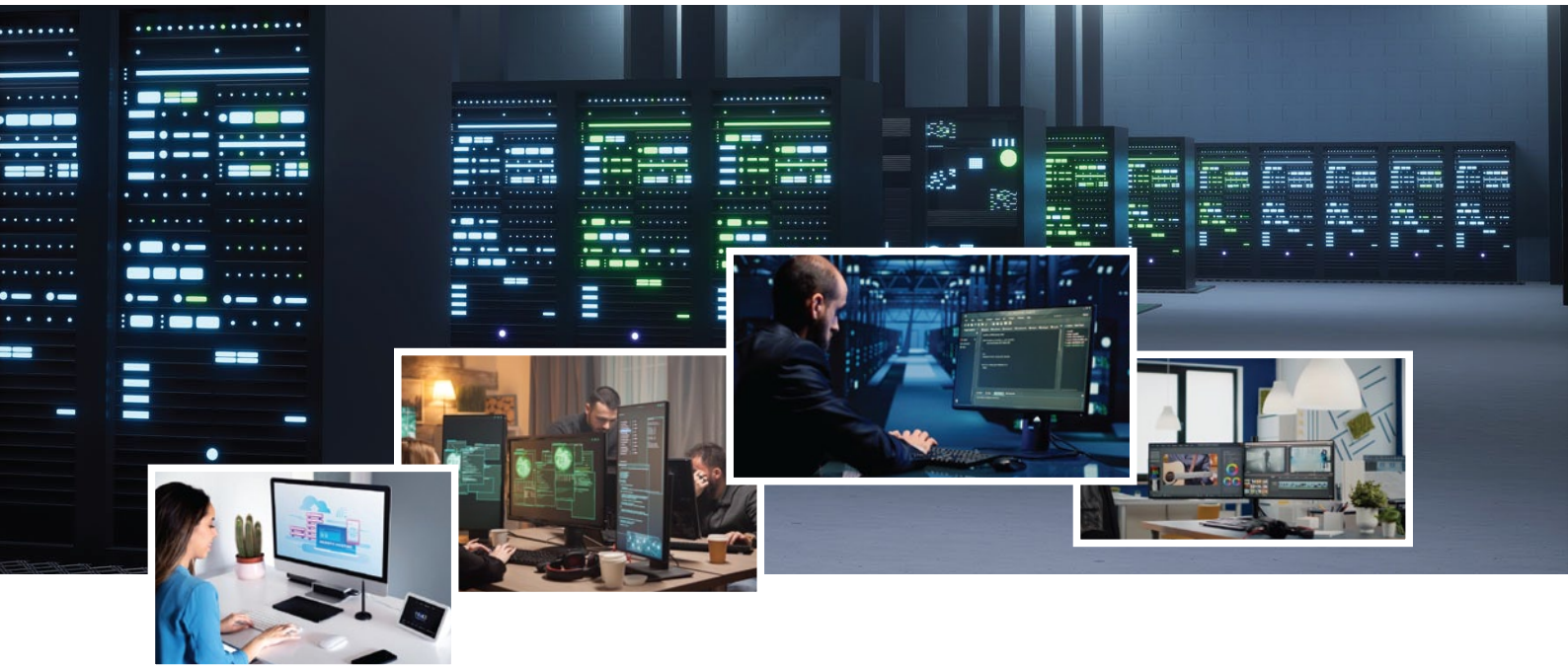
Atrust

Energy Saving Innovation
ESG Product



Remote PC Array

RPA120

In a 2U server form factor, RPA120 is a centralized array of workstations, offering up to 10 swappable computing nodes (cartridges). Users can then connect remotely to get desktops with high-end workstation performance, and enterprises can fulfill the high-density, high-performance deployment demands of Graphics workstations, and get benefits of security, convenience, environmental protection, and energy-saving.

Each cartridge in RPA120 is equipped with the independent CPU, RAM, SSD Storage, and GPU.

In contrast to VDI (Virtual Desktop Infrastructure) with centralized resources allocation, this innovative design, with individual computing nodes, can operate without compromises in performance, satisfy the need of professional applications, solve performance issues in a complicated VDI, save the subscription fee of virtualization software, reduce the deployment and setup time, lower the TCO, to achieve enterprises' goals of efficiency, power-saving, and carbon reduction.

