

SOLUCIONES CON CHR *CLOUD HOSTED ROUTER*

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mikrotik xperts



consulting
Soluciones en Telecomunicaciones

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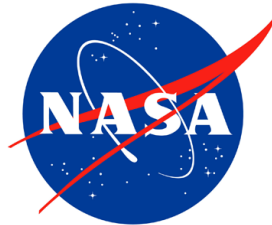
LLEGAMOS
DONDE OTROS NO LLEGAN

Pioneros en brindar conectividad a los rincones más recónditos de la Patagonia Chilena

Nuestros clientes

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Nuestros Clientes



Austro proveedor oficial de NASA en Magallanes. por segundo año consecutivo, **NASA** ha confiado en nuestros altos estándares de calidad al momento de elegir un proveedor de internet para llevar a cabo sus proyectos investigativos en el continente Antártico.



Temas

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- ¿Qué es CHR?
 - ▣ Licenciamiento
- ¿Qué es AWS?
 - ▣ Ejemplos de implementaciones
- Sistemas de virtualización
- Soluciones con CHR
 - ▣ Laboratorios en GNS3

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¿Qué es CHR?

¿Qué es CHR?

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- Es una versión de RouterOS diseñada especialmente para funcionar **de forma óptima** sobre sistema de virtualización
- Soporta **arquitecturas x86 y 64-bit**
- Puede ser empleado sobre los sistemas mas comunes de virtualización
 - ▣ Vmware ESX
 - ▣ XEN Server
 - ▣ KVM, QUEMU
 - ▣ VirtualBox
 - ▣ Hyper-V

Licenciamiento CHR

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□ Basado en licencia L6 para x86

Level number	0 (Trial mode)	1 (Free Demo)	3 (WISP CPE)	4 (WISP)	5 (WISP)	6 (Controller)
Price	no key ↗	registration required ↗	volume only ↗	\$45	\$95	\$250
Initial Config Support	-	-	-	15 days	30 days	30 days
Wireless AP	24h trial	-	-	yes	yes	yes
Wireless Client and Bridge	24h trial	-	yes	yes	yes	yes
RIP, OSPF, BGP protocols	24h trial	-	yes(*)	yes	yes	yes
EoIP tunnels	24h trial	1	unlimited	unlimited	unlimited	unlimited
PPPoE tunnels	24h trial	1	200	200	500	unlimited
PPTP tunnels	24h trial	1	200	200	500	unlimited
L2TP tunnels	24h trial	1	200	200	500	unlimited
OVPN tunnels	24h trial	1	200	200	unlimited	unlimited
VLAN interfaces	24h trial	1	unlimited	unlimited	unlimited	unlimited
HotSpot active users	24h trial	1	1	200	500	unlimited
RADIUS client	24h trial	-	yes	yes	yes	yes
Queues	24h trial	1	unlimited	unlimited	unlimited	unlimited
Web proxy	24h trial	-	yes	yes	yes	yes
User manager active sessions	24h trial	1	10	20	50	Unlimited
Number of KVM guests	none	1	Unlimited	Unlimited	Unlimited	Unlimited

Licenciamiento CHR

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- 60 días de trial full
- Costos
 - ▣ free
 - ▣ p1 perpetual-1 (\$45)
 - ▣ p10 perpetual-10 (\$95)
 - ▣ p-unlimited perpetual-unlimited (\$250)

Licence

System ID: 6R1ZP/utuJ

Level: P1

Next Renewal At: Jan/10/2016 21:59:59

Deadline At: Feb/09/2016 21:59:59

Limited Upgrades

OK

Generate New ID

Renew Licence

Renew Licence

Account: mymikrotikcomaccount

Password: *****

Level: P1

Start

Stop











Close

done

Foro MikroTik

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□ <http://forum.mikrotik.com/>

	RouterOS Virtual Labs by kasparskr » Wed Aug 19, 2015 1:21 am » in General	 	62	22937
	Cloud Hosted Router by normis » Mon Jul 27, 2015 2:56 pm	 ...     	453	63123



normis

MikroTik Support

MikroTik

Posts: 20696

Joined: Fri May 28, 2004 11:04 am

Reputation: 154

First RouterOS version: 2.3.18

Location: Riga, Latvia

Cloud Hosted Router

by **normis** » Mon Jul 27, 2015 2:56 pm

We are releasing a test version of an exciting new feature - **Cloud Hosted Router (CHR)**.

It is a Virtual Machine image of RouterOS that has **full functionality** of RouterOS without any kind of conventional RouterOS license, with the limitation of **1Mbit per interface**, in future, we will offer unlimited speed with a paid subscription. This allows you to use RouterOS in training classes, for testing, for experimentation or any other purpose, without the need for 24h trial or Demo license.

