

# Working with multiple Queues

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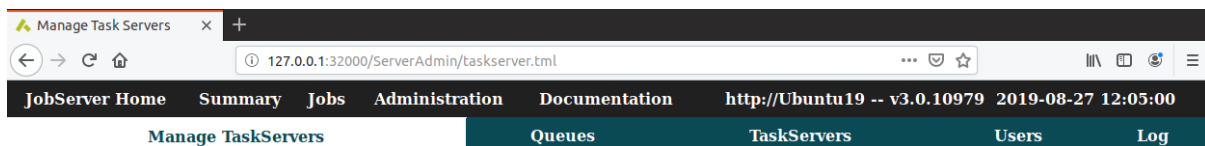
## 1 Registering Additional TaskServers with the JobServer

In order to have the JobServer send computational tasks to TaskServers other than your default machine you need to register these machines with the JobServer. In the following, please already have the TaskServer installed on the machine. The page `http://<taskserver>:23000` is accessible by a standard web browser, with `<taskserver>` a placeholder for your actual IP address or machine name.

On the JobServer administration page click the **Manage TaskServer** link in the blue navigation bar. On the following page (see below) type in a name for the TaskServer and the network address of the machine running it: `http://<taskserver>:23000`.

In the below example we have registered two machines, *local* and *workstation*.

- Use the **Check** button to check if the TaskServer machine is reachable from the JobServer
- Click **Change** to modify any of the settings for a TaskServer or to make it **Active/Inactive**



The screenshot shows a web browser window with the URL `127.0.0.1:32000/ServerAdmin/taskserver.tml`. The page has a navigation bar with links: JobServer Home, Summary, Jobs, Administration, Documentation, and a status bar showing `http://Ubuntu19 -- v3.0.10979 2019-08-27 12:05:00`. Below the navigation bar, there are tabs for **Manage TaskServers**, Queues, TaskServers, Users, and Log.

This page allows you to manage the Task Servers this Job Server uses.

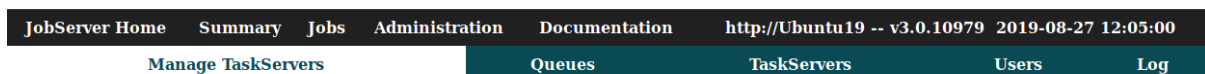
### Add Task Server

Use this section to add a new task server. The name is a convenient description that is used just for display. The url should have the form `http://<machine or ip address>:port`. By default, task servers listen on port 23000.

Name:

Url:

Name	URL	Active	Status	Check?	Change?
<a href="#">local</a>	<code>http://localhost:23000</code>	✓	up	<input type="button" value="Check"/>	<input type="button" value="Change"/>
<a href="#">workstation</a>	<code>http://localhost:23001</code>	✓	up	<input type="button" value="Check"/>	<input type="button" value="Change"/>



The screenshot shows the same navigation bar as above, with the **Manage TaskServers** tab selected.

**Note:** Linux machines may have difficulties recognizing Windows machines in a heterogeneous network. This is a network configuration issue and is not influenced by the way *MedeA* handles TaskServers. A simple test to make sure your network is set up correctly is to use the ping command to check if the two machines can “see” each other.

## 2 Adding Additional MedeA Queues

When submitting a job through the *MedeA* interface you are asked to choose a queue. A queue is simply a group of TaskServers. The JobServer uses queues to let you control where and how to run your jobs.

The JobServer interface lets you define queues and attach TaskServers to it. To define and edit queues click on the **Administration** link in the JobServer home page. Next select **Queues** from the blue navigation bar to bring up the server’s queue admin page (see example below).