One Device. 7 Features on Hand

What makes RPA120 different are individual computing nodes in a centralized and ease-of-management array.
It satisfies the needs of security and diversity in a single device, offering platforms for onsite or remote office applications, professional drawing, software development, video playback, etc.

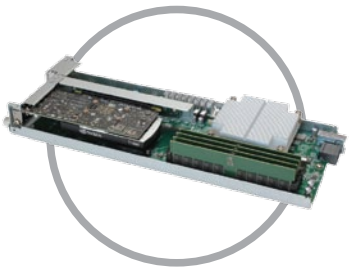
Key Features of RPA120 Are :

Security

RPA120 offers up to 10 cartridge-type computing nodes. Each cartridge can do its own tasks without competition of resources from others, just like a stand-alone workstation PC. To get Desktops ready for end users to connect remotely, IT administrators just need to deploy operating systems, install desired applications, and set up networks.
Computing and results stored are all in the remote RPA120, so you don't need to worry that valuable data will be leaked out. Data are all well protected.

Convenience

Cartridges are hot-swappable.
When in need of replacement or expansion (upgrade) , you can remove and insert cartridges while the chassis and other cartridges are in operation.
In addition, there is no hassles in network cabling due to the network ports of every cartriges are connected to the built-in Ethernet switch.



Performance

RPA120 contains 10 cartridge bays housing for 5 to 10 cartridges.*
Each cartridge is equipped with a PCIe extension slot for Graphics card (GPU) , which can be used without compromises to achieve the computing level of high-end

Graphics workstation.
Additionally, no hypervisor platform (for example, VMware vSphere® or Citrix Hypervisor™) is required to allocate resources. You can eliminate the performance issues of vCPU, competition of resources among VMs, complicated configuration of vGPU, and save the high software licensing fee.

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* RPA120 supports standard cartridges (with a standard GPU) or advanced cartridges (with a high-end GPU) , occupying one or two cartridge bays respectively. So, RPA120 can be equipped with 10 standard or 5 advanced cartridges.

Maintenance

Through KVM buttons on RPA120 locally or Remote KVM feature on Management Console remotely, IT administrators can monitor system health, install applications, or update firmware with ease.
You can maintain specific cartridges while others are in operation. You can even update chassis firmware without any cartridge downtime.

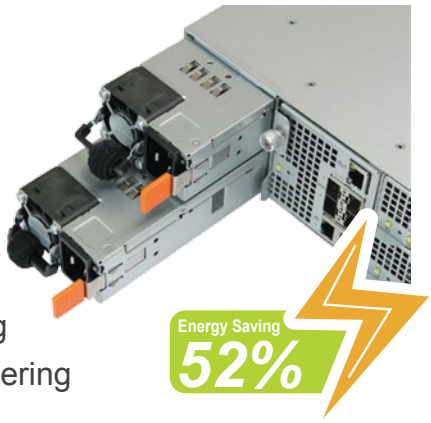
Scalability

RPA120 can be deployed for various applications and can be easily scaled up when needed. all you need is to add more RPA120 systems to get more computing nodes and capacity. After scale-up, you don't need to take time and effort reallocating resources as you do for your traditional servers.