We provide a generic (RAW) format IMG, VMDK file for VMWare, VDI for VirtualBox and VHDX for Hyper-V. These are ready to use virtual disk images (add as a virtual hard drive to your VM). These are NOT templates for importing.

qemu commands for converting images (if you need to convert to another format)

RAW to VMWare:

Code: Select all

```
qemu-img convert -f raw -O vmdk chr-6.31rc9.img chr-6.31rc9.vmdk
```

RAW to VirtualBox:

Code: Select all

```
qemu-img convert -f raw -O vdi chr-6.31rc9.img chr-6.31rc9.vdi
```

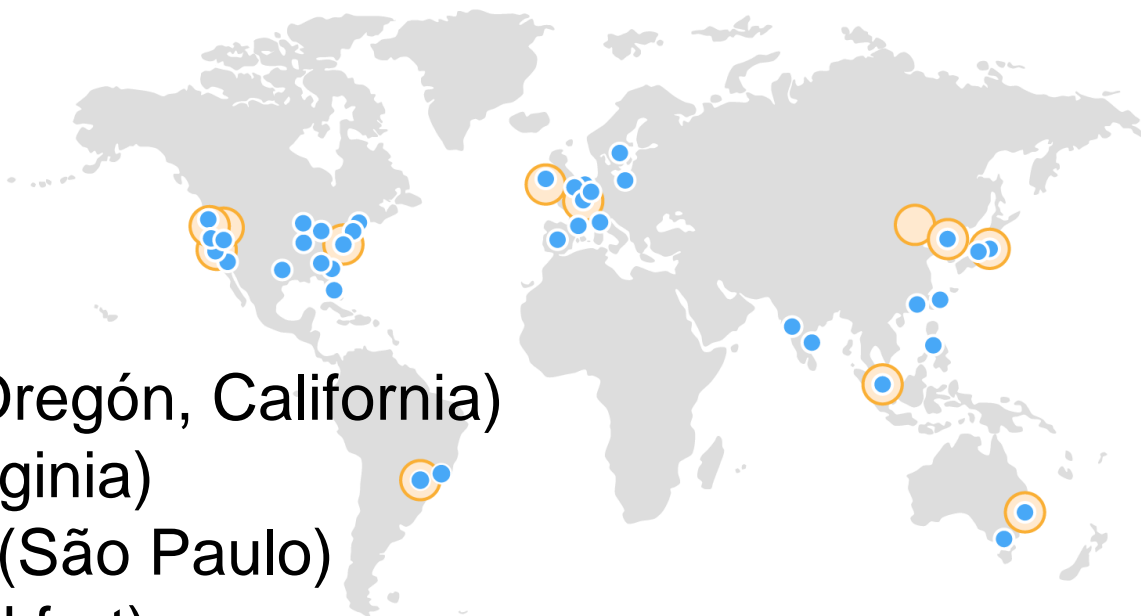
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¿Qué es AWS?

¿Qué es AWS?

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- Amazon Web Services
 - ▣ Servicios globales de informática
 - ▣ Almacenamiento
 - ▣ Bases de datos
 - ▣ Análisis
 - ▣ Aplicaciones
- Zonas
 - ▣ EE.UU. Oeste (Oregón, California)
 - ▣ EE.UU. Este (Virginia)
 - ▣ América del Sur (São Paulo)
 - ▣ UE (Dublín, Frankfurt)
 - ▣ Asia Pacífico (Seúl, Singapur, Sídney, Tokio)
 - ▣ China (Pekín)








Servicios AWS

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Compute

-  **EC2**
Virtual Servers in the Cloud
-  **EC2 Container Service**
Run and Manage Docker Containers
-  **Elastic Beanstalk**
Run and Manage Web Apps
-  **Lambda**
Run Code in Response to Events



Storage & Content Delivery

-  **S3**
Scalable Storage in the Cloud
-  **CloudFront**
Global Content Delivery Network
-  **Elastic File System** PREVIEW
Fully Managed File System for EC2
-  **Glacier**
Archive Storage in the Cloud
-  **Import/Export Snowball**
Large Scale Data Transport
-  **Storage Gateway**
Hybrid Storage Integration

Database

-  **RDS**
Managed Relational Database Service
-  **DynamoDB**
Managed NoSQL Database
-  **ElastiCache**
In-Memory Cache
-  **Redshift**
Fast, Simple, Cost-Effective Data Warehousing
-  **DMS** PREVIEW
Managed Database Migration Service








Networking

-  **VPC**
Isolated Cloud Resources
-  **Direct Connect**
Dedicated Network Connection to AWS
-  **Route 53**
Scalable DNS and Domain Name Registration






Developer Tools

-  **CodeCommit**
Store Code in Private Git Repositories
-  **CodeDeploy**
Automate Code Deployments
-  **CodePipeline**
Release Software using Continuous Delivery




Management Tools

-  **CloudWatch**
Monitor Resources and Applications
-  **CloudFormation**
Create and Manage Resources with Templates
-  **CloudTrail**
Track User Activity and API Usage
-  **Config**
Track Resource Inventory and Changes
-  **OpsWorks**
Automate Operations with Chef
-  **Service Catalog**
Create and Use Standardized Products
-  **Trusted Advisor**
Optimize Performance and Security

