JENKINS CHEAT SHEET

Jenkins

Jenkins is a software which allows you to do the continuous integration on your application/software lifecycle. It gets installed on the server where the central build will take place. Now let's understand its workflow.

Management

Configure system:
• Can be used to manage paths to various tools to use in builds.
  • Jenkins dynamically adds the config fields after the plugins are installed.
Manage Plugins:
• Plugins can be removed, updated and installed by manage plugin screen.
  • List all the current Java properties and system environment variables.
  • System log - view Jenkins log in real time.
  • Script console - lets you run groovy scripts on the server.
Manage nodes: configure the number of builds you want.
  • Shutdown - click prepare to shutdown link to prevent any new builds from being started. After all current builds are finished, Jenkins will shut down cleanly.

Automated Testing

• Step 1: go to plugins and choose selenium plugins and click to install.
• Step 2: go to configure system and select on selenium jar and save
• Step 3: Go to dashboard and select the config option for the project
  • Hand
• Step 4: Click on add build step and choose SeleniumHQ htmlSuite Run
• Step 5: Add the required details and click on save, execute and build. The test is executed, and a report is built.

Automated Deployment

• Head to the manage plugins and install the respective plugins.
  • It takes the war ear file and deploys that to the running remote application build
  • Go-to build and configure and click on ‘deploy to war/ear to container’
  • In the war container section save details about the destination server and click save.

Server Maintenance

Commands In Jenkins: (URLs).
• http://localhost:8080/jenkins/exit - shutdown Jenkins
• http://localhost:8080/jenkins/restart - restart Jenkins
• http://localhost:8080/jenkins/reload - to reload

To backup Jenkins Home:
• Go to configure system in manage Jenkins
  • Select a partition that has most free space.
  • Perform automated clean-up options to avoid this

Build Pipeline

• First go-to manage plugin and install build pipeline plugin.
• To see a build pipeline click the (+) on the dashboard.
• Enter any name and click on the view. Choose build pipeline view.
  • Accept the default settings and add the name of the project.
  • A view of entire pipeline with statuses will be visible.

Remote Testing

Selenium tests can run on remote slave machines via master slave and selenium suite plugin installation
• Step 1: go to master Jenkins server and manage nodes

Backup Plugin

• To tweak backup settings via setup
• To backup Jenkins config
• To restore config from a previous backup.
  • Alternatively you can use SCM (sync config plugin) or ThinBackup for global and job configurations.

Notifications

• Jenkins comes with a feature to add email notifications to the build project
  • Go-to Manage Jenkins R Configure System. In the email notification space enter the require SMTP server and use email suffixes.
  • Configure the recipients so that they would receive notification about broken or unstable builds
  • Notification plugins such as Tikal Knowledge allows job status notification for JSON and XML formats.
  • Options:
    • Format: either JSON or XML types
    • Protocol: TCP, UDP or HTTP
    • Event: job event that triggers the notification
    • URL: destination to send notifications to.
    • Timeout: default timeout 30ms

Manage Plugins

• To uninstall plugins, go-to manage plugins and click on the installed tab and click on uninstall for the plugin
• In case of need to install an older version of the plugin, download from the site and click on Upload Option to do it manually.

Unit Testing

Testing unit in Jenkins:
• Step 1: Go to the dashboard and choose an existing project and click configure
• Step 2: browse to add a build step and invoke Ant
• Step 3: Click on advanced
• Step 4: in the build file section enter the location of build.xml
• Step 5: add post build option and click Publish Junit test result report
• Step 6: ensure the report is in the folder of the project workspace
  The “*.xml” basically tells Jenkins to pick up the result xml files which are produced by the running of the Junit test cases. Click Save after done.
• Step 7: Click on build and check logs to see if successful or not with applications.

Furthermore:

Jenkins Training