
daisy.
Extreme networks
NETWORKING IN THE CLOUD ERA:
MAKING THE RIGHT CHOICE
A guide to moving your network to the cloud

**It's no surprise that almost every organisation, regardless of type or sector, now uses at least one kind of IT cloud service. The simple fact is, cloud technology vastly simplifies and reduces the cost and complexity of IT service delivery, and thanks to cloud networking, your wired, wireless and data centre access networks are no exception.**

### What is cloud networking?

Cloud networking offers you a new way to deploy, manage and optimise your networks - one that removes much of the local management and control of networking infrastructure and places it in the cloud. This makes management simple with everything in one place, meaning deployments, changes and support can all be done faster.

Unlike traditional, locally hosted on-premise solutions, cloud networking helps you simplify a range of highly complex tasks. You'll be able to get new business locations up and running in minutes while enjoying unprecedented levels of control and network visibility.

Although there are many cloud networking providers, their solutions differ in both features and quality. The guidelines that follow will help you discover what to look for and identify the best option for your organisation.

*ExtremeCloud™ IQ is a cloud-driven network management solution for wired and wireless networks. It's simple, flexible, intuitive to use, and helps you address the intense demands of today's business climate.*


YOUR CLOUD
NETWORK
CHECKLIST

# 1.

# UNDERSTANDING THE BASICS OF CLOUD ARCHITECTURE

Many cloud networking solutions look similar at first glance. However, it's worth bearing in mind that there are many different types of cloud architecture. To assess the quality of a given solution, first make sure that it's built using up-to-date principles like dynamic orchestration and containerised microservices. These are the software building blocks of the modern cloud, and play a vital role in enabling network scalability, reliability, and velocity.

**While other systems rely on 2nd or 3rd generation cloud infrastructure, ExtremeCloud™ IQ operates as a 4th generation cloud product. This enables greater flexibility and scale while giving unprecedented levels of insight into data gathered by the network.**

# 2.

# EXPLORE THE DIFFERENT CLOUD HOSTING OPTIONS

Some cloud solutions are only available through a single cloud hosting provider or a proprietary cloud, which can inhibit speed and innovation. There are several reasons why a given cloud provider may or may not be the best option for your business. For example, if you already have some cloud applications running on a specific platform, you may want to deploy your networking management on the same platform.

Whichever cloud networking partner you choose, make sure the technology they use is available via different cloud hosting providers, such as Amazon, Google, Microsoft, and even your own data centre.

**ExtremeCloud™ IQ is uniquely designed from a hybrid cloud perspective and as such can operate on Amazon Web Services, Google Cloud Platform, Microsoft Azure and in private data centres.**

## THE DIFFERENT GENERATIONS OF CLOUD TECHNOLOGY:

### 1st generation

Focused on cost savings, as well as the ability to move some hardware out of network locations and provide flexibility in management.

### 2nd generation

Focused on security, analytics, data gathering, and multitenancy, with a push to increase resiliency and reliability.

### 3rd generation

Focused on real-time innovation, as well as artificial intelligence (AI) and machine learning features (ML).

### 4th generation

Delivers all of the above plus cloud service provider agnostic, increased durability, expanded data processing capabilities, containerised microservices, and unlimited data duration to increase platform flexibility and scale.

# 3.

# DEMAND A CHOICE OF DEPLOYMENT OPTIONS

Whether you choose to deploy your IT infrastructure via the **public cloud** (for reasons such as flexibility and cost) or an **on-premise cloud** (for organisational or legal reasons), we recommend choosing a cloudagnostic platform so your applications and infrastructure are available across public, private, hybrid, and local models. If your cloud solution isn't built on an agnostic basis, future decisions become more complex and limited. It might be harder, for example, to move to a multi-cloud footing, or from one provider to another. It's also important to make sure that the feature set is consistent across all deployment models, so you never have to compromise on functionality.

