Seneca HPC Cluster

Maximizing Research ROI via Strategic Efficiency

Optimizing Research Dollars

Pure Computational Power

Even with CAC management, standalone clusters incur costs for auxiliary gear—switches, racks, and PDUs—that don't directly run simulations.

Seneca allows PIs to bypass these capital barriers, ensuring that every grant dollar is optimized for pure computational power.

Lower Barriers to Entry

Access high-performance infrastructure without the capital hit of replacing entire aging clusters. Migrate and scale at the pace of your research grants.

Three Paths to Performance

Pay-As-You-Go

The lowest barrier to entry. Buy compute unit (CU) bundles and pay only for the storage you use. Zero upfront hardware cost.

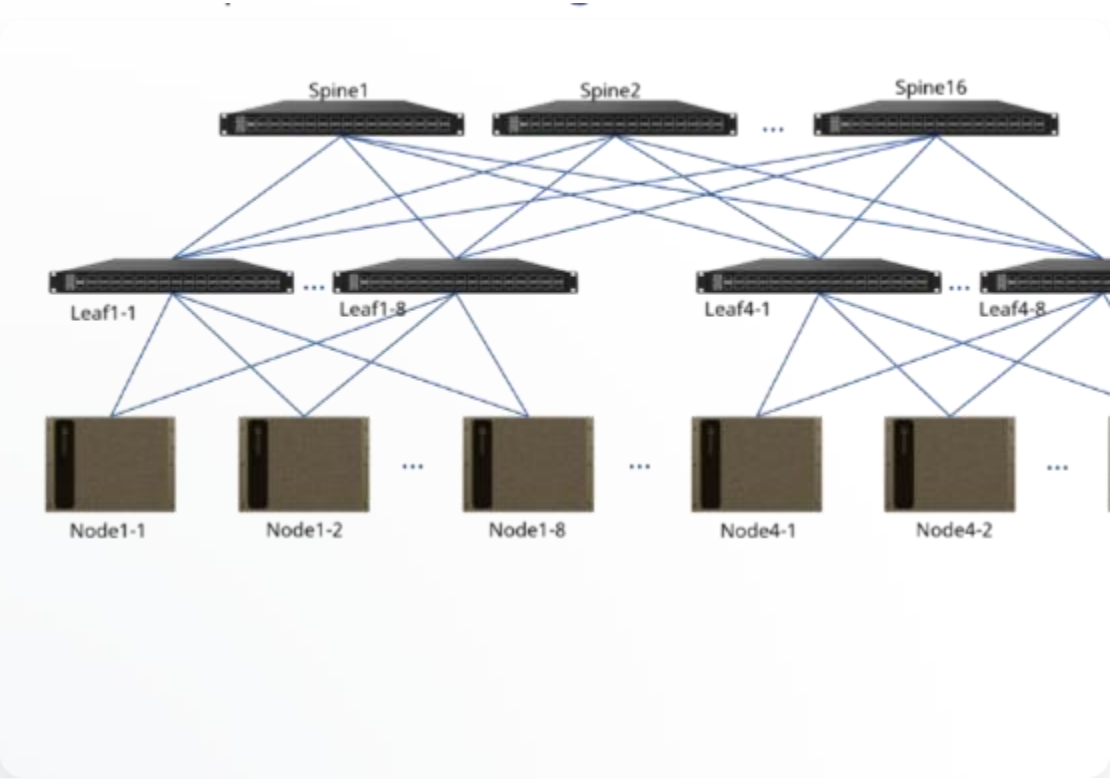
Condo Model

Contribute hardware to get priority rights and $0 compute costs on your nodes. Professional maintenance fees apply per node.

Storage

Pay only for the disk space you use ($100/TB/yr) billed in GB/mo. Or Purchase a dedicated storage array for exclusive group use. CAC manages the full lifecycle and hardware maintenance.