Security & Identity

-  **Identity & Access Management**
Manage User Access and Encryption Keys
-  **Directory Service**
Host and Manage Active Directory
-  **Inspector** PREVIEW
Analyze Application Security
-  **WAF**
Filter Malicious Web Traffic
-  **Certificate Manager**
Provision, Manage, and Deploy SSL/TLS Certificates

Analytics

-  **EMR**
Managed Hadoop Framework
-  **Data Pipeline**
Orchestration for Data-Driven Workflows
-  **Elasticsearch Service**
Run and Scale Elasticsearch Clusters






Internet of Things

-  **AWS IoT**
Connect Devices to the Cloud








Game Development

-  **GameLift**
Deploy and Scale Session-based Multiplayer Games




Mobile Services

-  **Mobile Hub**
Build, Test, and Monitor Mobile Apps
-  **Cognito**
User Identity and App Data Synchronization
-  **Device Farm**
Test Android, FireOS, and iOS Apps on Real Devices in the Cloud
-  **Mobile Analytics**
Collect, View and Export App Analytics
-  **SNS**
Push Notification Service

Application Services

-  **API Gateway**
Build, Deploy and Manage APIs
-  **AppStream**
Low Latency Application Streaming
-  **CloudSearch**
Managed Search Service
-  **Elastic Transcoder**
Easy-to-Use Scalable Media Transcoding
-  **SES**
Email Sending and Receiving Service
-  **SQS**
Message Queue Service
-  **SWF**
Workflow Service for Coordinating Application Components

Enterprise Applications

-  **WorkSpaces**
Desktops in the Cloud
-  **WorkDocs**
Secure Enterprise Storage and Sharing Service
-  **WorkMail**
Secure Email and Calendaring Service

EC2

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Launch Instance Connect Actions

Filter by tags and attributes or search by keyword

<input type="checkbox"/>	Name	Instance ID	Instance Type	Availability Zone	Instance State	Status Checks	Public IP
<input type="checkbox"/>	AWS-CLI	i-6ad752d9	t2.micro	us-east-1a	stopped		
<input type="checkbox"/>	CRM AUSTRO	i-c3903770	t2.small	us-east-1a	stopped		
<input type="checkbox"/>	ubuntu - kakita	i-aa54c619	t2.nano	us-east-1a	stopped		
<input type="checkbox"/>	elastix	i-27c70194	t2.nano	us-east-1a	running	✔ 2/2 checks passed	
<input type="checkbox"/>	CHR2	i-d15f8362	t2.nano	us-east-1a	running	✔ 2/2 checks passed	
<input type="checkbox"/>	CRM TFNET	i-a0238113	t2.small	us-east-1a	stopped		
<input type="checkbox"/>	CHR3	i-3259d881	t2.nano	us-east-1a	stopped		
<input type="checkbox"/>	CHR1	i-b6b97f05	t2.nano	us-east-1a	running	✔ 2/2 checks passed	
<input type="checkbox"/>	Windows: Austro, Sambil, .NET v4	i-1876f6ab	t2.medium	us-east-1a	running	✔ 2/2 checks passed	
<input type="checkbox"/>	academy, helpdesk, MySQL	i-3bee05d4	t2.micro	us-east-1a	stopped		
<input type="checkbox"/>	Windows: dropbox	i-6608d1c6	t2.small	us-east-1a	running	✔ 2/2 checks passed	

Costos AWS EC2

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Linux	RHEL	SLES	Windows	Windows con SQL Standard	Windows con SQL Web
Windows con SQL Enterprise					
Región: EE.UU. Este (Norte de Virginia) ▾					
	vCPU	ECU	Memoria (GiB)	Almacenamiento de instancias (GB)	Uso de Linux/UNIX
Uso general – Generación actual					
t2.nano	1	Variable	0.5	Solo EBS	\$0.0065 por hora
t2.micro	1	Variable	1	Solo EBS	\$0.013 por hora
t2.small	1	Variable	2	Solo EBS	\$0.026 por hora
t2.medium	2	Variable	4	Solo EBS	\$0.052 por hora

5 USD / MES

Ejemplo CHR en AWS

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Interface List

Interface Ethernet EoIP Tunnel IP Tunnel GRE Tunnel VLAN VRRP Bonding LTE

Name	Type	L2 MTU	Tx	Rx	Tx Packet (p/s)	Rx Packet (p/s)	FP Tx	FP Rx	FP Tx Packet (p/s)	FP Rx Packet (p/s)
aws-chr2	L2TP Server Binding		50.9 Mbps	50.6 Mbps	8 337	8 336	0 bps	0 bps	0	0
aws-chr3	L2TP Server Binding		0 bps	0 bps	0	0	0 bps	0 bps	0	0
aws-scl	L2TP Server Binding		0 bps	0 bps	0	0	0 bps	0 bps	0	0
ether1	Ethernet		54.4 Mbps	53.4 Mbps	8 337	8 346	0 bps	0 bps	0	0

Bandwidth Test (Running)

