Equinix Product Readiness

FUNCTIONAL LEARNING DEMO

CONFIGURING EQUINIX CONNECT PART 1 OF 3

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Hello I'm **Rupinder Randhawa**, Principal Product Manager with Equinix. I'd like to go over with you the different ways you can configure Equinix connect for Internet access from any one of our data centers. Equinix Connect is a direct Internet access product providing managed Single or Dual-Homed Internet service for Platform Equinix® customers. Its easy, scalable and quick to provision.

When a customer sets up their environment in our data center, they almost always need some form of Internet access. They could purchase this service from a 3rd party provider, or they could choose to get this service from Equinix. The Equinix Connect option does have advantages when it comes to;

- Availability, given that we have multiple upstream providers
- Performance, since our routers integrate with our local peering exchange for potentially shorter routes, and
- Convenience, where Equinix becomes your one-stop shop for support and billing

Recommended configurations
Single-Homed Direct. Use this for out-of-band communications channel. Dual-Homed VRRP Static. Use this for primary or non dynamic Internet service. Single-Homed BGP. Use this for secondary or dynamic Internet service.

Recommended Configurations

Single-Homed Direct

Dual-Homed VRRP Static

Single-Homed BGP

Table of contents
In this video we will be going over use cases, recommended configurations by use case, and all configurations. In part 2 of the series we will cover single-homed configurations. In part 3 of the series we will cover dual-homed configurations.

If you'd like to skip to either part 2 or part 3 of this video series look for the video links in the description.

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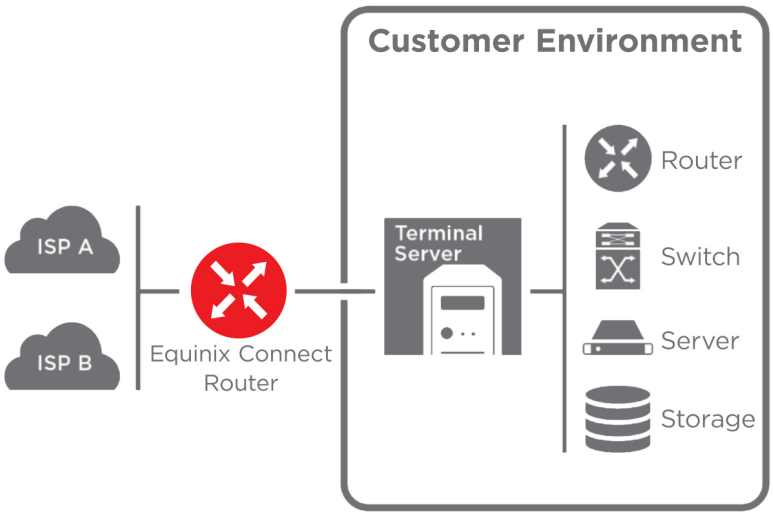
Topic

The short story and the long story.
To make quoting and ordering quick and easy we can guide the customer to a suggested configuration based on how they want to use the service in the first few minutes of this video I'll get straight to the point on which options to recommend. For more detail on all the different Equinix connect configurations you can watch the remaining videos in their entirety.

Most common use cases.
To make quoting and ordering quick and easy we can guide the customer to a suggested configuration based on how they want to use the service. Here are three typical use cases to choose from.

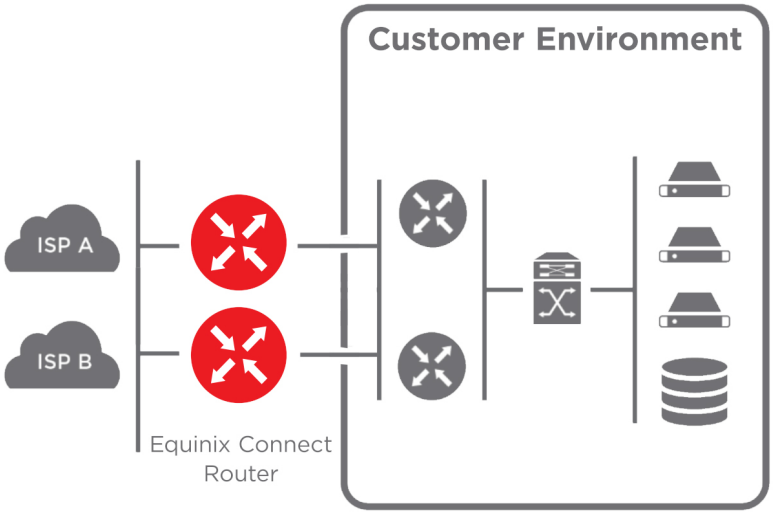
Single-Homed Direct when used for out of band management.
This is a low bandwidth, independent and diverse connection for managing servers and network equipment that doesn't rely on the primary Internet access path. This is useful for initial build configurations and for ongoing support.

