

Inside a Microsoft datacenter

The world runs on data, and the cloud—made up of datacenters around the globe—is its engine. Amid the changing nature of work, education and innovation, datacenters arguably have become the most important infrastructure of the 21st century.

Here's a look at [Microsoft's datacenters](#) and how they deliver worldwide physical and digital security, reliability, sustainable design and operations, and ground-breaking innovation.

Over **4 million** servers across

200+ datacenters

60+ datacenter regions launched and announced, more than any other cloud provider.

Azure Orbital ground station



Security

Microsoft has over **3,500** cybersecurity experts working around the **globe 24/7** to protect the Microsoft Cloud and invests over **\$1 billion** USD in physical and digital security and R&D.

2.5 billion daily cloud-based detections blocked almost **6 billion** threats on endpoints in 2020.

90+ data compliance certifications—more than any other cloud provider.

Microsoft helps secure more than **400,000** customers across **120** countries.



Reliability

We believe a trusted cloud is secure, reliable, and aligned with regulatory compliance and data residency requirements. Azure Availability Zones (AZs) protect customer applications and data from datacenter failures with independent power, cooling, and networking.

There is only **1 millisecond** of latency across Microsoft's regional datacenters.

By end of 2021, every country where we have a datacenter region will include an AZ, and every new datacenter region launched will include AZs.



Sustainability

We're also investing in sustainability at our datacenters, including green design and eco-friendly operations, with the goal of being carbon negative and water positive companywide by 2030.

2025

Replace **100 percent** of carbon-emitting electricity consumed at datacenters, buildings and campuses with power purchase agreements for green energy.

2030

Eliminate dependency on diesel fuel for power backup using alternatives such as synthetic fuels, long-duration batteries and hydrogen fuel cells.

2050

Offset historical carbon emissions since Microsoft's founding in 1975.

Divert 90% of waste away from landfills through solutions like Microsoft Circular Centers that repurpose, reuse and recycle servers and other infrastructure components.



Innovation

New deployments, new services and ground-breaking new facilities—Microsoft is constantly investing in innovation to make the cloud more reliable, efficient and available.

165,000+ Miles

of subsea, terrestrial, and metro optical fiber—enough to circle the planet more than **6.5 times**.



Project Natick

The world's first underwater datacenter.

Operated for up to 5 years without maintenance.

Powered entirely by locally produced renewable energy, including wind, solar, tide and wave sources.