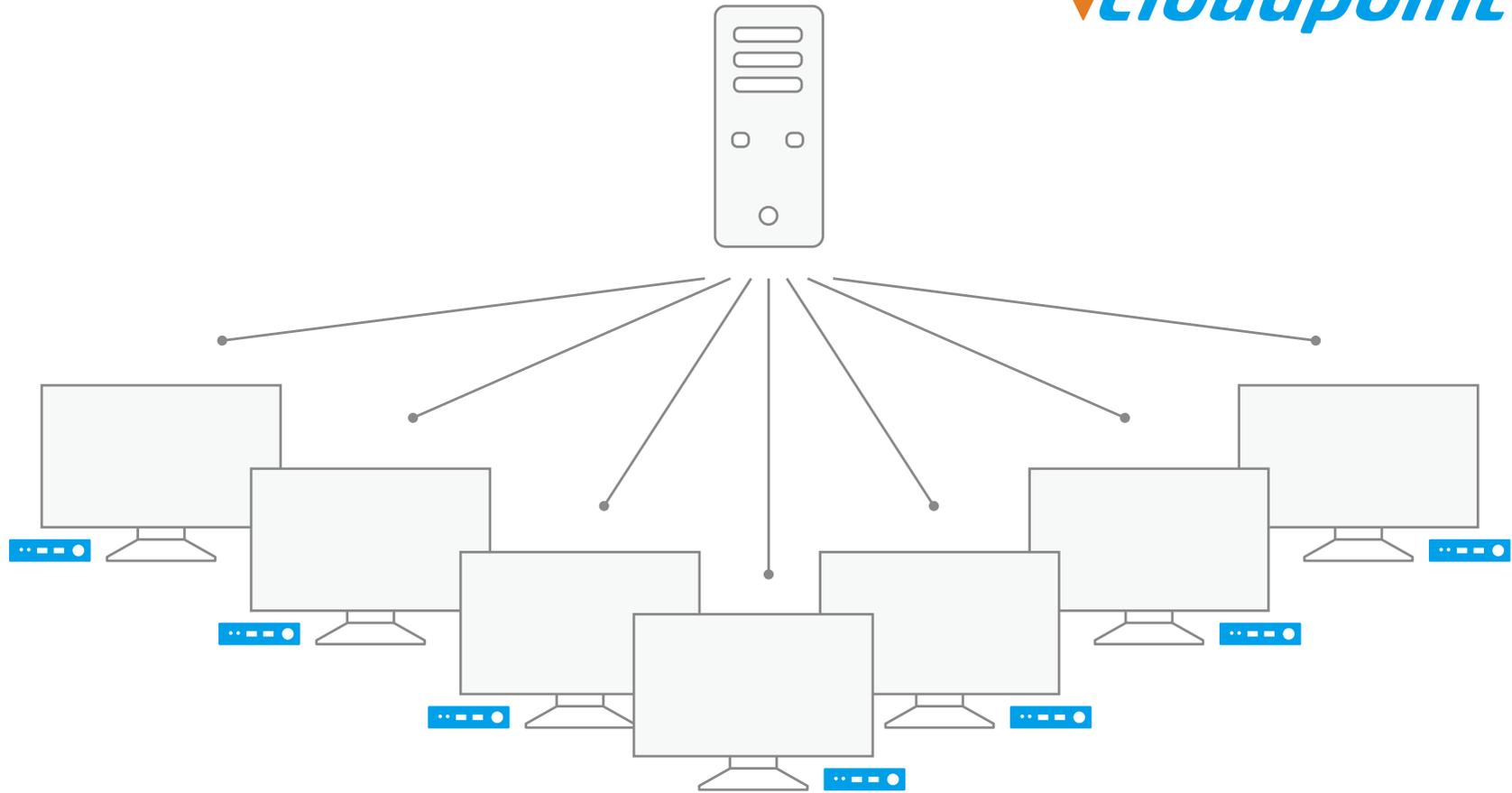


**vcloudpoint**

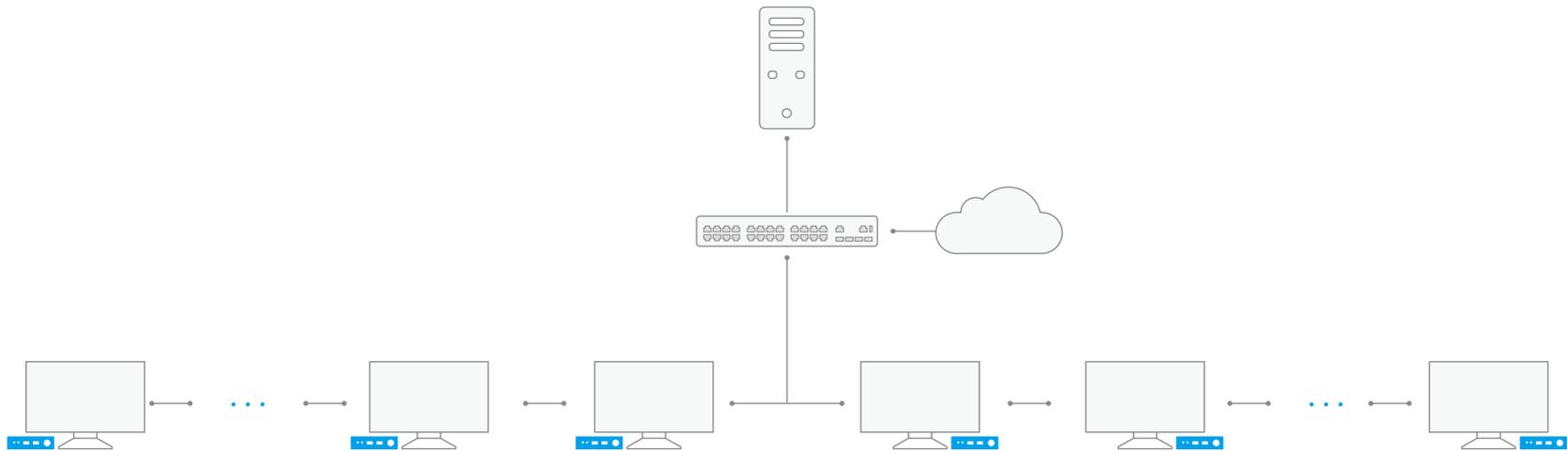


# ZERO CLIENT COMPUTING

Centralized Desktop Computing Solutions

# What Is Zero Client Computing

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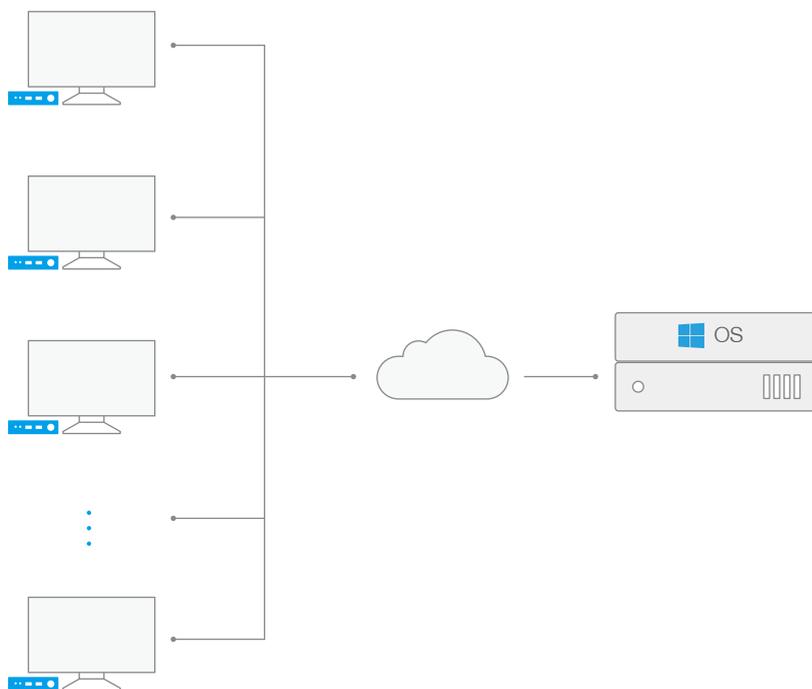


vCloudPoint zero client computing solutions are innovative desktop computing solutions that shift the traditional PC computing infrastructure to a centralized computing model. Within a zero client computing solution, users replace PC desktops or laptops with the access client devices, called zero clients, to remotely connect to virtual desktops centrally hosted in the servers at the data center.

