

Netflix Open Connect

Netflix

■ Facts

- Currently serving over 190 countries and territories
- 125 Million hours of streaming per day
- More than 75 million members



Netflix Original Content

More at: [Netflix Originals Premiere Dates](#)

Netflix Open Connect

Mission

Work with Internet Service Providers to provide a great Netflix experience

■ How?

- Open Connect Appliances within your network
- Private Interconnection at [these locations](#) (10G, 40G, 100G)
- Peering over public internet exchange points

■ Locations

- 60+ current global points of presence
 - 50+ Terabits of capacity
- Thousands of content appliances within ISP networks
- Deployments in every significant Netflix market

Open Connect Appliances (OCA)

- Up to 100% of Netflix content served from within ISP network
 - Reduces or eliminates Netflix traffic on upstream links during peak hours
 - Offload based on scale of deployment
- Content replenishment during off-peak hours (e.g. 2 PM - 2 AM)
- ISP controls routing decisions via BGP
- Multiple form factors
 - based on storage and throughput requirements
 - very high throughput per watt / rack unit
- Based on open source software (FreeBSD, Nginx, BIRD)
- Native IPv6 Support

Open Connect Appliance - Requirements

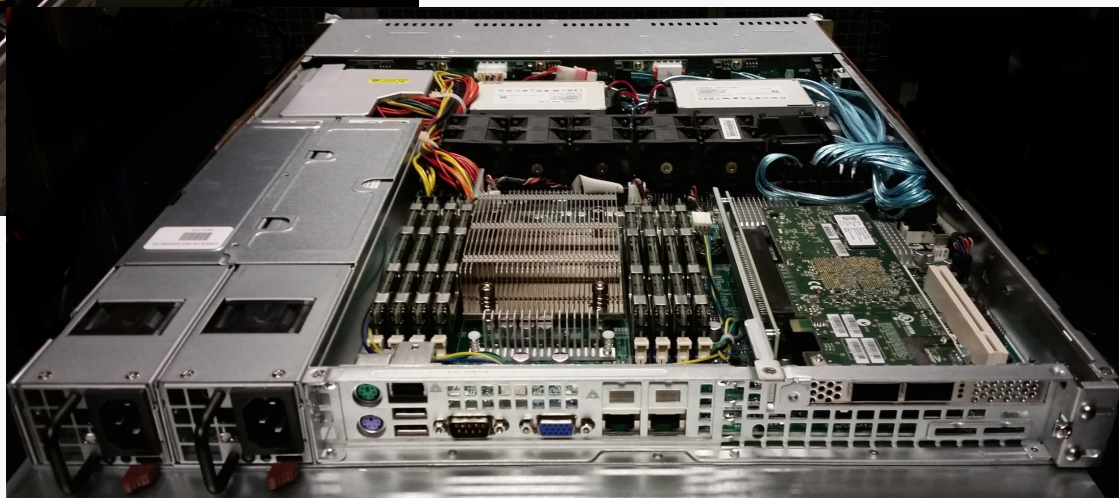
- >5Gbs of peak Netflix traffic
- Space and Power
 - Minimum 4U of rack space
 - 550 watts
 - Expands in 4U and 1U increments, deployment dependent
- 10G and 40G connectivity
- Process
 - Software license agreement
 - Hardware transfer of ownership
 - Site survey for each location
 - Settlement Free Interconnect agreement
 - Additional information - <http://openconnect.netflix.com>



