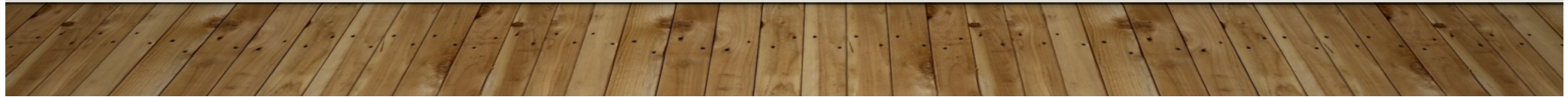


IMPROVE AND MAINTAIN CLOUDSTACK QUALITY BEYOND CI



AGENDA

- Current State
- Performance automation using Jenkins and Jmeter

CURRENT STATE

- BVTs / Smoketests
- Travis tests
- More tests written but are not run
- Regression tests – available but not run on a regular basis
- Performance tests – Automated using Jmeter and Jenkins

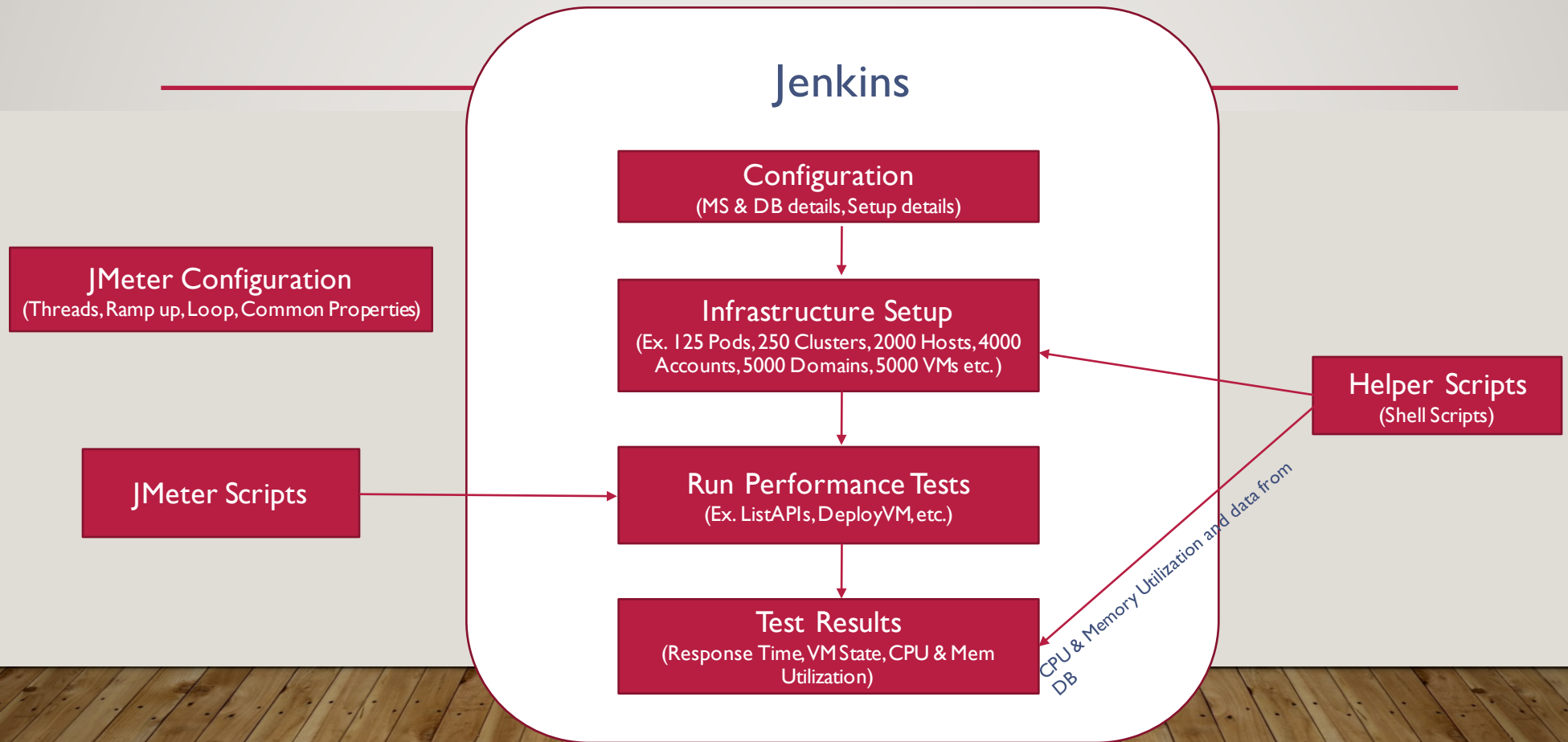
THINGS TO DO

- Things to do:
 - Regression tests are not run and takes 24-48 hours for completion
 - Group Regression tests into multiple areas – Networking, Storage etc
 - Run tests more frequently
 - Implement Code coverage to test the effectiveness of Tests
 - Add more automated tests to Performance area
 - UI based Test automation

