

METSI TECHNOLOGIES



“Single Pane of Glass” with UCS Director

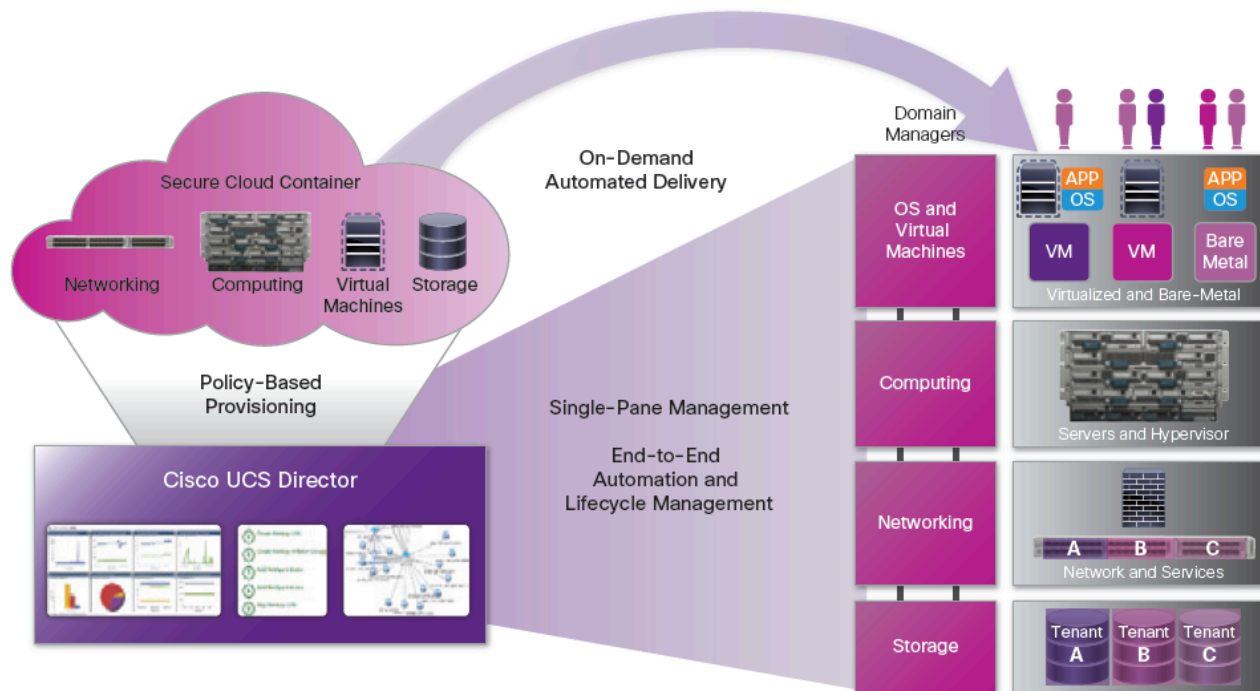


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[Tswana, water (n: A body of water, standing or flowing; a lake, or other collection of water.)]

DATA CENTER MANAGEMENT

- UCS Director:
 - is a vital component to converged infrastructure platforms.
 - positioned to provide a holistic management approach



UCS DIRECTOR

- Easy to build workflows by using “drag-n-drop” tasks”
- 1500+ built in (infrastructure) tasks for automation
- Customer deployments need an efficient mechanism to connect to multiple external sources for input and output processes.
- Development skills required to build integration requirements.

UCSD WORKFLOW CHALLENGES

- Custom workflow inputs (LOVs = List of values) can only be entered manually through the Edit Custom Workflow Input.

