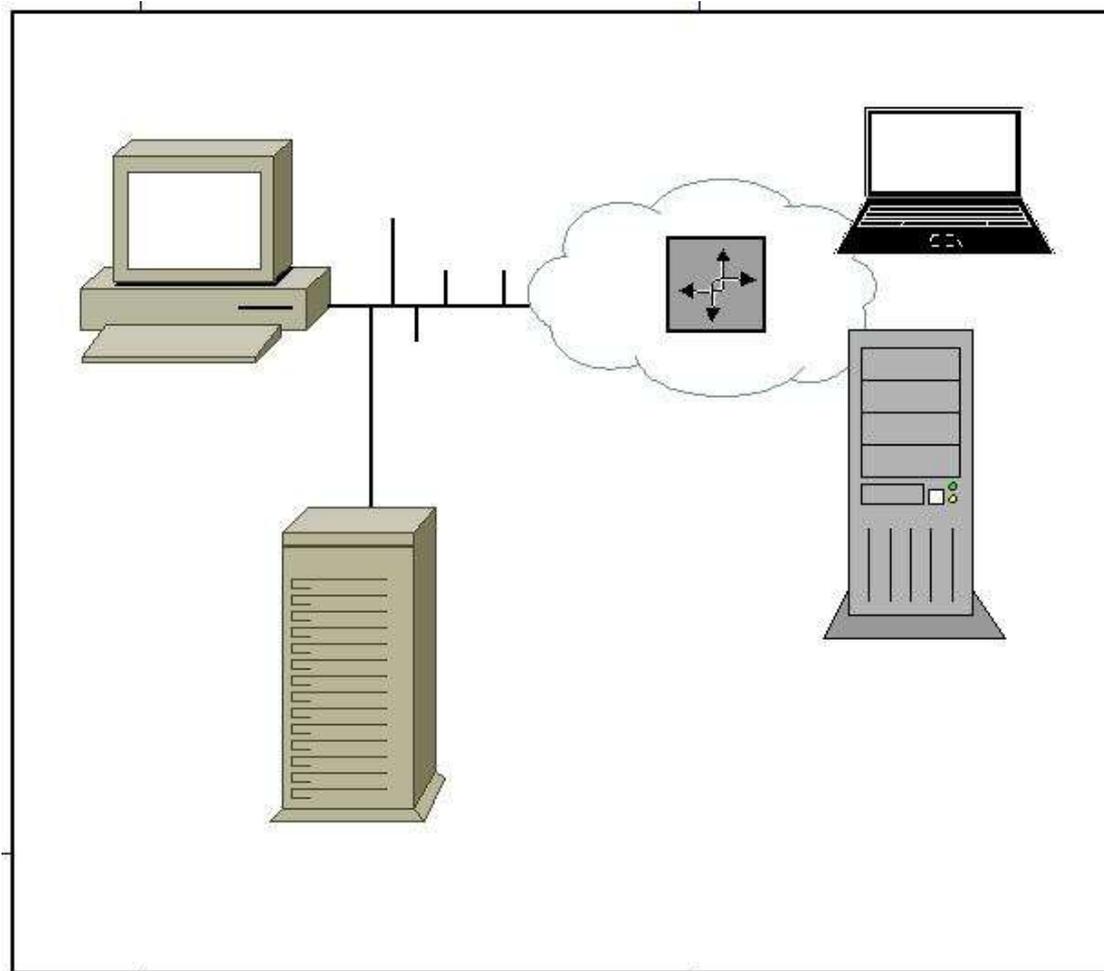


Workshop
Projeto
Temático
GNSS-SP

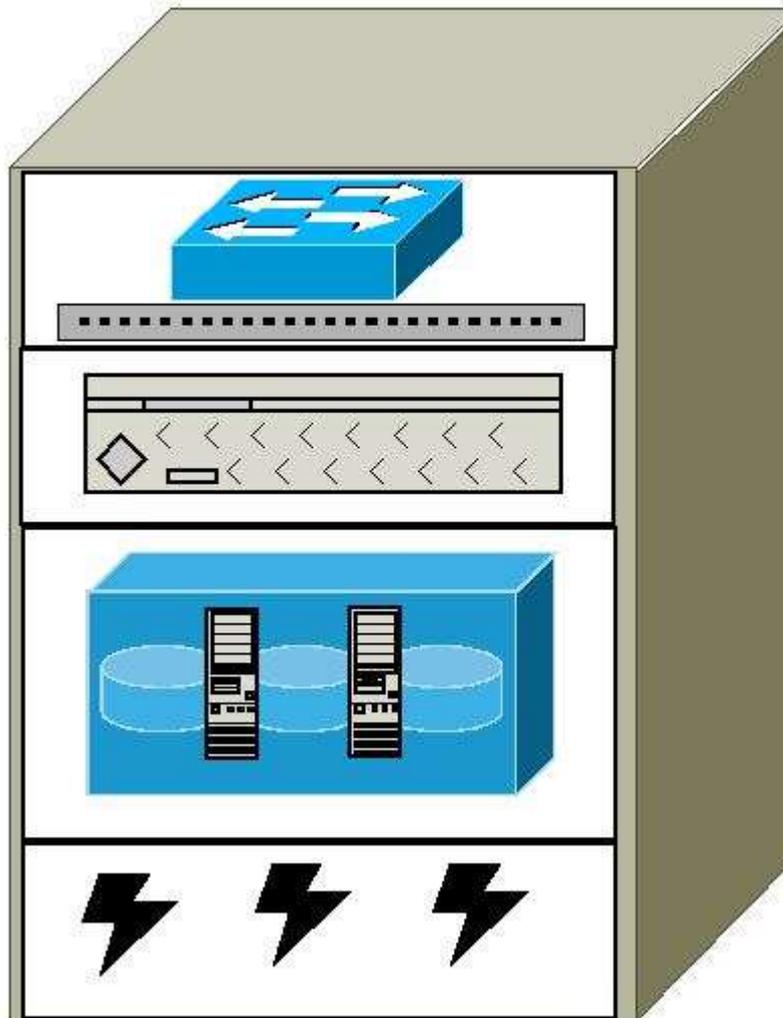
A estrutura computacional disponibilizada a partir do projeto temático

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Rogério Takeshi Oyama – rogeriooyama@yahoo.com.br