NETFLIX

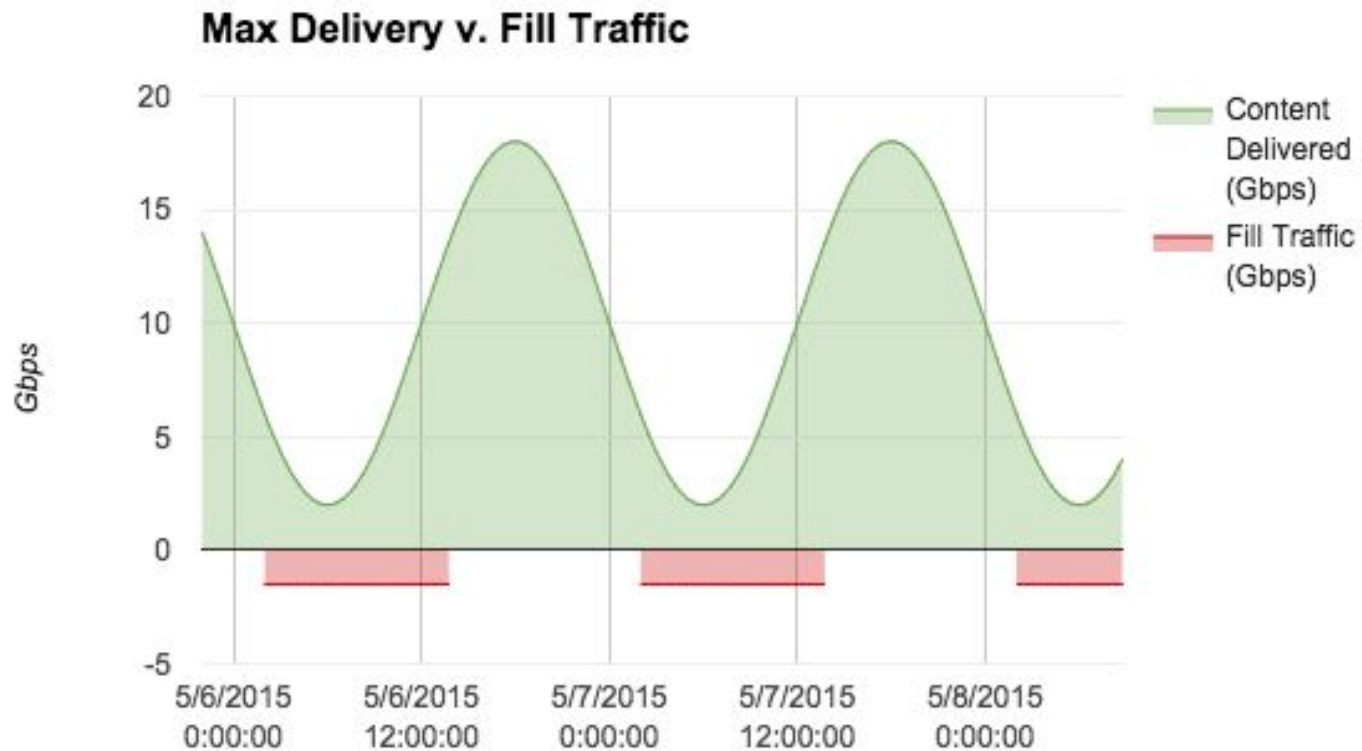
A Netflix POP





Left: Storage OCA
Right: Offload OCA

Example OCA Fill & Offload



Partner Portal

NETFLIX

RCN

Dave Temkin

0

30

0

0

My OpenConnect Network

Status Board

SITES

NYC (nyc001)

Philadelphia (phi001)

Allentown, PA (abe001)

Boston (bos001)

Chicago (ord001)

Chicago (ord002)

Ashburn (WDC) (iad001)

CONTENT CLUSTERS

rcn.isp-bos001-1

rcn.isp-iad001-1

rcn.isp-nyc001-1

rcn.isp-ord001-1

rcn.isp-phi001-1

BGP Feeds

Fill Windows

Metrics

Admin

My Account

User Management

MY OPENCONNECT NETWORK

Allentown, PA (abe001)

rcn.isp-phi001-1

C001.ABE001

OUT Gb/s

2.63

IN Mb/s

40.2

01:20 UTC

lagg0

IPv4 207.172.61.130/30IPv6 2610:80:3:4::2/64

C002.ABE001

OUT Gb/s

4.53

IN Mb/s

66.16

01:20 UTC

lagg0

IPv4 207.172.61.150/30IPv6 2610:80:3:9::2/64

Ashburn (WDC) (iad001)

rcn.isp-iad001-1

C001.IAD001

OUT Gb/s

1.54

IN Mb/s

25.05

01:20 UTC

lagg0

IPv4 66.44.150/30IPv6 2610:80:4:110::2/64

C002.IAD001

OUT Gb/s

1.58

IN Mb/s

23.92

01:20 UTC

lagg0

IPv4 66.44.158/30IPv6 2610:80:4:5::2/64

C003.IAD001

OUT Gb/s

2.28

IN Mb/s

35.43

01:20 UTC

lagg0

IPv4 66.44.162/30IPv6 2610:80:4:112::2/64

C004.IAD001

OUT Gb/s

3.46

IN Mb/s

52.78

01:20 UTC

lagg0

IPv4 66.44.84.134/30IPv6 2610:80:4:114::2/64

C005.IAD001

OUT Gb/s

3.74

IN Mb/s

56.36

01:20 UTC

Open Connect Support

- **24/7 monitoring**
- **No maintenance requirements**
- **Units replaced in case of defect**

Netflix in Hong Kong

- Located in Equinix HK1
- Open Connect Appliances available to medium and large networks
- Peering for all networks

More information can be found at <https://openconnect.netflix.com>

Questions?