Test To: 10.55.55.2

Protocol: udp

Local UDP Tx Size: 1500

Remote UDP Tx Size: 1500

Direction: both

TCP Connection Count: 20

Local Tx Speed: 50M bps

Remote Tx Speed: 50M bps

User: admin

Lost Packets: 0

Tx/Rx Current: 49.9 Mbps/49.9 Mbps

Tx/Rx 10s Average: 49.9 Mbps/49.9 Mbps

Tx/Rx Total Average: 49.9 Mbps/49.9 Mbps

Interface <aws-chr2>

Tx/Rx Rate: 50.9 Mbps / 50.6 Mbps

Tx/Rx Packet Rate: 8 337 p/s / 8 336 p/s

FP Tx/Rx Rate: 0 bps / 0 bps

FP Tx/Rx Packet Rate: 0 p/s / 0 p/s

Tx/Rx Bytes: 944.9 MiB / 977.1 MiB

Tx/Rx Packets: 1 300 822 / 1 351 241

Tx/Rx Drops: 1 / 0

Tx/Rx Errors: 0 / 0

enabled running slave Status: connected

Resources

Uptime: 16d 16:58:25

Free Memory: 408.3 MiB

Total Memory: 496.3 MiB

CPU: Intel(R)

CPU Count: 1

CPU Frequency: 2400 MHz

CPU Load: 4 %

Free HDD Space: 460.5 MiB

Total HDD Size: 527.8 MiB

Sector Writes Since Reboot: 8 057 688

Total Sector Writes: 8 057 689

Architecture Name: x86_64

Board Name: CHR

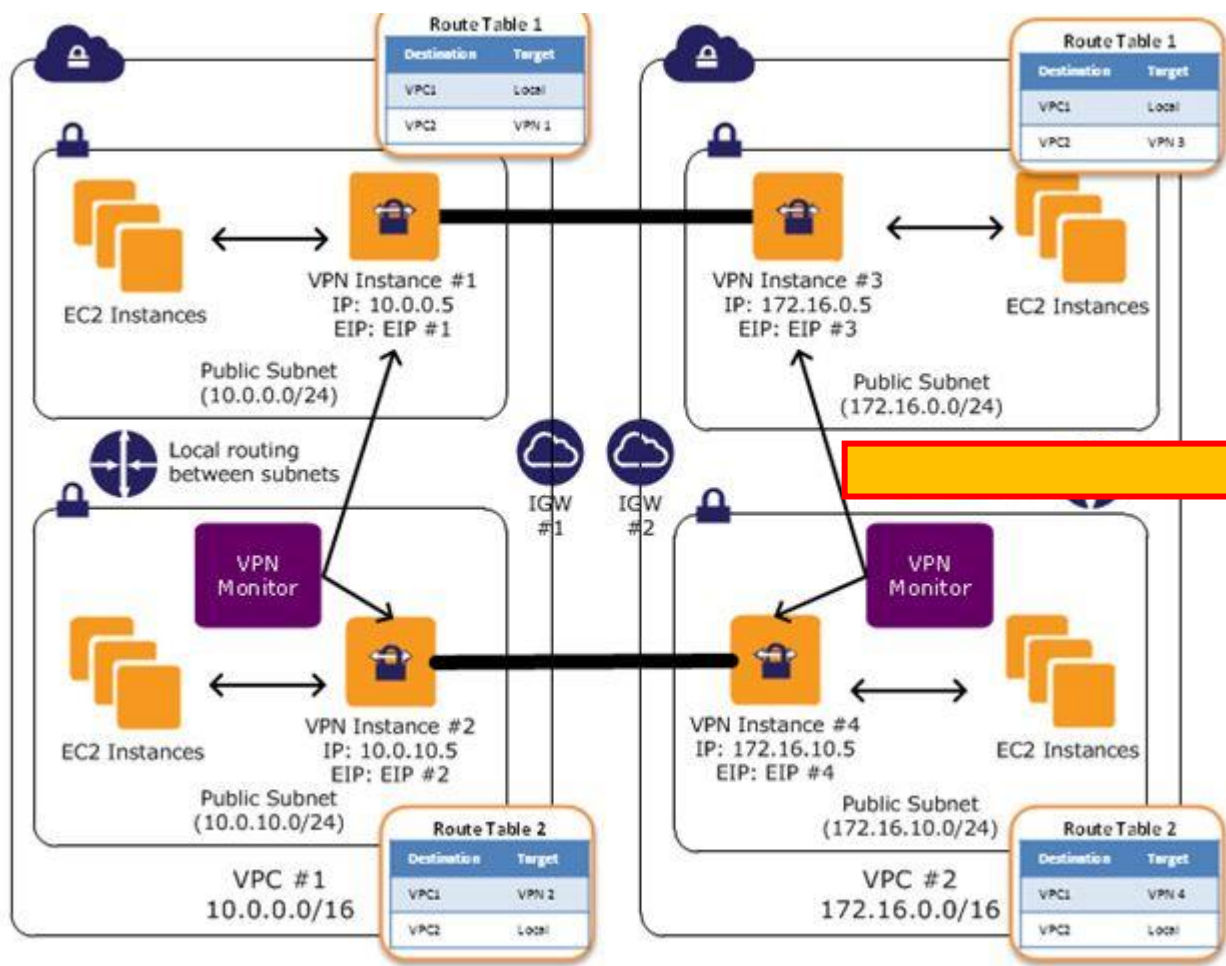
Version: 6.34 (stable)

