



Jenkins

Jenkins Node

JENKINS



JENKINS NODE

Jenkins master/slave architecture is used for distributed build environments, where the workload of building projects is distributed to multiple agent nodes, and we can use different environments for each build.



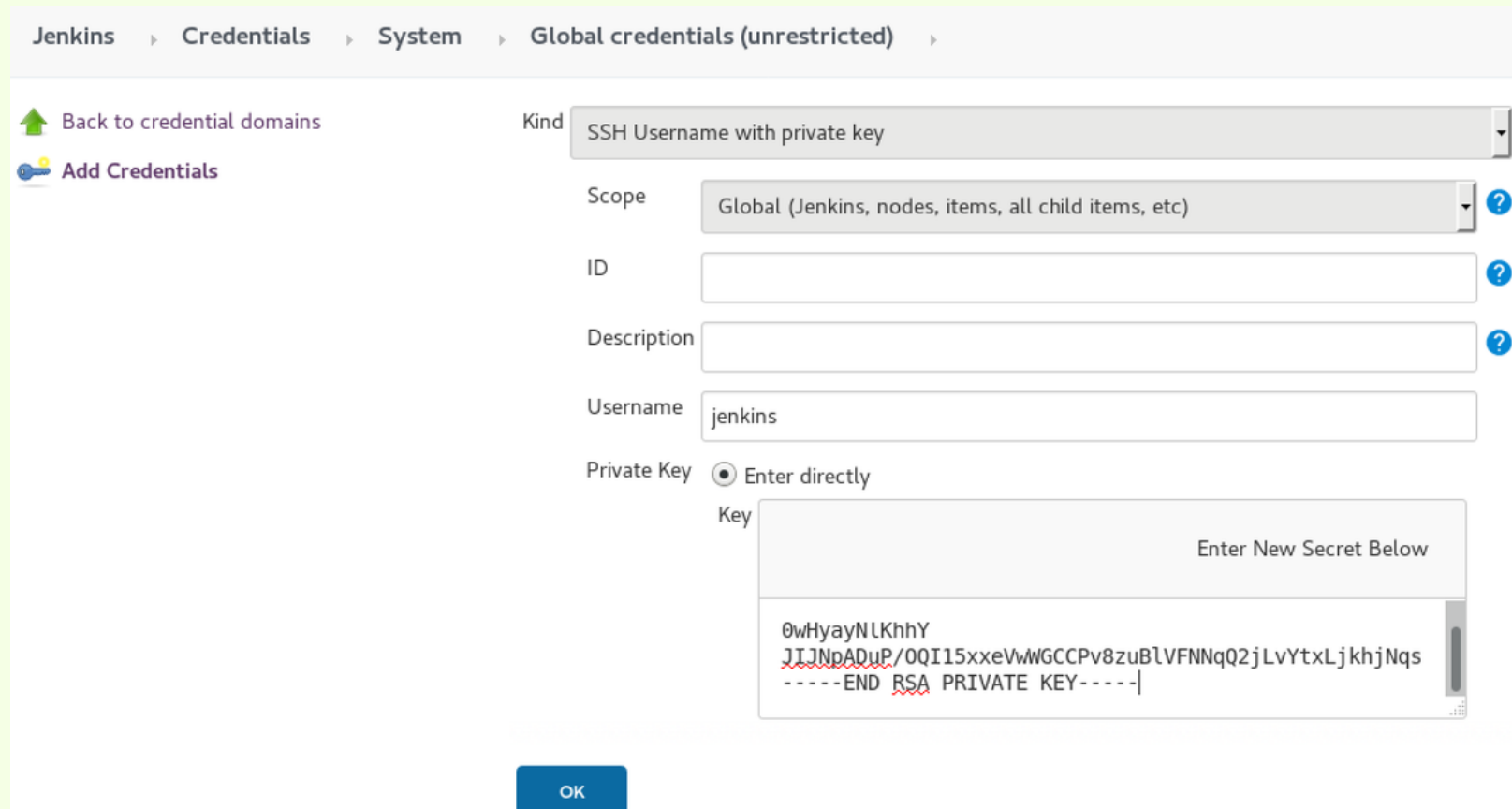
STEP #1

Create ssh keys for "jenkins" user on Jenkins master.

```
root@jenkins:~  
File Edit View Search Terminal Help  
-bash-4.2$  
-bash-4.2$  
-bash-4.2$ whoami  
jenkins  
-bash-4.2$  
-bash-4.2$ #ssh-keygen  
-bash-4.2$  
-bash-4.2$ pwd  
/var/lib/jenkins/.ssh  
-bash-4.2$  
-bash-4.2$ ll  
total 12  
-rw-----. 1 jenkins jenkins 1675 Jun 30 18:51 id_rsa  
-rw-r--r--. 1 jenkins jenkins 409 Jun 30 18:51 id_rsa.pub  
-rw-r--r--. 1 jenkins jenkins 379 Jul  1 15:17 known_hosts  
-bash-4.2$  
-bash-4.2$ █
```

STEP #2

Configure jenkins user credentials to Jenkins dashboard. Select "credentials -> global -> add". Supply the "id_rsa" for user jenkins.