# Virtual Desktop Solutions

## 1. (RDS) Shared Computing

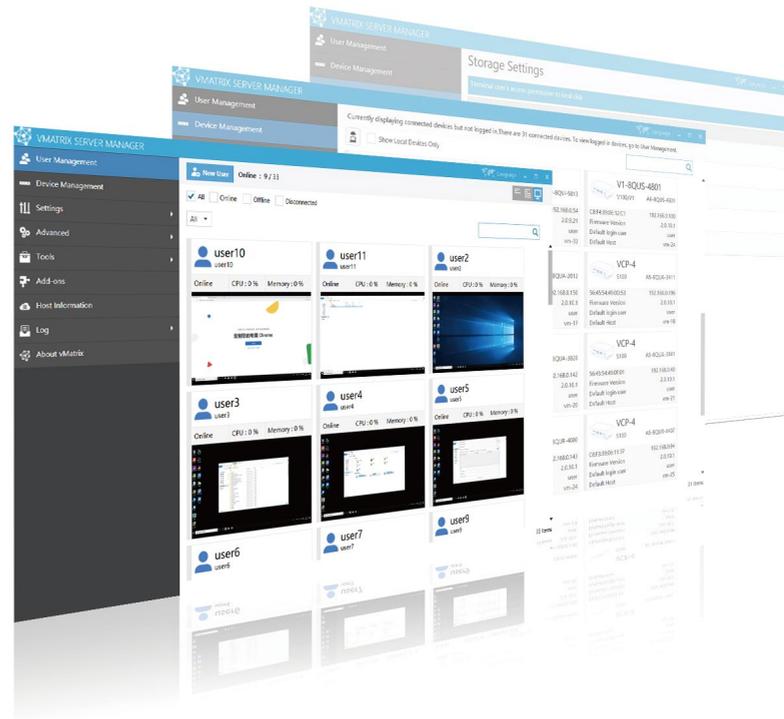
### Solution Overview



vCloudPoint's Shared Computing (RDS) solution allows multiple users to simultaneously share the resources of a single machine. With vMatrix Server Manager running on the Windows Operating System, multiple vCloudPoint client users connect to a single machine through a remote desktop session, sharing the same OS, the applications and the compute resources but working independently in their own session. vCloudPoint's RDS solution is a simple and cost-effective computing solution and works best for use cases which have groups of users that have similar needs in terms of applications and desktop configuration.

## vMatrix Server Manager

vMatrix Server Manager is the broker and manager for the vCloudPoint RDS system. It runs on the Windows host to allow remote desktop connections from vCloudPoint zero clients and enhances end-user experience by offering graphic acceleration, virtual audio, and USB redirection. It also plays a management role that enables administrators to easily configure the remote desktop environment and centrally manage zero client devices and users from the host side.



## Software Specifications

vMatrix Server Manager can run on most of Windows operating system (excluding home basic and starter editions).

vMatrix Server Manager permits up to 99 users per shared system. Actual number of connection users depends on the host configuration and the type of applications used.

vMatrix Server Manager communicates with S100 zero client, V1 zero client, and vMatrix Client devices.

## Solution Advantages

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### Rapid Deployment



The installation of RDS is as easy as 1, 2, 3. With simple user account creation and device connections, a new seat can be setup in minutes. An entire computer lab can be completed in a few hours compared to days or weeks with PCs.

### Low Cost



The vCloudPoint's RDS deployment is less resource-hungry, allowing IT to add additional users for a low resource cost or reduce the amount of hardware it uses. All users' sharing of a single OS image also minimizes software licensing costs.

### Easy Maintenance



There is no typical training required to manage the vCloudPoint RDS deployment, as there are few components and the vMatrix Server Manager is user-friendly and intuitive to use. With all users working on a single image, software maintenance like installations, patches and updates are minimized .

### Comprehensive Software



With vMatrix Server Manager, IT administrators can manage all remote desktop users and devices centrally and remotely at the server side. Besides, IT administrators can display their desktop to the users, communicate with them through the internal chat tool, provide support through monitoring and control over the remote desktops.

