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What is Cloud Server?

INTRODUCTION

Cloud Server is a highly available multitenant platform that's architected specifically around superior performance, availability and data protection. Cloud Server offers four initial configurations, all of which can be scaled with more storage, RAM, or vCPUs during deployment or at any time afterwards.

Cloud Server offers fixed monthly pricing to ensure cost predictability. All Cloud Server accounts include public IPs, infrastructure management, 99.99% SLA, 24x7 support, nightly backups, monitoring, firewalls, firewall management, VPN management, Windows 2008 Enterprise OS and IIS.

Available Cloud Server add-ons include additional vCPUs, memory, storage, extended backup, bandwidth and Microsoft SQL Server add-ons. Available services include server restoration, file restoration, and adding/removing IP addresses.

HOW DO YOU USE CLOUD SERVER?

Cloud Server offers an application infrastructure to support both new deployments as well as the migration of existing servers, both on-premise and from other clouds. Its use cases extend across the spectrum of SMB needs, including running a network of terminal services; hosting business applications like QuickBooks, SharePoint or file servers; or supporting infrastructure components like Microsoft Active Directory and
Microsoft SQL Server.

CLOUD SERVER'S COST OF OWNERSHIP

Cloud Server offers lower cost of ownership as compared to on-premise servers, without diminishing your levels of control.

- No capital outlay is required
- Leverage Audcomp aggregated purchasing power for access to enterprise-grade datacenters and best-of-breed components
- Reduce the cost of planning for business continuity and disaster recovery
- Fixed monthly billing keeps your bills predictable and manageable
- Rapid scalability offers full and immediate access to additional power whenever your business needs it

Audcomp Cloud Server is an enterprise-grade cloud application infrastructure designed specifically for small and medium-sized businesses.

Cloud Server lets you ensure your business applications perform to their fullest potential by providing you the highest levels of control and scalability, as well as the ability to balance configurability, scalability and price to match your cloud environment to your use case.

This white paper describes the technical details behind Cloud Server. It offers information about Cloud Server's infrastructure, virtual machines, firewalls, VPNs, managed service levels, and more. It also describes Cloud Server's comprehensive migration and support processes, which are designed specifically for ensuring a worry-free cloud experience.
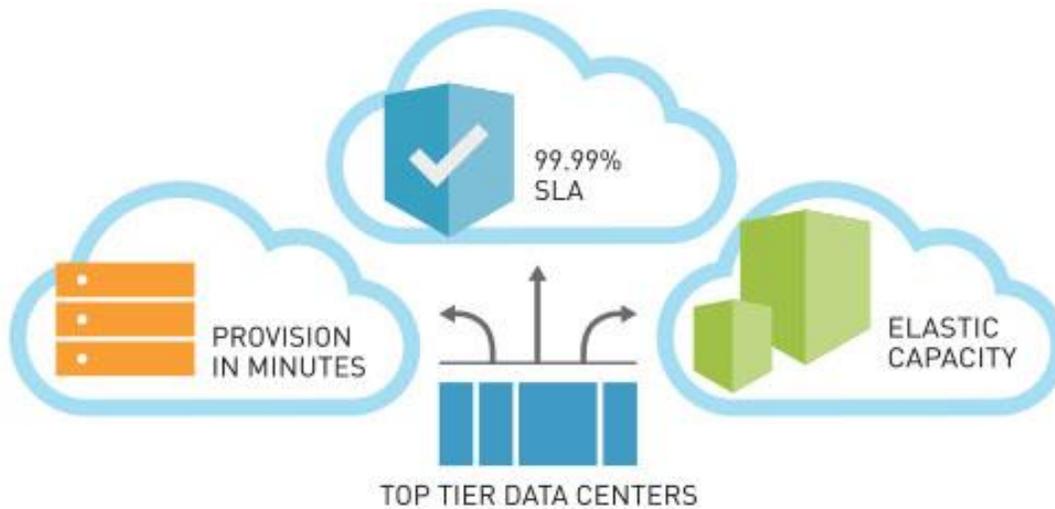
CLOUD SERVER INFASTRUCTURE

The sections below describe the technical details that underpin Cloud Server.

