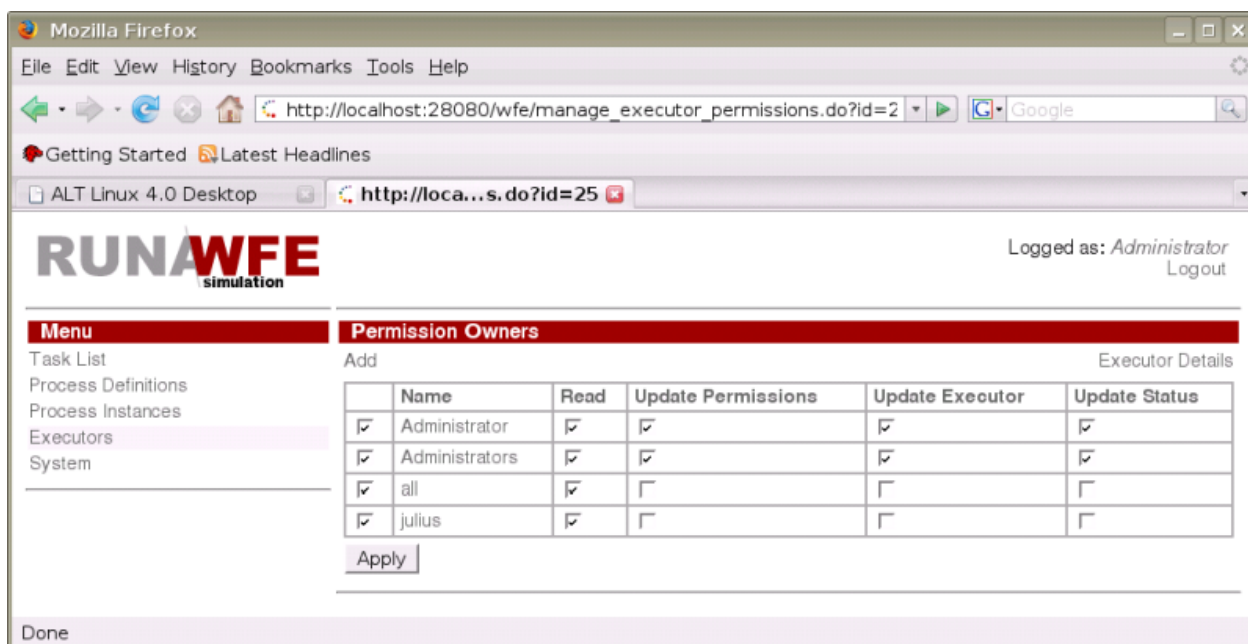


Give the members of the “all” group a “Read” permission and a “List Group” permission on the “staff”, “manager”, “human resource” and “bookkeeper” groups.

Give the members of the “all” group a “Read” permission on every actor.

An example for actor “julius”:





On the page of the “Process Definitions” menu item load test business processes on the system engine. Files:

- Hello World.par
- TimerDemo.par
- Report.par
- Overtime Work.par
- Vacation.par
- Businessstrip.par

Open the properties of “Hello World”, “TimerDemo”, “Vacation” processes and give the members of the “all” group the following permissions on these processes: “Read”, “Read Instance” and “Start Process”. For the “Report”, “Overtime Work”, “Businessstrip” processes, give the “Read” and “Read Instance” permissions to the group “all” and the “Start Process” permission to “manager”.

Example: Permissions on the “TimerDemo” process:

The screenshot shows the RunaWFE simulation web interface in a Mozilla Firefox browser. The URL is `http://localhost:28080/wfe/manage_process_definition.do?id=32768019`. The user is logged as Administrator. The interface includes a menu on the left with options: Task List, Process Definitions (selected), Process Instances, Executors, and System. The main content area is titled "Process Definition" and contains a table with the following data:

Definition Name	Version	Description
TimerDemo	1	Demo for element timer (no start form provided)

Below the table is a "Redeploy Process Definition" section with a "Browse..." button and a "Process type" dropdown set to "Script". There is also a "Process Graph" section showing a flowchart:

```

graph TD
    Start((requester) start) --> Timer[requester Before timer triggered]
    Timer -- 3 minutes --> End((requester) After timer triggered)
    End --> End2((end))
  
```

The screenshot shows the RunaWFE simulation web interface in a Mozilla Firefox browser. The URL is `http://localhost:28080/wfe/manage_process_definition_permission...`. The user is logged as Administrator. The interface includes a menu on the left with options: Task List, Process Definitions (selected), Process Instances, Executors, and System. The main content area is titled "Permission Owners" and contains a table with the following data:

Name	Read	Update Permissions	Redeploy	Undeploy	Start	Read Instance	Stop Instance
Administrator	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Process Definition Administrators	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
all	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Below the table is an "Apply" button.

The configuration is ready for work.

## References

- [1] <http://www.gnu.org/licenses/lgpl.html>



# Article Sources and Contributors

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