The screenshot displays the 'Edit Custom Workflow Input' window. The 'Custom Input Details' section shows the following information:

- Custom Input Type Name: My Custom LOVs
- Input Type: gen_text_input
- Input LOV

The 'LOV Entries' section contains a table with the following data:

Label	Value
DC_ip_address	192.168.0.1
DC_gateway	192.168.0.99
DC_subnet	255.255.255.0

Total 3 items

Buttons: Submit, Close

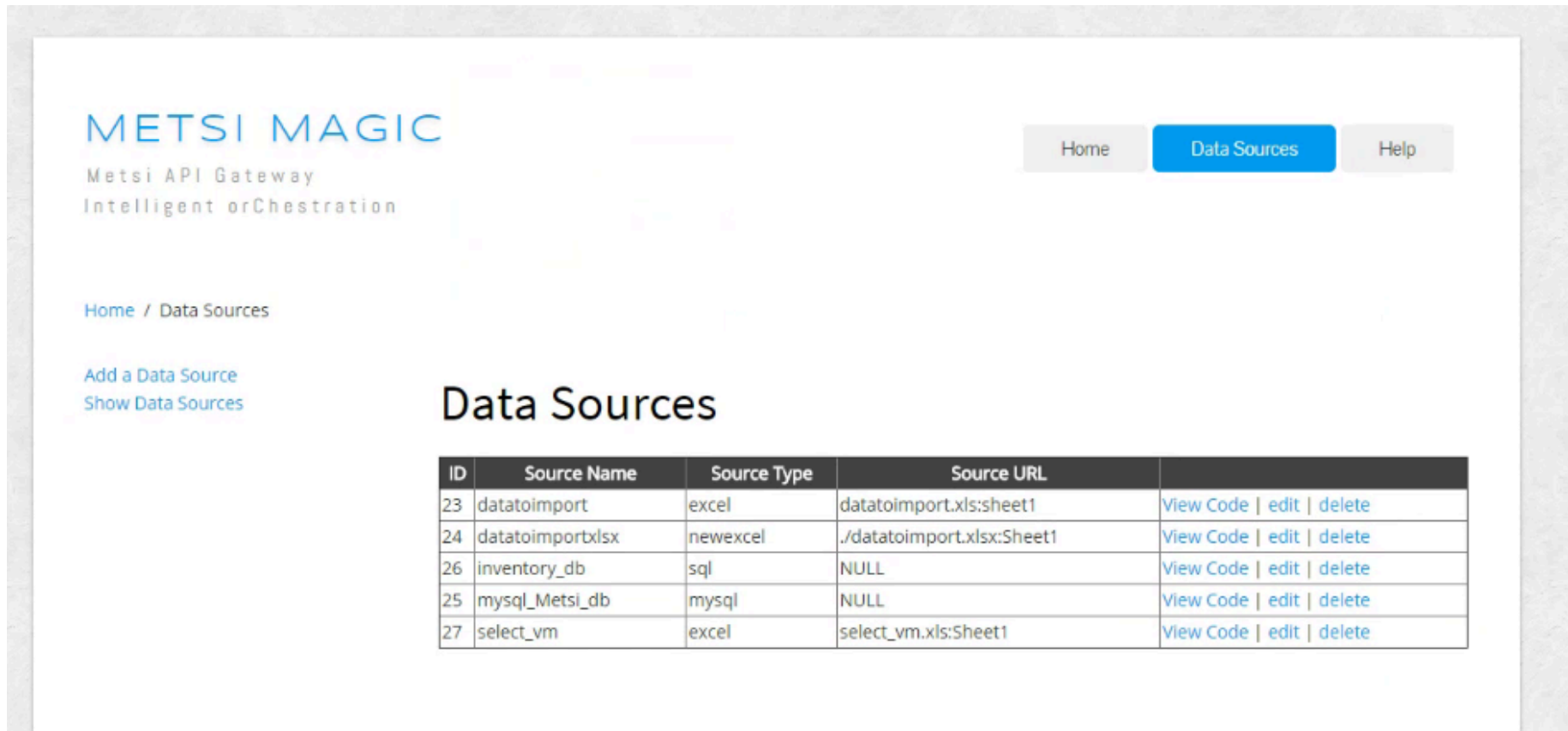
UCSD WORKFLOW CHALLENGES

- Recent customer deployment required over 100 input variables to drive the automation and building of the data center resources. This data was in CSV format.
- Customer did not want to use LOVs. Problems encountered:
 - 30 seconds to enter one variable. Around 1 hour to enter 100 variables.
 - The Label and Value pairs are hard coded which presents a maintenance nightmare.
 - Duplication of data in lists for other workflows.
 - Have to maintain multiple lists.