# Host Configuration Reference

No. of Users	CPU	RAM	SSD	HDD
10	i5-9500 or equivalent	24G	80GB for system and program files + 7GB per user for users' caches	Storage size to be determined by actual needs.
20	i7-9700K or equivalent	48G		
30	i9-9900K or equivalent	64G		
40	2*E5-2630 v4 or equivalent	96G		
50	2*E5-2650 v4 or equivalent	112G		
60	2*E5-2660 v4 or equivalent	128G		

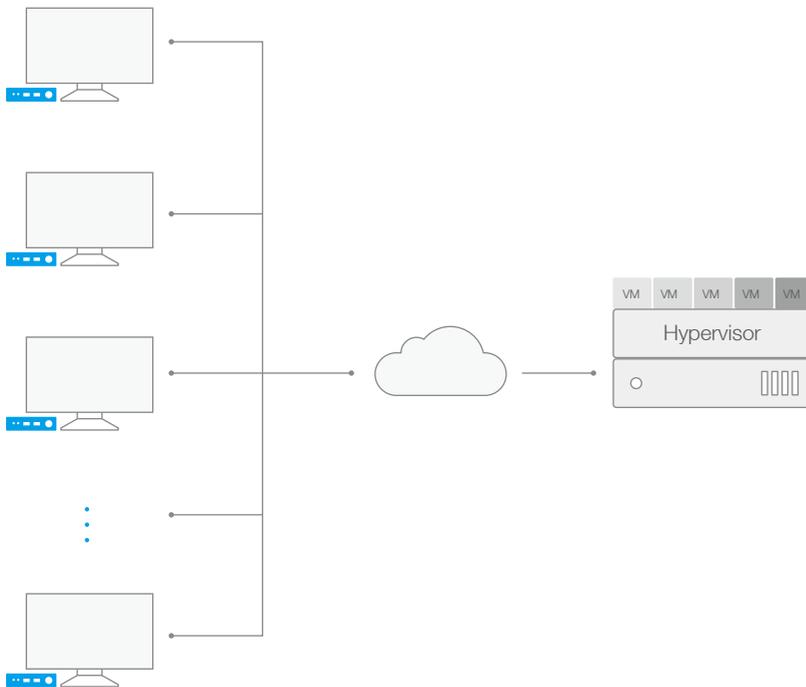
The preliminary guideline provides an estimated starting point from which administrators can validate. Performance results are highly dependent upon the host configurations, applications being used, OS and network conditions. Please test your environment before deployment.



# Virtual Desktop Solutions

## 2. (VDI) Virtual Desktop Infrastructure

### Solution Overview



vCloudPoint's Virtual Desktop Infrastructure (VDI) solution allows users to access independent virtual desktops hosted in virtual machines (VMs) in the server. With Virspire Desktop Agent running on the Windows virtual machine, each vCloudPoint client users connect to an independent virtual machine with dedicated resourced based on their needs. Since the virtual machines are isolated to each other, users will have the exact experience as they are running on a desktop computer. vCloudPoint's VDI solution is a flexible and highly manageable computing solution and and works best for complex deployments with diverse users and needs.



