



Nube Privada

Solución de virtualización

Y DR en la UPM

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Objetivos

- ✓ Consolidación de recursos de cómputo
- ✓ Minimizar costes de explotación, mantenimiento e inversiones
- ✓ Mayor flexibilidad en la gestión de sistemas
- ✓ Mejora de la disponibilidad de los servicios
- ✓ Disponer de una solución global de almacenamiento
- ✓ Disponer de una solución real de recuperación ante desastres

Medios

- ✓ 2 Data Centers (DC): Rectorado y Montegancedo
- ✓ Red basada en FO oscura (En despliegue Fase II)
- ✓ Infraestructura ya utilizable con pocas adecuaciones
- ✓ Experiencia en virtualización y cómputo en la nube

Solución

- ✓ Interconexión de los DC: Rectorado y Montegancedo
- ✓ Adecuar la infraestructura de cómputo y red existente
- ✓ Implantar solución de virtualización
- ✓ Implantar solución de almacenamiento



DC Montegancedo



DC Montegancedo



XenServer



14 x IBM Blade HS22
24 x HP Proliant DL160



4 x IBM iDataPlex M4



NetApp FAS 8040
NFS
■ SSD
■ SAS
■ SATA

DC Montegancedo



Oracle VM



NetApp FAS 8040



4 x IBM iDataPlex M4

DC Montegancedo



DC Rectorado



DC Rectorado



XenServer



4 x HP DL360 Gen9



4 x IBM iDataPlex M4



NetApp FAS 8200

- NFS
- SSD
- SAS
- SATA

DC Rectorado



Oracle VM



4 x IBM iDataPlex M4



NFS

- SSD
- SAS
- SATA

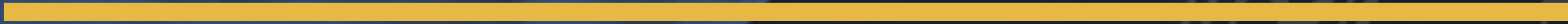
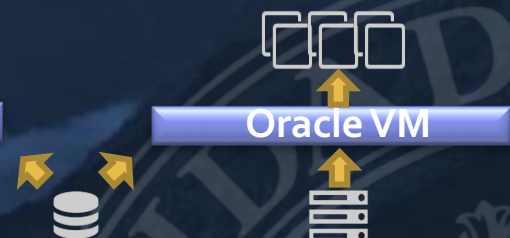
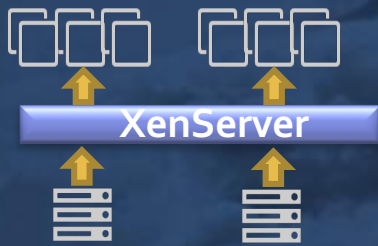
NetApp FAS 8200

DC Rectorado



DC Montegancedo

DC Rectorado



10 GbE ... (100GbE)

Importancia de la solución de almacenamiento



- ✓ Acceso al almacenamiento usando diversos protocolos: NFS / iSCSI / FC / SMB
- ✓ Sincronización de volúmenes en ambos sentidos
- ✓ Realización de Snapshots de volúmenes e histórico de los mismos
- ✓ Deduplicación de datos





CITRIX[®]
XenServer

XenCenter

File View Pool Server VM Storage Templates Tools Help

Back Forward Add New Server New Pool New Storage New VM Shut Down Reboot Suspend

Search... dc-rectorado4 in 'DC-RECTORADO' Logged in as: Local root account

General Memory Storage Networking NICs GPU Console Performance Users Search

DC-RECTORADO: Overview

New Search Edit Search Saved Searches Export... Import...

Show Columns

Name	CPU Usage	Used Memory	Disks (avg / max KBs)	Network (avg / max KBs)	Address	Uptime	HA
DC-RECTORADO	-	-	-	-	-	-	2 failures tolerated
dc-rectorado4	-	-	-	-	-	-	-
guadiela-h1	6% of 24 CPUs	111 GB of 320 GB	-	10/18	192.168.253.95, 192...	41 days 22 hours 47 minutes	-
agenda01	3% of 2 CPUs	Management Agent...	6/16	0/0	192.168.254.207, 13...	117 days 16 hours 4 minutes	Restart
awstats01	0% of 2 CPUs	3.9 GB of 4 GB	0/0	0/0	138.100.199.23, fe80...	232 days 12 hours 10 minutes	Do not restart
certint01	0% of 2 CPUs	1.3 GB of 4 GB	1/2	0/0	138.100.199.222, fe8...	1 day 2 hours 50 minutes	Restart
desa-slavedap01	1% of 1 CPU	1.1 GB of 2 GB	3/6	0/0	138.100.191.229, fe8...	14 days 20 hours 26 minutes	Do not restart
einstein	2% of 2 CPUs	2.6 GB of 4 GB	1/3	10/10	138.100.4.8, fe80:94...	323 days 12 hours 18 minutes	Do not restart
listdist01	0% of 2 CPUs	4 GB of 4 GB	2/7	1/1	138.100.4.55, fe80:c...	232 days 16 hours 17 minutes	Do not restart
obiee01	0% of 4 CPUs	1.1 GB of 8 GB	0/0	0/0	138.100.199.22, fe80...	132 days 16 hours 45 minutes	Restart
project01	1% of 2 CPUs	2.5 GB of 4 GB	0/1	0/0	138.100.198.154, fe8...	268 days 19 hours 24 minutes	Restart
registroelectronic01	0% of 2 CPUs	1.4 GB of 4 GB	0/0	0/0	138.100.191.41, fe80...	23 hours 15 minutes	Do not restart
relay02	4% of 8 CPUs	11.1 GB of 12 GB	73/146	20/20	138.100.198.19, 200...	47 days 18 hours 14 minutes	Do not restart
smtp02	0% of 8 CPUs	10.8 GB of 12 GB	4/8	2/2	138.100.198.70, fe80...	743 days 17 hours 43 minutes	Do not restart
spic101	1% of 4 CPUs	2.1 GB of 16 GB	0/0	0/0	138.100.199.39, fe80...	119 days 22 hours 12 minutes	Restart
tarific	5% of 4 CPUs	3.6 GB of 6 GB	1/2	0/0	192.168.254.230, fe8...	49 days 17 hours 22 minutes	Restart
tiwork02	1% of 4 CPUs	4 GB of 4 GB	4/8	1/1	138.100.191.209, fe8...	99 days 18 hours 15 minutes	Do not restart
tserver01	3% of 2 CPUs	1.7 GB of 8 GB	13/26	0/0	138.100.198.152, fe8...	22 days 21 hours 35 minutes	Restart
dc-rectorado1	-	-	-	-	-	-	-
salor-h1	11% of 24 CPUs	177 GB of 320 GB	-	2290/13446	192.168.253.98, 192...	41 days 20 hours 51 minutes	-
backup01	0% of 2 CPUs	1.8 GB of 2 GB	0/3	0/0	192.168.254.174, fe8...	13 hours 20 minutes	Restart
coie01	0% of 4 CPUs	22.6 GB of 24 GB	0/2	0/0	138.100.198.162, fe8...	114 days 16 hours 25 minutes	Restart
consig01	0% of 1 CPU	2 GB of 2 GB	0/0	0/0	138.100.199.11, fe80...	42 days 20 hours 47 minutes	Restart

Infrastructure

Objects

Organization Views

Saved Searches

Notifications 21

¡GRACIAS!