DATACENTER

Cloud Server is hosted in an SSAE16 Type II compliant, Tier III datacenter with redundant electrical and cooling infrastructure, verified levels of physical security, and redundant power supplies. To assure performance, availability and data protection, Audcomp datacenters offer:

Physical Security

- Highly secure and reliable Tier III datacenter
- A consistently more secure environment than on-premise deployments can provide
- Internal and external closed circuit television (CCTV) surveillance
- Biometric scanners control access control to datacenter floor
- 24x7 on-site security staffing

Logical Security

- Dedicated security staff and employee controls
- Every employee, regardless of their role, undergoes a rigorous background check
- Employee access to electronic credentials is strictly controlled and audited regularly

Network Security

- Fully isolated tenant network for each customer
- Integrated perimeter firewall and site-to-site VPN services.
- VPNs facilitate hybrid cloud scenarios between on-premise and cloud-based environments

Compliance

- Cloud Server's datacenter is SSAE16 Type II compliant

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Perimeter Firewall and
Virtual Private Network (VPN)
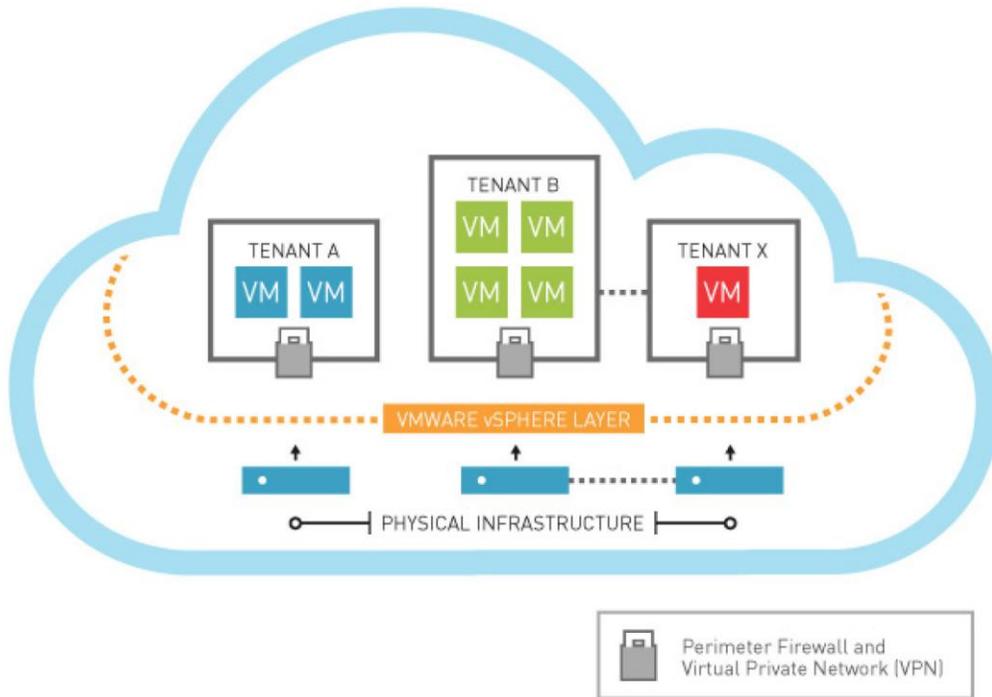
BEST-OF-BREED COMPONENTS

To ensure Cloud Server offers a worry-free experience, Cloud Server's engineers and architects deliberately focused on value, not economy. Audcomp commitment to best-of-breed extends to its storage and networking hardware, its VMware virtualization applications, and its Microsoft platform software.

- **The computing layer:** Dell PowerEdge R810 enterprise-grade servers with component redundancy and built-in HA features. They feature quad CPUs with eight cores each, 256GB RAM nodes, and are connected by 10G IP and an 8G fiber channel.

- **The storage layer:** For its SAN, Audcomp uses EMC VNX Fiber Channel arrays that combine RAID 5 with high-performance SAS disks to boost performance and redundancy. Agentless Symantec backup is used to reduce the performance overhead of backups and protect against data loss.

- **The network layer:** Cisco and Brocade VDX 10G Ethernet switches use multiple high-speed interconnects in a top-tier datacenter for network performance and reliability.

