Deploy Arista CloudEOS with Equinix Bare Metal

Goal

In this deployment guide, we will show you how to deploy Arista CloudEOS Router in Equinix Bare Metal, with the following highlevel tasks.

• Deploy an Equinix Bare Metal Server

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• Deploy an Arista CloudEOS Router on ESXI and bring online

For more information about the Arista CloudEOS Router, see <u>here</u> and Arista CloudVision, see <u>here</u>. For more information about Equinix Bare Metal, see <u>here</u>.

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Deployment Diagram

In the following diagram, we will focus on creating one of the Equinix Servers. We will deploy US-West and choose Dallas for its location.



Figure 1: CloudEOS with Equinix Bare Metal spanning the globe, allowing optimal performance and a quick deployment.

Deployment Diagram

1. In Equinix's Metal Console, select "Bare metal servers" and then "Deploy on demand"





2. Select the Metro Region from the drop down list of available areas.

Choose a metro

Take advantage of automated, interconnected bare metal across our global metros.



3. Select the desired server size, from available server options within the metro area.

Choose your server

The list of available configs will change depending on the metro selected.

	Server Type	Supported operating systems
0	c3.small.x86 🜖	🍜 🚭 🏶 🤤 🖓 📇 🜍 🌞 🛸 🔊 🕷 🎯 🗤 📕
0	m3.small.x86 🕚	🎄 🚭 🏶 🤤 🔿 🛲 🜍 🔆 🚔 🧖 🗰 🗐 🗤 📕
0	c3.medium.x86 🚯	🎄 🚭 🏶 🤤 🖓 🛲 🜍 🔆 🚔 🧖 🗰 🗐 🕬
0	c3.large.arm64 🕚	🍜 🚭 🤤 🔍 🛲 😋 🗱 🧟 👋
0	m2.xlarge.x86 🕚	🍀 🚭 🌸 🤤 🕐 🛲 🔅 📥 🧖 🎯 vm
0	s3.xlarge.x86 🕚	🎄 🚭 🏶 🤤 🗢 🛲 🜍 🔆 🛳 🔊 🕷 🧐 🗤 📕
0	m3.large.x86 🕚	🍜 🚭 🏶 🤤 🖓 📇 🜍 🔆 🚔 🧖 🗰 🗐 🕬
0	n2.xlarge.x86 🕕	🍜 🚭 🏘 🤤 🗢 🛲 🔅 🚔 🧖 🐙 🚳 vm 📑
0	g2.large.x86 🕚	🎄 😂 🚔 🍥 vm 🗮

4. Select VMware ESXI.

0	VMware ESXi 7.0	-



5. Enter the Equinix Bare Metal Server name.

Server 1		
Hostname		
Equinix-BM-Dallas		

6. Select Deploy Now at the bottom.



7. Once the server show as deployed, select the name to open Details.

Ma	na	ge S	ervers	
Your	Serve	ers (2)	Search table	(
		Hostna	me 🗘	
	8	Equinix	k-BM-Chicago	
	6	Equinix	k-BM-LosAngele	

- 8. IMPORTANT! The password will only remain for 24 hours after creating the server. Make certain to copy down the Password and save it somewhere secure. This is the Root password to connect to ESXI at the Public IP listed.
- 9. If deploying multiple servers, add a VLAN to communicate across the Equinix Fabric or dedicated ports with.

Ari	ista - Equinix Metal	Layer 2
٢	Bare metal servers	Equinix Metal's Layer 2 feature lets you provision between one and twelve project-specific layer 2 networks within a project. Learn about Layer 2 🗹
Ø	Networking	
	IPs	
	BGP	No current VLANS
	Layer2 VLAN	Add a VLAN
	Metal Gateway	
	Backend Transfer	
ď	Interconnections	
Ø	Project Settings	



10. You can add the SSH Keys as an alternative way to connect to the Bare Metal Host Server by going into Project Settings and Add SSH Key. For more on SSH keys in Equinix metal see <u>here</u>.

Arista - Equinix Metal 🔹	Arista Networks Inc / Projects / Arista - Equinix Metal
 Bare metal servers Networking Interconnections 	Arista - Equinix Metal Deployed on February 22nd, 2023 (4:18 PM UTC-05:00) Project ID: 06a8dc68 General Spot Market SSH Keys API Keys Usage Fees Timeline
Project Settings	Project SSH Keys Can be deployed to servers that are not tied to a particular user. This allows for easier management of shared SSH keys wi human accounts. Project SSH keys will be deployed to new servers the same way that user SSH keys are. Any project colla remove project-level SSH keys. Please manage your personal keys in your personal account settings.
	You don't have any SSH keys Add an SSH Key

- 11. Open a Web Browser and go to the IP provided in the Server details. This will open the ESXI window. Login with "root" and the password previously saved offline.
- 12. Next, we will install CloudEOS on ESXI. To do this, go to Virtual Machines and Create / Register VM.