	A	B	C	D	E	F	G
1	Server Configuration By Rack						
2							
3	FFL-NA-RACK-01	Server Type	RAM	Proc#	Slot #1	Slot #2	Slot #3
4	FFL-NA-DEF-01	DL380G3	1.0GB	2	Empty	Dual-Port NIC	Empty
5	FFL-RT-DC-02	DL360G2	1.0GB	2	Dual-Port NIC	Empty	N/A
6	FFL-RT-DC-01	DL360G2	1.0GB	2	Dual-Port NIC	Empty	N/A
7	FFL-NA-DNS-02	DL360G2	256MB	1	Dual-Port NIC	Empty	N/A
8	FFL-NA-DNS-01	DL360G2	256MB	1	Dual-Port NIC	Empty	N/A
9	FFL-RT-CA-01	DL380G2	256MB	1	RIM	Dual-Port NIC	Empty
10	FFL-RT-CA-02	DL380G2	256MB	1	RIM	Dual-Port NIC	Empty
11	FFL-NA-MGT-02	DL380G3	1.0GB	1	Empty	Dual-Port NIC	Empty
12	FFL-NA-MGT-01	DL380G3	1.0GB	1	Empty	Dual-Port NIC	Empty
13	FFL-NA-RACK-01	Server Type	RAM	Proc#	Slot #1	Slot #2	Slot #3
14	FFL-NA-DC-02	ML570	512MB	1	Empty	Dual-Port NIC	Empty
15	FFL-NA-DC-01	ML570G2	2.0GB	4	Empty	Dual-Port NIC	Empty
16							
17	FFL-NA-RACK-02	Server Type	RAM	Proc#	Slot #1	Slot #2	Slot #3
18	FFL-RT-CA-03	DL360G2	256MB	1	Dual-Port NIC	Empty	N/A
19	FFL-SA-CA-02	DL360G2	256MB	1	Dual-Port NIC	Empty	N/A
20	FFL-SA-CA-01	DL360G2	256MB	1	Dual-Port NIC	Empty	N/A
21	FFL-NA-EXF-02	DL360G3	2.0GB	2	Dual-Port NIC	SSL Accelerator	N/A
22	FFL-NA-EXF-01	DL360G3	2.0GB	2	Dual-Port NIC	SSL Accelerator	N/A
23	FFL-NA-MGT-01	DL360G2	2.0GB	2	Dual-Port NIC	Empty	N/A
24	FFL-NA-RACK-01	Server Type	RAM	Proc#	Slot #1	Slot #2	Slot #3
25	FFL-NA-SUS-01	DL360G2	2.0GB	2	Dual-Port NIC	Empty	N/A
26	FFL-RT-FL-01	DL360G2	2.0GB	2	Dual-Port NIC	Empty	N/A
27	FFL-NA-WINS-01	DL360G2	256MB	1	Dual-Port NIC	Empty	N/A
28	FFL-NA-SMS-01	DL380G3	1GB	4	Dual-Port NIC	Empty	Empty
29	FFL-NA-WEB-04	DL380G3	1.0GB	2	Empty	Dual-Port NIC	Empty
30	FFL-NA-WEB-03	DL380G3	1.0GB	2	Empty	Dual-Port NIC	Empty
31	FFL-NA-WEB-02	DL380G3	1.0GB	2	Empty	Dual-Port NIC	Empty
32	FFL-NA-WEB-01	DL380G3	1.0GB	2	Empty	Dual-Port NIC	Empty
33							
34	FFL-NA-RACK-03	Server Type	RAM	Proc#	Slot #1	Slot #2	Slot #3
35	FFL-NA-EXR-02	DL380G2	2.0GB	2	RIM	Dual-Port NIC	Empty
36	FFL-NA-EXR-01	DL380G2	2.0GB	2	RIM	Dual-Port NIC	Empty

THE METSI SOLUTION

- MAGIC = **M**etsi **A**PI **G**ateway for **I**ntelligent or**C**hestration
- This is used to connect and transform data intelligently between any source and target destinations.



