ServerView Cloud Load Control is an enterprise-grade container management software which accelerates development and simplifies operational tasks. It is seamlessly integrated with OpenStack, and enables the dispatching of containers over a set of nodes (clusters). With ServerView Cloud Load Control, operations can be automated, and clusters can be managed in a self-service mode. This helps to reduce operational costs, and drive agility in development processes. The software is based on the modern Linux container and clustering technology Kubernetes and Docker. ServerView Cloud Load Control itself contributes to the Kubernetes open source project.

**Main features**

**Container Orchestration**
- Dispatch containers to cluster nodes
- Describe distributed, containerized applications
- Automate operational tasks, such as deployment, scaling, failover, load-balancing, etc.

**Cluster Management**
- Streamlined setup of cluster for container orchestration
- Provisioning of clusters within minutes
- Automated processes

**OpenStack Integration**
- Seamless integration into OpenStack Horizon
- OpenStack tenants are enabled for “one-click” cluster provisioning
- Cluster management as easy as virtual server management

**Benefits**

**Modularization and automation**
- Improved workload density and better scalability
- Less need for development to care about infrastructure
- Simple, reliable application deployment

**Operation: Reduced costs**
- Improved resource utilization
- Repeatable and reliable processes
- Reduced risk for problems on cluster setup and operation

**Development: Driving agility and time-to-value**
- Simplified deployment and improved consistency across environments
- Encouraging move towards an application-centric paradigm
- Support use of modern system architectures
Managing containerized workload
Container frameworks, such as “Docker”, allow the effective use of containers as a tool to package, ship, and execute applications in isolation from each other. They are being increasingly adopted by IT organizations. In large-scale environments, this might result in a significant number of containerized workloads whose lifecycle needs to be controlled.
Fujitsu ServerView Cloud Load Control provides a platform for automating the deployment, scaling, and operations of containerized workload. It schedules containers across multiple hosts. The resources of the single hosts are aggregated in a cluster to one logical platform. Containerized workloads deployed to this platform are automatically distributed to suitable hosts to achieve optimal resource usage. In addition, a wide range of functions are provided to enable efficient management and operations, including:
- Service discovery for container interconnectivity
- Automatic load-balancing across containers
- Container replication and auto-recovery
- Rolling updates of changes
The deployment and management follow a declarative approach: The desired state is described; the system autonomously ensures that this state is reached and maintained. For example, with workload deployment, the desired state might consist of which container to run, the number of instances and allocated resources, such as CPU and RAM.
These characteristics make Fujitsu ServerView Cloud Load Control an ideal platform for using modern flexible system design principles, such as “microservices”. It supports the features which are important in this context: Easy service deployment, independent service scaling, simple discovery of service end points, and recovery of failure, transparent for other services.
Cluster Management
Setting up and operating clusters as a platform for executing containerized workloads is complicated. For example, the setup requires numerous steps such as provisioning the necessary resources, e.g. VMs and routers; configuring the network which includes ensuring the interconnectivity between containers running on the different hosts, and setting up the required software components on each of the cluster nodes.
Fujitsu ServerView Cloud Load Control automates all the steps required to provision and operate clusters, resulting in a significant decrease in the time and effort required for setting up a cluster – from days to minutes\(^1\). All operations are optimized and tested against the supported OpenStack platform. This enables the definition of repeatable and reliable processes – suitable for production environments – and results in a reduction of operational costs associated with cluster management.

Seamless integration with OpenStack
The characteristics of a container platform, such as the number of nodes and node performance, vary depending on the scenario. In large-scale enterprise environments the number of usage scenarios might by multiplied by the number of different groups or departments requiring a dedicated platform to manage their containerized workload.
The integration of Fujitsu ServerView Cloud Load Control with the OpenStack dashboard Horizon, enables OpenStack tenants to provision and manage clusters in a self-service mode depending on their individual usage scenario.
The baseline of user experience design for integration was the approach to treat ‘cluster’ as a first-class citizen of OpenStack, and the same with Nova’s virtual machines or Neutron’s networks. As a result of these efforts, the creation and management of clusters is as simple as the creation of virtual servers.

Open Source Technologies
Fujitsu ServerView Cloud Load Control is based on open source software components. Its core technology is Kubernetes, initially released by Google, and governed by the ‘Cloud Native Computing Foundation’ (CNCF) since December 2015. Kubernetes incorporates the experience gathered in over ten years of running containers workload at scale combined with best-of-breed ideas from the community. As an early member of the CNCF, Fujitsu is actively contributing source code to the Kubernetes project.

\(^1\) Based on internal evaluations.
## Technical details

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More information

Fujitsu products, solutions & services

Products
www.fujitsu.com/global/products/
In addition to FUJITSU Software ServerView Cloud Load Control, Fujitsu offers a full portfolio of other computing products.

Computing products
- Storage systems: ETERNUS
- Server: PRIMERGY, PRIMEQUEST, Fujitsu SPARC M10, BS2000/OSD Mainframe
- Client Computing Devices: LIFEBOOK, STYLISTIC, ESPRIMO, FUTRO, CELSIUS
- Peripherals: Fujitsu Displays, Accessories
- Software
- Network

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2016-01-19 WW EN