- **The virtualization layer:** VMware vCloud Director and VMWare vSphere 5 Enterprise ensure a highly reliable and scalable virtualized cloud infrastructure. It's flexible and resource-efficient, with the uptime guarantees and physical security of an experienced application infrastructure provider.

- **The providers:** Audcomp connects its datacenter to the Internet via multiple Tier 1 Internet providers like Sprint, Level 3, and Verizon.

In addition to the highest-quality building blocks, Audcomp servers are all clustered to ensure automatic failover to active nodes.

VIRTUAL MACHINES

Audcomp has structured its virtual machine offering to provide initial configurations that match most SMB use cases. All Cloud Server configurations can be set up with an essentially unlimited number of virtual machines, each with a

"guest" operating system. Details include:

- **High-capacity cloud servers.** Up to 8 CPU cores, 1 TB of storage and 32 GB of memory.

- **Instant scalability.** You can spin up new machines within minutes using your control panel.

- **Resource allocation and reserved resources.** You never have to queue for processing power, memory or storage that's rightfully yours.

- **High availability.** Cloud Server is one of the few providers to leverage VMware HA Active-Active clustering and N+1 component redundancy at the server, storage and network layers. We also leverage VMware's state-of-the-art vSphere vMotion for live migration of virtual machines to ensure continuous service availability. This means that if your host machine happens to degrade, our infrastructure will seamlessly move your cloud environment to a different host with no downtime.

- **Windows images.** Choose between Windows 2008 Enterprise 32 bit and Windows 2008 R2 Enterprise 64 bit. (You can migrate Windows 2003 SP2 (R2) 32bit/64bit workloads, but new servers running Windows 2003 are not supported.)

FIREWALL AND VPN

For Cloud Server, VMware vShield Edge integrates perimeter firewall and optional VPN services to guarantee privacy and provide dedicated network access. This ensures applications and data can always be accessed, even if a neighboring virtual machine is under DDoS attack or experiencing similarly high traffic volume.

This firewall is included—it is not an add-on. Firewall management is also included.

vShield Edge also offers visibility into and control over network gateway traffic. VPN services protect the confidentiality and integrity of communications in multitenant environments. The firewall and VPN services are cloud aware, so if your network does failover to another physical node, your security settings follow it.

More about Cloud Server firewalls:

- VMware vShield Edge firewalls are more flexible than hardware firewalls because they're tightly integrated with VMware HA and vMotion
- Cloud Server offers self-service firewall management
- Stateful inspection firewall allows users to control network access using source and destination information, significantly increasing network edge security
- Inbound and outbound connection control with rules based on:
  - **IP-address – source/destination IP address**
  - **Ports – source/destination port**
  - **Protocol – by type (TCP or UDP)**
  - **NAT & DHCP support**
- Can be managed by the customer or by Company Name Support

More about Cloud Server VPNs:

- Cloud Server's site-to-site VPN lets you establish secure communications between your Cloud Server environment and an on-premise VPN endpoint
- Enabled by VMware vShield Edge
- IPsec VPN—based on the IKE (Internet Key Exchange) protocol
- Apply firewall rules to VPN traffic
- Site-to-site and client-to-site tunneling
- Can be managed by the customer or by Audcomp Support

AUTOMATIC DATA BACKUPS

To protect against data loss or corruption, Cloud Server is backed up every night. Audcomp technical support team can restore a full image or a subset of files if you need to reestablish access to your business data.

FINANCIALLY BACKED GUARANTEED UPTIME

Cloud Server offers a 99.99% financially backed uptime guarantee. If service levels fall below that threshold, Audcomp is prepared to refund fees to customers who experience outages.

SCALABILITY, CONTROL & SIMPLICITY

Cloud Server can be scaled at any time to support your changing business needs. Through our Control Panel, it offers granular levels of control. At the same time, it's also built for simplicity and ease of management and administration. This section describes the features that underpin these aspects of Cloud Server.

SCALABILITY

One of the biggest advantages the cloud has over on-premise servers or dedicated hosting is its elasticity. Cloud Server makes it easy to scale vertically (to keep pace with sudden changes in demand) as well as horizontally (to provision new virtual machines and resources for steady growth over time). This lets you adjust your infrastructure to match short-term needs without sinking capital or suffering downtime as your
server is reconfigured.