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Pré-Temático: “Micro” como servidor

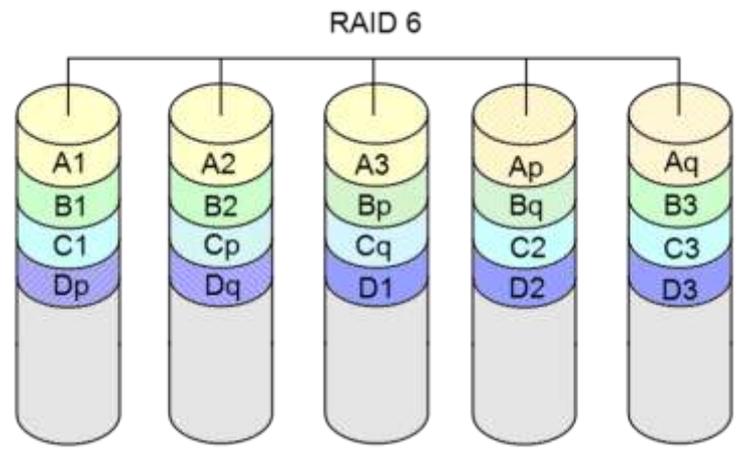


Temático: Servidor

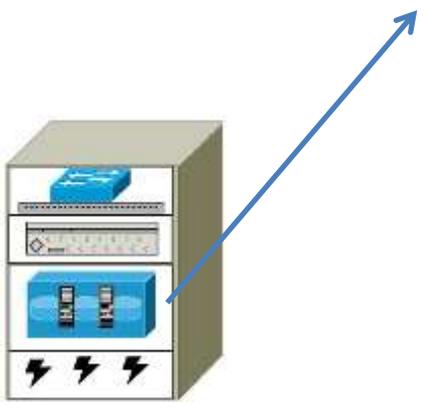
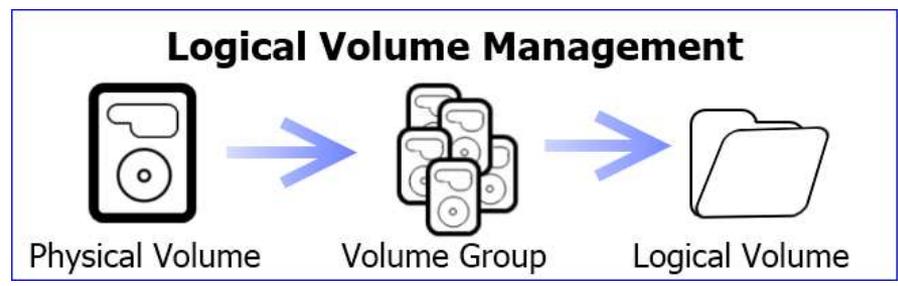