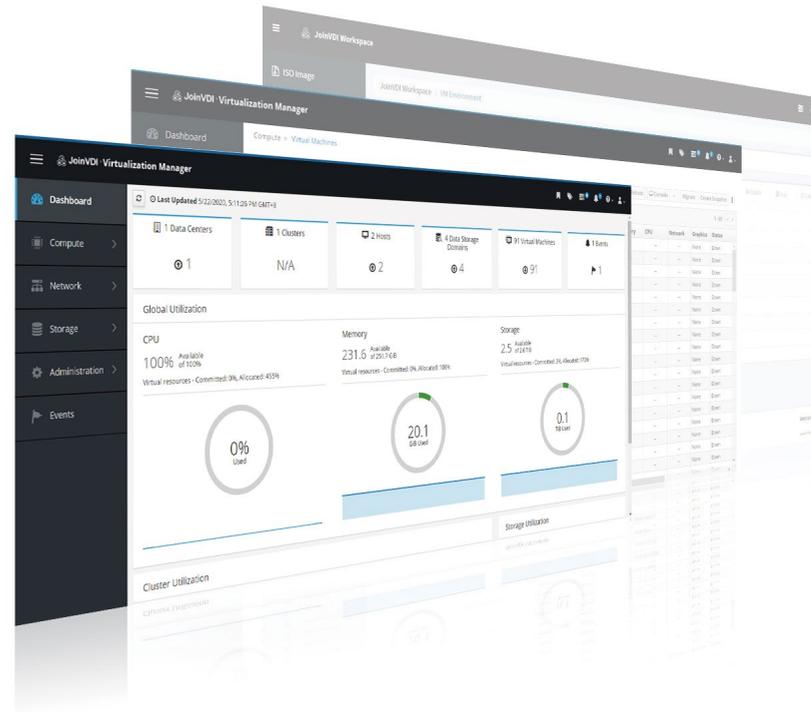
## JoinVDI Virtualization Manager ①

JoinVDI Virtualization Manager is Linux based virtualization platform running on a bare-metal machine. It includes the KVM hypervisor for creating virtual machines and provides a web-based management front end that gives you complete control over and visibility into clusters, hosts, virtual machines, storage, networking and other critical elements of virtualization infrastructure.



## Virspire Desktop Agent ②

Virspire Desktop Agent is a service role that provides users console access to the guest system hosted on the remote servers. Virspire Desktop Agent works with the vCloudPoint DDP protocol to offer a better guest console experience.



① formerly vCetrix Virtualization Manager

② formerly Virtrix Desktop Agent

## Software Specifications

Virspire Desktop Agent can run on most of Windows operating systems such as Windows 7, 10,11, Windows Server 2012, 2016, 2019, 2022 and so on.

Virspire is a neutral broker that can work with any hypervisors such as Exsi, Citrix hypervisor, Hyper-V, and other KVM variants.

Virspire Desktop Agent communicates with S100 zero client and V1 zero client.

## Solution Advantages

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### Dedicated Resources

VDI allows IT admin to tailor resource availability to different users based on their needs. Users that work with graphics editing software require more resources for their desktops compared to users who only run basic word processing and web browsing applications.



### Personalization & Customization

VDI allows end users to have the actual end-user experience as they are running on PCs. Users have the freedom to install their own applications and have personal settings.



### Highly Flexible & Manageable

With all server side infrastructure virtualized, VDI makes computing of organizations highly flexible and manageable. You can easily scale up with load balancing, reconfigure resources to meet growing needs, prevent single points of failure with fail-over setup and many more management tools and technologies to ease your IT administration.



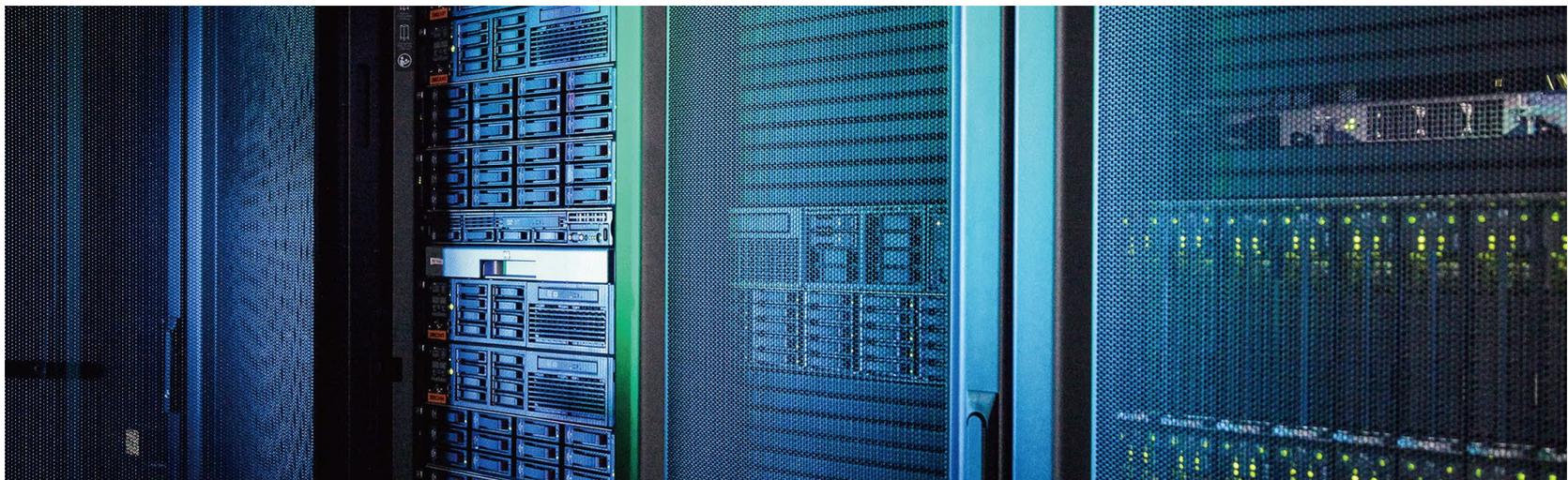
### Low Cost & All Hypervisor Compatible