ASKS

- Environment availability
- Need help
 - Regression tests – grouping and testing
 - Code coverage
 - Perf tests – add additional scenarios
 - UI test automation

CLOUDSTACK PERF TESTING USING JMETER AND JENKINS



JENKINS – SAMPLE CONFIGURATION

Execute shell

```
Command # Mangament server details
mgmtServer=10.112.9.6
mgmtServerUser=root
mgmtServerPwd=freebsd

# Cloud DB server details
clouddb_server=10.112.9.7
clouddb_port=3306
cloud_db=cloud
clouddb_username=cloud
clouddb_password=password

simdb_server=10.112.9.8

# Cloud setup configurations
hostCount=2016
useraccoutCount=4010
domainCount=510
vmCount=8020

# JMeter path
jmeter_path=$HOME/jmeter/apache-jmeter-3.1/bin

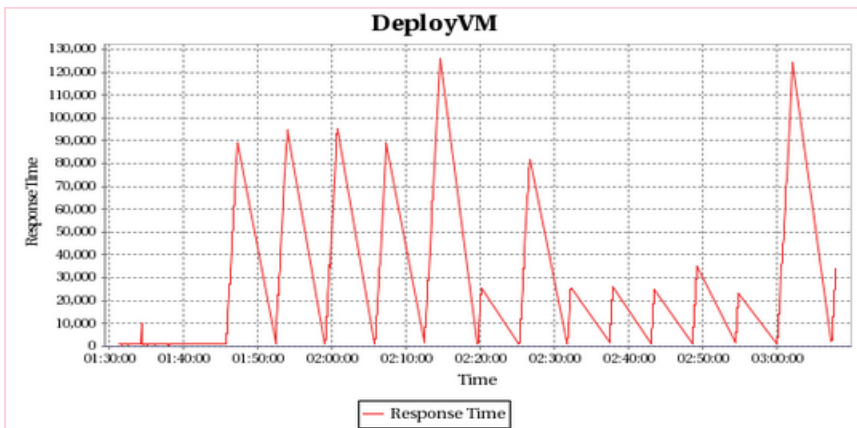
# Scripts location
jmeter_scripts=$HOME/perf_tests_jmeter

# JMeter properties file
jmeter_properties=$jmeter_scripts/config/performance.properties
```