**Unlike many competitors, ExtremeCloud™ IQ offers flexible deployment across public, private, local and even hybrid cloud. This gives you maximum flexibility, uninterrupted access to new innovations and a seamless user experience. Whichever deployment style you choose, ExtremeCloud™ IQ offers the same capabilities and feature sets. You can also change your deployment option easily as your requirements change.**

# 4.

# CONSIDER YOUR STANCE

Some IT departments may be wary of using cloud networking providers that only reside in one region. Others, conversely, due to national government rules or a range of other reasons, may be keen to have their cloud networking provider resident in their region of operation.

In recognition of these concerns, many cloud providers operate data centres in several major regions. It's therefore important to check out your provider's global presence before committing.

**ExtremeCloud™ IQ has a geographically distributed public cloud architecture with data centres in North America, Europe, and Asia Pacific. This optimises our regional service performance while enabling compliance with local data security and privacy regulations. Customer management-based data resides at the Regional Data Centre level and therefore stays in-region and in-country.**

# 5.

## SECURITY AND PRIVACY

Data security and privacy protection are vital areas to consider when choosing a cloud networking service. Always confirm your cloud provider's stance on these issues before purchasing. Do they follow best practices? Do they have suitable integrity controls in place? Do they abide by regulatory standards? Your chosen provider should be able to provide operating SLAs with financial guarantees, while rigorously observing regulatory requirements (e.g. GDPR) and industry standards like PCI-DSS. They should also have certifications to validate their processes, like the ISO 27000 family and CSA's STAR compliance programmes.

**ExtremeCloud™ IQ is the only cloud networking management platform to be ISO/IEC 27001 certified by the International Standards Organisation (ISO), ensuring the highest levels of compliance with information and data protection rules. ExtremeCloud™ also adheres to GDPR standards and stores no personal information belonging to customers.**

# 6.

## SIMPLICITY AND EFFICIENCY

The greatest benefit of cloud networking may well be its simplicity. How does it achieve this? By allowing you to manage unified wired and wireless networks centrally. With the burden of operation shifted to the cloud provider, you enjoy faster network speeds and the latest functionality without the pain of systems migration, upgrades, unexpected bugs, overnight maintenance windows, rollbacks, and other headaches. Cloud networking also helps to improve daily workflows. Logins no longer require a VPN. Licence management and the registering of new devices become simpler. Policies can be configured and supplied centrally.

You also have full, integrated visibility of all your network deployments, however widely distributed.

**ExtremeCloud™ IQ streamlines all aspects of network management with a user interface (UI) that is friendly and easy to use. This UI is sufficient for 98 percent of configuration tasks, as well as both manual and automated troubleshooting.**

*Available as an essential security application for ExtremeCloud™ IQ, Extreme AirDefense simplifies the protection, monitoring and compliance of your wireless LAN networks. It continuously safeguards the network from external threats 24x7x365 and notifies IT staff when attacks occur, enabling an immediate response. Extreme AirDefense also enables compliance with regulations such as PCIDSS, Sarbanes-Oxley, HIPAA, and GLBA. It can perform spectrum analysis, Bluetooth monitoring, advanced forensic analysis and provide a live view of what's happening on the network.*

# 7.

## AVAILABILITY AND RELIABILITY

When considering an initial move to the cloud, many organisations are concerned about system availability and reliability, and wary of any potential "loss of control". As a result, they expect cast-iron uptime guarantees from their cloud provider. Many cloud providers strive to deliver 99.99999% availability (also known as the seven "9s" of uptime), although they might only commit to 99.9% availability in an SLA.

When evaluating a cloud networking provider, be sure to review their SLAs, especially regarding guaranteed uptime, as well as the number and duration of planned outages and upgrades. It's also worth enquiring about the impact of planned service outages, since the best cloud networking solutions will continue to provide user connectivity, even while the connection to their cloud-based management is momentarily interrupted.

