# A quick guide to

# ZNetLive support services

# for

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# Introduction

OpenNebula is a flexible, feature-rich solution that provides complete management capabilities for virtualized data centers for enabling enterprise grade cloud in the organization's existing IT infrastructure.

**INTEROPERABLE** – You get to choose across most popular cloud interfaces and standards.

**INTEGRABLE & EXTENSIBLE –** You can customize your cloud service and have cloud operations conforming to existing policies.

**INFRASTRUCTURE AGNOSTIC –** You get to use your existing infrastructure, saving cost and avoiding vendor lock-in. Supports a number of hypervisors, networking and storage resources.

**INNOVATIVE –** You get to choose your cloud as per your needs – private, public or hybrid as OpenNebula supports all three.

**UNIQUE –** OpenNebula cloud provides all important functionalities for computing, networking and storage in one install, and its single integrated updating and patching process ensures high performance and stability.

**ESTABLISHED –** OpenNebula cloud's scalability, performance and reliability has been tested on a number of massive production deployments.

But being an advanced technology, set-up and management of OpenNebula cloud is not an easy task and calls for assistance from experts with proven expertise in this technology. ZNetLive addresses the challenges that organizations face while implementing OpenNebula clouds by providing assistance in set-up, configuration, management and monitoring services 24X7X365 by OpenNebula experts.

# Service levels

ZNetLive support team will manage your OpenNebula cloud from initial designing phase to its ongoing management in the production environment. Our support services include installing, configuring, updating, patching, troubleshooting and capacity planning services. We also monitor and maintain the health of your OpneNebula Cloud proactively.

## Maintenances – scheduled & emergency

All cloud need maintenance services and updates from time to time for performing optimally. Many times, these are scheduled but sometimes, there may be an emergency maintenance as per your cloud needs. For scheduled maintenance, ZNetLive support team will share exact problem, impact, preparations, time needed and other maintenance details with you.

## Tailormade runbook

While implementing your OpenNebula cloud, ZNetLive team will create a customized runbook in collaboration with you. It will include the set operating procedures on monitoring alerts and customized escalation routes as per the best business practices and your requirements.

## 24X7 monitoring

ZNetLive support team will proactively monitor your cloud round the clock. Our team will take care of your cloud's health including CPU, uptime, disk space, memory and services like nova, keystone, horizon etc.

## Scaling and optimizing

ZNetLive team will be recommending necessary things needed to better your cloud performance like scaling and for optimizing your resource utilization.

## Supported OpenNebula projects and associated technologies

| OPENNEBULA PROJECTS | |
|---|---|
| **Sunstone Dashboard** | A graphical interface which can be used by users and administrators for provisioning, accessing, and automating cloud resources. |
| **Hypervisor Support** | OpenNebula is capable of direct integration with hypervisors like Xen or KVM. |
| **Compute Node** | Get the ability of provisioning and managing large VM networks. |
| **Image Service** | OpenNebula offers discovery, delivery and registration services for server and disk images. It provides supports for a number of basic image formats like Raw, qcow2. |
| **Object Storage** | It offers scalable, redundant object storage utilizing standardized server clusters that are capable to store petabytes of data. |
| **Networking Service** | OpenNebula offers support for four networking modes:<br>**VLAN.** Implementations of Virtual Networks are done via 802.1Q VLAN tagging.<br>**Bridged**. The VM is attached directly to an existing hypervisor bridge. This mode is configured for network isolation and security groups.<br>**Open vSwitch**. It is same as the VLAN mode but instead of Linux bridge, it uses an openvswitch.<br>**VXLAN**. Virtual Networks implementing VLANs use the VXLAN protocol relying on IP multicast and a UDP encapsulation. |
| **Orchestration** | It helps application developers in describing and automating the infrastructure deployment through templates. |
| **Data Store** | **Files and Kernels Datastore**: for saving plain files and not saving disk images. The plain files can be used as context files, ram-disks or kernels.<br>**System Datastore:** is used for holding disk for running VMs. Disks are cloned to/moved from the Images datastore when VMs are terminated or deployed; or when disks are snapshotted or attached.<br>**Images Datastore:** is used for storing the images repository – ISCSI, CEPH, IVM, Raw, file system. |
| **ASSOCIATED TECHNOLOGIES** | |
| **CHEF, Docker, Ansible** | A software platform for configuring and managing computers combining multi-node software deployments, ad-hoc task execution and configuration management. |
| **Ceph** | Software storage platform that implements object storage on a single distributed computer cluster and provides interfaces for object, block and file level storage. Ceph is a completely distributed operation without a single point of failure offering scalability to the exabyte level. |

## ZNetLive support services for managed OpenNebula cloud

R = Responsibility

P = Participant of the activity

I = Has service information

| | Customer Owned Data Center | |
|---|---|---|
| **CUSTOMER SERVICES** | Customer | ZNetLive |
| **Round the clock support** | I | R |
| **Dedicated Account Manager** | I | R |
| **Dedicated OpenNebula Architect (added offering)** | I | R |
| **Hosted configuration monitoring and hardware monitoring events' response** | P | R |
| **Cloud infrastructure configuration monitoring and node OS and hypervisor response** | I | R |
| **Cloud and configuration backup** | I | R |
| **Security patches application to cloud** | I | R |
| **Intrusion detection** | R | I |
| **Virus scanning of server** | R | I |
| **DDoS mitigation** | R | I |
| **Management of firewall** | R | P |
| **On -request server check for compromise** | P | R |
| **Third-party security auditing following implementation** | R | P |
| **DATA CENTER SERVICES** | | |
| **Providing and maintaining** | | |
| **Data Center (DC) facility** | R | I |
| **Cooling and redundancy** | R | I |
| **DC physical security** | R | I |
| **Routing and switching devices** | R | P |
| **Provisioning IP Block** | R | I |
| **Power and redundancy** | R | I |
| **Power and network connectivity** | R | I |
| **Configuring Firewall** | R | I |
| **Providing bandwidth** | R | I |
| **Physically installing devices** | R | I |
| **Architecture design, review and consultation** | P | R |
| **MONITORING SERVICES** | | |
| **Monitor and alert for Disk capacity** | P | R |
| **Sending email alerts** | I | R |
| **Monitor OpenNebula Services** | I | R |
| **Managing local storage** | R | P |
| **CPU performance utilization report sharing** | I | R |

## About ZNetLive

ZNetLive provides wholesome cloud business solutions and managed services to large enterprises and SMBs on latest technologies and enterprise grade hardware with value added benefits. ZNetLive specializes in complete cloud consultancy and infrastructure analysis to provide dynamic cloud solutions tailored to specific industry processes.

ZNetLive, owned by ZNet Technologies Pvt. Ltd., was founded in 2001 and has been providing cloud hosting and managed services to customers in over 141+ countries worldwide.

In addition to industry's best accreditations such as the HostReview Readers' Choice Award; The Deloitte Technology Fast 500 Asia and Fast 50 India Awards for 2010 & 2011; ISO 27001 and D&B certifications, ZNetLive has a number of Microsoft certifications.

For more information, visit: https://www.znetlive.com/openebula-cloud/
Get in touch with us: msp@znetlive.com

India and from other countries: (91) 141 4070666

India Toll Free: 1-800-102-9638