

Opensource Infrastructure Cloud Automation solution

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viapps

Summary

- Current Scenario
- What is Viapps?
- What does Viapps allow you to do?
- Viapps architecture
- Viapps components
- Viapps network services catalog
- Screenshots
- Viapps professional services

Viapps solution

- Another Opensource initiative of AGS Group in Dec 2011
- 2 year+ of active development
- Enterprise Virtual Appliance Factory solution
- Enterprise support services

AGS |
Global Services

Current Scenario

- The number of services in data centers is increasing
- Virtualization infrastructure in data centers is very high
- The degree of implementation of “Cloud Automation” solutions in enterprise is still low
- The need to optimize time and money in the process of installation, configuration, maintenance and service management in data centers is very high
- All companies use basic network infrastructure services like Firewalls, DNS/DHCP/NTP servers, mail Relays, IP Load Balance, proxys Web,...

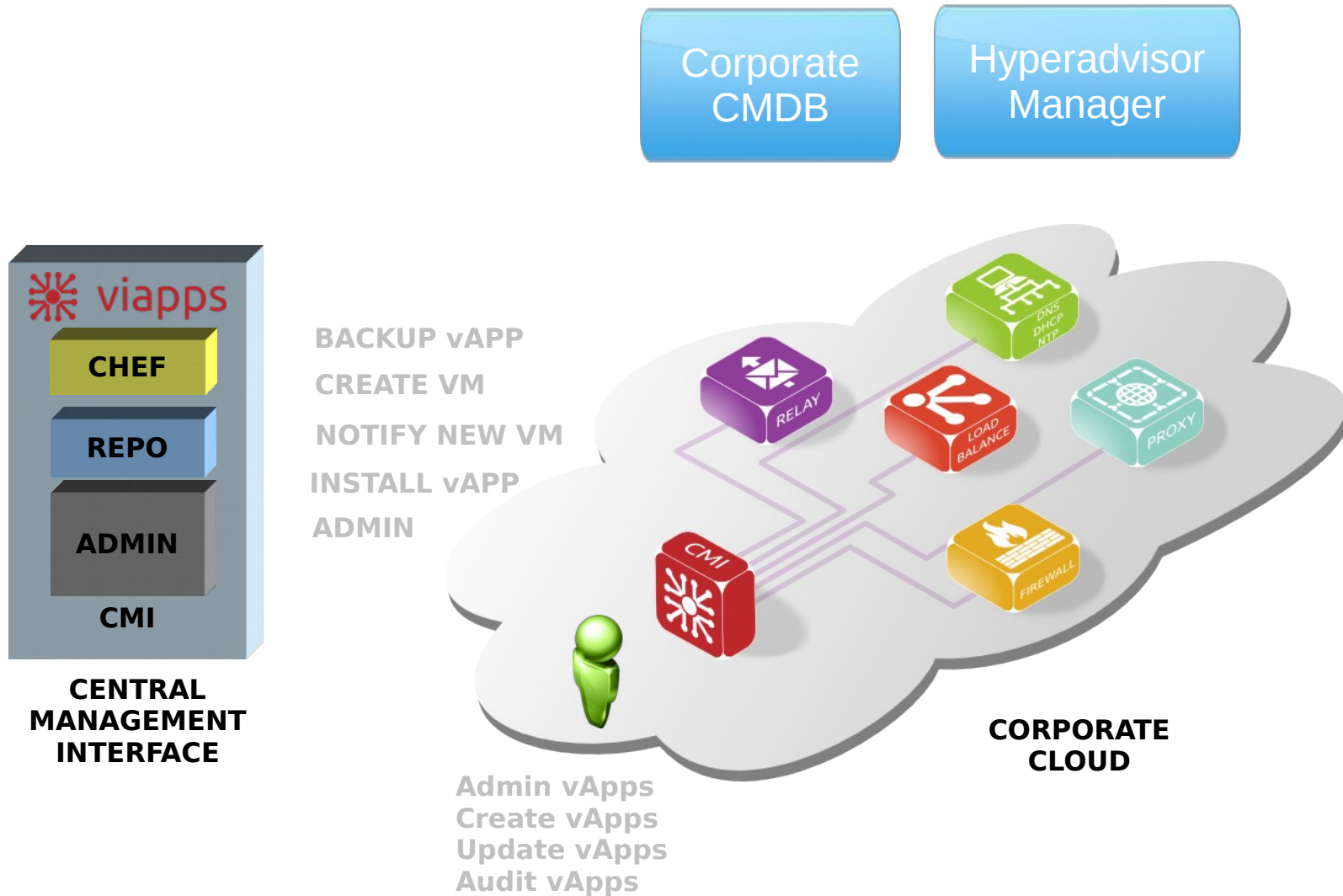
What is Viapps?

- It is an automation live cycle solution of infrastructure services on cloud environments
- It allows to create, install, configure, update, manage, monitor and audit network infrastructure services like Firewalls, DNS/DHCP/NTP Servers, HTTP Proxy, SMTP Gateways and IP LoadBalance
- Based on opensource components Chef Server and our own development
- It can be deployed on any cloud/virtualization environment, private Clouds, public Clouds or hybrid Clouds
- Extensible, new functionalities and services can be incorporated through new module development
- It is based on a RESTful API, allowing it to be integrated with third party platforms