Build Time: Jan/29/2016 10:25:47

Soluciones VPN

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□ Servidor VPN en la nube



Interconexión con Datacenter

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The screenshot displays the Mikrotik WinBox interface with the RouterOS configuration. The left sidebar shows the 'RouterOS WinBox' menu with options like 'Quick Set', 'CAPsMAN', 'Interfaces', 'Wireless', 'IP', 'Routing', 'System', 'Queues', 'Files', 'Log', 'Radius', 'Tools', 'New Terminal', 'LCD', 'MetaROUTER', 'Partition', 'Make Supout.rtf', 'Manual', 'New WinBox', and 'Exit'.

The main window is divided into two panes:

- Interface List:** A table showing the configuration of various interfaces. The columns are Name, Type, L2 MTU, Tx, and Rx. The list includes EoIP Tunnels, VLANs, Bonding, and Bridges.
- Route List:** A table showing the configuration of routes. The columns are Dst. Address, Gateway, Distance, Routing Mark, and Pre. The list includes recursive routes for various destinations and reachable routes for local networks.

Name	Type	L2 MTU	Tx	Rx
OK_eoip_voip_eco-camp.natales	EoIP Tunnel	65535	0 bps	
OK_eoip_voip_fs.puq	EoIP Tunnel	65535	0 bps	
OK_eoip_voip_fs.puq.2	EoIP Tunnel	65535	0 bps	
OK_eoip_voip_puq	EoIP Tunnel	65535	0 bps	
bonding_sxt	Bonding		8.6 Mbps	
vlan-101	VLAN		2.8 Mbps	
vlan-201	VLAN		3.0 Mbps	
vlan-301	VLAN		363.6 kbps	
vlan-401	VLAN		2.2 Mbps	
vlan-501	VLAN		3.8 kbps	
bridge_HRS	Bridge	65535	0 bps	
bridge_WILD-FI	Bridge	1594	2.5 kbps	
bridge_loopback	Bridge	65535	0 bps	
bridge_swich-ubnt	Bridge	65535	0 bps	
bridge_vlan-101	Bridge	1594	0 bps	
bridge_vlan-501	Bridge	1594	3.9 kbps	
bridge_voip	Bridge	1594	0 bps	
eoip_HRS	EoIP Tunnel	65535	0 bps	
eoip_HRS-PAINE	EoIP Tunnel	65535	0 bps	
eoip_SOD.WILD-FI	EoIP Tunnel	65535	0 bps	
eoip_demo.hotspot.puq	EoIP Tunnel	65535	0 bps	
eoip_movistar_vlan-501_HRS-OPERA	EoIP Tunnel	65535	0 bps	
eoip_switch-ubnt	EoIP Tunnel	65535	0 bps	
eoip_voip-RUBENS_WF	EoIP Tunnel	65535	1456 bps	
eoip_voip_El-Chileno	EoIP Tunnel	65535	0 bps	
eoip_voip_LiliK	EoIP Tunnel	65535	0 bps	
eoip_voip_PatagoniaCamp	EoIP Tunnel	65535	0 bps	
eoip_wild-fi_CampingFS	EoIP Tunnel	65535	1456 bps	
eoip_wild-fi_Cuemos	EoIP Tunnel	65535	1456 bps	
eoip_wild-fi_EcoCamp	EoIP Tunnel	65535	1456 bps	
eoip_wild-fi_ElChileno	EoIP Tunnel	65535	4.8 kbps	
eoip_wild-fi_Frances-Camping	EoIP Tunnel	65535	1456 bps	
eoip_wild-fi_Frances-Domos	EoIP Tunnel	65535	1456 bps	
eoip_wild-fi_HRS	EoIP Tunnel	65535	1456 bps	
eoip_wild-fi_KIOSKO	EoIP Tunnel	65535	1456 bps	