1. Single-Homed Direct



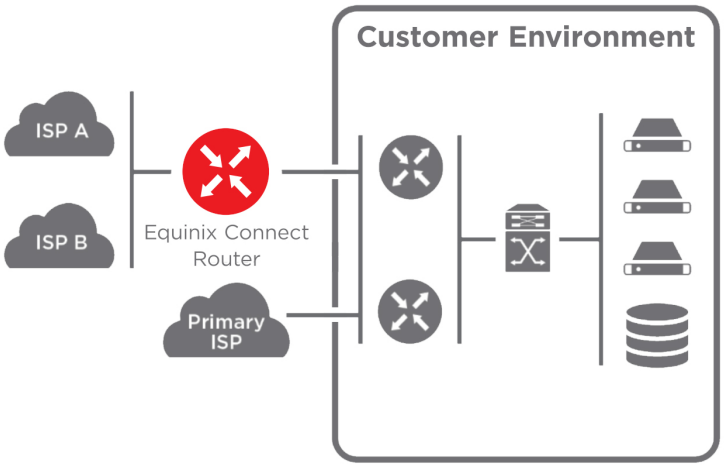
Dual-Homed VRRP Static used for static or primary Internet service.
This is a high bandwidth Internet service for IP transit needs, including locally optimized public SaaS reachability. Dual-Homed VRRP Static is the most common but other choices include single or dual-homed options, static or BGP routing choices, and additional IPv4 and IPv6 IP addresses when needed.

2. Dual-Homed VRRP Static



Single-Homed BGP when used for dynamic or secondary Internet service.
This is a medium to high bandwidth Internet access path that can be used as dynamic or backup Internet service. Often used to provide Internet service diversity. Equinix Connect can be the primary or secondary Internet service.

3. Single-Homed BGP



Recommended Configurations.
Ask the customer this question. Does the customer intend to use Equinix Connect as an Out Of Band (OOB) communication channel? If using it for Out Of Band communications, select Single-Homed, Direct configuration. We provide IPv4 /30 addresses and IPv6 /64 addresses, at no additional cost, to configure their equipment to our routers. They choose the port and bandwidth but we recommend 1G ports with a minimum bandwidth commit between 10Mbps to 100Mbps at their discretion.

If not used for Out Of Band communications (therefore primary or secondary Internet access), ask… Do you plan on connecting to EC with BGP or use a static default route?

If using BGP (perhaps for backup Internet access), select Single-Homed BGP. We provide IPv4 /30 addresses and IPv6 /64 addresses, at no additional cost, to configure their equipment to our routers.

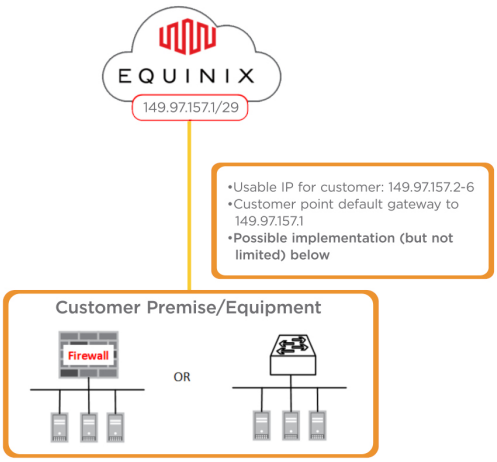
If static default (most often for primary Internet access), select
Dual-Homed, VRRP Static configuration. We provide IPv4 /29 addresses and IPv6 /64 addresses, at no additional cost, to configure their equipment to our routers. Customer would also order, using the "EC – Additional IP address" POF, an IPv4 /28 and IPv6 /64 for their addressing behind the default configuration addresses.

Single-Homed Direct – PA (Provider Assigned IP addresses). Most common for OOB applications. This is a very simple configuration. The customer is using a flat network meaning there is no routed network. The Default IP address assigned is a /30, meaning that the customer will have 1 usable IP address for configuring their firewall or switch. If the customer wants to have more IP addresses behind that, they can purchase them from Equinix using the POF "EC Additional IP Addresses". Their choices are

- /29 or /28 or /27 for IPv4
- /64 or /48 for IPv6

The example shown here is for a customer with a /29.