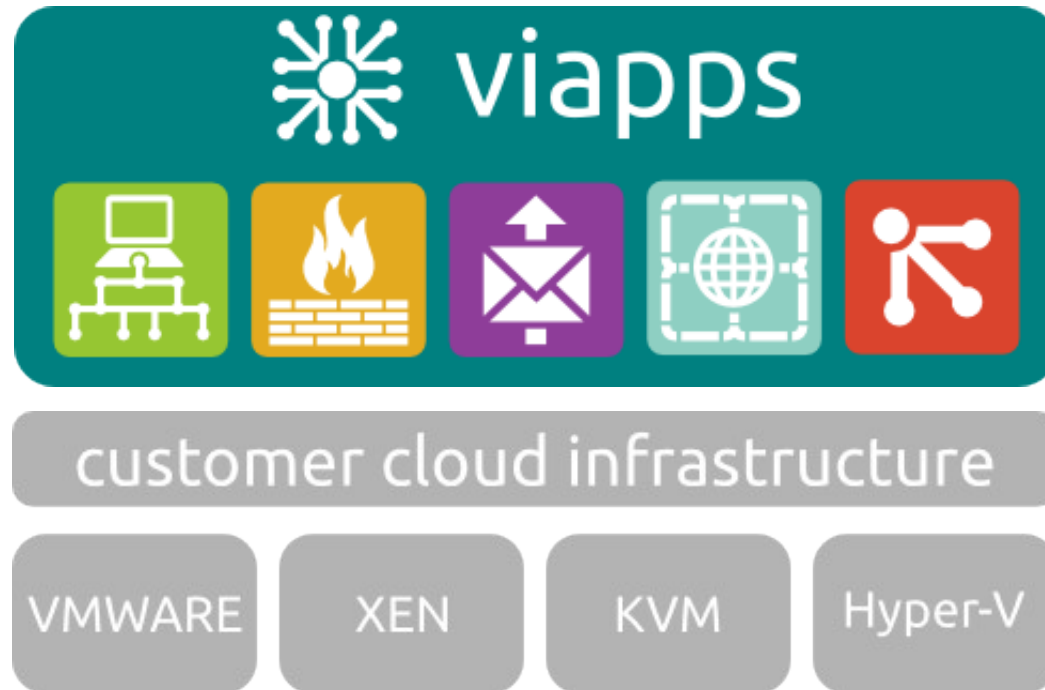
What does Viapps allow you to do

- Fast and easy deployment of infrastructure services
- Global deployment and local management. It allows to delegate management to local administrators
- Virtual Appliance Full life cycle support
- Configuration and security management of network services
- Maximizing the benefits of the cloud in a corporation
- Improving the productivity of system and network administrators
- Very easy deployment of opensource infrastructure services very easy, allowing corporates to save time and money in resources and licenses

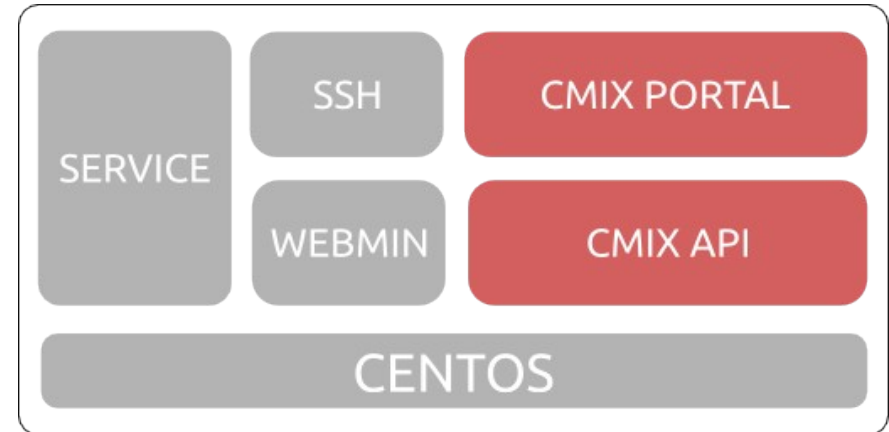
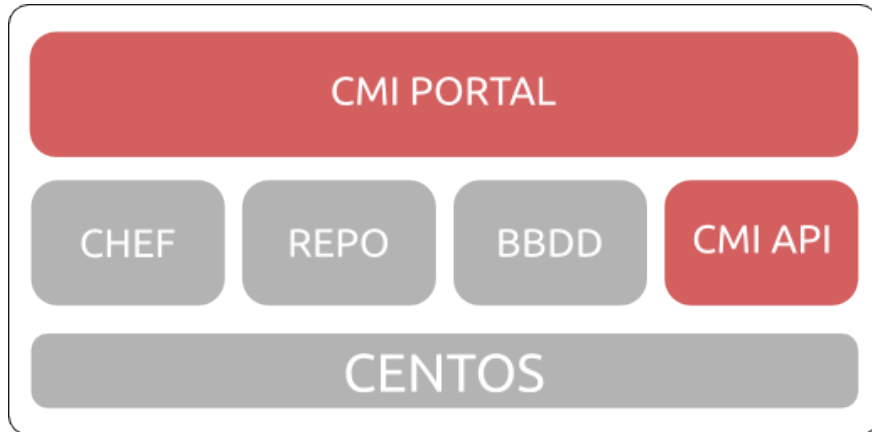
Viapps general overview