vCloudPoint provides a complete end-to-end VDI solution including the vCetrix Virtualization Manager, Virspire Desktop Agent and zero clients at the cost of a fraction of others. But if you get used to VMware or Citrix offerings or are having some other KVM based virtual servers in use, vCloudPoint Virspire Desktop Agent and zero clients work in harmony with any hypervisor to provide a familiar user experience.

## Host Configuration Reference

No. of Users	CPU	RAM	SSD	HDD
10	2* E5-2630 v4 or equivalent	64G		
20	2* E5-2650 v4 or equivalent	96G	16GB for the virtualization layer + 40GB for the golden image + 5GB per non-persistent virtual desktops or 40-60GB per persistent virtual desktops	Storage size to be determined by actual needs
30	2* E5-2670 v4 or equivalent	160G		
40	2* E5-2690 v4 or equivalent	192G		

The preliminary guideline provides an estimated starting point from which administrators can validate. Performance results are highly dependent upon the host configurations, applications being used, OS and network conditions. Please test your environment before deployment.



# Comparing RDS vs VDI

RDS and VDI each offer benefits for organizations, but are designed to serve different business scenarios. RDS is highly useful for businesses seeking to lower IT costs or streamline their IT administration. Being simple to set up and easy to use may make it a good choice for environments where many users have very similar needs in terms of applications and desktop configuration,

and if they are dealing with less sensitive data types where security is not a primary concern. VDI is a better option for more complex deployments with different user types and particularly useful when businesses have to deliver the virtual desktops and applications separately to avoid any compatibility issues or deal with critical and confidential data.

	RDS	VDI
<b>Implementation &amp; Maintenance</b>	RDS deployments are simple for any IT administrator to implement and maintain. RDS desktops and applications are all copies of one central image, making managing and updating the software easy.	VDI structure is complex. Very high skill levels for IT staff are typically required for deployment and maintenance. IT staff managing multiple OS instances, patching and updating them is strenuous.
<b>Resources Distribution</b>	Users share compute resources, which can lead to contention and performance issues.	IT administrator can tailor dedicated resources to different users based on their needs.
<b>Application Compatibility</b>	Some applications are not designed for session-based access by multiple users.	Users are far less likely to have application compatibility problems as they access an independent OS with complete administrative rights.
<b>Desktop Personalization</b>	As multiple people are potentially using the desktop at the same time, they can't have admin access. And there will be some limits on configuration changes and applications that are installed.	As each user enjoys a dedicated VM with an OS, they can install or uninstall applications with full or partial administration rights within the VM.
<b>User Density</b>	RDS is less resource-intensive, so you can generally pack far more users onto a host which in turn means lower costs.	VDI deployments are resource-hungry so investment in hardware resources is far higher than traditional PCs.
<b>Software Licensing</b>	RDS minimizes licensing costs with multiple users sharing a copy of OS and applications. The client access licenses (CAL) required by Microsoft for each device or user to access the host is low and perpetual.	Software costs and licensing complexity can significantly increase VDI's price tag. You need to buy a Windows license for each virtual desktop and Virtual Desktop Access (VDA) on a year-subscription basis from Microsoft.

# Endpoint Device

## Zero Client

The vCloudPoint zero client contains no moving parts but only the necessary hardware & firmware to initialize a conversation with the network, begin network protocol processes, and display desktop output. It centralizes all software, processing and management to just what is running on the host, leaving little more than a keyboard, mouse and monitor at a user's desk. As a result, it requires no driver to install, no patch management, and no local operating system licensing fees or updates. The device consumes very little power and is tamper-resistant and completely incapable of storing any data locally, providing a more secure endpoint.



## Zero Client Benefits

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### Reduce acquisition costs

The initial acquisition costs are saved when replacing PCs with vCloudPoint zero clients which cost less than half the price of entry-level PCs.