Space Saving

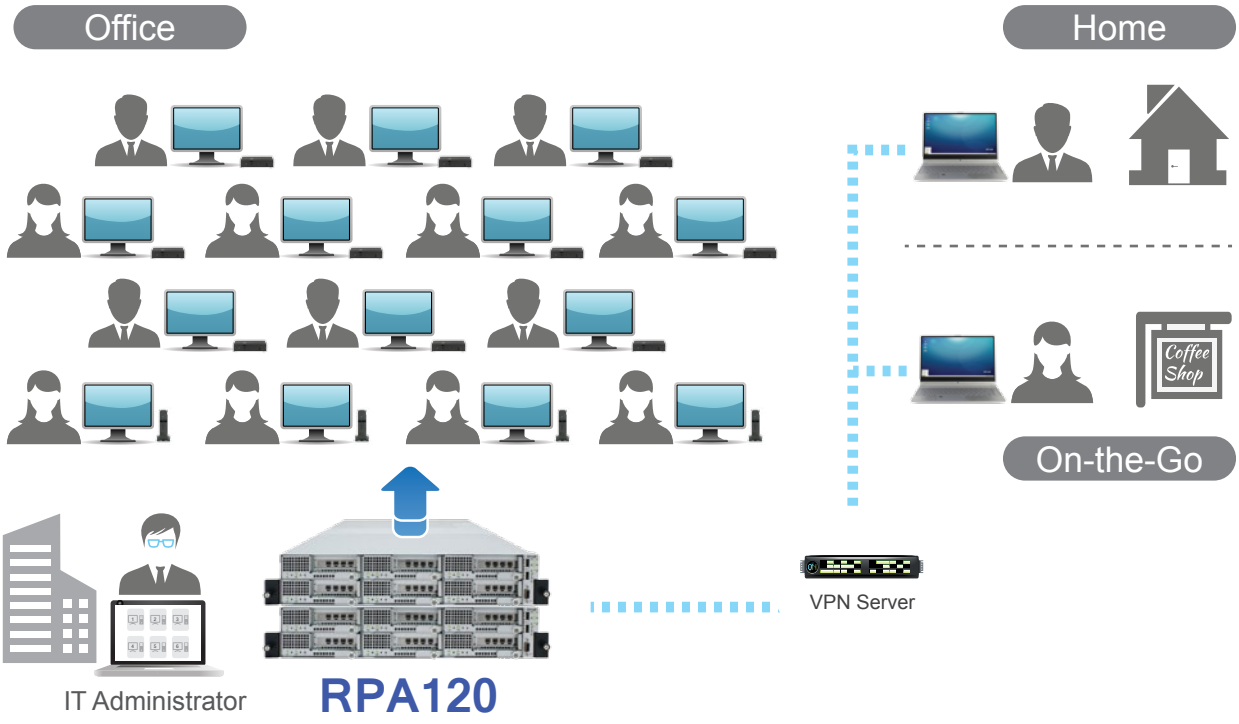
RPA120 houses up to 10 cartridges in a 2U chassis. To get access to Desktops, users create remote connections via thin clients. Comparing to traditional configuration of 10 physical desktops, this solution gets more rooms for comfortable working space and reduce substantial materials (e.g. chassis, etc.).
In addition, locating all computing nodes in one place would help check and manage effectively.

Energy Saving

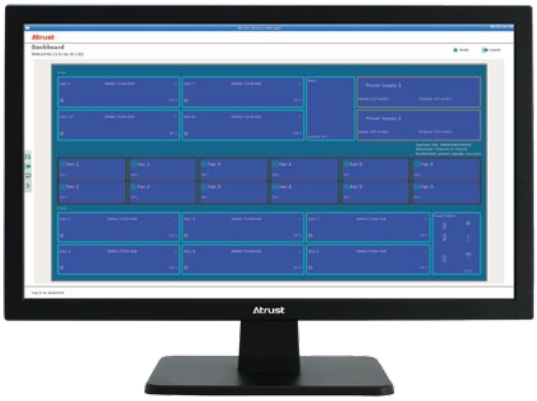


RPA120 comes with the design of power redundancy, using two hot-swappable 2000W power supplies and powering up to 10 cartridges.
With the help of GPU on a cartridge, even professionals can connect remotely to use Graphics demanding applications, such as art creating, video editing, engineering drawing etc., just with thin clients or normal computers.
All the power you need in total is only 48% of a traditional configuration of workstations. It's power-saving and eco-friendly !