Viapps solution



Main components of Viapps

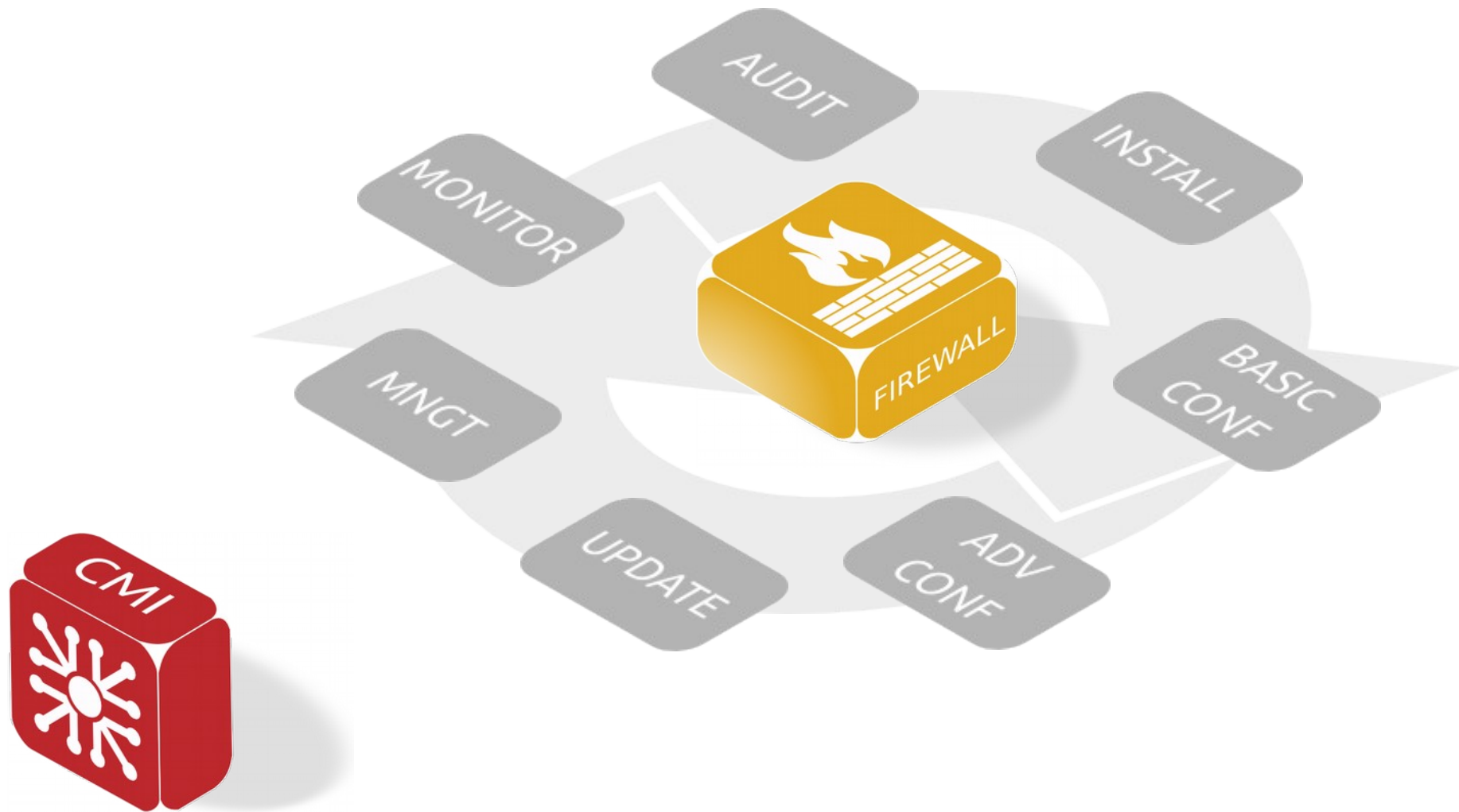


Central Management Interface (CMI)



Service Nodes (CMIX)

Viapps solution. Full Life Cycle support



Full life cycle support

- **Install:** The supply process begins from the CMI, and it relies on Chef Server to send all required recipes to VM in order to install the firewall server
- **Basic Configuration:** The configuration needed to start working. This is executed by Chef Server with data provided by CMI.
- **Advanced Configuration:** Applying rules by default, applying security policies, providing interfaces, paths,... It will all will be execute from CMI

Full life cycle support

- **Update:** Applying every kind of updating to the software base, OS as well as Applications like shorewall and others..... Recipes will be sent from Chef Server. Private RPM repository will be used.
- **Administration:** OS as well as Firewall Service configuration management. Creation of rules, objects, attributes, etc...
- **Monitoring:** Platform and Service Monitoring, performance trending, updating status, etc...
- **Audit:** Logs concentration of the different nodes, validating configuration, access, etc...

Flavors catalog available today

- **Managed Firewall:** Statefull Firewall based on iptables and shorewall. With central management interface, including objects and rules shared by any firewall node
- **HTTP Proxy:** HTTP Proxy Server based on Squid software. It is ready to act as reverse proxy to accelerate content or direct proxy to allow internet access to an internal network.
- **SMTP Gateway:** Mail Relay Server based on Postfix software
- **IP Load Balance:** IP Load Balance service based on Linux Virtual Server (IPVS), support for TCP/UDP protocol,...
- **DNS/DHCP/NTP Server:** DNS/DHCP/NTP Server based on bind and isc dhcp software. It is ready to support from simple architectures to complex ones with multiple nodes.
- [more to come...]

Viapps Releases



- GNU v2 license
- Open roadmap
- Community driven
- Support services available



- Certified stack
- Long term support
- Enterprise ready
- Advance features like, cluster support, ...