Consolidated Infrastructure Savings



Lower Maintenance Overhead

Maintenance fees for Seneca Condo nodes are optimized by shared infrastructure density. PIs are no longer responsible for the maintenance of a full isolated stack (switches/racks/UPS). Your grant funds nodes, and our professional maintenance covers everything from OS patching to vendor support.

Option 1: Pay-As-You-Go

Ultimate Research Agility

Ideal for new PIs, grad students, or bursty projects. Access world-class GPU and CPU power without hardware procurement delays.

- **$0 Upfront Cost:** No capital investment.
- **Global Access:** Compute Units (CU) work on Seneca or Red Cloud.

Financial Safety & Guardrails

Absolute Hard Stops

Jobs cannot launch if your Compute Unit balance is zero. This provides an absolute "hard stop" to prevent unexpected spend or grant overruns.

No Expiration

Compute Units never expire. Buy what you need for the grant cycle and use them at the pace of your research, not the fiscal year.

Simple, Transparent Pricing

$350

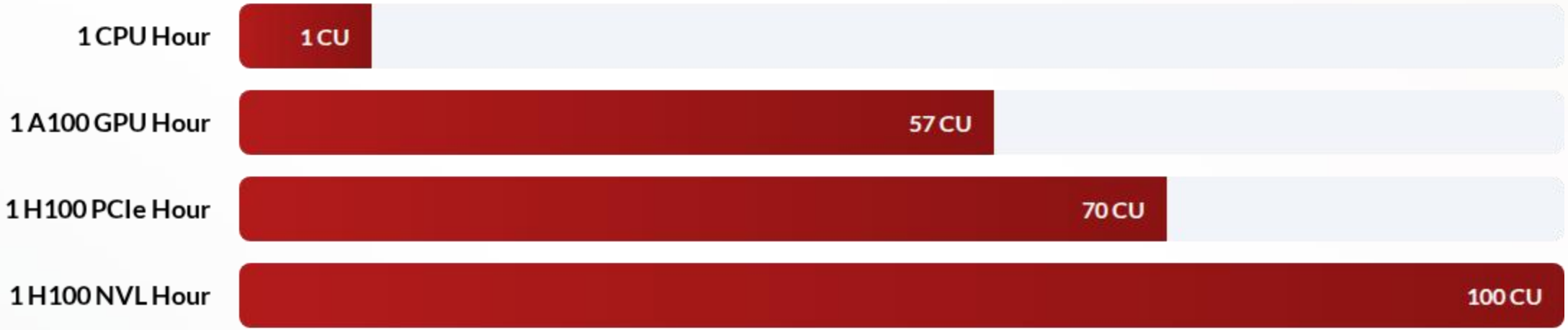
Per 10,000 Compute Unit Bundle

Predictable Economics

Bundles are purchased upfront and used as currency across all Seneca resources. This simple flat-rate model enables audit-friendly grant proposals.