Configuração

- HDs em RAID6



- LVM



Equipamentos 1



Equipamentos 2



Equipamentos 1 - detalhes

- Hp Proliant DL 180 G6
 - Processador Xeon
 - 6GB RAM
 - Dual Gigabit Ethernet

- Hp Modular Smart Array
 - 6TB de armazenamento



Equipamentos 2 - detalhes

- Hp Proliant DL 380 G7
 - Processador Xeon
 - 22GB RAM
 - Dual Gigabit Ethernet

- Hp Modular Smart Array
 - 7.5TB de armazenamento



Software

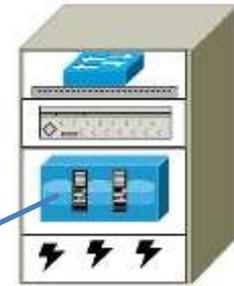
- Host com CentOS
- Sistema de virtualização
 - XEN
- Máquinas virtuais com Debian



Máquinas Virtuais (VMs)

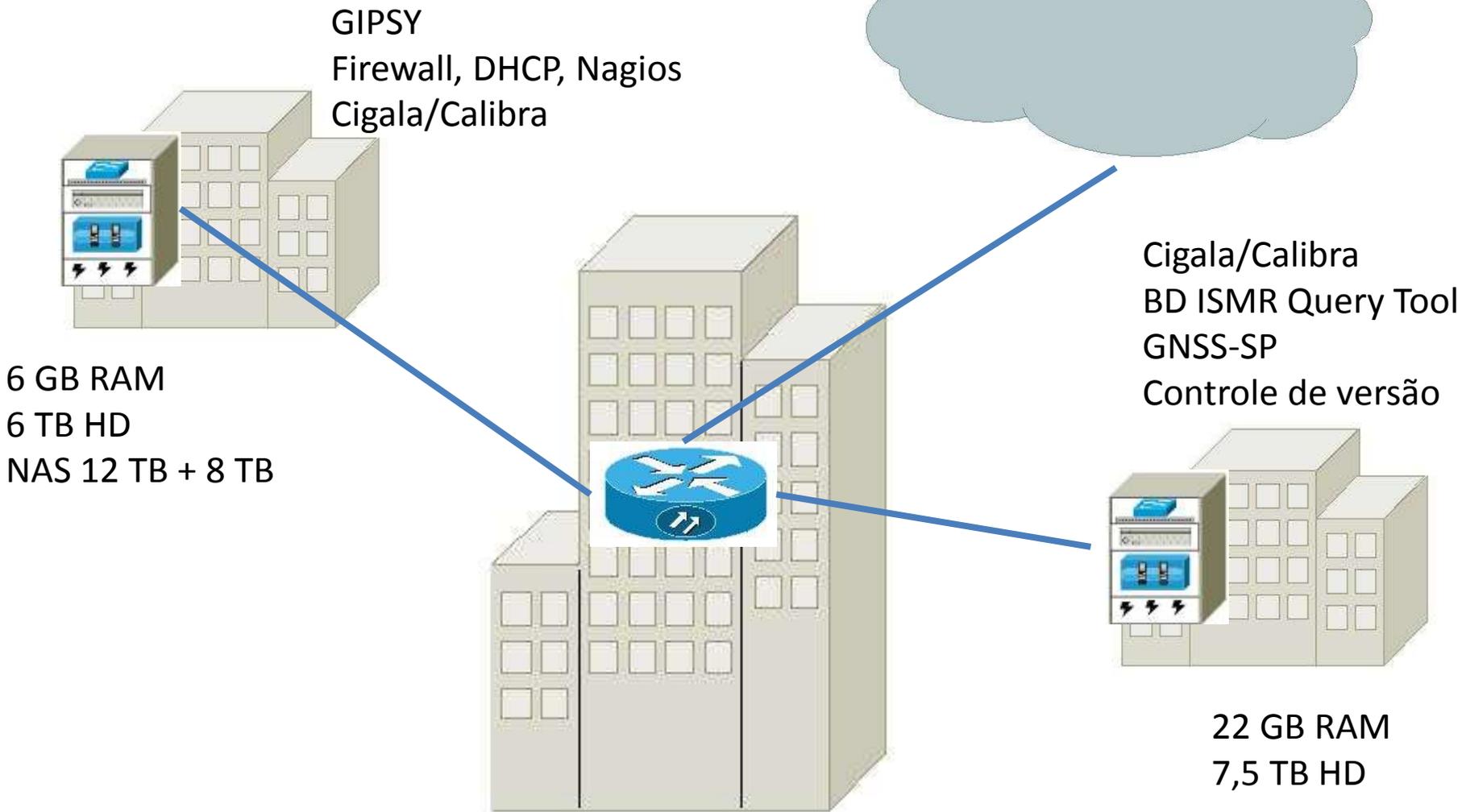
- Máquinas virtuais criadas para fins específicos
- 6 máquinas virtuais em execução
- Distribuídas nos 2 servidores