**ExtremeCloud™ IQ has achieved an operational state of 100% uptime. Also, due to its 4th generation architecture, ExtremeCloud™ IQ provides "11 9s" of Data Durability. This ensures the loss of only one data object in 10,000 every 10 million years.**

# 8.

## COST EFFICIENCIES

Switching to cloud networking can significantly reduce the cost of deploying and operating your network, as compared to hosting it inhouse. Most crucially perhaps, the cloud enables a smooth transition to operational expenditure (OpEx) and away from the upfront capital expenditure (CapEx) common to on-premise solutions.

While the long-term total cost of ownership doesn't always play out in cloud's favour, the flexibility benefits of OpEx budgeting are often compelling in their own right. This is particularly true when you factor in the development speed enabled by cloud, and the impact this can have on the achievement of your business objectives.

**ExtremeCloud™ IQ reduces upfront business costs, automates deployment and centralises support and management. This in turn helps to ease operational expenditure and offset the need for trained staff at remote locations, while providing both CapEx and OpEx savings.**

*Included with ExtremeCloud™ IQ is a unique portable device-agnostic licensing model across access points, campus switches, and data centre switches and routers.*

# 9.

## SCALABILITY AND ELASTICITY

One of the most attractive benefits of cloud-based networking is its elasticity - the ability it gives you to scale up or down in line with changing demand. A single underlying platform is the key to enabling that scalability while maximising the benefits you get from any hardware purchases and minimising the need for expensive refreshes.

It doesn't matter whether you choose public or private cloud or both. The most critical thing is to find the right management platform to help you plan, grow, and upgrade your cloud network.

**Thanks to its 4th Generation cloud architecture, ExtremeCloud™ IQ is infinitely scalable. It leverages your existing infrastructure while managing all access points and switches across your onpremise and cloud deployments. This eliminates "architecture lock-in", allowing you instead to migrate between cloud and on-premise hosting as your needs dictate, without expensive hardware or "rip-and-replace" software installations.**

# 10.

## APPLICATION PERFORMANCE

Application performance is a key priority for any organisation considering a cloud networking solution. That's hardly surprising: no-one wants productivity to drop because users are waiting for cloudreliant apps and browsers to load. The upshot? Any cloud networking provider worth their salt should be able to continuously monitor usage, making sure all your applications are delivered optimally to boost, not reduce, efficiency.

**ExtremeCloud™ IQ gives you 360-degree insight into the status and performance of your network, including all users, applications and connected devices. Enjoy a complete, holistic overview (and therefore complete control) at a single glance.**

# 11.

## ARTIFICIAL INTELLIGENCE (AI) AND MACHINE LEARNING (ML)

By moving to the cloud, many organisations hope to leverage advanced capabilities like AI and ML to enhance network automation and performance. Harnessing AI and ML in your network management approach can make your networks more "intelligent", defining common behaviours and increasing automation. This, in turn, reduces workload and improves performance.

**ExtremeCloud™ IQ incorporates AI and ML to help you automate routine and monotonous tasks like configuration, optimisation, and troubleshooting. By detecting and correcting problems before they affect the end-user, these technologies can greatly enhance your employee experience and reduce the maintenance burden on your IT team.**

Cloud networking offers you a wealth of benefits that can't be found in traditional network management systems. Its unmatched flexibility and scalability make it a perfect fit for organisations of all shapes and sizes.

Your organisation's network underpins access to every resource and service. It's therefore vital to partner with the right provider – one who can help to ensure your cloud network grows and evolves as your business does.

As an Extreme Networks Ultimate Master Partner, Daisy can help you create a more efficient network environment with cloud-driven networking. ExtremeCloud™ IQ creates the ideal conditions to flourish, now and in the future. As our customer, you'll have both Daisy and Extreme on hand to help get the most from your investment, both proactively and through multiple lines of technical support.

## GET IN TOUCH

**Schedule a no obligation call with one of our network experts**

**T: 0344 863 3000**

**E: enquiries@daisyuk.tech**

**W: daisyuk.tech**

Extreme networks



daisyuk.tech