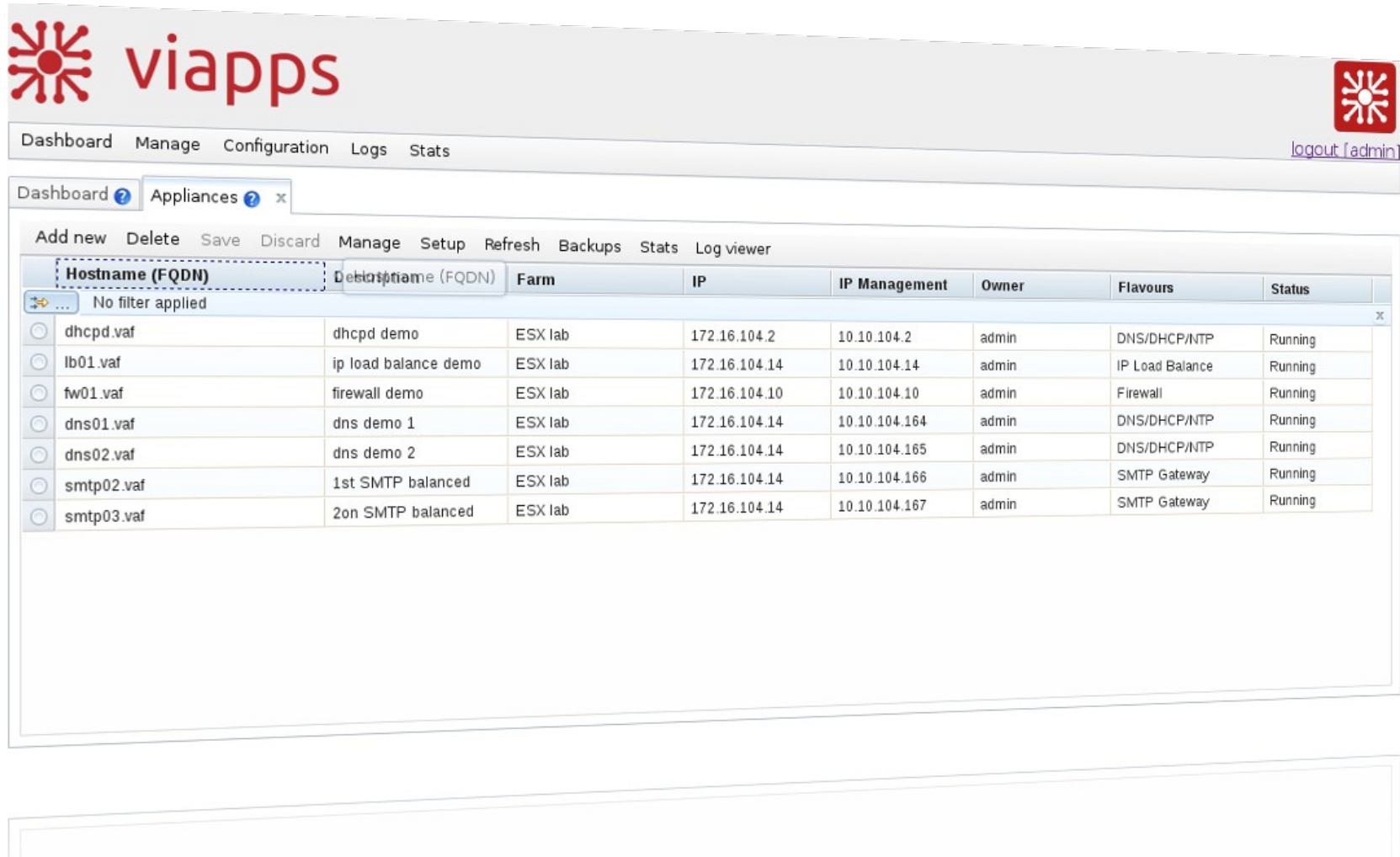


- Instant access to viapps functionality
- Pay per use
- All the advantages of Enterprise Edition

Main Dashboard



CMI Screenshots



The screenshot displays the viapps management interface. At the top, there is a navigation bar with the viapps logo and a menu containing 'Dashboard', 'Manage', 'Configuration', 'Logs', and 'Stats'. A 'logout [admin]' link is visible in the top right corner. Below the navigation bar, there is a breadcrumb trail: 'Dashboard > Appliances'. The main content area features a toolbar with actions: 'Add new', 'Delete', 'Save', 'Discard', 'Manage', 'Setup', 'Refresh', 'Backups', 'Stats', and 'Log viewer'. A table lists the deployed VAPPs with the following columns: Hostname (FQDN), Description (FQDN), Farm, IP, IP Management, Owner, Flavours, and Status. The table contains 8 rows of data, all with a 'Running' status.

Hostname (FQDN)	Description (FQDN)	Farm	IP	IP Management	Owner	Flavours	Status
dhcpd.vaf	dhcpd demo	ESX lab	172.16.104.2	10.10.104.2	admin	DNS/DHCP/NTP	Running
lb01.vaf	ip load balance demo	ESX lab	172.16.104.14	10.10.104.14	admin	IP Load Balance	Running
fw01.vaf	firewall demo	ESX lab	172.16.104.10	10.10.104.10	admin	Firewall	Running
dns01.vaf	dns demo 1	ESX lab	172.16.104.14	10.10.104.164	admin	DNS/DHCP/NTP	Running
dns02.vaf	dns demo 2	ESX lab	172.16.104.14	10.10.104.165	admin	DNS/DHCP/NTP	Running
smtp02.vaf	1st SMTP balanced	ESX lab	172.16.104.14	10.10.104.166	admin	SMTP Gateway	Running
smtp03.vaf	2on SMTP balanced	ESX lab	172.16.104.14	10.10.104.167	admin	SMTP Gateway	Running

Management of deployed VAPPs

CMI Screenshots

The screenshot displays the viapps web interface. At the top left is the viapps logo. The navigation menu includes Dashboard, Manage, Configuration, Logs, and Stats. The user is logged in as 'admin' with a 'logout' link. The current page is the 'Setup' step of the VAPPs installation wizard, showing a progress bar at 0%. The form contains the following fields:

- Hostname (FQDN): proxy.vaf
- Description: Proxy lab
- IP assigned: 192.168.104.2
- IP Management: 10.10.104.14
- Farm assigned: ESX lab
- Mail request to: javier.gonzalez@agsgroup.net
- VAPP flavour: HTTP Proxy
- Connection IP: (empty)
- Service IP #1: (empty)
- Service IP #2: (empty)

There are 'Save' and 'Save & next' buttons at the bottom left. A dialog box on the right asks 'Let the system manage the registration process:' with 'Yes' and 'No' radio buttons. An illustration of a person climbing stairs labeled 'STEP 1' is on the right side of the form.