VMs - detalhes



- Máquinas virtuais:
 - vmGIPSY (GIPSY)
 - vmGateway (Firewall, DHCP, Nagios)
 - vmCigala (armazenamento dos dados CIGALA/CALIBRA)
 - vmBanco (base de dados ISMR Query Tool)
 - vmGNSS-SP (armazenamento dos dados GNSS-SP)
 - vmGCS (controle de versão)

Organização física



Monitoramento

Nagios®

General

- Home
- Documentation

Current Status

- Tactical Overview
- Map
- Hosts
- Services
- Host Groups
 - Summary
 - Grid
- Service Groups
 - Summary
 - Grid
- Problems
 - Services (Unhandled)
 - Hosts (Unhandled)
 - Network Outages

Quick Search:

Reports

- Availability
- Trends
- Alerts
 - History
 - Summary
 - Histogram
- Notifications
- Event Log

System

- Comments
- Downtime
- Process Info
- Performance Info

Host	Service	Status	Last Check	Duration	Attempt	Status Information
228	/rep1 Partition	CRITICAL	06-17-2013 12:01:06	6d 9h 14m 7s	3/3	DISK CRITICAL - free space: /rep1 74 MB (0% inode=99%):
	/rep2 Partition	WARNING	06-17-2013 12:00:17	5d 18h 48m 56s	3/3	DISK WARNING - free space: /rep2 214835 MB (11% inode=99%):
	/rep3 Partition	CRITICAL	06-17-2013 12:00:27	20d 19h 36m 26s	3/3	DISK CRITICAL - free space: /rep3 13617 MB (0% inode=99%):
	CPU Load	OK	06-17-2013 12:00:51	5d 18h 48m 35s	1/3	OK - load average: 0.00, 0.00, 0.00
	Current Users	OK	06-17-2013 12:00:48	5d 18h 48m 25s	1/3	USERS OK - 2 users currently logged in
	Root Partition	OK	06-17-2013 12:00:59	5d 18h 48m 14s	1/3	DISK OK - free space: / 9581 MB (43% inode=92%):
	Total Processes	OK	06-17-2013 12:01:09	5d 18h 48m 4s	1/3	PROCS OK: 133 processes
PALM	CIGALA Partition	OK	06-17-2013 12:00:20	2d 2h 0m 53s	1/3	DISK OK - free space: /mnt/disco1 266665 MB (56% inode=99%):
	CPU Load	OK	06-17-2013 12:01:09	2d 2h 1m 4s	1/3	OK - load average: 0.05, 0.04, 0.00
	Current Users	OK	06-17-2013 12:00:18	2d 2h 0m 55s	1/3	USERS OK - 1 users currently logged in
	Root Partition	OK	06-17-2013 12:00:28	2d 2h 0m 45s	1/3	DISK OK - free space: / 47985 MB (89% inode=96%):
	Swap Usage	OK	06-17-2013 12:01:04	2d 2h 1m 11s	1/3	SWAP OK - 94% free (3561 MB out of 3814 MB)
	Total Processes	WARNING	06-17-2013 12:00:49	2d 2h 1m 24s	3/3	PROCS WARNING: 168 processes
PRU1	CIGALA Partition	OK	06-17-2013 12:01:00	3d 12h 42m 13s	1/3	DISK OK - free space: /cigala 1349728 MB (38% inode=99%):