ESXi Host Clie	nt		
Mavigator ✓ ■ Host Manage Monitor	~	 Equinix-BM-LosAngeles - Virtual Machines Create / Register VM Create / Register VM Virtual machine 	W
 Virtual Machines Storage Networking 	0	Quick filters ~	



13. Select "Deploy a virtual machine from an OVF or OVA file" and then select "Next"



14. Provide a name used to ESXI for this Router and then browse to the location you have downloaded the CloudEOS file to. Note: CloudEOS images are found at <u>here</u>

Select creation type	Select OVF and VMDK files
Select OVF and VMDK files	Select the OVF and VMDK files or OVA for the VM you would like to deploy
Select storage	Enter a name for the virtual machine.
License agreements	LA-Equinix-BM-Transit
Deployment options	Virtual machine names can contain up to 80 characters and they must be unique within each ESXi instance.
6 Additional settings	
Ready to complete	
	× CloudEOS-4.29.2F.ova

- 15. Select "Next", as only one storage device will be available.
- 🗇 New virtual machine LA-Equinix-BM-Transit

Select creation type Select OVF and VMDK files	Select storage Select the storage type and datastore							
Select storage	Chandrad Discourses and							
License agreements	Standard Persistent Me	emory						
Deployment options	Select a datastore for the virtual maching	ne's configuratio	on files and a	ll of its virtu	ual di	sks.		
5 Deployment options 6 Additional settings	Select a datastore for the virtual mach	ne's configuratio	on files and a	ll of its virtu	ual di	sks.		
 Deployment options Additional settings Ready to complete 	Select a datastore for the virtual mach	 Capacity ~ 	on files and a	Il of its virtu	ual di: ~	sks. Thin provisic	Access	,

16. Select "Thick" and "Finish".

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+🗗 New virtual machine - LA	-Equinix-BM-Transit			
 Select creation type Select OVF and VMDK files 	Deployment options Select deployment options			
3 Select storage4 Deployment options	Network mappings	VM Network	VM Network	~
5 Ready to complete	Disk provisioning	O Thin • Thick	k	
	Power on automatically			

17. After the VM is installed, we will edit the network settings with require us to Power Off the VM first.

🗖 Console 🛛 Monitor	Power on	Power off	t 📔 🧨 Edit 🗌
quinde-nust-uitall2-et legin: "	CH-Equin Guest OS	IX Powering it off may cause data loss in the guest	n. ‡-bit)
	Compatibility	/ ESXi 5.5 virtual machine	
	VMware Too	ls No	
	CPUs	2	
	Memory	8 GB	
- General Information			✓ Har
> 🧕 Networking			> 🗖 🤇
> 🖻 VMware Tools	VMware Tools i	is not installed.	tions III I
> 🖪 Storage	2 disks		>@
☐ Notes		🇨 Edit n	
			lotes 2
 Performance summary last h 	nour		
 Performance summary last h 	10ur © Con:	sumed host CPU	> MML 1 > MML 1 > MML 1



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				€ ₽	Export Export With Images
or 🕨 I	Power on () Power of	f 📘 Suspend 🏾 🎝 Reset 📋 🌶	Edit C Refresh	₽	Edit settings
	CH-Equinix-BM-	Transit			Edit the settings for this virtual r
	Guest OS	Red Hat Enterprise Linux 7 (64-bit)		ľ	Edit notes
	Compatibility	ESXi 5.5 virtual machine		Aa	Rename
	VMware Tools	No			Answer question
	CPUs Memory	2 8 GB		ر	Unregister
	_			Ŵ	Delete
			✓ Hardware Configura	0	Help
			> 🔲 CPU	Z	Open VM in new window
	VMware Tools is not insta	lled. 🌣 Actions	Memory	_	8 GB
	2 disks		> 🕞 Hard disk 1		6 MB
			V G Hard dick 2		AGR

19. In the VM Hardware Settings, change the memory to the desired amount. The minimum requirements as seen in the Data Sheet is 8Gb. At this point you will also add additional Network Adaptors. By default, there will be one Network Adaptor, which is defaulted to the Mgmt Interface in EOS. We will add one interface for the Internet side as well as another in the event we add a backbone connection to another Router in the Equinix environment.17. After the VM is installed, we will edit the network settings with require us to Power Off the VM first.