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New VAPPs Installation Wizard

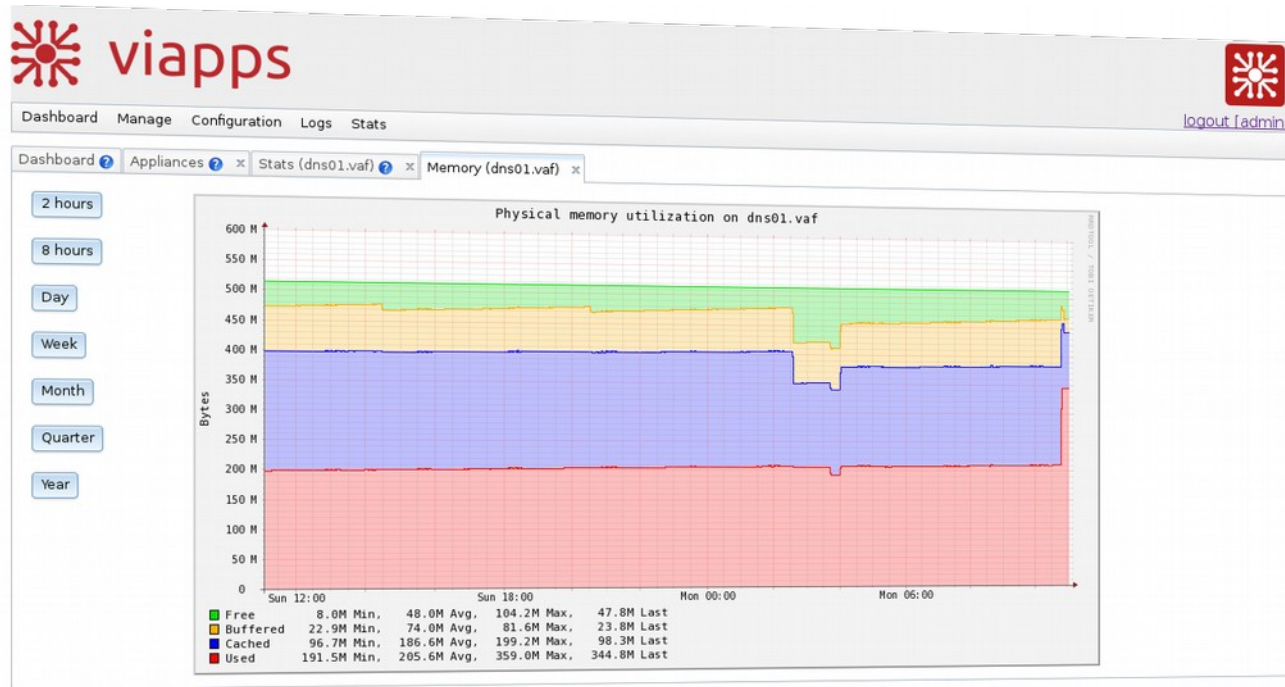
CMI Screenshots

The screenshot displays the viapps web interface. At the top, there is a navigation menu with 'Dashboard', 'Manage', 'Configuration', 'Logs', and 'Stats'. Below this, there are tabs for 'Dashboard', 'Appliances', and 'Backups (lb01.vaf)'. The main content area shows a table of backup records. The table has columns for 'Name', 'Timestamp', 'Result', and 'Link'. The data rows show backup entries for 'VAPP_ID7_BK0' from 3/28/13 to 4/8/13, all with a status of 'ok'. The interface also includes a 'Save filter' button and a 'No filter applied' message. At the bottom of the page, there is a footer with copyright information: 'Copyright AGS 2012 - Report bug/suggestion - Rev. 1313'.

Name	Timestamp	Result	Link
VAPP_ID7_BK0	3/28/13	ok	backup-20130328040009.tgz
VAPP_ID7_BK0	3/29/13	ok	backup-20130329040010.tgz
VAPP_ID7_BK0	3/30/13	ok	backup-20130330040005.tgz
VAPP_ID7_BK0	3/31/13	ok	backup-20130331040006.tgz
VAPP_ID7_BK0	4/1/13	ok	backup-20130401040012.tgz
VAPP_ID7_BK0	4/2/13	ok	backup-20130402040005.tgz
VAPP_ID7_BK0	4/3/13	ok	backup-20130403040008.tgz
VAPP_ID7_BK0	4/4/13	ok	backup-20130404040016.tgz
VAPP_ID7_BK0	4/5/13	ok	backup-20130405040007.tgz
VAPP_ID7_BK0	4/6/13	ok	backup-20130406040009.tgz
VAPP_ID7_BK0	4/7/13	ok	backup-20130407040012.tgz
VAPP_ID7_BK0	4/8/13	ok	backup-20130408040017.tgz

Backup management of deployed VAPPs

CMI Screenshots



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Performance monitor of a VAPPs

CMI Screenshots



Performance monitor of a VAPPs

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Log viewer of a VAPPs

CMI XPRESS – DNS/DHCP/NTP Screenshots

The screenshot shows the 'Setup DNS' configuration page in the viapps interface. The page is titled 'Setup DNS' and includes a navigation menu with 'Dashboard', 'Setup', 'Manage', 'Configuration', and 'Logs'. The current page is 'Setup DNS', which is shown in a browser tab. The interface is for configuring a DNS server for the domain 'dns01.vaf' (IP: 10.10.104.164/CMI_IX01/v1.0.rc1.1313).