Dst. Address	Gateway	Distance	Routing Mark	Pre
0.0.0/0	208.67.222.123 recursive via 186.103.198.97 vlan-201	1	vlan-201	
0.0.0/0	208.67.220.123 recursive via 186.103.180.57 bridge_vlan-101	1		
0.0.0/0	208.67.222.123 recursive via 186.103.198.97 vlan-201	2		
0.0.0/0	208.67.222.220 recursive via 186.103.227.193 vlan-301	1	vlan-301	
0.0.0/0	208.67.220.222 recursive via 186.103.227.185 vlan-401	1	vlan-401	
0.0.0/0	208.67.222.220 recursive via 186.103.227.193 vlan-301	3		
0.0.0/0	208.67.220.222 recursive via 186.103.227.185 vlan-401	4		
0.0.0/0	209.244.0.3 recursive via 190.82.88.185 bridge_vlan-501	5		
0.0.0/0	208.67.220.123 recursive via 186.103.180.57 bridge_vlan-101	1	vlan-101	
0.0.0/0	209.244.0.3 recursive via 190.82.88.185 bridge_vlan-501	1	vlan-501	
1.1.1.0/30	10.87.23.2 reachable vlan-1563_TEN-BONDING	110		
10.17.13.0/24	ether5_SXT-Frigorifico2 reachable	0		10
10.17.14.0/24	vlan-2702_SXT-CerroNegro-SUR reachable	0		10
10.17.15.0/24	bridge_WILD-FI reachable	0		10
10.17.16.0/24	bridge_vlan-101 reachable	0		10
10.18.12.0/24	172.17.12.10 reachable vlan-2703_BaseBox-CerroNegro	110		
10.18.13.0/24	172.17.12.10 reachable vlan-2703_BaseBox-CerroNegro	110		
10.19.0.0/16	bridge_WILD-FI reachable	0		10
10.20.30.0/30	10.87.23.2 reachable vlan-1563_TEN-BONDING	110		
10.32.72.0/24	10.87.23.2 reachable vlan-1563_TEN-BONDING	110		
10.43.143.0/29	ether7_vmware reachable	0		10
10.44.144.0/24	bridge_swich-ubnt reachable	0		10
10.49.64.0/24	vlan-2921 reachable	0		10
10.53.153.0/29	10.87.23.2 reachable vlan-1563_TEN-BONDING	110		
10.57.11.0/24	10.87.23.2 reachable vlan-1563_TEN-BONDING	110		
10.57.12.0/24	10.87.23.2 reachable vlan-1563_TEN-BONDING	110		
10.57.13.0/24	10.87.23.2 reachable vlan-1563_TEN-BONDING	110		
10.57.14.0/24	10.87.23.2 reachable vlan-1563_TEN-BONDING	110		
10.57.15.0/24	10.87.23.2 reachable vlan-1563_TEN-BONDING	110		
10.57.16.0/24	10.87.23.2 reachable vlan-1563_TEN-BONDING	110		
10.57.18.0/24	10.87.23.2 reachable vlan-1563_TEN-BONDING	110		
10.57.19.0/24	10.87.23.2 reachable vlan-1563_TEN-BONDING	110		
10.57.20.0/24	10.87.23.2 reachable vlan-1563_TEN-BONDING	110		
10.57.22.0/24	10.87.23.2 reachable vlan-1563_TEN-BONDING	110		
10.57.202.0/24	10.87.23.2 reachable vlan-1563_TEN-BONDING	110		

Reglas de filtrado y NAT

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#	Action	Chain	Src. Address	Dst. Address	Proto...	Src. Port	Dst. Port	In. Inter...	Out. Int...	Bytes	Packets	Comment
0	masquerade	srcnat	10.232.102.0/24							9.0 MiB	20 569	
1	masquerade	srcnat	10.232.103.79							5.3 MiB	35 120	
2	masquerade	srcnat	10.255.255.0/24							0 B	0	
3	redirect	dstnat	10.232.102.0/24							359.3 KiB	5 925	
4	dst-nat	dstnat		10.232.101.101	17 (u...		53			8.4 KiB	40	redvoiss
5	dst-nat	dstnat		10.232.101.101	17 (u...		4569			84 B	2	elastix
6	dst-nat	dstnat		10.232.101.101	17 (u...		5060			18.5 KiB	25	elastix
7	dst-nat	dstnat		10.232.101.101	17 (u...		10000-20...			9.0 KiB	53	elastix
8	dst-nat	dstnat		10.232.101.101	6 (tcp)		8081			1280 B	32	ubuntu - blocked page
9	dst-nat	dstnat		10.232.101.101	6 (tcp)		80			1083.4 KiB	18 817	ubuntu - blocked page
10	dst-nat	dstnat		10.232.101.101	6 (tcp)		80			0 B	0	ubuntu - blocked page
11	redirect	dstnat		10.232.101.101	6 (tcp)		80			22.1 KiB	455	web-proxy

