Executive Summary

The Nokia AirFrame data center solution
Centralized and distributed capabilities for the telco cloud

More data has been created in the past two years alone than in the entire history of humankind. And 5G is going to change the game for good, letting people do more on their mobiles than ever before. Data-driven trends like social media and the Internet of Things are making the need for fast service transmission, network mobility and scalability way more complex. The IT industry has looked to the cloud to meet the challenges of today and tomorrow. Now, the Nokia AirFrame data center solution is doing the same – and more – for telcos.

The Nokia AirFrame data center solution is 5G ready and gives operators all the benefits and flexibility of cloud computing technologies in a solution that’s specifically tailored to telcos’ needs.
**Made for telcos, better for telcos**

Telco services put their own unique demands on network infrastructures. That’s why they need a unique approach to cloud architecture and hardware infrastructure. The Nokia AirFrame data center solution delivers the industry’s first advanced cloud management made to handle both centralized and distributed telco cloud architectures. In short, it’s better for telcos because it’s made for telcos.

**High efficiency, low latency**

Mobile services need a network designed for high-speed connectivity and made to reduce latency and network ingress traffic. The Nokia AirFrame data center solution is tailor made to meet telcos’ need for superior efficiency and capabilities. It’s more efficient at running data that needs telco applications than the current x86 hardware. And can run the most common IT applications.
For telcos, things like low latency are crucial. And they’re driving the need for layered data center architecture.

The Nokia AirFrame data center solution is available in two form factors: Rackmount and OCP (Open Computer Project). It’s more efficient than existing x86-based servers at running demanding telco applications, which also means lower latency.

Cloud radio is driving the need for distributed data center architecture.

The Nokia AirFrame data center solution can scale from single server to large hyperscale data centers, which means it’s more flexible.

5G will change the game as we know it, letting people do more with their phones than they’ve ever imagined. Meeting the challenges of 5G will require distributed architecture, real-time responsiveness and unprecedented agility and scalability.

The Nokia AirFrame data center solution can run both IT and telco workloads thanks to HW acceleration, which includes encryption, packet-forwarding and radio baseband. That’s why it’s perfectly positioned to meet the demanding needs of telcos as we head into the era of 5G.

Open standards like OCP are a major trend in the industry.

As the industry’s first telco-grade OCP data center, AirFrame OCP is leading the way forward.

Hyperscale data centers are also a big trend, and not only for giants like Facebook or Google. Enterprises of all sizes will can benefit from hyperscale data centers.

OCP brings a lot to the table, including industry-leading energy efficiency (PUE <1.1), a 50% higher HW density and serviceability designed for data centers in which a single engineer manages over 25,000 servers.

Energy efficiency is more important than ever, especially in the hyper-scale environment.

OCP is based on Facebook’s open design and it’s helped them save over $2 billion in infrastructure costs.

Services from end to end

The benefits of cloud hardware and software are enhanced by end-to-end services. Nokia Networks’ Global Services cloud portfolio helps reduce both business and technical risks over the entire AirFrame data center lifecycle. And we have a proven proven foundation for operating telco applications on the cloud for both NFVs and converged IT/enterprise scenarios.

We support all phases of the cloud lifecycle, from consultancy that ensures business drivers are realized to identifying business process changes that ensure successful service realization to holistic integration and support. And we strengthen our own services by partnering with other experts in multivendor environments.
Nokia AirFrame data center is available in two form factors

**Rackmount servers**
- Easy downward scalability for distributed datacenters
- 19” rack-mount form factor
- Full-width 1U server, or 2U storage servers

**OCP hyperscale servers**
- Higher density and lower energy consumption
- 3 servers in 2OU in OpenRackv2
- Serviceability designed for datacenters where 1 engineer manages 25k+ servers
Stronger together - merging telco and IT

As 5G pushes the limits of what’s possible, it will also create new and unprecedented data demands, especially for telcos. The Nokia AirFrame data center solution is helping operators meet those demands by delivering all the benefits and flexibility of cloud computing technologies in a solution that’s specifically designed with telcos in mind.