3.5¢ Effective Compute Unit Cost

Compute Unit (CU) Conversion



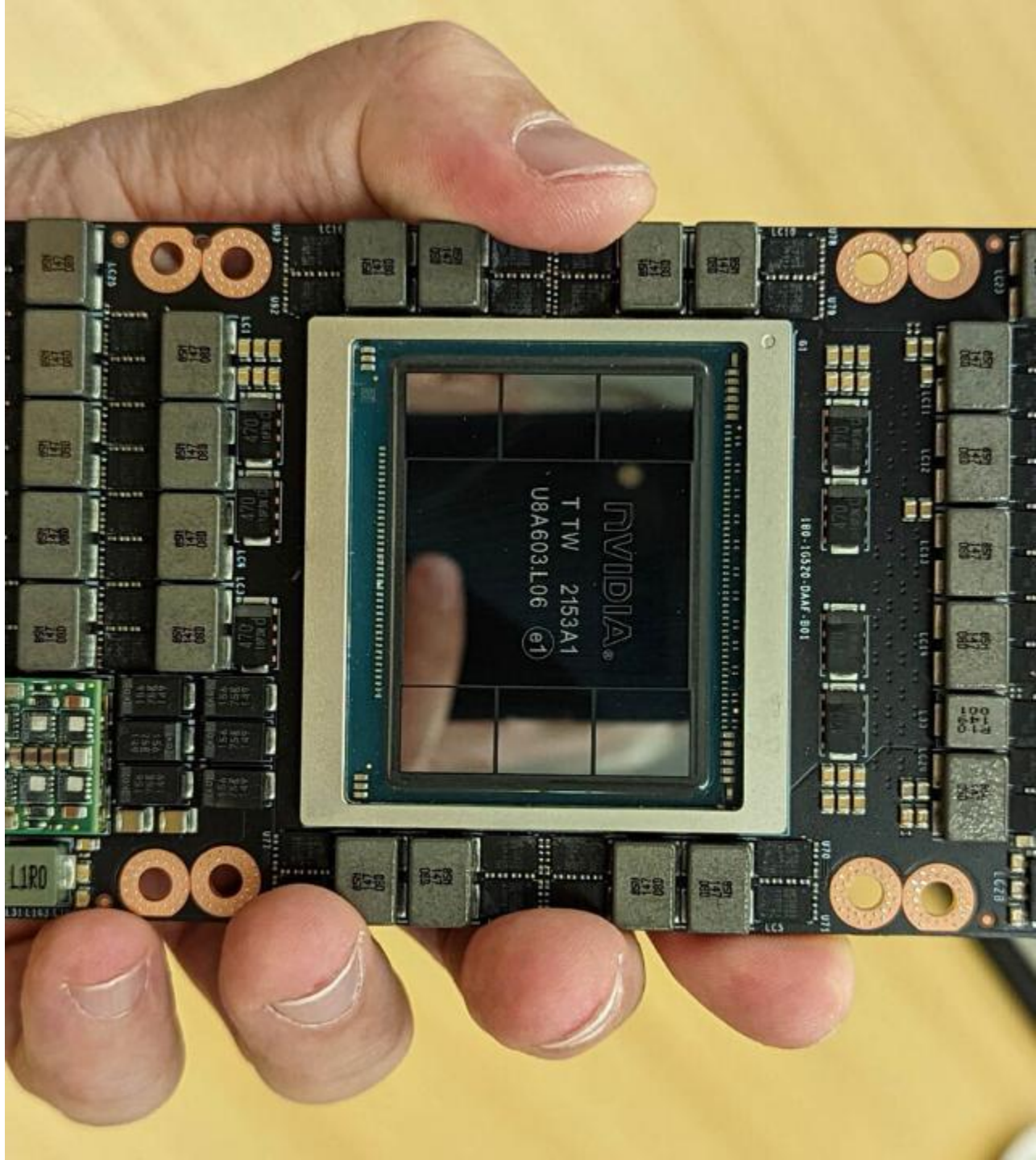
Maximize compute power dynamically based on job requirements.

Option 2: Hardware Condo

Zero Compute Unit Cost*

Pay $0 for cycles on your owned nodes. Professional maintenance by CAC with predictable per-node fees.

Priority Rights: Shareholders receive their own dedicated Slurm queue with full preemption rights on their hardware nodes.



Elastic Scaling & Bursting

Burst Beyond Capacity

Outgrown your hardware? Instantly burst into the general cluster capacity. Additional resources are simply paid via standard Compute Unit bundles.

