GovPOD

The HPC you know with the security you need

PENGUIN COMPUTING

Benefits and Use Cases

- ▶ Access to HPC resources and tools in a FedRAMP-compliant environment

- ▶ Predictable billing - simple, pay-per-use

- ▶ No extra charges for standard network data transfers

- ▶ Operating expense instead of capital expense

- ▶ SMBs can compete in the federal contract space

- ▶ Includes technical support from HPC experts & staff with backgrounds in science and engineering

- ▶ Overcomes limited access to in-house resources

- ▶ Offers a cost-effective solution vs. owning and managing your own cluster

- ▶ Enables immediate collaboration with Scyld Cloud Workstation

Why GovPOD

- • FedRAMP Moderate-compliant
- • Geographically dispersed sites with optional replication
- • High-speed parallel file systems
- • On-demand with no commitment, with reduced pricing for volume or committed use
- • Remote visualization using Penguin's Scyld Cloud Workstation

True FedRAMP HPC

You have a need for an HPC compute environment. The decision becomes whether to build from scratch or use a secure environment in the cloud.

With Federal Government Penguin-On-Demand (GovPOD), you can utilize a FedRAMP-engineered, high-performance, bare-metal, HPC environment in the cloud without having to invest in on-premise infrastructure. GovPOD eliminates many of the performance, scalability, and security challenges associated with traditional cloud computing environments.

Easily submit and monitor compute jobs from a traditional Linux CLI environment or from an intuitive and secure web portal. GovPOD's HPC cluster is ready-to-run with 100s of

applications pre-installed, eliminating much of the complexity of building, managing, and scaling HPC environments. This efficiency and economy of scale save both capital and operational cost, while ensuring a clear, predictable pricing model.

Leverage our two decades of experience in building and optimizing HPC environments and applications with free support from our HPC experts, who will assist you in running applications, managing workflows, and getting the best GovPOD customer experience possible.

GovPOD is a cloud-based, high-performance supercomputer designed to meet FedRAMP program requirements.

What makes GovPOD different?

GovPOD gives you features and services that other providers do not:

- ▶ No need to custom-build an HPC environment
- ▶ No extra charges for standard network data transfers
- ▶ Runs HPC Native
- ▶ HPC tools and libraries already working, along with schedulers and cluster managers

- ▶ Complete with a high-performance file system with high-speed, low-latency interconnects
- ▶ Focused on and designed for HPC users
- ▶ HPC expert help included
- ▶ A familiar environment so your users don't need to focus on anything but their applications

FedRAMP security

To ensure you have the most secure environment possible to protect your data, secure your identity, and restrict access to only authorized users, Penguin Computing POD:

- ▶ **Designed to meet FedRAMP security standards** – GovPOD consists of redundant computing sites rated to operate the entire security suite of standards as defined by NIST 800-53 and 800-171 for DFARS.

- ▶ **Meets DOD HPC Modernization Program standards** – GovPOD meets the requirements of the DOD HPC Modernization Program which includes monitoring cloud-based services to determine risk and maintain security.

- ▶ **Uses a single-tenant compute environment** – Unlike multi-tenant cloud environments, POD's compute environment is segregated to protect your privacy.

- ▶ **Layers on physical security** – POD is hosted at a highly secure, Tier III facility that undergoes an annual SSAE18 SOC 2 Type II audit.

- ▶ **Ensures data security** – All customer data lives solely at our United States, Tier III data center facility. Customers have complete control over access and persistence of their cloud data.

- ▶ **Encrypted data security** – All access to POD is over secure, industry-standard, encrypted protocols: HTTPS+SSL, SSH through AES-128 or AES-256, or customized private VPN connections through AES-256.

Key Components

GovPOD provides a complete software, hardware, and management platform built on our compute-optimized hardware, Red Hat Cloud Suite technologies, and Penguin Computing Scyld cloud and cluster orchestration and management software. GovPOD also leverages high-performance, low-latency networking and storage technologies to deliver optimized HPC for your workloads.