METSI MAGIC
Metsi API Gateway
Intelligent orChestration

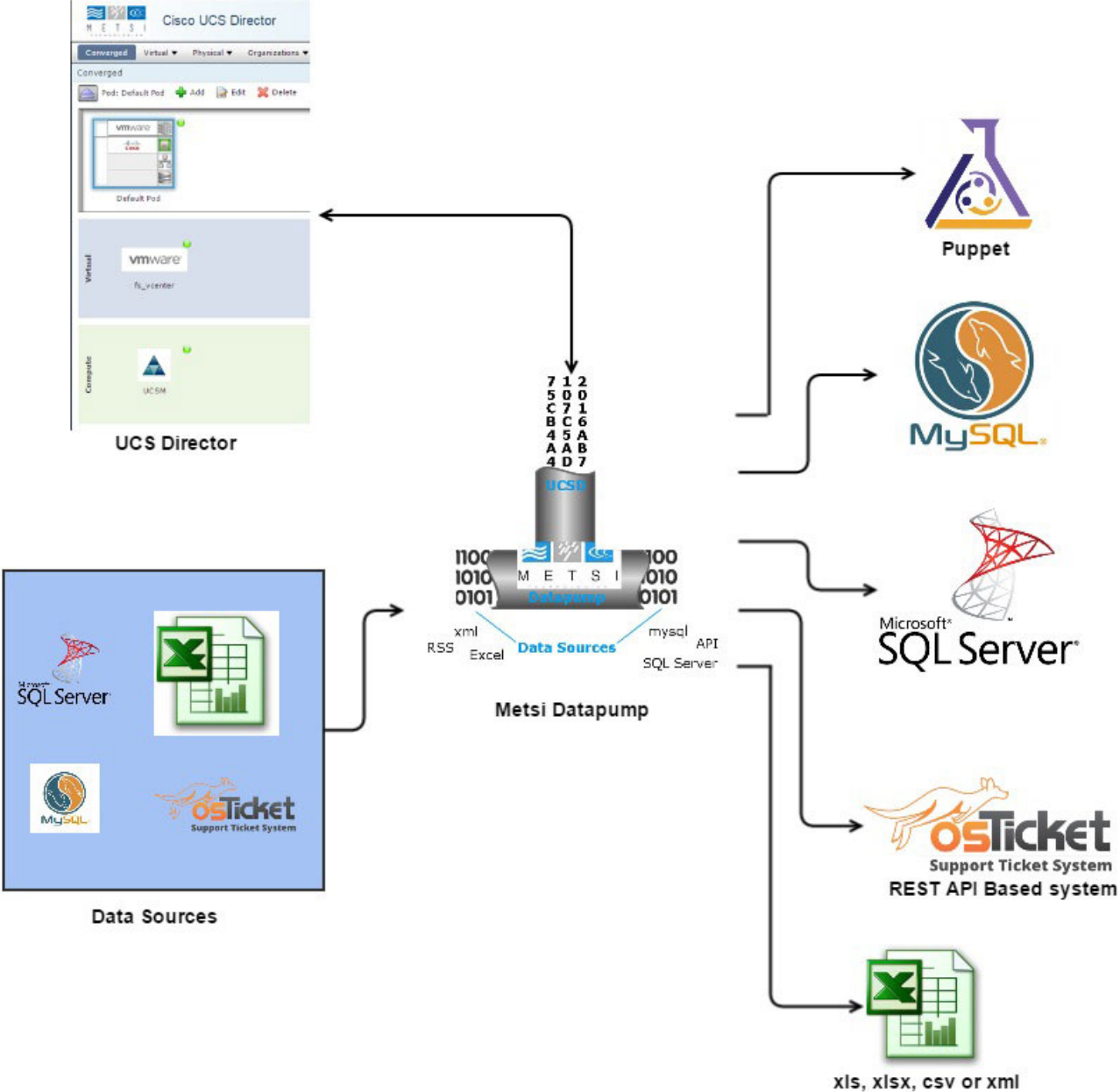
Home / Data Sources

[Add a Data Source](#)
[Show Data Sources](#)