Virtual Hardware VM	Options		
🖨 Add hard disk 🛛 🚊 Add	network adapter 🛛 🗔 Add other de	evice	
> 🔲 CPU	2 ~ 1		
> 🌆 Memory	8 GB ~		
> 🔜 Hard disk 1	6 MB ~		×
> 🛄 Hard disk 2	4 GB ~		×
SATA Controller 0			×
> 🎫 Network Adapter 1	VM Network	🖂 🗹 Connect	×
> 🛄 Video Card	Specify custom settings	÷	
		SAVE	CANCEL



20. Select "Add network adaptor" twice, which will add two more adaptors.

Virtual Hardware VM Op	tions
🚍 Add hard disk 🛛 🚊 Add net	ork adapter 🛛 🖬 Add other device
> 🗖 CPU	2 3
> IIII Memory	8 GB ~
> 🔚 Hard disk 1	6 MB ~ ×
> 🛄 Hard disk 2	4 GB ~ ×
SATA Controller O	×
> 🛤 Network Adapter 1	VM Network VM Network X
> Mill Network Adapter 2	VM Network
> M Network Adapter 3	VM Network V Connect ×
> 🛄 Video Card	Specify custom settings
	SAVE CANCEL

21. Power on the VM again and you will be ready to configure CloudEOS.





22. Once the CloudEOS Router is powered up, select the Window to open the console.

	Virtual machine	~	Status	~	Used space	~
~	CH-Equinix-BM-Transit		🤣 Normal	8	8.08 GB	
Qu	ick filters ~					
opinis	-aast-siteliD-et legist "	CH-Equinix-BM-	Transit			
		Guest OS	Red Ha	at Ei	nterprise Linux 7 (64	4-bit)
		Compatibility				
		VMware Tools	No			
		CDUs	2			
	Click to open a brow	wser console to this virtual	machine			
	C	memory	4 GB			
-	C					

23. Login with the user "admin". When setting up the Bare Metal server, a /29 network. The gateway will be that network +1, VM will be the next and the remaining are available for use on your CloudEOS router.

Random Example: 162.210.129.8/29 Available Network IPs: 162.210.129.9-162.210.129.14 Broadcast Address: 162.210.129.15 Equinix Gateway: 162.210.129.9 ESXI Server: 162.210.129.10 CloudEOS Eth1 Address: ip address 162.210.129.11/29 CloudEOS Default Route: ip route 0.0.0/0 162.210.129.9

The CloudEOS is now online and ready to install any licensing, upgrade, and complete user specific configuration. The complete CloudEOS Configuration Guide can be found here.

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- 24. (Optional) If you have Arista CloudVision, you can also onboard the CloudEOS Router onto CloudVision, and you can see similar routing information and more valuable information from a historical perspective for troubleshooting and visibility. If you don't have Arista CloudVision, you can register it at https://www.arista.io/cv. More information about CloudVision can be found https://www.arista.io/cv. More information about CloudVision can be found https://www.arista.io/cv.

CloudVision	Devices	Events	Provisioning	Dashboards	Topology
Devices > equini	x-west-site	e122-r1 ~	> Routing >	BGP > VRF:	Default ~
NDP Table		BGP Ove	rview		

Bridging Capability	BOF OVELVIEW				
MAC Address Table	Local BGP Details				
MLAG	14:00	15:00 15:14:49	16:00	17:00	
VYLAN	BGP Configured	Enabled			
VALAN	BGP AS Number				
Routing		65199			
IPv4 Routing Table	Configured BGP Router ID	192,168,	122.1		
IPv6 Routing Table	Routing Mode				
IPv4 Multicast Table		Multi-Ag	ent		
BGP	BGP Peers				
IONE	BGD Established Deers			2 peers	
IGMP				2 peers	
Segmentation	BGP Unestablished Peers				
Traffic Flows				0 peers	
	BGP Learned Paths				
302.1X	IBv4 RGP Learned Poutes			0 paths	
	IPV4 DOP Learned Roules			17 routes	
nterfaces	IPv6 BGP Learned Routes				
Ethernet				N/A	
Routed Ports	BGP Peers				
Port Channels	Don recia				
Traffic Counters	Peer 1	State	Up/Down Since	Enabled	Local Adv



Summary

You have now completed the steps of creating and connecting the Arista CloudEOS Router in Equinix Bare Metal. You can repeat this process for each Metal Server you plan on installing. As indicated, Eth 2 can then be used to connect to the backbone. A few options are available, depending on your deployment model and bandwidth requirements. These options can be found <u>here</u>.

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