RPA Applications



ACM - Atrust Chassis Manager



GUI (ACM / AFDM) and CLI (SSH)
Both Available for Management

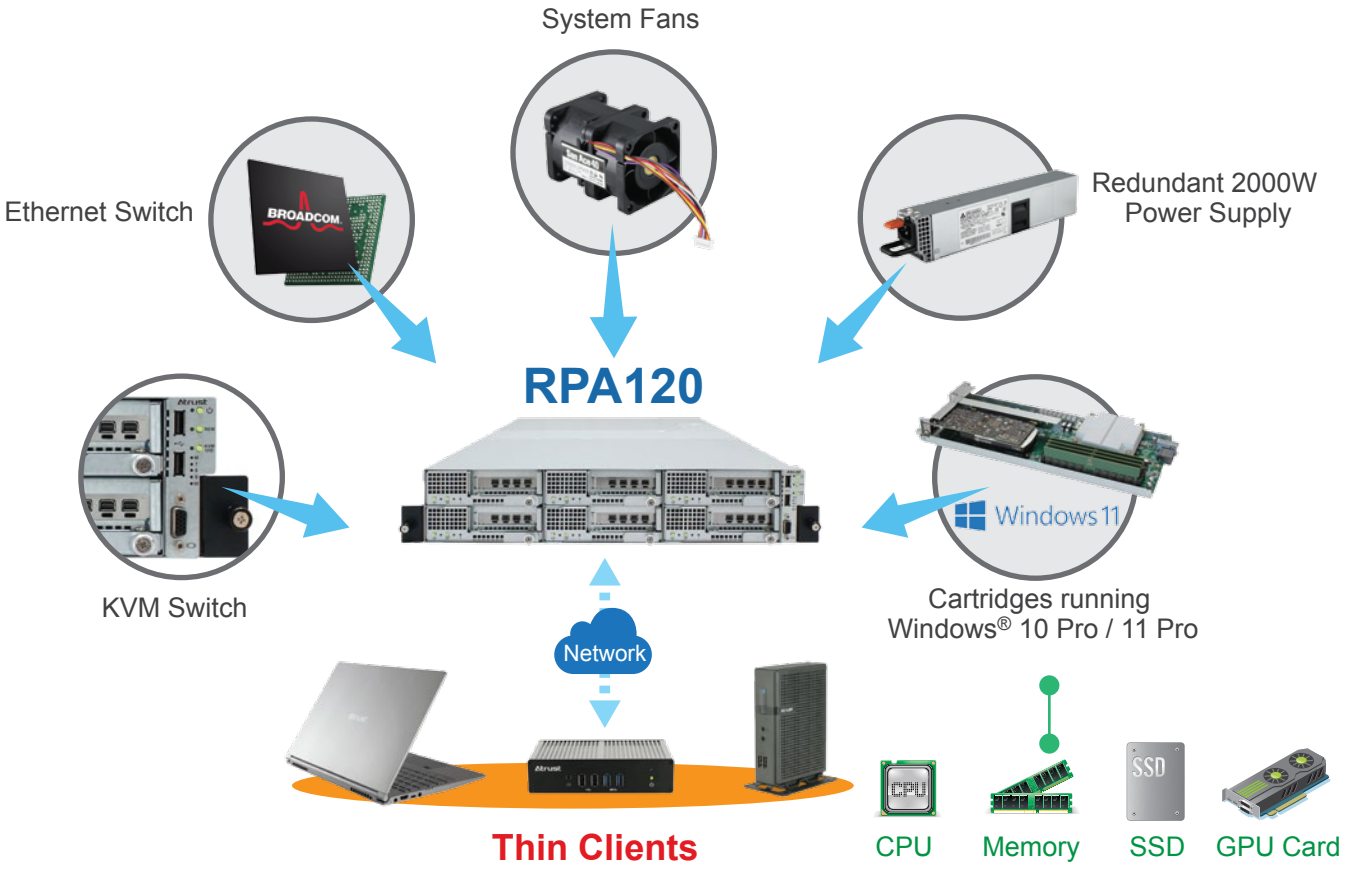
Switch (Built-in) and Chassis Management

- CPU, PSU and FAN Status
- Temperature Monitoring
- Email Alert
- Firmware Version and Upgrade
- Account Management
- Chassis Configuration (IP, etc.)
- Switch Configuration
- SNMP Trap Support