Data Sources

ID	Source Name	Source Type	Source URL	
23	datatoimport	excel	datatoimport.xls:sheet1	View Code edit delete
24	datatoimportxlsx	newexcel	./datatoimport.xlsx:Sheet1	View Code edit delete
26	inventory_db	sql	NULL	View Code edit delete
25	mysql_Metsi_db	mysql	NULL	View Code edit delete
27	select_vm	excel	select_vm.xls:Sheet1	View Code edit delete

MAGIC - Expanding UCS Director's Orchestration Capabilities



CISCO SOLUTION COMPONENTS

Self-Service Portal: "Single Pane of Glass"

Cisco Prime Service Catalog

Orchestration & Automation

Cisco Process Orchestrator

Private/Public Cloud Management

UCS Director / Intercloud Fabric

AWS



AZURE



Microsoft
Hyper-V



vmware
vCenter



RSA Via™

Via Access

Via Governance

Via Lifecycle

CIAC CHALLENGES

1. No automated or Manual capability to refresh the data containing the VMs hosted in vCenter and Hyper V
 - This includes the power on or off state
 - New VMs added in VCenter and HyperV
2. The list of requirements for many customer goes beyond the list of capabilities - here's what we can do out of the box:
 - Power on or off VM
 - Add or delete and resize an HDD
 - Resize to Large, Medium or Small etc
 - Access via SSH or RDP from the Portal
3. Here is what is missing:
 - View the current power state and have it change when the state is changed
 - Add and Remove a Network Adapter
 - Change the Adapter Type of a Network Adapter
 - Change the port group of a Network Adapter
 - Modify the Datastore of a VM Disk
 - View the ICF hosted VMs in the public Cloud for a Tenant
 - Migrate VMs to the Public Cloud and move back again
 - Move a VM between tenants
 - Shutdown a VM
 - Mount an ISO Image

Everything that can be done in UCS Director should be made available within CIAC - there are 2836 REST API functions in UCSD

METSI VISION SOLUTION

Self-Service Portal
PSC Content or Appliance

Available now

Orchestration and Automation
Cisco Process Orchestrator / UCS Director

APIs to commission/instantiate/configure/de-commission

Cloud Content
Pre-Built for Portal
and Automation

OpenStack



openstack

vCloud



vmware

Amazon EC2



amazon
webservices

Dev/Ops
Application Canvas

Cloud Service
Providers

LDAP/Active
Directory

Office 365

Remedy

Webex

EMC Mozy

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METSI CONTENT

1. **Can be embedded within PSC or used standalone as an appliance without the PSC dependency.**

2. Web Portal within PSC to leverage UCSD / APIs
 1. User onboarding
 2. Data Center / Application Inventory Data
 3. Administrative Operations
 4. Catalog Requests
 5. Tenant on boarding
 6. VM lifecycle management
 7. Request Audit, Compliance and Governance Review
 8. “Compare the Cloud” pricing reports
 - a. Showing cost comparison between AWS EC2, Azure, etc
 9. Migrating VMs between Cloud Providers using native APIs
 - a. Amazon Web Services EC2 → Microsoft Azure

SCREENSHOTS

TENANT MANAGEMENT



Infrastructure

Tenants

Admin

Log out

Self Service Portal

My Cloud / My Tenant Servers

[View as user-tenant1](#) | [View as user-tenant2](#) | [View as user-tenant12](#)
[Inventory Refresh](#)