### Greater energy saving

The vCloudPoint zero clients consume only 5 watts and produce much less heat, providing at least an 80% savings in energy consumption and air conditioning over PCs.



### Quick Provisioning

vCloudPoint zero clients are essentially plug-and-play devices. They require only minutes to set up and seconds to boot. After a keyboard, mouse and monitor are connected, the zero client workstation is ready to be utilized.



### Centralized management

There is nothing for IT to configure, manage, or update at the endpoint. All installations, patches & updates are done on a single host. One IT staff can handle 5 times as many devices and users compared to PCs.



### Reduce unplanned downtime

With no failure-prone parts and desktop-related problems, unplanned endpoint downtime is greatly reduced. Even when turn faulty, the zero client can be placed, helping the user back to work in seconds.



### Rapid roaming from any client

No time is wasted on moving a heavy laptop or rebooting the system. With a simple log-off and then log-in from any zero client, the user's back at his desktop with all open applications and files still in place.



### Longer refresh cycles

The obsolescence-free feature of the zero clients proves longer desktop refresh cycles, saving both refresh budgets and cutting the time for the refresh from weeks to hours.



### Security policies

IT staff can apply security policies, monitor, and disable end users from logging in or lock-down locally connected USB peripherals, preventing users from copying confidential data to removable storage.



### Eliminate virus infection

With no resident OS or storage capable of running software, the zero client provides a completely secure endpoint that is immune to viruses and other malware.



### Remote technical support

IT and support staff can provide support or fix problems right from their desks, eliminating the costs and delays of having to travel to remote user locations.



### No risk of data lost

Since the vCloudPoint zero clients cannot store any data locally, users are free of worrying about data loss stemming from hardware failure or laptop/PC theft.



### File sharing

IT admins can set public drives on the host for public storage, allowing terminal users to share files without the need to copy or transfer between desktops.

# Connections

## V1 Model



- ① VGA Display Port
- ② HDMI Display Port
- ③ 10/100/1000 Mbps Ethernet
- ④ 5V DC Power Input
- ⑤ USB2.0
- ⑥ 3.5mm Speaker
- ⑦ 3.5mm Microphone
- ⑧ USB2.0
- ⑨ Power/ Reset Button

## S100 Model



- ① Power/ Reset Button
- ② USB2.0
- ③ 3.5mm Mic jack
- ④ 3.5mm Speaker Jack
- ⑤ 10/100 Mbps Ethernet
- ⑥ USB2.0
- ⑦ VGA Display Port
- ⑧ 5V DC Power Input

# Hardware Specifications

Model		S100	V1
Appearance	Size	124(W)x75(D)x26(H) mm	93(W)x90(D)x18(H) mm
	Weight	107g	150g
	Color	Matte black	Diamond black & moon sliver color
Video Output		VGA	HDMI / VGA
Networking	Ethernet	10/100 Mbps	10/100/1000Mbps
	WIFI	Optional external 2.4G/5G wifi	
I/O	Display	1 x VGA	1 x VGA, 1 x HDMI
	USB	4xUSB 2.0	
	Network	1xRJ45	
	Audio	1 x 3.5mm microphone, 1 x 3.5mm speaker	
	Power	1 x 3.5*1.35mm (5V* 2A) DC	
	Switch	1 x power/reset switch	
Anti-theft Gadget		x	√
Power Consumption		Average: 5W; Standby: 0.2W; Max.: 10W	

Model	S100	V1
Resolution	32 bit color depth; 30FPS; standard display: 640x480, 800x600, 1024x768, 1280x102, and 1600x1200; wide display: 1360x768, 1366x768, 1440x900, 1600x900, 1680x1050, and 1920x1080.	
Audio	16 bit, 44.1 Khz/ 48Khz input/ output via 3.5mm jacks.	
Video	Full HD 1080p; client side rendering with lossless compression for local videos through VLC media player; host side rendering with lossy compression for local or web-embedded videos through other media players.	
USB Peripherals	Storage Devices, USB Hubs, Single, Multi-functional & Dot Matrix Printers, Smart Card Reader, Office & POS Scanners, Single Touch Screens, Parallel to USB Converters, etc; An external power supply may be required for devices working on large voltage.	
Desktop Agent	Connects to a remote desktop session with vMatrix Server Manager running in the system; Connects to the machine console with Virspire Desktop Agent running in the system.	
Setting Management	Terminal device settings can be managed at the terminal or the server manger software.	
Certificates	FCC Class AB, CE, CCC, RoHS compliant, BIS, NOM, ISO 9001: 2015, ISO 14001: 2015.	

