

**Codruta Bunea - establishing a test approach for a private cloud environment**

what do we need to think about?

what is a cloud?

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questions

performance

security

recoverability

multi-tenancy

scalability

most important scenarios  
Sonar can be used to monitor performance over time  
what did the CI perf tests actually look like? Small focused scripts or end-to-end type tests?

simulate high load tests on all tenants simultaneously  
unable to see other tenants data  
simulate load with tenant switched data  
no sessions overlapping during common tests

simulate user actions  
analyse/define expected outcomes  
monitor interactions and analyse logs  
simulate loss of components

simulate  
reconstruct

manual  
automatically  
scale-up  
scale-down  
reverse of up  
define level  
load test "up"  
identify boundary between up and down  
monitor and analyse scaling and request balancing

measures and tests  
cloud fault tolerance  
failover  
having a DR plan is business critical

backups  
point in time recovery  
daily snapshots  
real time replication

WAF - define vulnerable entry points & apply XSS and SQL injection tests

injection  
service traffic hijacking  
encryption of data and network traffic  
denial of service  
intrusion detection and prevention firewalls

up-time > 99.9%  
redundancy  
availability  
non-functional  
functional  
requirements  
single point of failure  
recovery

SLA's  
security  
environment - needs to be production like  
risks  
standards  
performance  
scalability

multi-tenancy  
data replication  
private  
public  
community  
hybrid

define the tools  
needs to generate load and monitor the network

performance tests  
list what needs to be tested

execute and measure  
server side performance  
system response

operations and roles  
define test stypes - load, stress etc

cloud latency  
system monitoring

cloud latency  
measure

performance on-site  
performance off-site

compare metrics between builds  
continuous performance  
monitor performance from the outset

application frequency  
risk  
map operations and test data

performance testing each build via Jenkins

performance on-site  
performance off-site