#	Action	Chain	Src. Address	Dst. Address	Proto...	Src. Port	Dst. Port	In. Inter...	Out. Int...	Connection State	Connection NAT ...	Bytes	Packets	Comment
0	drop	input								invalid		137.9 KiB	2 211	
1	acc...	input								established related		9.3 GiB	9 208 528	
2	acc...	input			6 (tcp)		8291					616 B	12	winbox
3	acc...	input			17 (u...		1701					1320 B	10	i2p
4	acc...	input			6 (tcp)		8071					22.1 KiB	455	web-proxy
5	acc...	input	10.232.102.0/24		17 (u...		53					359.3 KiB	5 926	dns redirect
6	acc...	input	10.232.101.1		17 (u...	67	68					656 B	2	dhcp
7	acc...	input						all ppp				49.0 MiB	139 642	vpn
8	acc...	input	54.165.129.249		6 (tcp)		22					2080 B	40	AWS GenCert
9	acc...	input	52.70.224.186									0 B	0	CHR2-AWS
10	acc...	input	52.71.156.82									0 B	0	CHR3-AWS
11	drop	input										83.3 MiB	1 441 926	
12	drop	forward								invalid		174.7 KiB	4 459	
13	acc...	forward								established related		4712.5 MiB	8 024 727	
14	acc...	forward						all ppp				75.9 KiB	1 488	vpn
15	acc...	forward							all ppp			35.6 KiB	227	vpn
16	acc...	forward	10.232.102.0/24		1 (ic...							0 B	0	icmp - echo request
17	acc...	forward	10.232.102.0/24		6 (tcp)		80,443					5.4 KiB	92	http, https
18	acc...	forward	10.232.102.0/24		17 (u...		53,123					351.8 KiB	4 740	dns, ntp
19	acc...	forward	10.232.102.11		17 (u...	5060,100...						32.3 MiB	60 660	elastix
20	acc...	forward	10.232.102.11	190.153.25.202	17 (u...	4569						0 B	0	elastix
21	acc...	forward	10.232.102.219									0 B	0	AWS-CLI
22	acc...	forward	64.76.154.0/24									156.6 KiB	799	redvoiss
23	acc...	forward		64.76.154.0/24								0 B	0	redvoiss
24	acc...	forward	10.232.103.79									5.8 MiB	38 749	aws workspaces
25	acc...	forward									dstnat	2791.6 KiB	46 211	dst-nat
26	drop	forward										204.4 KiB	3 411	

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Sistemas de virtualización

Sistemas de virtualización

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Laboratorios con GNS3

Laboratorios con GNS3

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The image shows the homepage of the GNS3 website. The background is dark with a faint, abstract pattern. At the top left is the GNS3 logo, a stylized blue and purple creature. To its right is a navigation menu with the following items: SOFTWARE, NEWS, COMMUNITY, SUPPORT, MARKETPLACE, and ACADEMY. In the center-right area, there is a large GNS3 logo with the text 'GNS3' below it. Below the logo, the main headline reads 'The software that empowers network professionals.' Underneath this, a sub-headline states 'Join the over 2 million network professionals who rely on GNS3 to build better networks, share ideas and make connections.' At the bottom right, there is a prominent blue button with the text 'FREE DOWNLOAD' in white capital letters.

SOFTWARE **NEWS** **COMMUNITY** **SUPPORT** **MARKETPLACE** **ACADEMY**



GNS3[®]

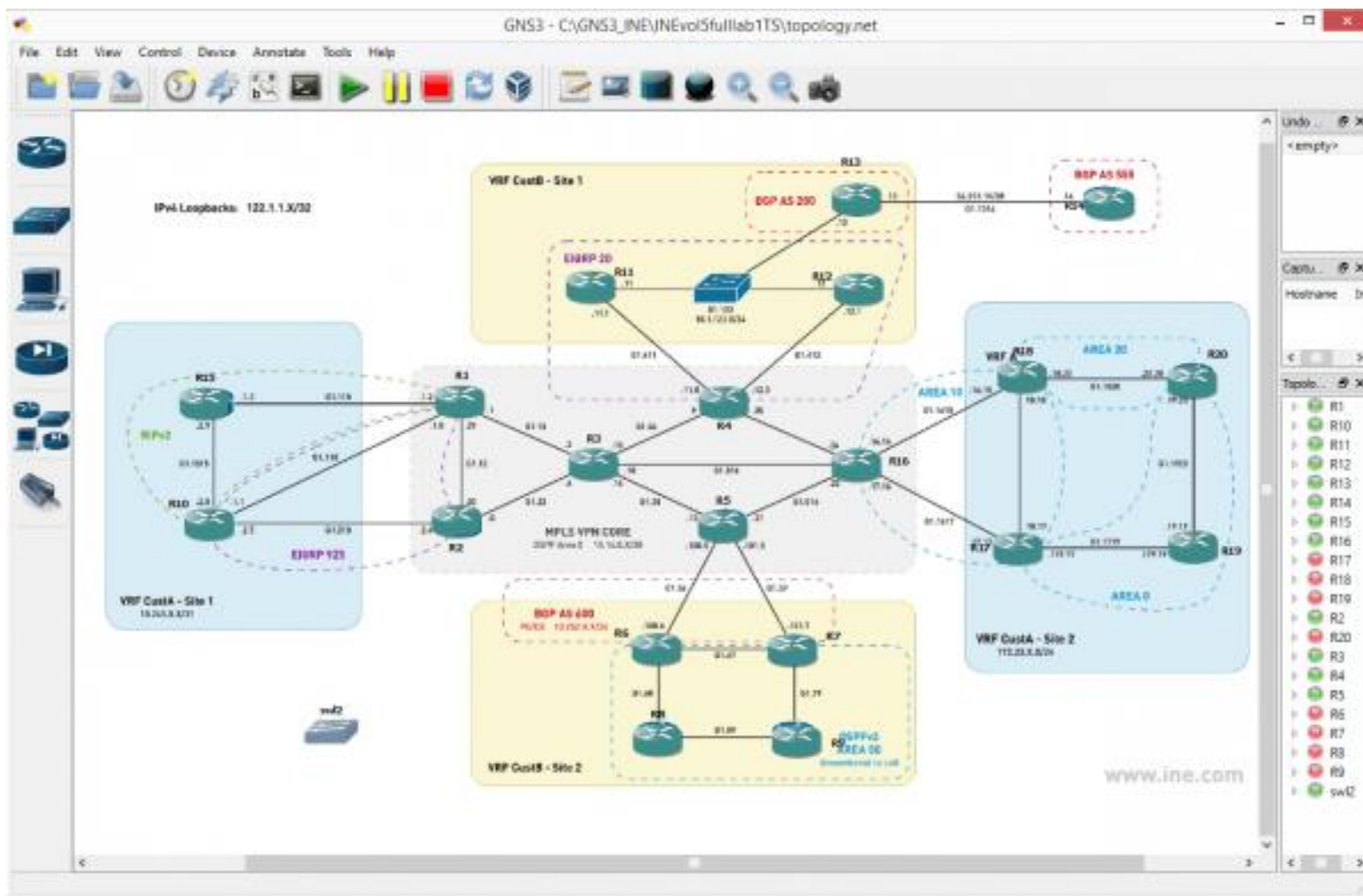
**The software that empowers
network professionals.**

