

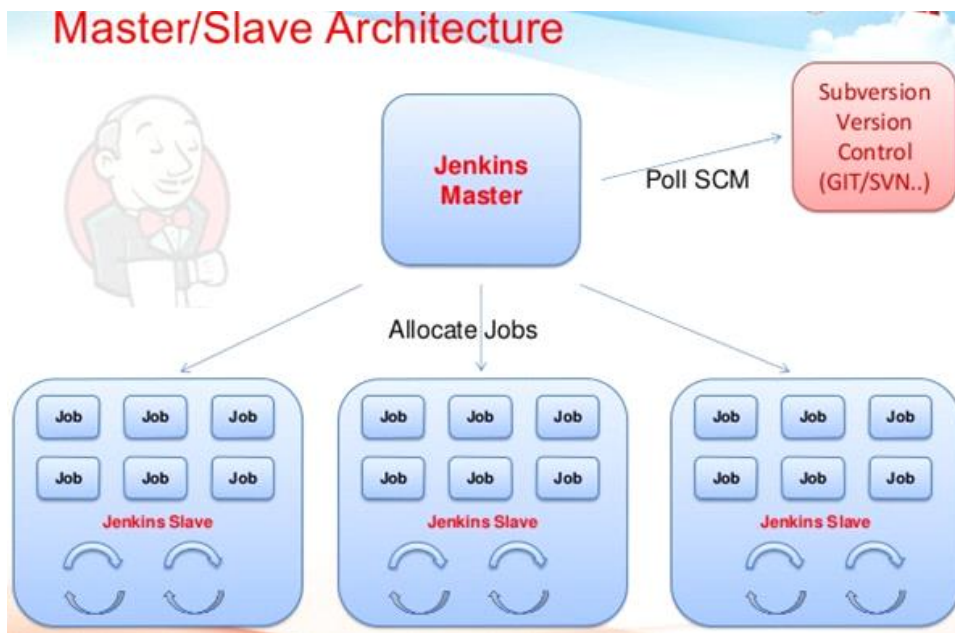
# Distributed Builds

## What does scaling involve?

# of Slaves  
# of Jobs  
# of Builds  
# of Concurrent HTTP requests  
Single master Vs Multiple Masters

## Managing Jenkins at Scale

- Managing multiple masters
- Security
- Plugins
- Resource utilization
- Availability
- Organizing Jobs
- Onboarding new teams / projects



# Create Node

## Different ways of creating slave agents

- **Have master launch the slave agent via SSH** ---- We will use this
- Have master launch slave agent on Windows
- Write your own script to launch Jenkins slaves
- Launch slave agent via Java Web Start
- Launch slave agent headlessly

Create a jenkins-master instance	
Create a Jenkins-slave-1 instance	
Ensure master and slave are able to ping each other	
<u>-----From Slave -----</u>	
In the Slave node, install Java	<pre>sudo add-apt-repository ppa:webupd8team/java -y sudo apt-get update sudo apt-get install oracle-java8-installer sudo apt-get install oracle-java8-set-default export JAVA_HOME=/usr/lib/jvm/java-8-oracle</pre>
Create a folder "jenkins" under Ubuntu home	mkdir jenkins-root
Enable password authentication	<pre>nano /etc/ssh/sshd_config Allow Password Authentication yes</pre>
Restart sshd service	systemctl restart sshd
<u>-----From Master-----</u>	
Switch to Ubuntu user	su ubuntu
Generate a ssh key	ssh-keygen
Copy to slave machine	ssh-copy-id ubuntu@<slave IP>
Try connecting to slave through ssh	<pre>ssh ubuntu@&lt;slave IP&gt; exit</pre>
<b><u>Manage nodes</u></b>	
<b><u>Create node</u></b>	
Name	QA_Build_Agent
Remote Root Directory	Jenkins-root Note: The Dir. Created in Slave under Ubuntu home dir.
Usage	Use this node as much as possible
Launch Method	Launch slave agent via SSH
Host	DNS or IP of the slave
Credentials	Pull down "Add" and select "Jenkins" # The above command opens a new window
<b><u>Jenkins Credentials Provider: Jenkins</u></b>	
Domain	Global credentials (unrestricted)

Kind	SSH user name with private key
Scope	Global (Jenkins, nodes, items, child items etc.,)
User name	ubuntu
Private Key	Select "Enter Directly" copy it by giving the below command... cat /home/ubuntu/.ssh/id_rsa
	Click "Add" button
Host Key Verification Strategy	Manually Trusted Key Verification Strategy
Availability	Keep this agent online as much as possible
Node Properties	
Tool Locations	
Name	(jdk) Java8 # this is the name given in Global Tool Configuration section for setting JAVA_HOME
Home	/usr/lib/jvm/java-8-oracle
	Save the form