# **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 🕕	🎄 各 🏶 🤤 🖓 🗂 🗮 🜍 🔅 🛸 🔗 🕷 🥘 vm 📕
0	c3.medium.x86 🕚	🎄 峇 🏶 🤌 🔍 🛲 🔘 🗱 🕿 🚿 🎯 vm 📕
0	c3.large.arm64 🕚	🤴 各 🤤 🥶 🗮 🌍 🗮 🧐
0	m2.xlarge.x86 🕚	🍀 💁 🌸 🤤 🖓 🛲 🔆 🚔 🧖 🧐 vm
0	s3.xlarge.x86 🚯	🎄 🕿 🏶 🤤 🕐 🛲 🔘 🔅 🛸 🔊 👋 🥘 vm 📕
0	m3.large.x86 🕚	🍜 🚭 🏶 🤤 🖓 🗂 🥶 🏷 🌞 🧟 🗤 📕
0	n2.xlarge.x86 (1)	🍜 🚭 🏶 🤤 🔍 🛲 🛠 🛳 🧇 🕷 🚳 🕶 🗮
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	
P	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
<ul> <li>Bare metal servers</li> <li>Networking</li> <li>Interconnections</li> </ul>	Arista - Equinix Metal Deployed on February 22nd, 2023 (4:18 PM UTC-05:00) Project ID: 06a8dc68
Interconnections     Project Settings	General Spot Market SSH Keys API Keys Usage Fees Timeline
	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 Clier	nt		
Mavigator ✓ ■ Host Manage Monitor	~	<ul> <li>Equinix-BM-LosAngeles - Virtual Machines</li> <li>Create / Register VM</li> <li>Create / Register VM</li> <li>Virtual machine</li> </ul>	Pow
<ul> <li>Virtual Machines</li> <li>Storage</li> <li>Networking</li> </ul>	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

<ol> <li>Select creation type</li> <li>Select OVF and VMDK files</li> </ol>	Select storage									
3 Select storage	Standard	Persistent Mem	-							
4 License agreements	Standard	Persistent Men	ory							
5 Deployment options	Select a datastore f	for the virtual machine	's configuratio	on files an	d all (	of its virtu	al di	sks.		
6 Additional settings										
7 Ready to complete	Name	~	Capacity $\sim$	Free	~	Туре	~	Thin provisio	Access	~
ready to complete				Concernance of the second second		THE REPORT OF THE REPORT OF		and the second second	Second Second	

#### 16. Select "Thick" and "Finish".

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+🗗 New virtual machine - L	A-Equinix-BM-Transit	
1 Select creation type 2 Select OVF and VMDK files	Deployment options Select deployment options	
<ul><li>3 Select storage</li><li>4 Deployment options</li></ul>	Network mappings	VM Network VM Network ~
5 Ready to complete	Disk provisioning	○ Thin ● Thick
	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 on	wer off	🖋 Edit
quinte-mast-site112-rt legis: _	CH-Equinix Guest OS	This virtual machine is currently powered on. Powering it off may cause data loss in the guest 1-b	iit)
	Compatibility	ESXi 5.5 virtual machine	
	VMware Tools	No	
	CPUs	2	
	Memory	8 GB	
- General Information			✓ Har
> 🧕 Networking			> 🗖 (
> 🖻 VMware Tools	VMware Tools is no	ot installed.	and t
> 🖪 Storage	2 disks		
Notes		🖋 Edit notes	
✓ Performance summary last h	nour		
<ul> <li>Performance summary last h</li> </ul>		ned host CPU	



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					Export Export With Images
or   🕨 F	Power on () Power of	f 🚺 Suspend 🏾 🎝 Reset 🗎	Edit C Refresh	5	Edit settings
	CH-Equinix-BM-	Transit		ß	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			
4	CPUs Memory	2 8 GB		-	Unregister
	_			Ŵ	Delete
			✓ Hardware Configura	0	Help
			> 🔲 CPU	Z	Open VM in new window
	VMware Tools is not instal	led. 🌣 Actions	Memory	_	8 GB
	2 disks		> 📇 Hard disk 1		6 MB
			N G Hard dick 2		ACP

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 n	etwork adapter 🛛 🗔 Add other de	vice	
> 🔲 CPU	2 💙 🚯		
> 🌃 Memory	8 GB ~		
> 🔜 Hard disk 1	6 MB ~		×
> 🛄 Hard disk 2	4 GB ~		×
SATA Controller O			×
> 🎫 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	vork adapter 🛛 🖬 Add other device
> 🗖 CPU	2 👋 🚯
> IIII Memory	8 GB ~
> 🔚 Hard disk 1	6 MB × ×
> 🛄 Hard disk 2	4 GB ~ ×
SATA Controller 0	×
> Mill Network Adapter 1	VM Network VM Connect X
> Ma Network Adapter 2	VM Network VC Connect X
> 🛤 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	2	8.08 GB			
Quid	ck filters ~							
	wat-sitelD-ct legist _	CH-Equinix-BM-	Transit					
and the sector of the sector sec								
		Guest OS	Red Hat Enterprise Linux 7 (64-bit)					
		Compatibility						
		VMware Tools	No					
		CDLIc						
	Click to open a bro	owser console to this virtual						
	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 <a href="https://www.arista.io/cv">https://www.arista.io/cv</a>. More information about CloudVision can be found <a href="https://www.arista.io/cv">https://www.arista.io/cv</a>. More information about CloudVision can be found <a href="https://www.arista.io/cv">https://www.arista.io/cv</a>.

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

	BGP Overview			
Bridging Capability				
MAC Address Table	Local BGP Details			
MLAG	BGP Configured	15:00 15:14:49	16:00	17:00
VXLAN	Der comgarea	Enabled	a	
uting	BGP AS Number	65199		
IPv4 Routing Table	Configured BGP Router ID	192.16	8.122.1	
IPv6 Routing Table	Routing Mode			
IPv4 Multicast Table		Multi-/	Agent	
BGP	BGP Peers			2 peers
GMP	BGP Established Peers			
Segmentation				2 peers
	BGP Unestablished Peers			0 peers
ffic Flows	BGP Learned Paths			
2.1X				0 paths
	IPv4 BGP Learned Routes			17 routes
erfaces	IPv6 BGP Learned Routes			
Ethernet				N/A
Routed Ports	BGP Peers			
Port Channels				
Traffic Counters	Peer ↑	State	Up/Down Since	Enabled



#### **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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