The screenshot shows the Jenkins 'Add Credentials' form. The breadcrumb trail at the top is 'Jenkins > Credentials > System > Global credentials (unrestricted)'. On the left, there are links for 'Back to credential domains' and 'Add Credentials'. The form fields are as follows:

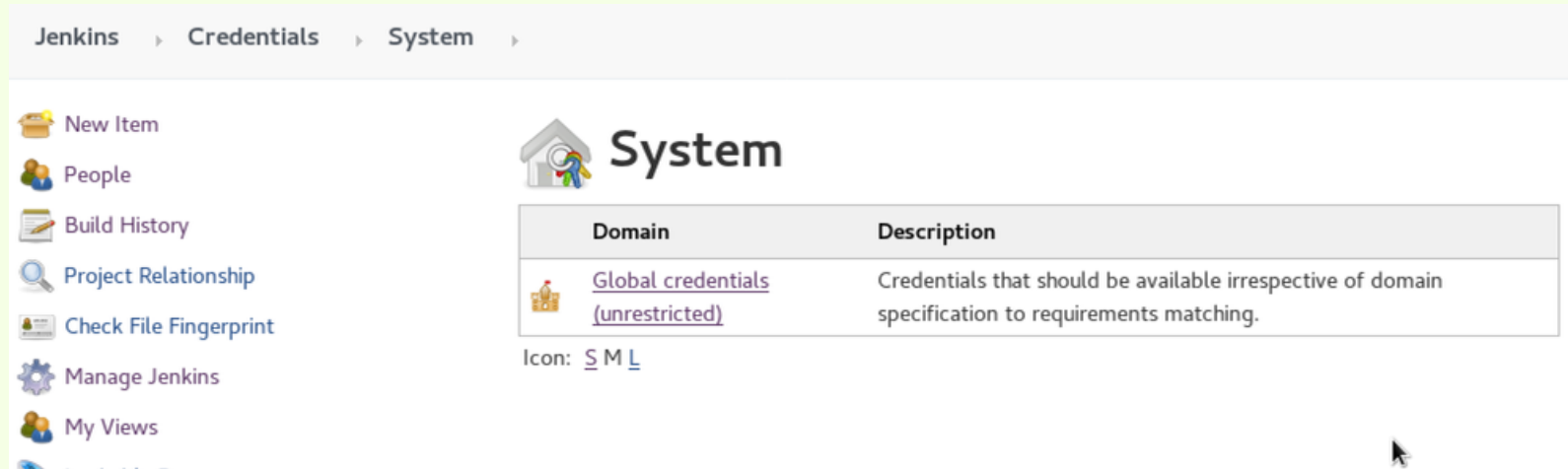
- Kind:** SSH Username with private key
- Scope:** Global (Jenkins, nodes, items, all child items, etc)
- ID:** (empty text box)
- Description:** (empty text box)
- Username:** jenkins
- Private Key:** ☒ Enter directly
- Key:** A text area containing the following text:

```
0wHyayNLKhHY
jIjNpADuP/0QI15xxeVwGCCPv8zuBlVFNNqQ2jLvYtxLjkhjNqs
-----END RSA PRIVATE KEY-----|
```

An 'OK' button is located at the bottom center of the form.

STEP #3

Confirm that jenkins user credential has been created.



The screenshot shows the Jenkins web interface. The breadcrumb navigation at the top reads 'Jenkins > Credentials > System >'. On the left sidebar, there are links for 'New Item', 'People', 'Build History', 'Project Relationship', 'Check File Fingerprint', 'Manage Jenkins', and 'My Views'. The main content area is titled 'System' with a house icon. Below the title is a table with two columns: 'Domain' and 'Description'. The table contains one entry: 'Global credentials (unrestricted)' with a description: 'Credentials that should be available irrespective of domain specification to requirements matching.' Below the table, there is a link 'Icon: [S](#) [M](#) [L](#)'.

Domain	Description
Global credentials (unrestricted)	Credentials that should be available irrespective of domain specification to requirements matching.

Icon: [S](#) [M](#) [L](#)

STEP #4

Go to the slave node (10.0.0.101) and install the packages.

```
# yum -y install java-1.8.0-openjdk git
```

Create a user "jenkins" on the slave node

```
# useradd -d /var/lib/jenkins jenkins
```

```
#passwd jenkins
```