	CPU Load	OK	06-17-2013 12:00:11	3d 12h 42m 2s	1/3	OK - load average: 0.51, 0.15, 0.05
	Current Users	OK	06-17-2013 12:00:21	3d 12h 42m 52s	1/3	USERS OK - 2 users currently logged in
	Root Partition	OK	06-17-2013 12:01:09	3d 12h 42m 4s	1/3	DISK OK - free space: / 9111 MB (51% inode=93%):
	Rxlogger	OK	06-17-2013 12:00:19	0d 10h 44m 54s	1/3	Listagem bem sucedida para Mon Jun 17 11:44:20 BRT 2013:
	Swap Usage	OK	06-17-2013 12:00:29	3d 12h 42m 44s	1/3	SWAP OK - 100% free (3796 MB out of 3813 MB)
	Total Processes	OK	06-17-2013 12:00:40	3d 12h 42m 33s	1/3	PROCS OK: 142 processes
PRU2	CIGALA Partition	WARNING	06-17-2013 12:00:51	5d 18h 48m 22s	3/3	DISK WARNING - free space: /cigala 385689 MB (12% inode=99%):
	CPU Load	OK	06-17-2013 12:01:01	5d 18h 48m 12s	1/3	OK - load average: 0.36, 0.24, 0.13
	Current Users	OK	06-17-2013 12:00:12	5d 18h 48m 1s	1/3	USERS OK - 2 users currently logged in
	Root Partition	OK	06-17-2013 12:00:22	5d 18h 48m 51s	1/3	DISK OK - free space: / 357820 MB (96% inode=99%):
	Rxlogger	OK	06-17-2013 12:01:10	0d 11h 10m 3s	1/3	Listagem bem sucedida para Mon Jun 17 12:10:32 BRT 2013
	Swap Usage	OK	06-17-2013 12:00:20	5d 18h 48m 53s	1/3	SWAP OK - 100% free (1996 MB out of 2000 MB)
	Total Processes	OK	06-17-2013 12:00:33	5d 18h 48m 42s	1/3	PROCS OK: 119 processes
SJCU	CIGALA Partition	OK	06-17-2013 12:00:23	4d 1h 57m 50s	1/3	DISK OK - free space: /cigala 1669710 MB (53% inode=99%):
	CPU Load	OK	06-17-2013 12:00:52	4d 1h 58m 21s	1/3	OK - load average: 0.31, 0.13, 0.04
	Current Users	OK	06-17-2013 12:01:04	4d 1h 58m 11s	1/3	USERS OK - 1 users currently logged in
	Root Partition	OK	06-17-2013 12:00:15	4d 1h 57m 58s	1/3	DISK OK - free space: / 367470 MB (99% inode=99%):
	Rxlogger	OK	06-17-2013 12:00:23	0d 10h 58m 50s	1/3	Listagem bem sucedida para Mon Jun 17 11:58:53 BRT 2013:
	Swap Usage	OK	06-17-2013 12:00:11	2d 19h 53m 2s	1/3	SWAP OK - 100% free (1999 MB out of 1999 MB)
	Total Processes	OK	06-17-2013 12:00:21	4d 1h 57m 52s	1/3	PROCS OK: 124 processes
localhost	Current Load	OK	06-17-2013 11:58:32	95d 21h 24m 30s	1/4	OK - load average: 0.00, 0.01, 0.00

Desenvolvimento: ISMR Query Tool

[brunovani](#)
[Logout](#)