Tenant1

Cloud	VMID	VM Name	IP Address	Power State	vDC	OS
vlabbehavc01	1	TENANT1SRV	192.168.1.121	OFF	tenant1_win_vdc	Microsoft Windows Server 2008 R2 (64-bit)
vlabbehavc01	2	TENANT1DC	192.168.1.120	ON	tenant1_win_vdc	Microsoft Windows Server 2008 R2 (64-bit)
hyperv	59	Tenant1-H2		ON	tenant1_hyperv	Windows Server 2012 R2 Standard
vlabbehavc01	101	vm-Tenant1-SR21	192.168.1.200	OFF	tenant1_win_vdc	Microsoft Windows Server 2008 R2 (64-bit)
vlabbehavc01	109	vm-Tenant1-SR27		OFF	tenant1_win_vdc	CentOS 4/5/6 (64-bit)
vlabbehavc01	119	Centos6SR1	192.168.1.161	ON	tenant1_win_vdc	CentOS 4/5/6 (64-bit)
vlabbehavc01	189	vm-Tenant2-SR55		OFF	t1_centos63	Red Hat Enterprise Linux 6 (64-bit)
vlabbehavc01	193	vm-Tenant1-SR56		ON	t1_centos63	Red Hat Enterprise Linux 6 (64-bit)
vlabbehavc01	195	SR55Clone		ON	t1_centos63	Red Hat Enterprise Linux 6 (64-bit)

Tenant2

Cloud	VMID	VM Name	IP Address	Power State	vDC	OS
vlabbehavc01	3	TENANT2DC	172.29.130.120	ON	tenant2_win_vdc	Microsoft Windows Server 2008 R2 (64-bit)
vlabbehavc01	4	TENANT2SRV	172.29.130.121	ON	tenant2_win_vdc	Microsoft Windows Server 2008 R2 (64-bit)
vlabbehavc01	102	vm-Tenant2-SR22	172.27.0.200	ON	tenant2_win_vdc	Microsoft Windows Server 2008 R2 (64-bit)

“SINGLE PANE OF GLASS”


Infrastructure Tenants Admin Log out

Self Service Portal

My Cloud / My Tenant Servers






<-Back

vm-Tenant1-SR21

Cloud: viabbehavc01
VM ID: 101
VM Name: vm-Tenant1-SR21
IP Address: 192.168.1.200
Power State: OFF 

vDC: tenant1_win_vdc
Category: Generic VM
Provisioned Time: Mar 19, 2015 11:57:37 UTC
OS: Microsoft Windows Server 2008 R2 (64-bit)


Additional VM Options


 CPUs	Resize
 Memory	Resize
 CD/DVD drive	
 Hard disk	Add
 Network adapter	Add

Network Adapters

Adapter Name: Network adapter 1 [Remove](#)
Adapter Type: E1000 [Change](#)
Type: DVNIC
Port Group: 6_cgkh_servers [Change](#)
vNIC IP Address: fe80 :482d 589b 8d89:b00c:192.168.1.200
vNIC IP Address: 00:50:56:a7:Dd:d6
Host Node: viabbehaesx04.cegekavirtual.local


Operations


 [Clone VM](#)


 [Remote Desktop](#)

Hard Disks

Datacenter Name: Hasselt
Account Name: viabbehavc01
Datastore Name: MD1_SAN_VLABBEHA_02 [Modify](#)
Disk Name: Hard disk 1 [Delete](#)
Disk Mode: persistent
Provision Type: Thick
Provision Size GB: 40.0 [Modify](#)
Unit Number: 0