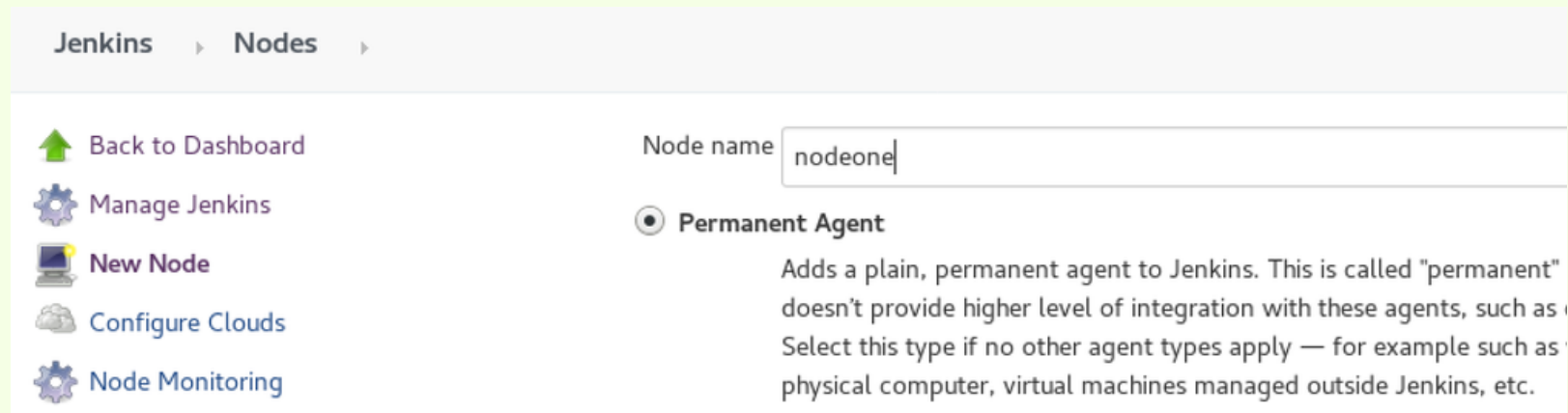
STEP #5

Copy the id_rsa.pub from jenkins master's "jenkins" user to "jenkins" user on node

```
-bash-4.2$  
-bash-4.2$  
-bash-4.2$ pwd  
/var/lib/jenkins/.ssh  
-bash-4.2$  
-bash-4.2$ ll  
total 12  
-rw-----. 1 jenkins jenkins 1675 Jun 30 18:51 id_rsa  
-rw-r--r--. 1 jenkins jenkins  409 Jun 30 18:51 id_rsa.pub  
-rw-r--r--. 1 jenkins jenkins  379 Jul  1 15:17 known_hosts  
-bash-4.2$  
-bash-4.2$ ssh-copy-id jenkins@server.example.com
```

STEP #6

Add the slave node on jenkins master dashboard. Go to "manage jenkins -> manage node and cloud". Select "New Node"



The screenshot shows the Jenkins 'New Node' configuration page. The breadcrumb navigation at the top reads 'Jenkins > Nodes >'. On the left sidebar, there are five links: 'Back to Dashboard' (with a green up arrow icon), 'Manage Jenkins' (with a gear icon), 'New Node' (with a laptop icon and highlighted in purple), 'Configure Clouds' (with a cloud icon), and 'Node Monitoring' (with a gear icon). The main content area has a 'Node name' text box containing 'nodeone'. Below this, the 'Permanent Agent' option is selected with a radio button. A description for 'Permanent Agent' follows: 'Adds a plain, permanent agent to Jenkins. This is called "permanent" because it doesn't provide higher level of integration with these agents, such as cloud providers. Select this type if no other agent types apply — for example such as physical computer, virtual machines managed outside Jenkins, etc.'

STEP #7

Supply node information details.

Description: anything

Remote root directory: /var/lib/jenkins

Labels: server

Launch method: Launch slave agent via SSH, type the host ip address '10.0.0.101', choose the authentication using 'Jenkins' credential.

STEP #8

Select Save.

Jenkins > Nodes >

Back to Dashboard

Manage Jenkins

New Node

Configure Clouds

Node Monitoring

Build Queue

No builds in the queue.

Build Executor Status

master

- 1 Idle
- 2 Idle

server


- 1 Idle


Name	<input type="text" value="nodeone"/>	
Description	<input type="text" value="anyting"/>	
# of executors	<input type="text" value="1"/>	
Remote root directory	<input type="text" value="/var/lib/jenkins"/>	
Labels	<input type="text" value="server"/>	
Usage	<input type="text" value="Use this node as much as possible"/>	
Launch method	<input type="text" value="Launch agents via SSH"/>	
Host	<input type="text" value="10.0.0.101"/>	
Credentials	<input type="text" value="jenkins"/>	
Host Key Verification Strategy	<input type="text" value="Known hosts file Verification Strategy"/>	


STEP #9


Within few moment your slave jenkins server will be ready for builds.


[Jenkins](#) > [Nodes](#) >


 [Back to Dashboard](#)

 [Manage Jenkins](#)



 [New Node](#)

 [Configure Clouds](#)

 [Node Monitoring](#)

Build Queue 

No builds in the queue.

S	Name ↓	Architecture	Clock Difference	Free Disk Space	Free Swap Space	Free T
	master	Linux (amd64)	In sync	6.79 GB	1.50 GB	
	server	Linux (amd64)	In sync	1.60 GB	1024.00 MB	
Data obtained		13 min	5 ms	13 min	13 min	13 min

[Refresh status](#)