JUKE MULTICLOUD STORAGE AND COMPUTE

Product Description

Juniper Networks® Juke Multicloud is a container and storage management solution for running distributed container-based applications. Based on open-source technologies such as ZFS, OpenVPN, OpenVswitch, and LXD, the Juke platform fuses compute and storage from on-premises Amazon Elastic Compute Cloud (Amazon EC2) and Google Cloud Platform (GCP) resources into a unified, easy-to-use application development environment that provides high scale, high availability, and high performance across the entire pool of resources spanning on-premises and multiple clouds while abstracting the specific details of those environments.

At its core, Juke is a policy-driven resource management layer that executes to a user-defined state across all computing resources. Example policies include:

- **Storage:**
  - Keep two copies of this volume in EC2, two copies in GCP, and three copies on-premises.
  - Don't let this data leave the European geographic zone.
- **Compute:**
  - Make sure there are always two containers running in each geographic continent, whether they are running on-premises, in EC, or in GCP.
  - If EC2 latency is too slow, move this container to GCP.

The Juke platform can be deployed over any compatible compute, storage, or networking hardware.

Juniper Juke includes the following components:

- Juke persistent network plane
- Juke persistent storage plane
- Juke administrator node image, including resource services and Web interface
- Juke worker node image

Architecture and Key Components

Juniper’s Juke is a software-only container infrastructure operations management solution that abstracts the underlying resources needed to power applications by providing persistent storage, network, and compute resources across network edge and cloud, simplifying the development and deployment of distributed applications.

By making the infrastructure layer transparent to applications, Juke allows enterprises to easily migrate workloads across private and public cloud infrastructure stacks. Juke's abstracted resource control fabric frees customers to select the right cloud for the job, delivering on the agility promise of multicloud.
Juke allows orchestration platforms such as Kubernetes, OpenShift, and others to scale as a single, seamless pool of resources. It does this by presenting a single storage and container infrastructure across on-premises and multiple clouds. Juke controls and manages persistent resources for scalability and creates resilient storage and container clusters in a unified network environment, allowing users to tier data and seamlessly move persistent containers and volumes across clouds.

**Features and Benefits**

Juniper’s Juke makes it easy to deliver container-based multicloud for enterprise customers. By allowing you to continuously innovate in order to deliver revenue-generating services, Juke helps IT delivery in the following ways.

**Faster Time to Market**

The Juke platform accelerates your development in Kubernetes and other orchestration platforms by freeing developers from having to worry about specific cloud provider infrastructure implementations. The simplified process of designing, implementing, and operating your container applications using a policy-driven operations environment will expedite container creation and streamline life-cycle management.

**Reliable Container Services**

The Juke platform automates and optimizes the physical infrastructure for container and storage operations so a container developer can be sure of the reliability of the end-user solution. With integrated visualization and management capabilities, Juke helps you achieve your overall service-level objectives.

**Simplified Operations**

Fully automated life-cycle management enabled by the Juke platform delivers an intelligent, multicloud storage layer that accelerates the infrastructure transformation journey to a secure and automated cloud, driving new business opportunities with a fresh wave of revenue-generating services.

**Use Cases**

There are a variety of use cases for the Juke platform:

- Local disk performance in branch offices while synchronizing data to cloud volumes
- Performant service delivery across clouds with differing geographic presence
- Reliable, locality-aware, edge computing access
- Live, stateful migration of running containers across different clouds

**Specifications**

<table>
<thead>
<tr>
<th>Platform</th>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td>On-Premises (Ubuntu 16.04)</td>
<td>Admin node image, worker node image</td>
</tr>
<tr>
<td>EC2 Cloud (Ubuntu 16.04)</td>
<td>Admin node image, worker node image</td>
</tr>
<tr>
<td>Google Cloud (Ubuntu 16.04)</td>
<td>Worker node image</td>
</tr>
</tbody>
</table>
### Ordering Information

<table>
<thead>
<tr>
<th>Product Number</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>S-JK-S1-1</td>
<td>Juke Standard, 1 compute license for 1 year for on-premises with customer support; entitled to use Juke Cloud on AWS and GCP—includes container runtime, persistent storage, persistent network, volume replication, and workload mobility.</td>
</tr>
<tr>
<td>S-JK-A1-1</td>
<td>Juke Advanced, 1 compute license for 1 year for on-premises with customer support; entitled to use Juke Cloud on AWS and GCP—includes standard features plus role-based access control (RBAC), snapshot, service high availability (HA), self-healing.</td>
</tr>
<tr>
<td>S-JK-S1-3</td>
<td>Juke Standard, 1 compute license for 3 years for on-premises with customer support; entitled to use Juke Cloud on AWS and GCP—includes container runtime, persistent storage, persistent network, volume replication, and workload mobility.</td>
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### About Juniper Networks

Juniper Networks brings simplicity to networking with products, solutions and services that connect the world. Through engineering innovation, we remove the constraints and complexities of networking in the cloud era to solve the toughest challenges our customers and partners face daily. At Juniper Networks, we believe that the network is a resource for sharing knowledge and human advancement that changes the world. We are committed to imagining groundbreaking ways to deliver automated, scalable and secure networks to move at the speed of business.