Single-Homed Direct – PA (Provider Assigned IP addresses)



Dual-Homed VRRP Static – PA L2/L3 (Provider Assigned IP addresses) (Previously Multi-Homed VRRP P2P). Most common for primary Internet access. Here the customer is using a Routed network behind their devices.

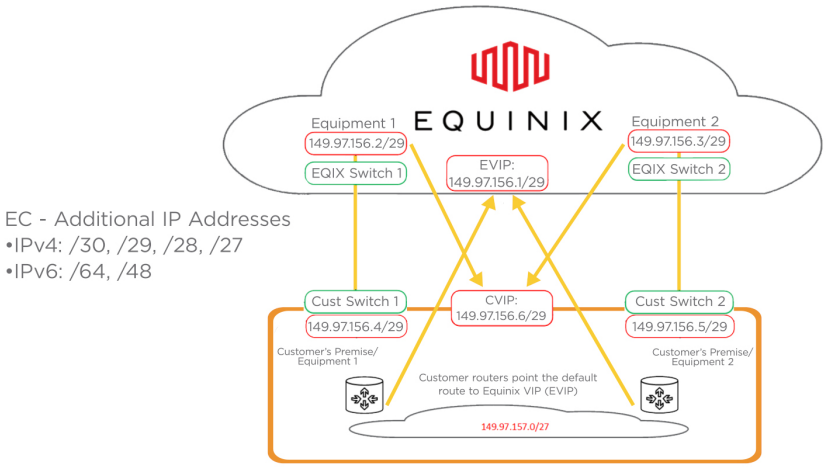
They are provided with an IPv4 /29 or IPv6 /125 for provisioning. In this example the Customer points the default route to the first IP on the /29 P2P subnet.
It shows the customer with a /27 for the routed network. When purchasing additional IP addresses for that network, they can choose from these options:

- IPv4: /30, /29, /28, /27
- IPv6: /64, /48

Customer must provide the multi-access network (layer 2 switching) required for VRRP advertisements between the master and slave.

Note: In AMER only, for 1G and below, Equinix will provide the L2 switching between switch 1 and 2 when internal capacity exists.

Dual-Homed VRRP Static – PA L2/L3 (Provider Assigned IP addresses) (Previously Multi-Homed VRRP P2P)

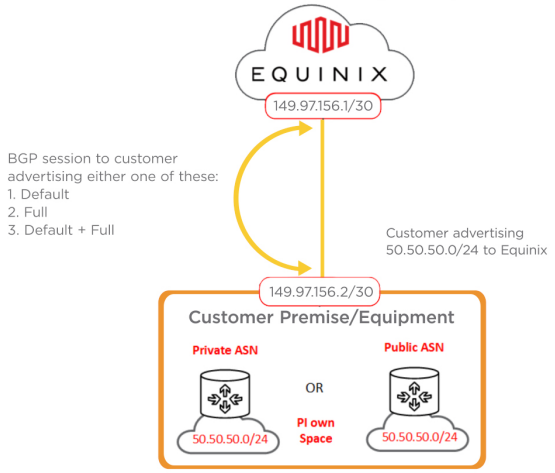


Single-Homed BGP – PI (Provider Independent) (Public or Private ASN with PI Space). Most common for backup or secondary Internet access. This Customer has their own PI space. Customer's own subnet has to be greater than or equal to /24 They either have their own Public ASN or are using a Private ASN (with an LOA) assigned by Equinix. Equinix provides an IPv4 /30 or IPv6 /126 for configuration.

BGP Policy is used to select:

1. Default Routes
2. Full Routes
3. Default + Full Routes

Single-Homed BGP – PI (Provider Independent) (Public or Private ASN with PI Space)



All Other Possible Configurations for Equinix Connect.

Single Port

- Single-Homed Direct (most common for OOB)
- Single-Homed Static
- Single-Homed BGP
- Multi-site Single-Homed (Australia only)

Dual Port

- Dual-Homed Direct (AMER only)
- Dual-Homed Static
- Dual-Homed VRRP (most common for primary Internet access)
- Dual-Homed BGP (most common for secondary Internet access)

That completed Configuring Equinix Connect Part 1 of 3.