HOME | Rede de Estações | CIGALA | CALIBRA | ISMR Query Tool | Publicações | Admin

Date/time interval	2013-06-17 00:00	2013-06-17 23:59	X-Axis / Label	Continuous Time	time (UTC)
Station(s)	PRU2		(Plot 1) Y-Axis / Label	s4	s4
Satellite(s)	GPS		(Plot 2) Y-Axis / Label	off	
S4	>=	and	Size & Color	600 x 300	Change Color
Elevation angle	>=	and	Title	Station PRU2 (GPS)	
phi6011 (Custom Filters)	>=	and	Footer text	Powered by ISMR Query Tool	
	Empty		<input type="button" value="Plot"/> <input type="button" value="Clear all Images"/> <input type="button" value="Reset Filters"/>		

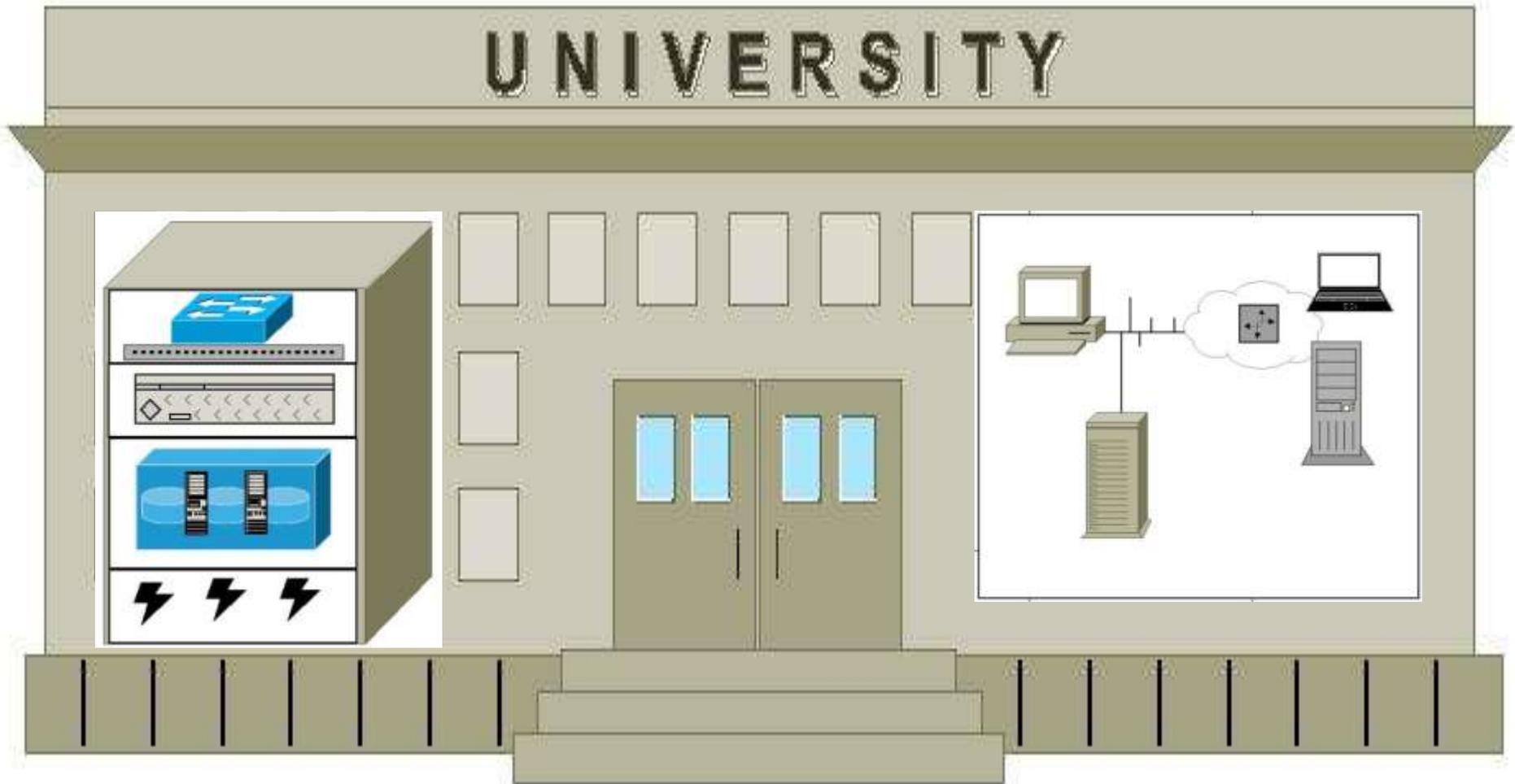
DB response time: 0.1 secs. Memory usage: 11Mb
 Plot response time: 0.29 secs. Memory usage: 14.75Mb