Zone type for this server? Master Slave Forward

Master Zone Domain: dns01.vaf !

Zone Name: !

Slave Zone Masters: !

Zone Name: !

Forward Zone Forwarders: !

Role for this server? Authoritative Resolver

Allow Recursion: Yes No

Allow Query ACL: localhost

Allow Transfer: localhost

Unconditional Forwarders: any
* Semicolon separated list

DNS custom root.hints: Internet Internal

Buttons: Save, Load sample data

DNS/DHCP/NTP VAPPs configuration Wizard

CMI XPRESS – DNS/DHCP/NTP Screenshots

The screenshot displays the viapps VAPP Dashboard for the instance 'dns01.vaf' (IP: 10.10.104.164/CMI_X01A1.0.rc1.1313). The dashboard includes a navigation menu (Dashboard, Setup, Manage, Configuration, Logs) and a breadcrumb trail (Dashboard > Setup DNS > Setup DHCP). The main content area is divided into three sections:

- VAPP Status:** Shows a '99% pass' result with a green checkmark. It includes buttons for 'Run quality check' and 'Reset Checkpoint'. A 'Step 5 completed' message with a large green checkmark and a 'Refresh' button is also present.
- VAPP Summary: DNS/DHCP/NTP:** A summary table showing the following counts:

Category	Count
DHCP subnets	0
DHCP reserved hosts	0
NTP servers	3
NTP restrictions	6
NTP peers	0
DNS Zones master zones	5
DNS Zones slave zones	0
DNS Zones forward zones	0
- CPU usage (%):** A line graph showing CPU usage over time, with a peak of approximately 3% at 17:46.

VAPP Dashboard with status and summary information

CMI XPRESS – DNS/DHCP/NTP Screenshots

The screenshot displays the viapps web interface for managing DNS records. The top navigation bar includes 'Dashboard', 'Setup', 'Manage', 'Configuration', and 'Logs'. The current page is 'Records (mydomain.vaf)'. A table lists DNS records with columns for 'Num', 'Name', 'Class', 'Type', and 'Values'. A modal dialog is open for editing SOA information, showing fields for 'Refresh time', 'Transfer retry time', 'Expiry time', 'Negative cache time', 'Email', and 'Nameserver'. A 'Check Records File' button is visible on the right side of the interface.

Num	Name	Class	Type	Values
1	mydomain.vaf.	IN	SOA	localhost. admin.mydomain.com 1368434986 10800 3600 604800 38400
2	mydomain.vaf.	IN	NS	localhost.
3	www.mydomain.vaf.	IN	A	192.168.104.10

Refresh time: 10800 Seconds
Transfer retry time: 3600 Seconds
Expiry time: 604800 Seconds
Negative cache time: 38400 Seconds
Email: admin@myemail.vaf
Nameserver: 192.168.1.1

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Manage DNS SOA information

CMI XPRESS – DNS/DHCP/NTP Screenshots

The screenshot shows the viapps web interface for managing DNS records. The top navigation bar includes 'Dashboard', 'Setup', 'Manage', 'Configuration', and 'Logs'. The user is logged in as 'admin' and is viewing the 'Records (mydomain.vaf)' page. A table lists existing records:

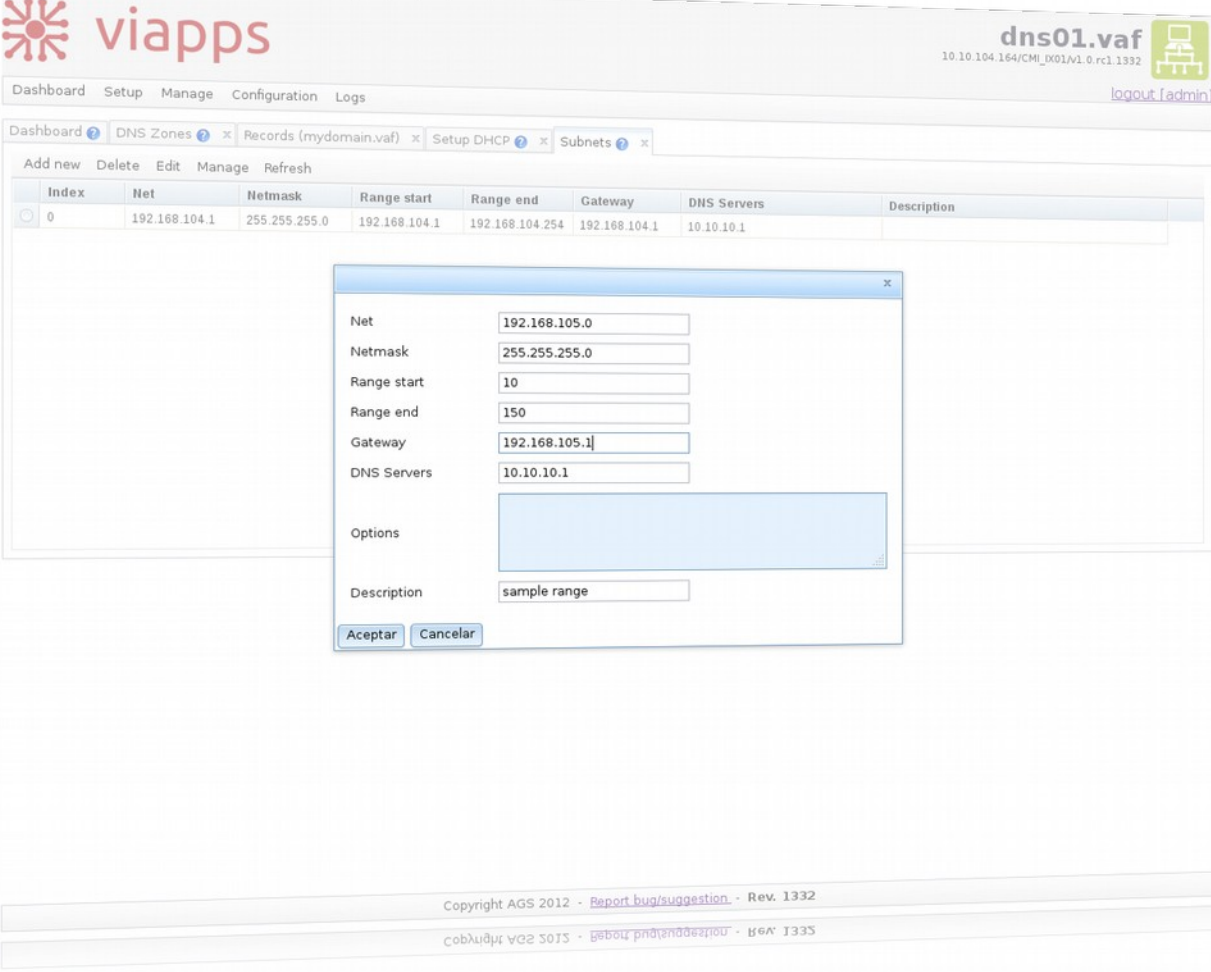
Num	Name	Class	Type	Values
1	mydomain.vaf.	IN	SOA	localhost. admin.mydomain.com 1368434986 10800 3600 604800 38400
2	mydomain.vaf.	IN	NS	localhost.
3	www.mydomain.vaf.	IN	A	192.168.104.10

