

Simulator integration

The simulator is an effective tool that mocks the entire set of hypervisor (agent) commands. It is essential when testing the performance metric of the CloudStack management server without having to deploy large data centers for the purpose. Here we detail some of the tests setup to test various parts of Apache CloudStack in a continuous fashion using the simulator

These build steps are similar to the regular build, deploydb and run of the management server. Only some extra switches are required to run the tests and should be easy to recall and run anytime:

Building

Build with the `-Dsimulator` switch to enable simulator hypervisors

```
$ mvn -Pdeveloper -Dsimulator clean install
```

Deploying Database

In addition to the regular `deploydb` you will be deploying the simulator database where all the agent information is stored for the `mockvms`, `mockvolumes` etc.

```
$ mvn -Pdeveloper -pl developer -Ddeploydb
$ mvn -Pdeveloper -pl developer -Ddeploydb-simulator
```

Start the management server

Same as regular `jetty:run`.

```
$ mvn -Dsimulator -pl client jetty:run
```

To enable the debug ports before the run
`export MAVEN_OPTS="-XX:MaxPermSize=512m -Xmx2g -Xdebug -Xrunjdwp:transport=dt_socket,address=8787,server=y,suspend=n"`

On Jenkins (simulator pipeline)

Simulator can be used to test every commit of cloudstack using the above workflow. The checkin tests are a small set of tests that check whether certain basic scenarios are not broken by the commit. This workflow is in the pipeline of jobs on the [simulator](#) view of [jenkins](#)

The pipeline works thus:

simulator-gate
simulator-build
simulator-deploydb
start-jetty
run-checkin-test
stop-jetty