## Competitive Advantages

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### Easy To Set Up, Use & Manage

vCloudPoint zero clients are extremely easy to set up, use and manage. The software installation is so easy in just a few clicks. There are no configurations needed to be done at the endpoints or the host. The vCloudPoint zero client provides a plug and play experience to users.

### Excellent Image Quality

With vCloudPoint zero clients, users do not have to sacrifice image quality for high performance and low network bandwidth usage. IT administrators can choose their level of compression, lossy or lossless, based on their network constraints and the needs of end users.

### Smooth Desktop Experience

Powered by vCloudPoint's innovative Dynamic Desktop Protocol (DDP), vCloudPoint zero clients deliver a seamless desktop experience that is indistinguishable from running on a PC desktop.

### Real-Time Audio

vCloudPoint zero clients are capable of supporting real-time audio devices like headsets and microphones with vCloudPoint Virtual Audio Drivers running inside virtual desktops. These Virtual Audio drivers enable reliable audio playing and recording in any Windows systems and CD-quality sound at the zero clients.

### Broad USB Device Support

vCloudPoint zero clients support a wide range of USB devices including memory devices, USB hubs, single, multi-functional & dot matrix printers, card reader, office & POS scanners, single touch screens, U keys, and USB converters.

### Multimedia Redirection

vCloudPoint vDirect Client Rendering (multimedia redirection) technology provides a better user experience for video viewing, particularly for high concurrent video playback occasions, and reduces CPU and network bandwidth consumption without the need for expensive GPUs.

# Customer Cases

Zespół-Szkolno-Przedszkolny-  
w-Kamionnej-in-poland



Wanek-Furniture-  
Company-in-Vietnam



Secondary-technical-school-in-  
Slovakia



Philadelphia-School-in-  
Jordan



NRB-Bank-in-Bangladesh



Netherlands Weert Library



Nahit-Mentese-Vocational-  
And-Technical-Anatolian-High-  
School-In-Turkey



Mukdahan-School-in-  
Thailand



Ministry-of-Defense-in-Guinea-  
Conakry



Laser-Eye-Clinic-VISION-In-  
Bulgaria



Eureka-Information-  
Technology-in-Pakistan



Anyksciu-Jono Biliuno-  
gimnazija-in-Lithuania



# About Us

## Company Profile

vCloudPoint is the registered brand of Shen Zhen Cloudpoint Technology Co., Ltd. The company is a global technology provider started in 2015, with its head office in China. It provides centralized desktop computing solutions combined with desktop management software and zero client devices to organization customers. vCloudPoint solutions allow multiple users to simultaneously work on a centralized server/ PC host, helping customers reduce costs, simplify management, enhance security and boost productivity on desktop computing.



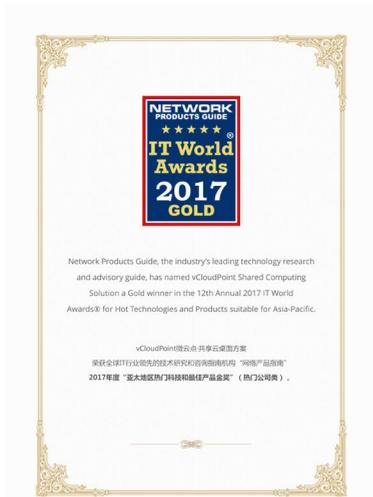
## Global Partners

vCloudPoint products are sold through vCloudPoint’s worldwide channel partners. By 2019, more than 300, 000 vCloudPoint zero clients have been sold through 20+ regional distributors and 4,000+ partner dealers in 50+ countries and regions, including Korea, Malaysia, Indonesia, India, Philippines, Thailand, Nepal, Vietnam,

Myanmar, Ukraine, Poland, Lithuania, Slovakia, Czech Republic, Latvia, Iran, Pakistan, Libya, Guinea, Ethiopia, Peru, Colombia, Argentina, China, Jordan, Cambodia, Poland, Sudan, Fiji, and Netherlands, etc.



# Honors & Awards



# Certifications & Patents





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