A modal form is open for adding a new record. The 'Name' field contains 'ftp' and the domain is '.mydomain.vaf'. The 'Type' dropdown menu is open, showing options: A, CNAME, PTR, AAAA, NS, MX, and SRV. An 'Acceptar' button is visible at the bottom left of the modal. To the right of the table, there is a green checkmark icon and a 'Check Records File' button.

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Add a new DNS entry

CMI XPRESS – DNS/DHCP/NTP Screenshots



The screenshot shows the viapps web interface for managing DNS and DHCP. The main page displays a table of DHCP ranges. A modal dialog is open for adding a new range.

viapps dns01.vaf
10.10.104.164/CMI_X01/v1.0.rc1.1332

Dashboard Setup Manage Configuration Logs [logout \[admin\]](#)

Dashboard DNS Zones Records (mydomain.vaf) Setup DHCP Subnets

Add new Delete Edit Manage Refresh

Index	Net	Netmask	Range start	Range end	Gateway	DNS Servers	Description
0	192.168.104.1	255.255.255.0	192.168.104.1	192.168.104.254	192.168.104.1	10.10.10.1	

Modal Dialog Fields:

- Net: 192.168.105.0
- Netmask: 255.255.255.0
- Range start: 10
- Range end: 150
- Gateway: 192.168.105.1
- DNS Servers: 10.10.10.1
- Options: (empty)
- Description: sample range

Acceptar Cancelar

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Add a new DHCP range

CMI XPRESS – Firewall Screenshots

The screenshot displays the viapps Firewall Dashboard. At the top left is the viapps logo. The top right shows the instance name 'fw01.vaf' and IP '10.10.104.10/CMI_X01/V1.0.rc1.1332', along with a 'logout [admin]' link. The main navigation bar includes 'Dashboard', 'Manage', 'Configuration', and 'Logs'. Below this is a breadcrumb trail: 'Dashboard > Zones > Interfaces > Policies > Rules > Masquerading Rules > NAT'. The dashboard content is divided into three main sections:

- VAPP Status:** Shows a '99% pass' result with a green checkmark. It includes buttons for 'Run quality check' and 'Reset Checkpoint'. A 'Step 5 completed' message with a large green checkmark and a 'Refresh' button is also present.
- CPU usage (%):** A line graph showing CPU usage over time from 10:49 to 10:58. The usage peaks at approximately 3% around 10:50 and 10:52.
- Zones & Rules:** A summary box listing: 7 firewall zones, 6 policies, and 8 rules.

At the bottom of the dashboard, there are two footer lines: 'Copyright AGS 2012 - Report bug/suggestion - Rev. 1332' and its Greek translation.

Firewall Dashboard

CMI XPRESS – Firewall Screenshots

The screenshot displays the viapps firewall management interface. At the top left is the viapps logo. At the top right, the instance name 'fw01.vaf' and IP address '10.10.104.10/CMI_X01/v1.0.rc1.1332' are shown, along with a 'logout [admin]' link. Below the header is a navigation menu with 'Dashboard', 'Manage', 'Configuration', and 'Logs'. The main content area shows a breadcrumb trail: 'Dashboard > Zones > Interfaces > Policies > Rules > Masquerading Rules > NAT'. Below this is a toolbar with actions: 'Add new', 'Delete', 'Edit', 'Save new order', 'Discard new order', 'Refresh', and 'Deploy'. The main table lists the configured zones:

Name	Name	Options	IN Options	OUT Options	Comment
sede2	ipv4				
INET	ipv4				
sede1	ipv4				
ISP2	ipv4				
TRUST	ipv4				
DMZ	ipv4				
fw	firewall				

At the bottom of the interface, there are two footer lines: 'Copyright AGS 2012 - Report bug/suggestion - Rev. 1332' and its Greek equivalent.