Powered by ISMR Query Tool

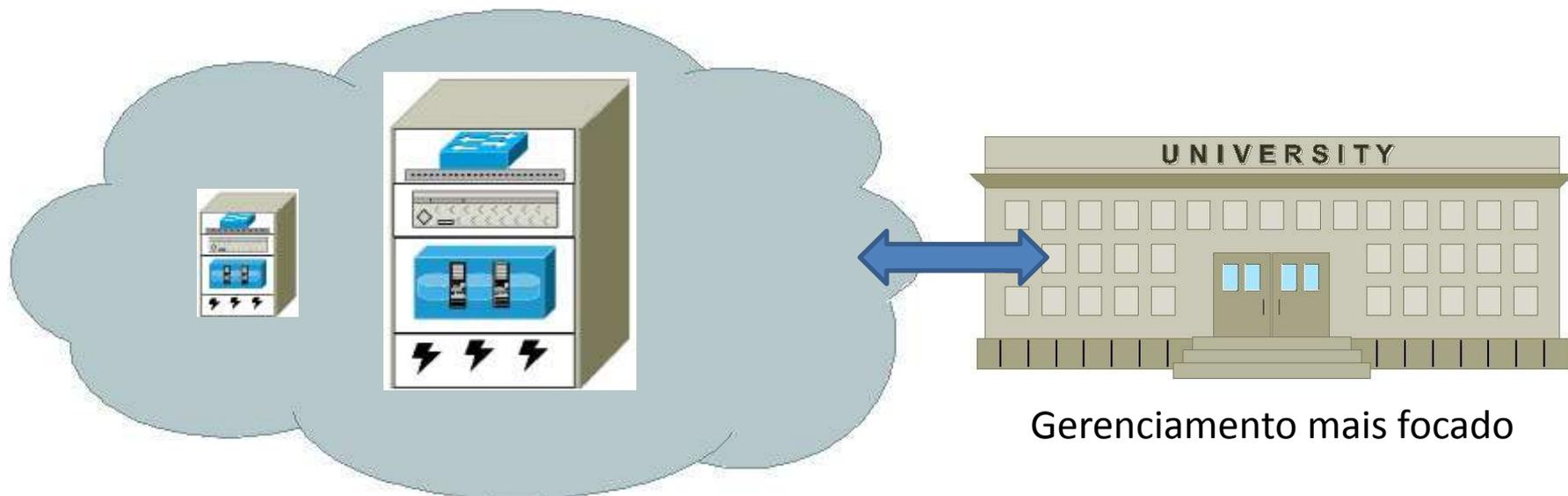
Alguns benefícios

- Manutenção: **reduzindo** o número de **servidores físicos** é possível **diminuir gastos com manutenção de hardware**
- Autonomia de aplicativos: cada **aplicativo** está inserido em sua **própria máquina virtual**, ou seja, upgrades e mudanças não geram impacto em outras máquinas
- Melhor uso dos recursos: economia em energia elétrica, espaço e refrigeração
- Melhor aproveitamento do hardware: menos tempo ocioso
- Balanceamento de carga

Gerenciamento

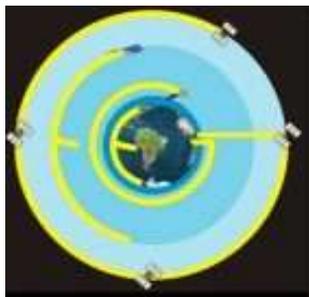


Pós-Temático



Gerenciamento mais focado

Configuração menor para
processamento e backup



Obrigado!