SAMPLE RESULTS – LISTAPI RESPONSE TIMES

URI ↑	Samples	Samples diff	Average (ms)	Average diff (ms)	Median (ms)	Median diff (ms)	Line90 (ms)	Minimum (ms)	Maximum (ms)	Http Code	Previous Http Code	Errors (%)	Errors diff (%)	A
listVolumes-pagesize-5000	1	0	24945	0	24945	0	24945	24945	24945	200		0.0 %	0.0 %	
listVolumes-pagesize-500	1	0	4736	0	4736	0	4736	4736	4736	200		0.0 %	0.0 %	
listVolumes-pagesize-3000	1	0	17167	0	17167	0	17167	17167	17167	200		0.0 %	0.0 %	
listVirtualMachines-pagesize-5000	1	0	33270	0	33270	0	33270	33270	33270	200		0.0 %	0.0 %	
listVirtualMachines-pagesize-500	1	0	7188	0	7188	0	7188	7188	7188	200		0.0 %	0.0 %	
listVirtualMachines-pagesize-15000	1	0	104120	0	104120	0	104120	104120	104120	200		0.0 %	0.0 %	
listVirtualMachines-pagesize-10000	1	0	72743	0	72743	0	72743	72743	72743	200		0.0 %	0.0 %	
listVirtualMachines-pagesize-1000	1	0	10305	0	10305	0	10305	10305	10305	200		0.0 %	0.0 %	
listStoragePools-pagesize-250	1	0	2645	0	2645	0	2645	2645	2645	200		0.0 %	0.0 %	
listRouters-pagesize-1000	1	0	6892	0	6892	0	6892	6892	6892	200		0.0 %	0.0 %	
listHosts-pagesize-1984	1	0	12052	0	12052	0	12052	12052	12052	200		0.0 %	0.0 %	
listEvents-pagesize-5000	1	0	4476	0	4476	0	4476	4476	4476	200		0.0 %	0.0 %	
listEvents-pagesize-500	1	0	2939	0	2939	0	2939	2939	2939	200		0.0 %	0.0 %	
listEvents-pagesize-1500	1	0	3786	0	3786	0	3786	3786	3786	200		0.0 %	0.0 %	
listDomains-pagesize-500	1	0	18923	0	18923	0	18923	18923	18923	200		0.0 %	0.0 %	
listDomains-pagesize-100	1	0	4432	0	4432	0	4432	4432	4432	200		0.0 %	0.0 %	
listAsyncJobs-pagesize-2500	1	0	6883	0	6883	0	6883	6883	6883	200		0.0 %	0.0 %	
listAsyncJobs-pagesize-1000	1	0	4624	0	4624	0	4624	4624	4624	200		0.0 %	0.0 %	
listAccounts-pagesize-500	1	0	20809	0	20809	0	20809	20809	20809	200		0.0 %	0.0 %	
listAccounts-pagesize-4000	1	0	146721	0	146721	0	146721	146721	146721	200		0.0 %	0.0 %	
listAccounts-pagesize-3000	1	0	118379	0	118379	0	118379	118379	118379	200		0.0 %	0.0 %	

SAMPLE RESULTS – DEPLOYVM (500 VMS, 15 LOOPS)



vm count	vm state	vm type	read time
8520	Running	User	4/22/2017 19:39
9020	Running	User	4/22/2017 19:45
9520	Running	User	4/22/2017 19:51
10020	Running	User	4/22/2017 19:58
10520	Running	User	4/22/2017 20:05
11020	Running	User	4/22/2017 20:11
11520	Running	User	4/22/2017 20:19
12020	Running	User	4/22/2017 20:24
12520	Running	User	4/22/2017 20:31
13020	Running	User	4/22/2017 20:36
13520	Running	User	4/22/2017 20:42
14020	Running	User	4/22/2017 20:47
14520	Running	User	4/22/2017 20:53
15020	Running	User	4/22/2017 21:00
15520	Running	User	4/22/2017 21:06

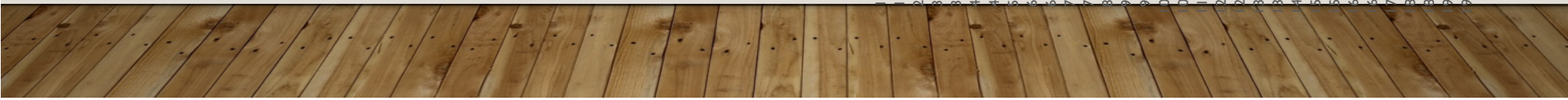
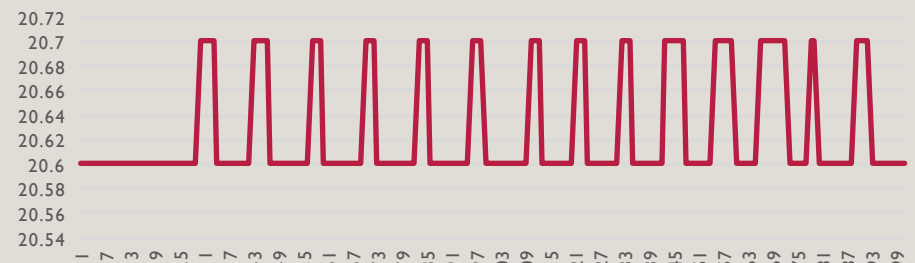
URI: DeployVM

URI	Samples	Samples diff	Average (ms)	Average diff (ms)	Median (ms)	Median diff (ms)	Line90 (ms)	Minimum (ms)	Maximum (ms)	Http Code	Previous Http Code	Errors (%)	Errors diff (%)	Average (KB)
DeployVM	7500	0	16333	0	13118	0	30691	660	125974	200		0.0 %	0.0 %	

CPU Utilization



Virtual Mem Usage



THANK YOU

- Help with Asks
- Collaborate to improve the quality of CloudStack code.