Firewall Zones management

CMI XPRESS – Firewall Screenshots



fw01.vaf
10.10.104.10/CMI_DX01/v1.0.rc1.1332



Dashboard Manage Configuration Logs

[logout \[admin\]](#)

Dashboard ? Zones ? x Interfaces ? x Policies ? x Rules ? x Masquerading Rules ? x NAT ? x

Add new Delete Edit Save new order Discard new order Refresh Deploy

Interface identifier	Interface identifier	Options	Comment
lo	ISP2		
eth2	INET		
eth1	DMZ		options
eth0	TRUST	dhcp,routefilter	

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Firewall interfaces management

CMI XPRESS – Firewall Screenshots



fw01.vaf
10.10.104.10/CMI_X01/v1.0.rc1.1332



[logout \[admin\]](#)

Dashboard Manage Configuration Logs

Dashboard ? Zones ? x Interfaces ? x Policies ? x Rules ? x Masquerading Rules ? x NAT ? x

Add new Delete Edit Save new order Discard new order Refresh Deploy

Source identifier	Source identifier	Policy	Log Level	Traffic limit	Traffic burst	Comment
all	INET	ACCEPT		3	3	
DMZ	all	ACCEPT				
fw	all	ACCEPT				
TRUST	all	ACCEPT				
all	all	REJECT	info			
INET	all	DROP	info			

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Firewall Policies management

CMI XPRESS – Firewall Screenshots



viapps

fw01.vaf

10.10.104.10/CMI_XP01/v1.0.rc1.1332



Dashboard Manage Configuration Logs

[logout \[admin\]](#)

Dashboard Zones Interfaces Policies Rules Masquerading Rules NAT

Add new Delete Edit Save new order Discard new order Refresh Add default rule Deploy

Action	Source	Destination	Protocol	Destination port	Source port	Original destination	Rate limit	Comment
ACCEPT	fw:127.0.0.1	all	all					
ACCEPT	TRUST:10.10.104.1	all	all					
ACCEPT	INET:mailservers	DMZ	tcp	webtraffic				
ACCEPT	INET	DMZ:lb01dmz	tcp	ssh				
DNAT	INET	DMZ:px01dmz	tcp	dnstransfer				
DNAT	INET	10.10.104.12 DMZ:px01dmz	udp	dnsquery				
DNAT	INET	10.10.104.166 DMZ:px01dmz	udp	dnsquery				
DNAT	INET	10.10.104.167 DMZ:smt00dmz	tcp	smtp				
ACCEPT	all	fw	tcp	ssh				

Values:
10.10.104.12
10.10.104.166
10.10.104.167

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Firewall Rules management

CMI XPRESS – Firewall Screenshots

The screenshot shows the viapps firewall management interface. The main window displays a list of firewall rules with columns for Action, Source, Destination, Protocol, Destination port, Source port, Original destination, Rate limit, and Comment. A 'Cmdb Objects' dialog box is open, showing a selection interface for objects. The dialog has a 'Selected Objects' section with fields for Source, Destination, and Protocol. Below this is a table of objects:

Type	Public name	Public description	Technical name	To Firewall	Search
Host	cmi2-trust	CMi2 (test, trust)	10.10.104.3	cmi2trust	cm
Host	fw01-inet	fw public interface	192.168.104.157	fw01inet	fw0
Host	fw01-dmz	fw dmz interface	172.16.104.10	fw01dmz	fw0
Host	fw01-trust	fw trust interface	10.10.104.10	fw01trust	fw0
Host	smtp00-dmz	smtp00 service interface	172.16.104.12	smtp00dmz	sm
Host	smtp00-trust	smtp00 trust interface	10.10.104.12	smtp00trust	sm
Host	px01-dmz	proxy01 service interface	172.16.104.11	px01dmz	px0

At the bottom of the dialog, there are buttons for 'Add object', 'Apply', and 'Cancel'. The footer of the interface contains copyright information: 'Copyright AGS 2012 - Report bug/suggestion - Rev. 1332' and its Greek equivalent.

Firewall Add Rules with objects from Cmdb

CMI XPRESS – Firewall Screenshots

The top screenshot shows the 'Outgoing interface' configuration table in the viapps interface. The table has columns for 'Outgoing interface', 'Network', 'SNAT address', 'Protocol', 'Restrict to ports', and 'IPsec options'. Two rows are visible, both for the 'eth2' interface.

Outgoing interface	Network	SNAT address	Protocol	Restrict to ports	IPsec options
eth2	172.16.104.0/24	192.168.104.157			
eth2	10.10.104.0/24	192.168.104.157			

The bottom screenshot shows the 'Interface identifier' configuration table. The table has columns for 'Interface identifier', 'External address', 'Internal address', 'Active for all hosts', and 'Active for firewall system'. One row is visible for the 'eth2' interface.

Interface identifier	External address	Internal address	Active for all hosts	Active for firewall system
eth2	192.168.104.158	172.16.104.14	yes	no

Firewall Masquerading and NAT management

Viapps Professional Services

- **Cloud Automation Consultancy**

- Setup an architecture and a methodology that better fits your customer needs, trying to maximize benefits of cloud technologies.
- Offers a full suite of professional services and training to help your organization get on the road to success with Viapps solution. Our expertise in deploying complex enterprise infrastructure can help your team build strong skills and positions you to independently succeed long term.

- **Installation**

- Setup Viapps in the customer site with services like installation, configuration, customization or optimization the solution to meet your needs

- **Support service levels**

- Depending of the criticality of the service, there are different types of support services, like email, 8x5 or 24x7

- **Viapps development**

- Develop specific functionalities that our customer is interested, like integration with 3rd party platforms, add new services or flavors to the solution catalog,...

- **Training and Skill Development**

- Our experts can train your team with an on-site Viapps Fundamentals class.

more info about Viapps

<http://viapps.org>

<http://youtube.com/viapps>

<https://redmine.viapps.org>

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