Move to 

Move to 

Move to 

USAGE REPORTING



Infrastructure

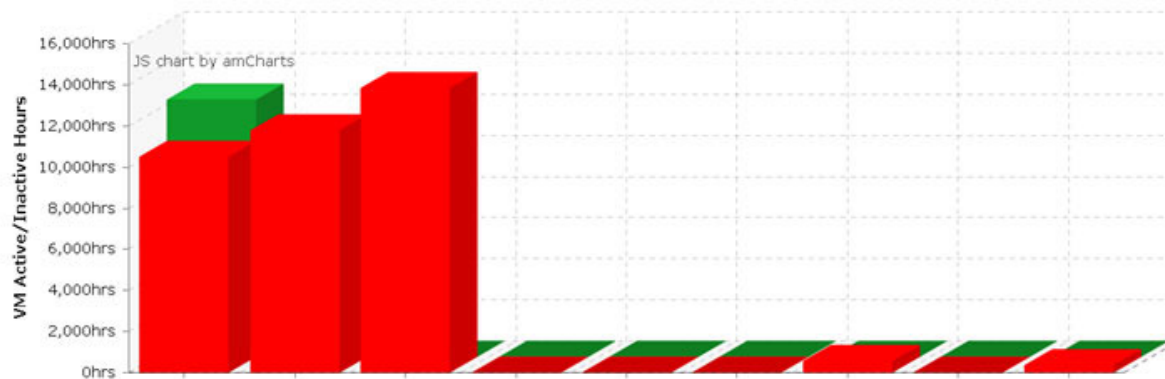
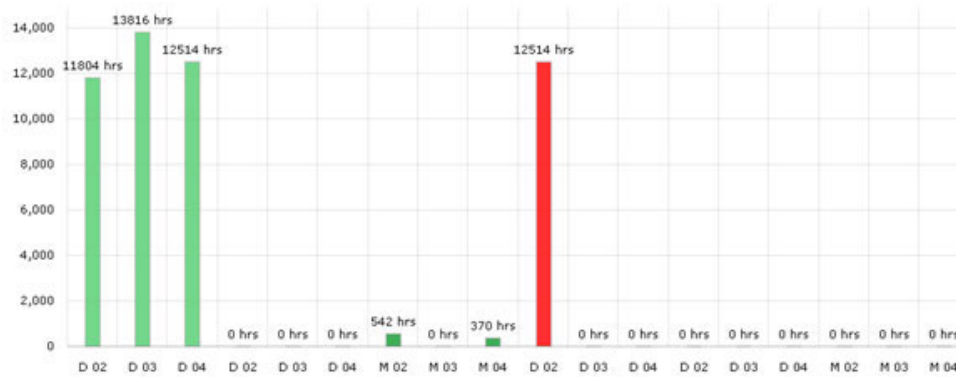
Tenants

Admin

Log out

Self Service Portal

Reporting / Compute



“COMPARE THE CLOUD PRICING”



Infrastructure

Tenants

Admin

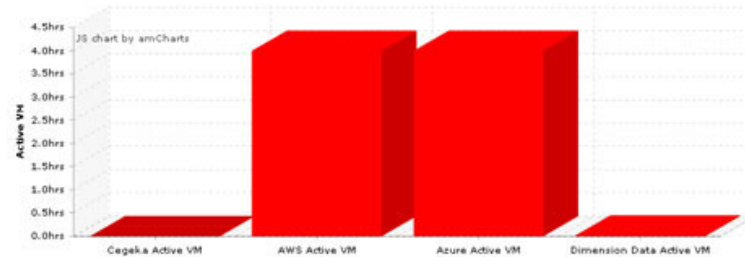
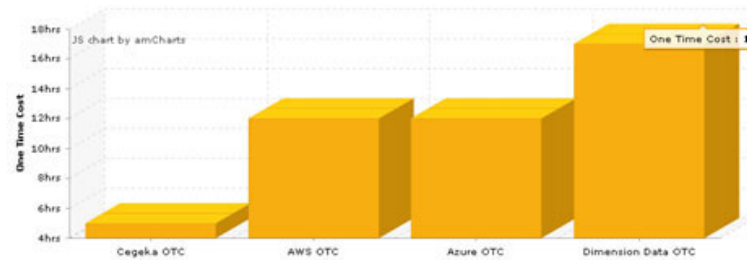
Log out

Self Service Portal

Reporting / Price Comparison

Back to

Compare the Prices



Cegeka Cost Model



THANKS YOU FOR YOUR TIME



M E T S I

T E C H N O L O G I E S