To define a new queue, fill out the text fields at the bottom and click **Add Queue**

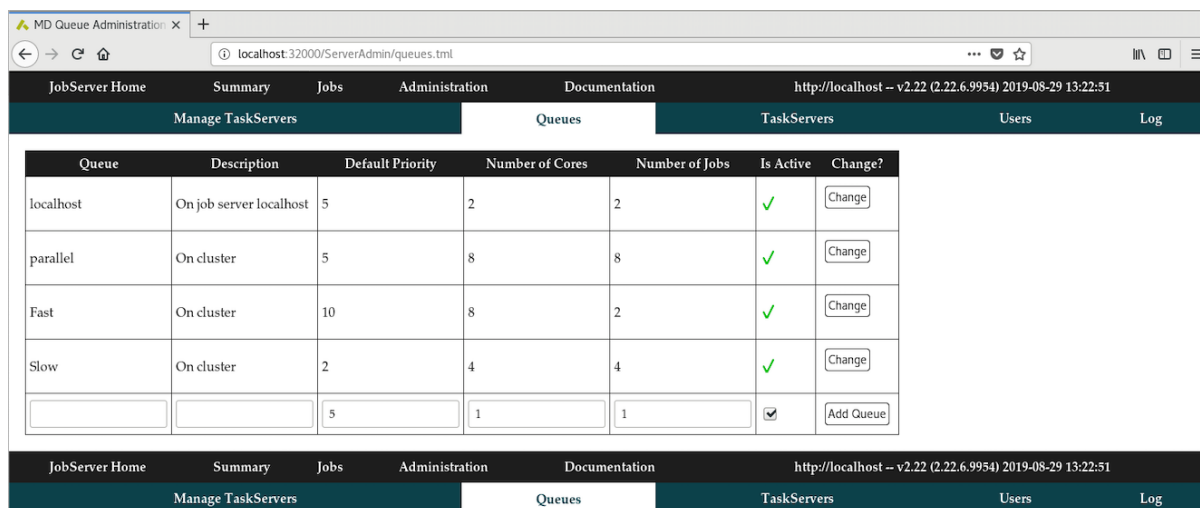
In the below example we have defined 4 queues with varying attributes. Besides the default local queue, we have set up a queue for a parallel system with 8 processors (*parallel*), a slow queue (*Slow*) and a fast queue (*Fast*). In the following, we will attach TaskServers to these queues.

**Note:** Note that queues are just named groups of TaskServers! To have a queue behave in a certain way, you need to configure a TaskServer correspondingly and attach it to the queue!

Click on the **Change** button on the right of a given queue’s row to configure the queue and to attach TaskServers to the selected queue.

<http://localhost:32000/ServerAdmin/queues.tml>

The default installation creates a local queue, Jobs are processed in the sequence they are submitted to the JobServer. By creating different queues (such as Fast and Slow), jobs in the Fast queue have a higher priority over jobs in the slow queue.



Queue	Description	Default Priority	Number of Cores	Number of Jobs	Is Active	Change?
localhost	On job server localhost	5	2	2	✓	<input type="button" value="Change"/>
parallel	On cluster	5	8	8	✓	<input type="button" value="Change"/>
Fast	On cluster	10	8	2	✓	<input type="button" value="Change"/>
Slow	On cluster	2	4	4	✓	<input type="button" value="Change"/>
<input type="text"/>	<input type="text"/>	<input type="text" value="5"/>	<input type="text" value="1"/>	<input type="text" value="1"/>	<input checked="" type="checkbox"/>	<input type="button" value="Add Queue"/>

## 3 Attaching a TaskServer to a Queue

In the following, please have installed one or more TaskServers, you have registered them with the JobServer and you have defined one or several Queues. Now all that is left is to tell the JobServer which Queue you want to feed the TaskServer.

In the present example, you will register a TaskServer machine called **workstation**. Before you can use it though, you need to attach it to a queue.