- **Meet peak demands.** Cloud Server can be configured with RAM resources that easily support spikes in user traffic and application workloads.
- **Add capacity on the fly.** Using our Control Panel, you can bring new virtual machines online in minutes. You can also add vCPUs, memory and storage to existing virtual machines. Resource upgrades take effect as soon as the server is rebooted.

GRANULAR CONTROL

Cloud Server lets you configure your cloud environment as necessary to suit your specific needs. It gives you on-premise levels of control that include:

- Full admin access and permissions for each Cloud Server
- Server console access
    - Manage your server as if you were on site
    - Visualize the OS startup screen, diagnose system errors or control the server through its native GUI
    - Access and troubleshoot your server when Terminal Server
      is not available
    - Access power management capabilities
    - Mount local CD/DVD/ISO to Cloud
    - *Please note: IE8+ and Firefox browsers are currently supported by Cloud Server. The Server Console does not work over proxies, so please disable them. This tool requires installation of the VMware Remote Console Plugin (available for download from within the control panel).*

BROAD EASE-OF-USE

Cloud Server is managed via Audcomp's Control Panel.

This simple and intuitive web-based interface can be accessed from any browser. It serves as the point of entry of managing Cloud Server. It's been directly integrated with VMware's virtualization platform.

Using the Control Panel, you can provision new servers or scale existing ones. The Control Panel also simplifies management with server status and health reporting, power management, remote desktop access, and server console access for greater administrative control.

- Rapid provisioning and capacity controls
  - Provision a new server in minutes
  - Upgrade server resources on demand—including CPU, memory and storage
  - Add additional hard disks and/or upgrade existing hard disks as necessary
- Resource utilization alerts
  - Key resource information lets you predict your needs
  - Resources are averaged over a 24 hour period
  - Yellow and red alerts are provided for CPU, memory or storage usage above 70% and 90% respectively

MANAGED SERVICES

Cloud Server is designed to keep you focused on your applications and your middleware by offering managed services that include:

- Management of all infrastructure components
- Nightly backup with one week of data retention included, with add-ons options for 2,3, and 4 weeks of retention.
  - can restore an entire virtual machine or individual files on demand
  - Restoration services are chargeable
- Uptime and utilization monitoring
- Managed and self-service firewall and VPN setup and support

SUPPORT AND MIGRATION

This section details the support and migration services that come as part of Cloud Server.

COMPLEMENTARY ONBOARDING AND MIGRATION

Our team assists with your migration and onboarding needs. They work behind the scenes to provision or migrate servers without interrupting you or your users.

Our team combines industry best practices with industry-leading tools and extensive experience to minimize your involvement in the process. Audcomp has built internal processes that minimize interruption and ensure data fidelity while proceeding at a pace that you dictate. Your experience includes:

1. **Discovery and planning.** Audcomp's team does the diligence necessary to understand not only what your current system looks like, but why it looks that way. This extends to the apps you're running, the domains you've mapped, the layout of your drives, your naming conventions, the types of network cards, and any software dependencies that may exist. With this deep understanding of your needs, Audcomp develops a migration plan that minimizes your involvement and maintains business continuity. Audcomp also helps you

build a plan for communicating with end users, if necessary.

2. **Transfer and configuration.** To initiate a physical-to-virtual or virtual-to-virtual conversion, Audcomp will provide you with a procedure that you'll execute on your legacy server. After transferring the image of your old deployment, Audcomp will work with you to run a security audit, configure the server and establish RDP access. Then they will work behind-the-scenes to configure it along with your firewall rules, any VPN settings and anything else necessary to ensure your new VM is a perfect match.

3. **Cut over.** Once it has completed its checklists, Audcomp team makes the VM available to you for final your testing, QA, and any other follow-up configurations. Your new systems will be ready to power your business applications with the performance, availability and data protection that you expect from Audcomp.

VIGILANT SUPPORT

Audcomp prides itself on proactive and reactive vigilance to ensure a worry-free experience. On the proactive side, Audcomp is ceaselessly monitoring its infrastructure and your cloud environments. But should you need assistance, Audcomp will react within 4 hours guaranteed response time.

If you have any further questions about Audcomp Cloud Server, feel free to contact Audcomp at 905 304 1775 or services@audcomp.com. For more information, please visit www.audcompcloud.com and www.audcomp.com.