Preemptable Cycles

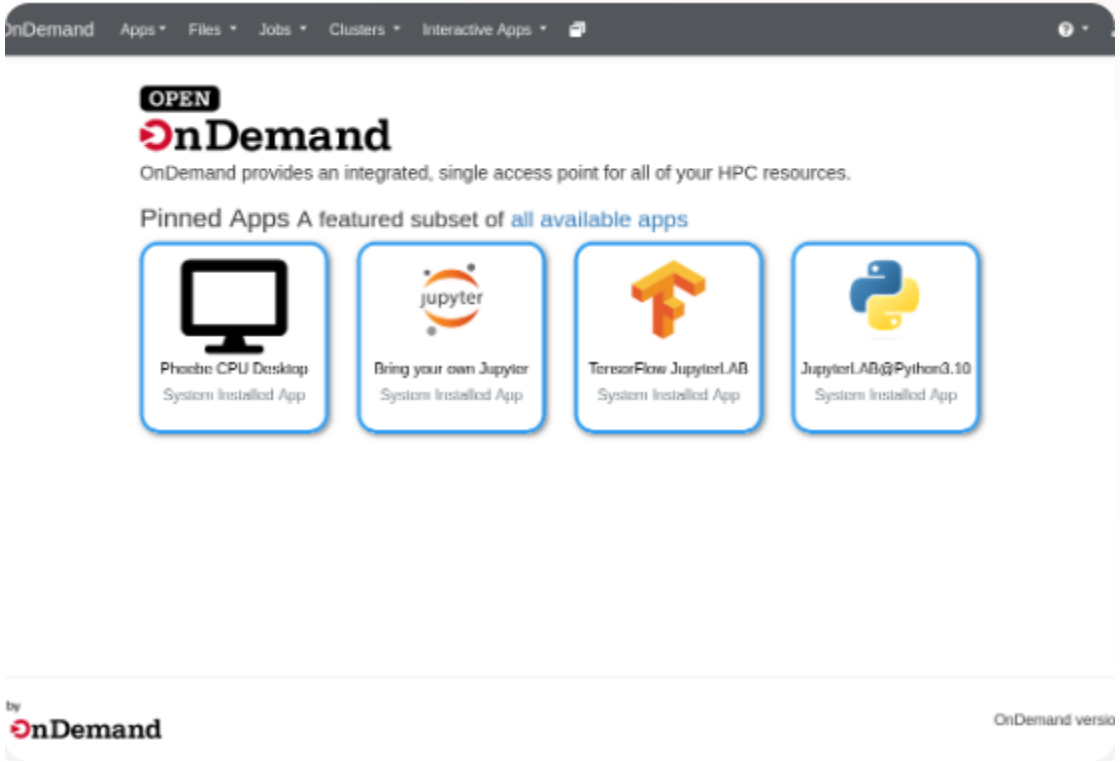
Idle cycles on private hardware are available to others. These jobs are strictly preemptable and re-queued instantly if the owner submits a task.

Access via Open OnDemand

Browser-Based HPC

Lowering the barrier to entry with web-based access to powerful interactive and batch applications. Access Seneca from anywhere, no command line experience required.

AlphaFold3	**MATLAB**
Jupyter	**VS Code**



Flexible Storage Strategy

Pay for Content, Not Containers

Elastic Storage: $100/TB/Year. Billed at a granular monthly GB rate based on your actual footprint.

Private Hardware: Purchase your own storage system for exclusive use. Full maintenance and lifecycle management provided by CAC.

Professionally Managed Lifecycle

Security & Patching

Professional OS patching, security monitoring, and active maintenance are built-in to the Seneca environment.

Hardware Lifecycle

Troubleshooting, repair management, and direct vendor support liaison handled by CAC experts.

Consulting

Direct access to CAC consultants for code optimization, custom Slurm tuning, software development, etc.

Consulting fees apply

Seneca Participation Models

Feature	Pay-As-You-Go	Condo (Hardware)	Private Storage
Upfront Cost	$0 (Bundle Basis)	Compute Node Cost	Hardware Cost
Maintenance	Included in Comp. Units (CU)	CAC Per-Node Fee	CAC Maint. Fee
Compute Fee	Uses CU Balance	**$0 (on owned gear)**	N/A
Bursting	Uses CU Balance	**Burst via CUs**	N/A
Storage Rate	$100/TB/Year*	$100/TB/Year*	Owned Array Cost
Access	General Queue	**Priority Rights**	Exclusive Access

**Billed monthly in GB increments based on actual usage footprint.*

Questions?

Architect your research's financial future with Seneca.

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