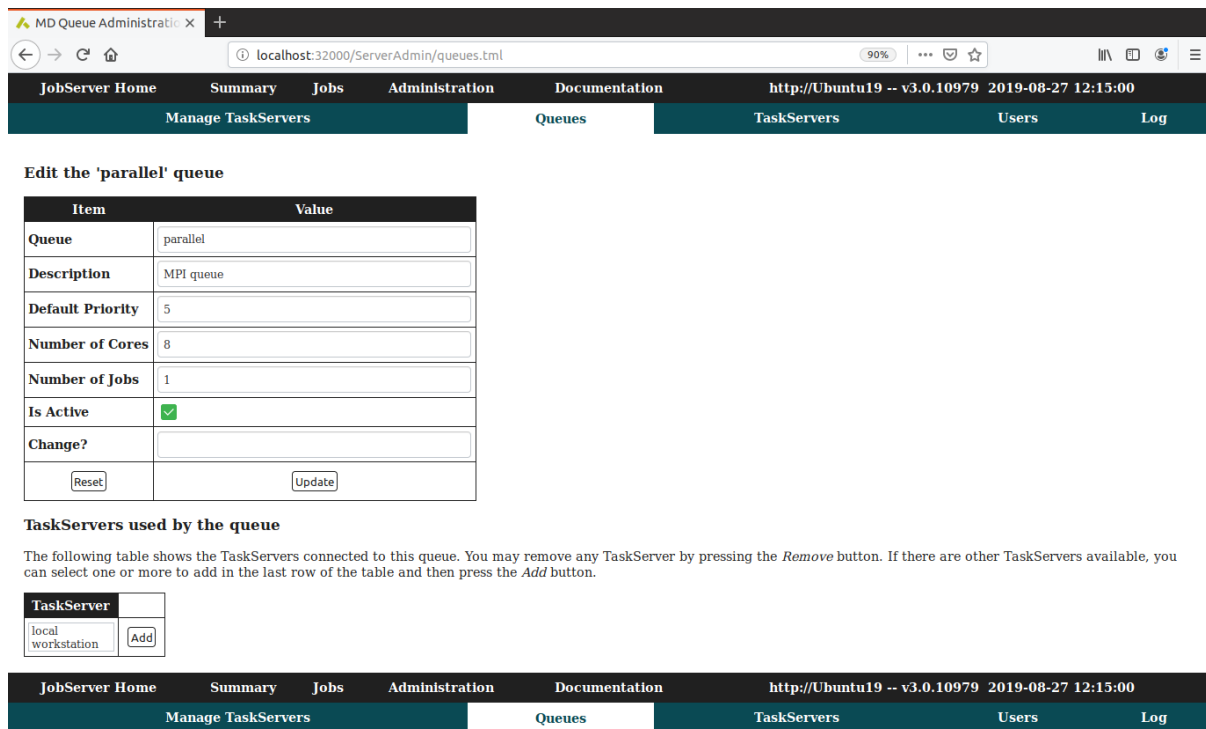
To reach the Queue admin page (see above), click **Job Control** >> **View and Control Jobs** in *MedeA*, then click **Administration** and on the next screen **Queues** (blue navigation bar). On the Queue admin page click the **Change** button next to the Queue you would like to edit and you will get to below page

In the upper section of this page you can review and change the attributes of the queue. In the lower half, you need to define which TaskServer to attach to the queue.

In the table labeled TaskServer (marked in green) select workstation and click **Add**.

**Note:** The status of the button changes from **Add** to **Remove** once you have added a TaskServer.

**Note:** Present in the list are only those TaskServers which were previously registered with the JobServer. In other words the JobServer does not know about a TaskServer machine until you register it.



**Edit the 'parallel' queue**

Item	Value
Queue	parallel
Description	MPI queue
Default Priority	5
Number of Cores	8
Number of Jobs	1
Is Active	<input checked="" type="checkbox"/>
Change?	
<input type="button" value="Reset"/> <input type="button" value="Update"/>	

**TaskServers used by the queue**

The following table shows the TaskServers connected to this queue. You may remove any TaskServer by pressing the *Remove* button. If there are other TaskServers available, you can select one or more to add in the last row of the table and then press the *Add* button.

TaskServer	
local workstation	<input type="button" value="Add"/>