Join the over 2 million network professionals who
rely on GNS3 to build better networks, share ideas and
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Foro MikroTik

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□ <http://forum.mikrotik.com/>

	RouterOS Virtual Labs by kasparskr » Wed Aug 19, 2015 1:21 am » in General	 	62	22937
	Cloud Hosted Router by normis » Mon Jul 27, 2015 2:56 pm	 ...     	453	63123



normis

MikroTik Support

MikroTik

Posts: 20696

Joined: Fri May 28, 2004 11:04 am

Reputation: 154

First RouterOS version: 2.3.18

Location: Riga, Latvia

Cloud Hosted Router

by **normis** » Mon Jul 27, 2015 2:56 pm

We are releasing a test version of an exciting new feature - **Cloud Hosted Router (CHR)**.

It is a Virtual Machine image of RouterOS that has **full functionality** of RouterOS without any kind of conventional RouterOS license, with the limitation of **1Mbit per interface**, in future, we will offer unlimited speed with a paid subscription. This allows you to use RouterOS in training classes, for testing, for experimentation or any other purpose, without the need for 24h trial or Demo license.

We provide a generic (RAW) format IMG, VMDK file for VMWare, VDI for VirtualBox and VHDX for Hyper-V. These are ready to use virtual disk images (add as a virtual hard drive to your VM). These are NOT templates for importing.

qemu commands for converting images (if you need to convert to another format)

RAW to VMware:

Code: Select all

```
qemu-img convert -f raw -O vmdk chr-6.31rc9.img chr-6.31rc9.vmdk
```

RAW to VirtualBox:

Code: Select all

```
qemu-img convert -f raw -O vdi chr-6.31rc9.img chr-6.31rc9.vdi
```

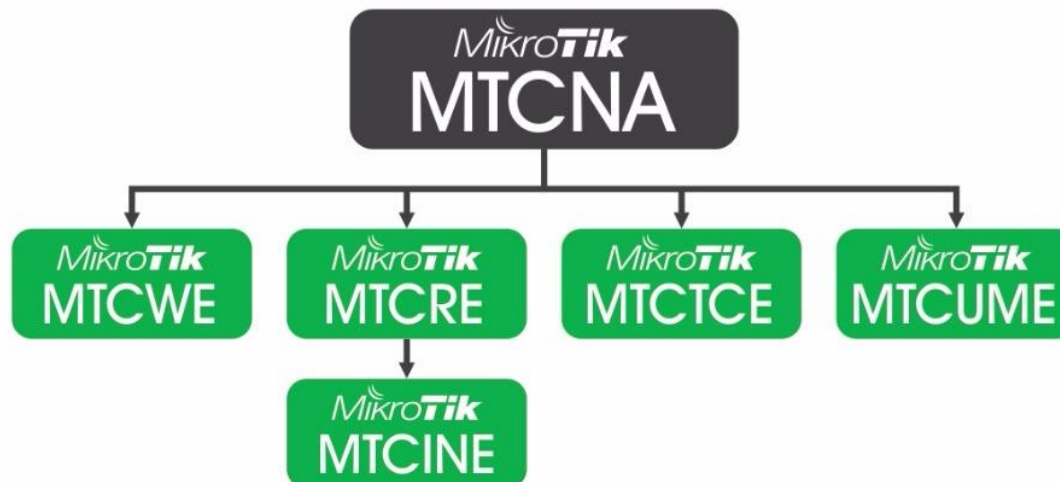
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Invitación

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- Cursos de certificación oficial MikroTik




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¿Preguntas?

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Gracias por
su atención