

Server Consolidation with Xen Farming

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The Xen Farming Concept

Overview and network structure

Virtual Machine Manager <@xen1>

File Edit View Help

All virtual machines

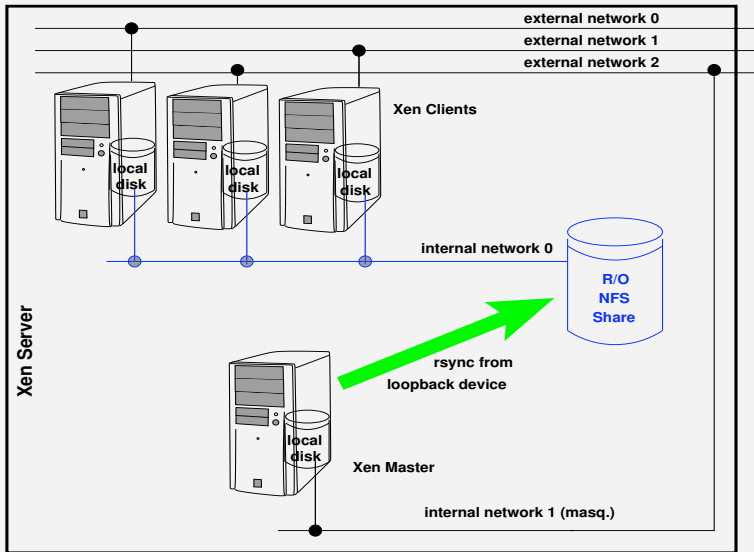
Name	ID	Status	CPU usage	VCPUs	Memory usage
localhost	xen	Active	0.43 %	8	7.87 GB 98 %
Domain-0	0	Running	0.37 %	8	4.87 GB 60 %
em-test	12	Running	0.00 %	1	128.00 MB 1 %
gridmon	2	Running	0.00 %	1	512.00 MB 6 %
gwdu248	3	Running	0.00 %	1	256.00 MB 3 %
handle	11	Running	0.01 %	1	512.00 MB 6 %
lmlsrv	5	Running	0.02 %	1	256.00 MB 3 %
lsf	6	Running	0.03 %	1	512.00 MB 6 %
sas	7	Running	0.00 %	1	256.00 MB 3 %
sles10-master	-	Shutoff	0.00 %	1	256.00 MB 0 %
svn	10	Running	0.00 %	1	512.00 MB 6 %
test	9	Running	0.00 %	1	128.00 MB 1 %

Delete New Details Open

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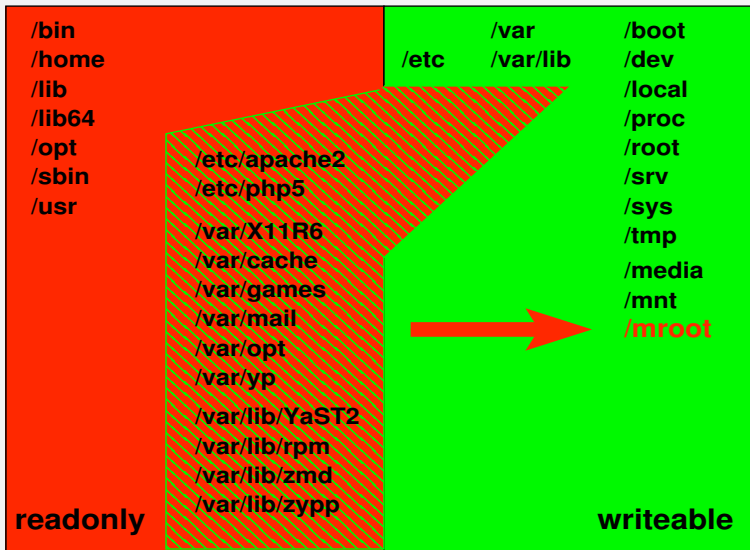
Xen Farming

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Files System: writeable and readonly parts

- Executables, libraries, static data etc. can be hold in a readonly region.
- Files, that have to be writeable:
 - all files that are changed by the operating system during lifetime
 - all configuration files must be configurable by the administrator
 - home directories
 - temporary directories
 - mount points
 - directories for application data
- typical: 4.5 GB in the readonly area and about 150 MB in the writeable area

Files System: writeable and readonly parts



Consistency and Conflicts after Update

- conflictable files are exactly those files,
 - that are in the writeable part
 - that differ from the corresponding files before update
 - or do not exist in the masters file system before update
 - and that are written by the installation or update
- one has to compare therefore all files in the writeable part of the client with the corresponding files on the master file system before update
- all files that differ and all additional files in the writeable part of the client indicate a conflict
- these files are left untouched in our model, the new version is copied as corresponding file with extension '.xennew' beside these files.