With the powerful cloud and cluster management of Scyld ClusterWare® and Scyld Cloud Manager, and expert management from the Penguin Computing services teams, your end users can engage with these resources with the same ease and even better performance than they need to keep innovating.
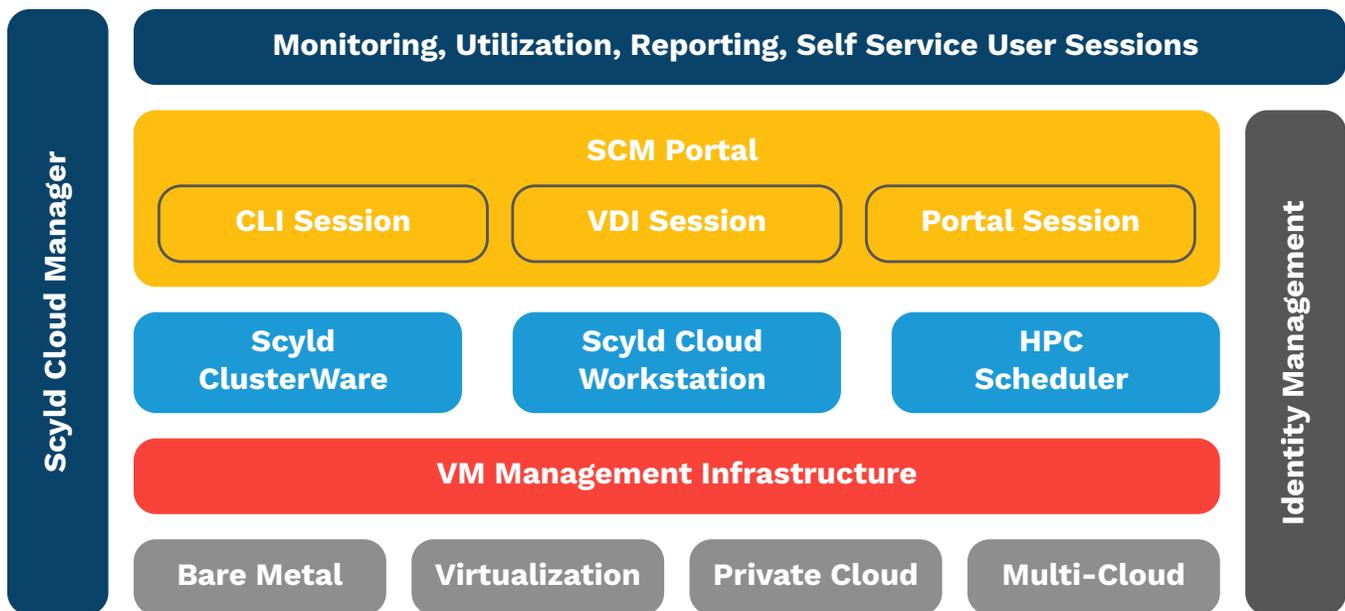
Scyld Cloud Manager Features

▶ Fully integrated HPC cloud solution for administrators

▶ Guided self-registration web portal to on-board users onto HPC resources

▶ Web portal interface allows access rights management and system monitoring

▶ Live and historical usage reporting for billing and chargeback management

▶ Web service APIs for reporting, resource management, and access control

▶ Flexible VM configurations that support remote 3D visualization desktops

Scyld Cloud Manager

GovPOD leverages Penguin Computing's Scyld Cloud Manager (SCM) cloud software suite to enable a complete HPC cloud solution. SCM provides administrators and users with a single pane of glass for registration, access management, system provisioning, and more.

Accounting & Chargeback

Organizations often depend on internal chargeback and tracking models to ensure resources are being consumed by the users that help generate revenue or budget for the environment. Organizations can track job completion time, job resource utilization, and who ran the job, giving them the ability to chargeback by user, group, or project.

Virtualization & Bare Metal Computing

GovPOD provides the best features of a cloud environment with the best features of an on-premises HPC cluster. Head nodes, login nodes, and other administrative nodes are virtualized to enable process redundancy and

flexibility across the infrastructure. Compute nodes are provisioned as bare metal servers to ensure HPC jobs run optimally and consistently in the cluster. Users can expect predictable job performance from the cluster, and administrators can expect flexible and rapid provisioning across the environment.

Integration & Security

GovPOD is tested and delivered as an integrated solution with security and support as paramount components. GovPOD can integrate into existing customer environments, providing the flexibility needed to integrate with many different networks, identity managers, authentication policies, and end-user workflow models. The GovPOD architecture provides a reliable cloud-enabled foundation with endpoints that are integrated into the private HPC networks and services as well as enterprise networks and services. The architecture is built on a solid cloud-enabled OpenStack framework providing a secure platform to integrate with and strengthen security compliance.

Contact Us

With included free support from HPC experts, transparent pricing, and a variety of financing options, GovPOD meets the needs of both power users who need to expand capacity quickly as well as those building their organizations on a budget.

Penguin Computing Services

GovPOD leverages our two decades of experience in building and optimizing HPC environments and applications. Our HPC experts will provide all the support you need at no extra charge, assisting in running applications, managing workflows, and getting the best GovPOD customer experience possible. Download our Services Brochure to learn more.

Transparent Pricing

With GovPOD, you only pay for the resources you use, with no hidden costs or extra fees, no extra charge for expert HPC support, and no additional charges for standard network data transfers. Traditional, on-premises clusters have many capital and operational expenses that can quickly add up. Beyond the capital expense to purchase a modest HPC cluster, you still have data center, power and cooling, and administration expenses. You never have to worry about these expenses when you use POD. Our simple pricing model makes it easy to forecast costs and set usage limits to ensure you are never over budget.

To find out how you can drive innovation with instant access to a FedRAMP-secure HPC compute environment in the cloud, use this form and a specialist will contact you.