

# HPC & AI Services



**Purpose built, sustainable IaaS for the most demanding HPC and AI workloads—with 24/7 support**

## **More compute for a better world**

HPC and AI drive deeper insights and transformational outcomes across multiple industries, including automotive, aerospace, marine engineering, life sciences, financial services, and many more.

Performance and compliance concerns mean many HPC workloads must remain on-premises. However, managing HPC clusters in-house is costly, complex, and time-consuming. And so is data center management. It's hard to match the energy efficiency and economies of scale of larger facilities. Power costs can quickly spiral and lengthy facility upgrade projects often exceed estimates, adding to the bill while delaying time to market. These hurdles put the brakes on innovation while competitors leap ahead.

## So what's the solution?

Say hello to supercomputing as-a-service.

atNorth lowers the barrier to entry for HPC. We reduce your time, cost, and expertise burden—while optimizing performance, accelerating time-to-insights, and supporting your sustainability goals.

Our dedicated private HPC clusters operate in a fully centralized and optimized environment encompassing data center, network, storage, and compute—built from the ground up for your most demanding HPC & AI workloads.

Less pain, more power.

Computational fluid dynamics, big data analysis, Monte Carlo simulations, weather forecasting, computer vision, natural language processing/large language models, and beyond... Whatever the workload, we've got you covered.

## Why atNorth

### Expertise and ease of use

atNorth is your trusted partner and 'one stop shop' for HPC. We serve a rapidly growing global customer base across multiple industries—helping organizations move away from localization while pursuing innovation and sustainable revenue generation.

You don't need internal expertise and endless consultants specializing in data center management, hardware management, cloud security, and HPC applications. We can look after everything instead. We're here all day, every day, to overcome your operational challenges—from application scaling and performance optimization to solution architecture and development—allowing you to focus on value creation.

We retain all the modern functionalities inhouse devops teams need to manage clusters—with IaaS support and CLI API infrastructure code management, ensuring you retain full control of your bare metal, virtualized and network resources.

**"Having a lower price and better performance from a sustainable source is a win-win situation."**

Luke Peffers, Chief Weather Officer, Tomorrow.io

**"HPC is a crucial element of our business, and atNorth-powered HPC is essential to our team."**

Marc Tombroff, Vice President of R&D, Cadence Design Systems



## Lower your carbon, lower your costs

Our world-renowned, ultra-sustainable data centers are powered by 100% renewable energy and leverage natural cooling to achieve the lowest carbon intensity worldwide—dramatically lowering your energy costs and carbon footprint.

We're more predictable, transparent, and flexible than the public cloud—with remarkably stable pricing. Our OPEX model ensures you only pay for what you use, with rolling billing or the option to reserve instances monthly or quarterly. You can also commit for 36–60 months for a very competitive fee (similar to operating your own cluster). And there are no hidden data exchange costs.

## We can reduce your HPC & AI carbon footprint by up to 98%

### The power you need, when you need it

atNorth's resilient data centers are purpose built for high density workloads and designed around you:



**Customized compute** — Our turnkey clusters are ready to scale and can be turned on within 24 hours. We can also procure, build, set up, and test tailored clusters designed to your specific requirements. Or you can opt for full consultancy and dedicated management.



**Performance without compromise** — Unlike the public cloud, we run all cluster nodes in close proximity with high speed Omni-Path or Infiniband interconnects. And to ensure the highest levels of performance without compromise, we do not throttle power or thermal profiles.



**Scalability and flexibility** — Stable base capability with long-term flexibility ensures you always have the processing power to meet usage spikes, seasonal demand, and changing project loads.

