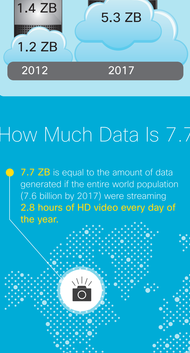
GROWTH IN THE CLOUD

Global data center traffic is projected to triple between 2012 and 2017, with data center traffic specifically in the cloud forecast to grow nearly fivefold during that period.



By 2017, 69% of global data center traffic will come from cloud services and applications.

Traditional Data Center Traffic

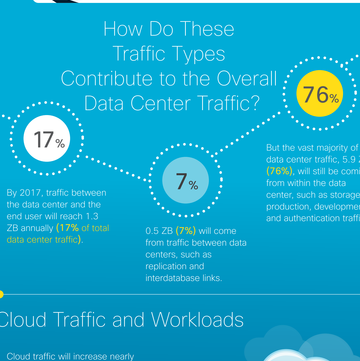
Cloud Data Center Traffic

1 zettabyte (ZB) is equal to sextillion bytes, or a trillion gigabytes.

How Much Data Is 7.7 Zettabytes?

7.7 ZB is equal to the amount of data generated if the entire world population (7.6 billion by 2017) were streaming **2.8 hours of HD video every day of the year.**

It is equivalent to about **1.6 years of continuous music** streaming for the world's population (7.6 billion by 2017).

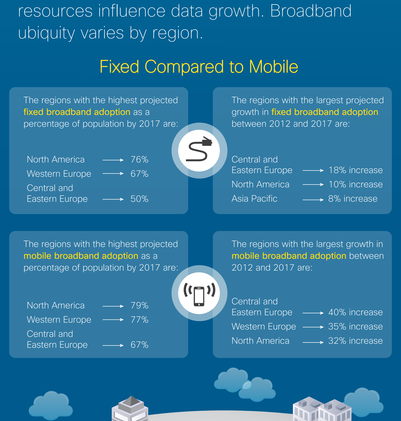


It is equivalent to about **14 hours of daily web conferencing** for the world's workforce (3.6 billion by 2017).

Where Is the Origin of This Data Center Traffic?

Some traffic flows between the data center and end users, some traffic flows between data centers, and some traffic stays within the data center.

How Do These Traffic Types Contribute to the Overall Data Center Traffic?



By 2017, traffic between the data center and the end user will reach 1.3 ZB annually **(17%** of total data center traffic).

0.5 ZB **(7%)** will come from traffic between data centers, such as replication and interdatabase links.

But the vast majority of data center traffic, 5.9 ZB **(76%)**, will still be coming from within the data center, such as storage, production, development, and authentication traffic.

Cloud Traffic and Workloads

Cloud traffic will increase nearly **fivefold** between 2012 and 2017.

Nearly two-thirds of all workloads will be cloud-based by 2017. Cloud workloads (30% compound annual growth rate [CAGR]) will grow five times faster than traditional data center workloads (6% CAGR).

Differences in regional network behavior and resources influence data growth. Broadband ubiquity varies by region.

Fixed Compared to Mobile

The regions with the highest projected **fixed broadband adoption** as a percentage of population by 2017 are:

North America	76%
Western Europe	67%
Central and Eastern Europe	50%

The regions with the largest projected growth in **fixed broadband adoption** between 2012 and 2017 are:

Central and Eastern Europe	18% increase
North America	10% increase
Asia Pacific	8% increase

The regions with the highest projected **mobile broadband adoption** as a percentage of population by 2017 are:

North America	79%
Western Europe	77%
Central and Eastern Europe	67%

The regions with the largest growth in **mobile broadband adoption** between 2012 and 2017 are:

Central and Eastern Europe	40% increase
Western Europe	35% increase
North America	32% increase

Regional Fixed or Mobile Device Ownership and Connections Influence Cloud Readiness

The regions with the **largest average number of fixed devices** and machine-to-machine (M2M) connections per user in 2012 were:

North America	5.18
Western Europe	3.36
Central and Eastern Europe	2.01
Latin America	2.00

The regions with the **largest average number of fixed devices** and M2M connections per user in 2017 will be:

North America	7.34
Western Europe	5.23
Asia Pacific	2.99
Latin America	2.96

The regions with the **largest average number of mobile devices** and M2M connections per user in 2012 were:

Central and Eastern Europe	1.85
Middle East and Africa	1.69
Western Europe	1.66

The regions with the **largest average number of mobile devices** and M2M connections per user in 2017 will be:

North America	2.67
Western Europe	2.51
Central and Eastern Europe	2.30

Source: Cisco Global Cloud Index, 2013