

Smart Jenkins

Plugin Information

View Smart Jenkins [on the plugin site](#) for more information.

This plugin reduces the electricity consumption by shutting down idle slaves and re-schedules jobs to avoid the rush hours of electricity.

Abstract

This plugin schedules jobs to avoid rush hours, shuts down idle computers, and boots them remotely when necessary. In this plugin, OK time (when jobs will be built by Jenkins) and NG time (when jobs will be blocked by this plugin) are being defined. If it is in NG time, idle slaves which are controlled by this plugin will shut down. At the same time, jobs which are controlled by this plugin will be blocked and re-scheduled. However, jobs which are configured to be built with another slave (which is always online) will be built at once. If it is in OK time, all slaves controlled by this plugin will boot. Meanwhile, jobs which are blocked will be built in this time.

About this plugin

This plugin allows:

1. Setting "OK" time1 and "NG" time2.
2. Selecting slaves which will be controlled by this plugin
3. Selecting jobs which will be controlled by this plugin
4. Shutting down slaves when necessary even it is in OK time
5. Waking up slaves when necessary even it is in NG time

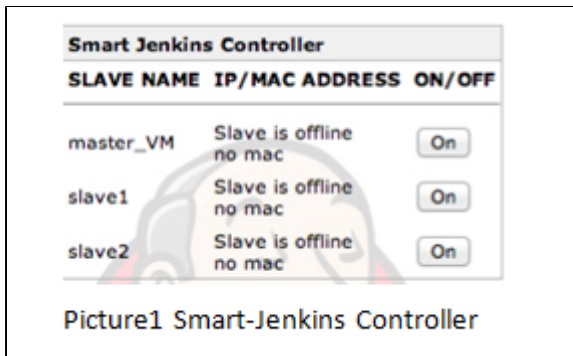
User guide

To use this plugin, users need to do some setting in their slave machines.

- If the OS of a slave machine is Linux, users need to set the permission of "shutdown" command to make it can be used by every user of this machine.
- Users need to make slave machines launch when system starts up.
- Users need to make master machine's number of built greater than 1.
- Users need to install "wake-on-lan" on master.

Note: there are four jobs (shutdown-linux, shutdown-win, wol-linux, wol-win) will be created by this plugin.

When you install this plugin, your side menu will have table like picture1. You can boot your slave machines by clicking the button "On" or shut down your slave machines by clicking the button "Off". And when the slave machine is online, it will show the IP and MAC address in this table.



To activate this plugin, just check the smart Jenkins link and check enable Smart-Jenkins Scheduler. You then get the following fields:

OK Time Slot is where you define your own OK time. You just need to input the time you want to do your jobs. For example, from 23o'clock to 7o'clock next day, it is not rush time of electricity, so you want to do your jobs in the time. Also, if you only need do your tests on weekdays, you can input the day you want to do your jobs.

In this case, you can set your OK time like "1-5@23-7"(the number before @ means the day you want to do your jobs and the number after @ means the time you want to do your jobs in a day).

The green part in picture2 means OK time and the gray part means NG time. The red line in picture2 means current time.



If you check the enable selection in job config page (picture3), jobs which are checked will be controlled by this plugin. It means the checked jobs will be blocked in NG time unless its config¹ says it can be built with the slave which is always online.

ENABLE	JOB NAME	TRIGGER	LAST BLOCKED BUILD	LAST SCHEDULED BUILD	NEXT SCHEDULED BUILD
<input checked="" type="checkbox"/>	ruby-benchmark		2011/07/27 17:15:40	-	
<input checked="" type="checkbox"/>	ruby-test		-	-	

Picture3 Job Config

If you check the enable selection in slave config page (picture4), slaves which are checked will be controlled by this plugin. It means that the checked slave will shut down when it is NG time and will boot when it is OK time. And the un-checked slave will always online.

ENABLE	SLAVE NAME
<input checked="" type="checkbox"/>	slave1
<input type="checkbox"/>	master_VM
<input checked="" type="checkbox"/>	slave2

Picture4 Slave Config

For example, you make job config in picture3 and slave config in picture4. And you set "ruby-test" job's matrix label_exp as "slave1 || master_VM". When it is NG time, slave1 is power off and master_VM is online. So the ruby-test job will be built with master_VM machine.