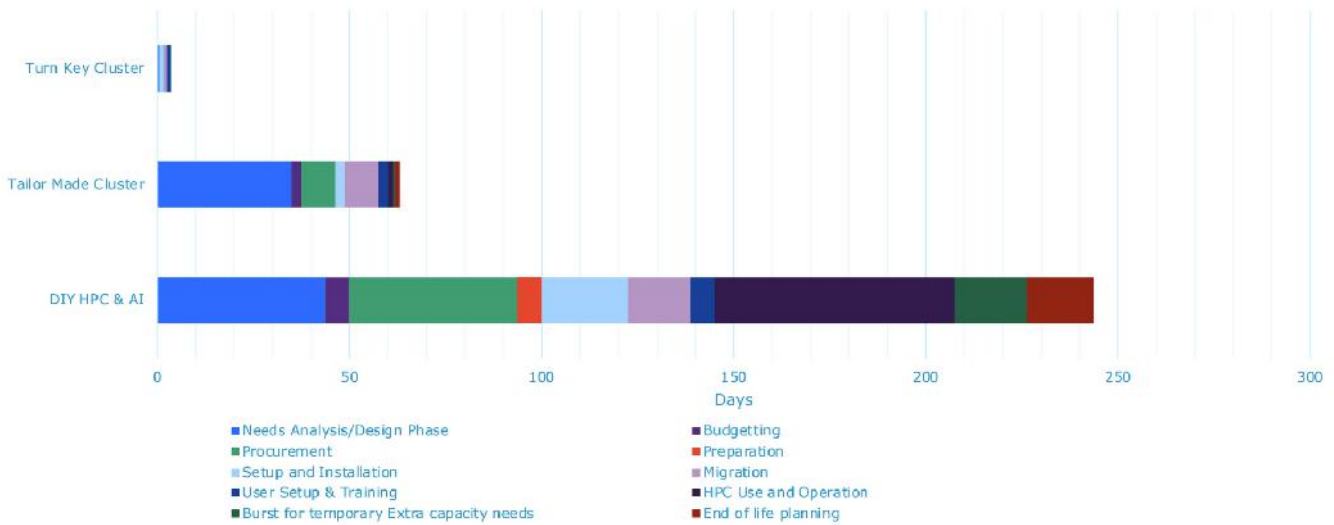


**Faster time-to-market** — Instant access to turnkey capacity improves productivity, and enables faster time-to-market—saving up to six months from when the need arises to running AI/ML/DL simulations or calculations at scale.



## Best of both worlds

### Speed to market



## Ensuring business continuity

We provide a full stack SLA that meets your exacting business requirements, with always available data centers and expertly managed operating systems to meet your uptime goals. Our power-dense, HPC-native compute environments with dedicated clusters guarantee multi-region availability and ensure security of access for your most valuable data—with optional encryption for a zero-trust approach.

### How can we help

atNorth HPC & AI services to ensure business continuity efficiently

	On premise	Off premise	Cloud	atnorth
Admin Support	Operator	Operator	Operator	atNorth (Optional)
OPS Support	Operator	Operator	Operator	atNorth (Optional)
Security	Operator	Operator	Operator	atNorth
Monitoring	Operator	Operator	Operator	atNorth
OS Management	Operator	Operator	Operator	atNorth
Networking	Operator	Operator	Provider	atNorth
Hardware Management	Operator	Operator	Provider	atNorth
Data Center Management	Operator	Provider	Provider	atNorth
Data Center	Operator	Provider	Provider	atNorth



## Clusters without compromise

atNorth's dedicated private HPC combines the benefits of in-house clusters and the as-a-Service model to deliver greater performance, more flexibility, stronger control, and improved sustainability.

## Best-of-breed resources built around you

From turnkey to tailored-made clusters, our fully scalable solutions are built from best-of-breed resources, including:

**Bare metal resources** — including automated infrastructure (IaaS and Infrastructure as code) and the latest HPC optimized CPUs based on AMD and Intel roadmaps.

**Visualization and virtualization resources** — running on globally accessible, remote, powerful workstations with pre and post processing data capability, with license management.

**Network resources** — run in close proximity via high speed Infiniband and Omni-Path interconnects, and direct links.

**AI Resources** — with the latest architecture and technology from market leaders such as NVIDIA and Intel.

**Storage** — general purpose, cost efficient, and highly resilient storage, and (WEKA) Optimized RDMA based resilient parallel file system.

## Best of both worlds

A combination of the benefits of own cluster and cloud

	On premise	Cloud	 atnorth
Capacity scalability >	✗	✓	✓
OPEX billing (cloud) >	✗	✓	✓
Full stack SLA >	✗	Somewhat	✓
Data control >	✓	Somewhat	✓
Performance optimization >	✓	✗	✓
Price performance >	✓	✗	✓



## 01 - TEAM

Our team of experts can assist you with IT architecture design, automation, monitoring & metrics, software deployment & updates and OS deployment & updates. Our HPC specialists can provide you with a turn-key solution so you can hit the ground running, delivering results to your customers instead of focusing on the infrastructure.



## 02 - RESOURCES

Offering BareMetal resources, virtualized resources and Storage (Ceph / Optimized). The latest in HPC technologies optimizing CPU for the more demanding workloads, fast storage for the more demanding bleeding edge AI training and the connectivity to make it available anywhere.



## 03 - FOUNDATIONS

The foundation of what we do. Our renowned datacenters power our HPC and AI infrastructure which has Tier 3 fully sustainable underpinning.



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