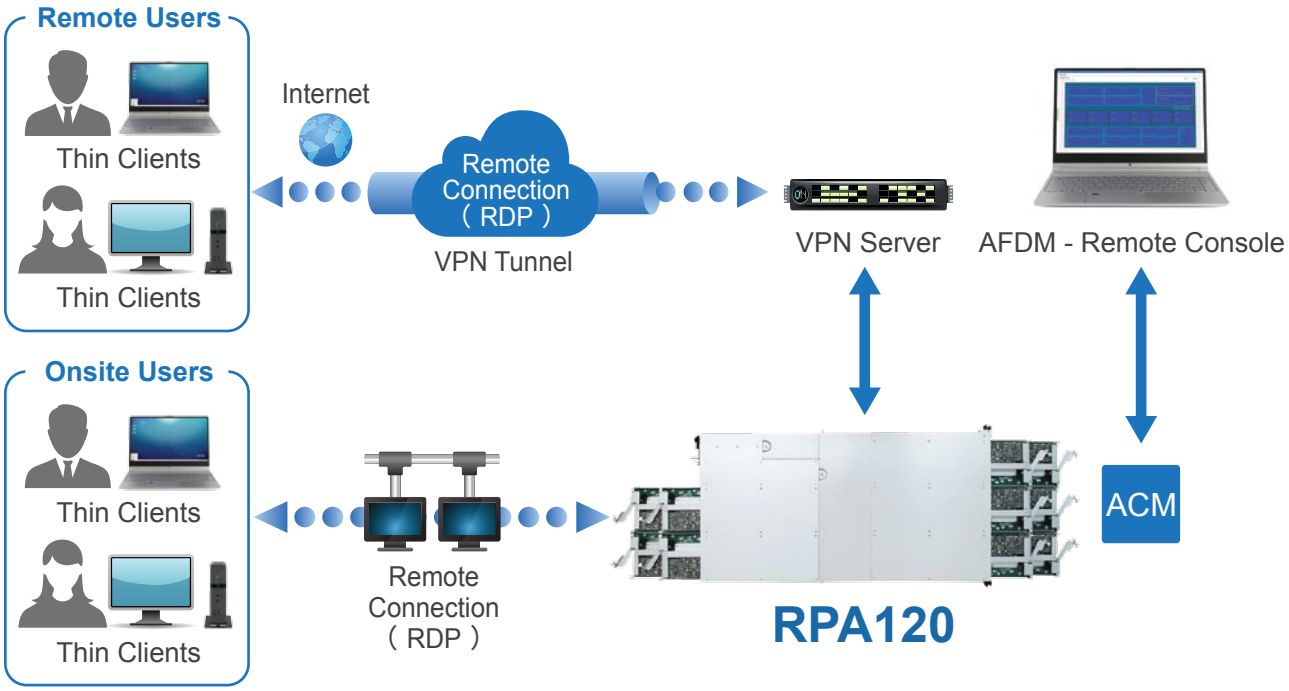
Cartridge Management

- Power Control (On / Off / Shutdown / Reboot)
- Domain Join
- Hostname Change
- IP and Gateway Change

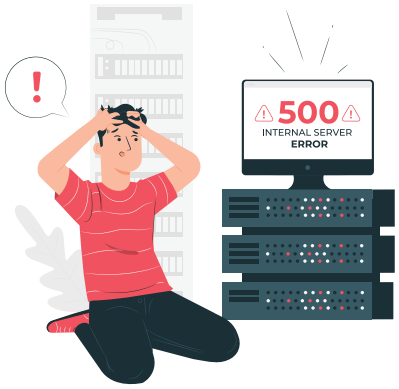
Centralized Array of Workstations and Reduced Cost of Hardware Deployment



Network Topology and Infrastructure



On-premises VDI Deployment Barriers



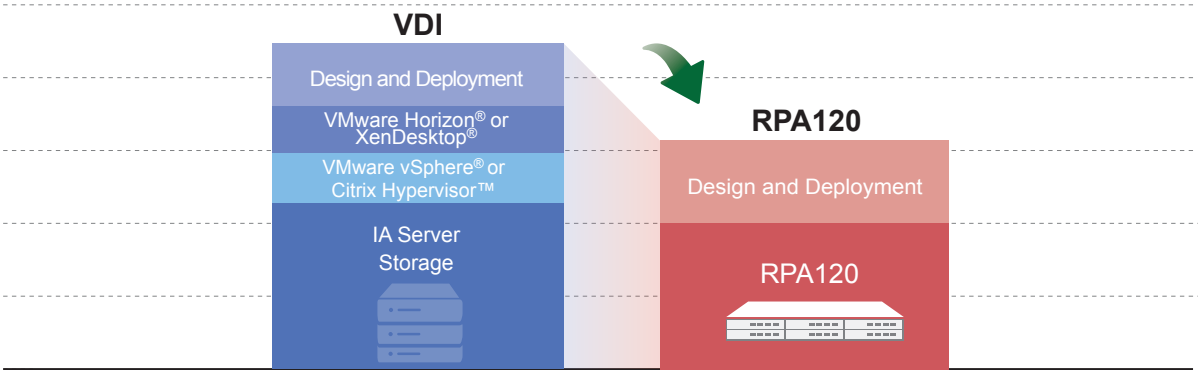
1. Initial Setup Cost
2. Planning and Deployment Time
3. Unexpected Performance Issues
4. Unpredictable Maintenance Cost
5. Future Expansion Cost
6. License Cost of Microsoft VDA and other software

Remote PC Array

RPA120

Initial Setup Cost

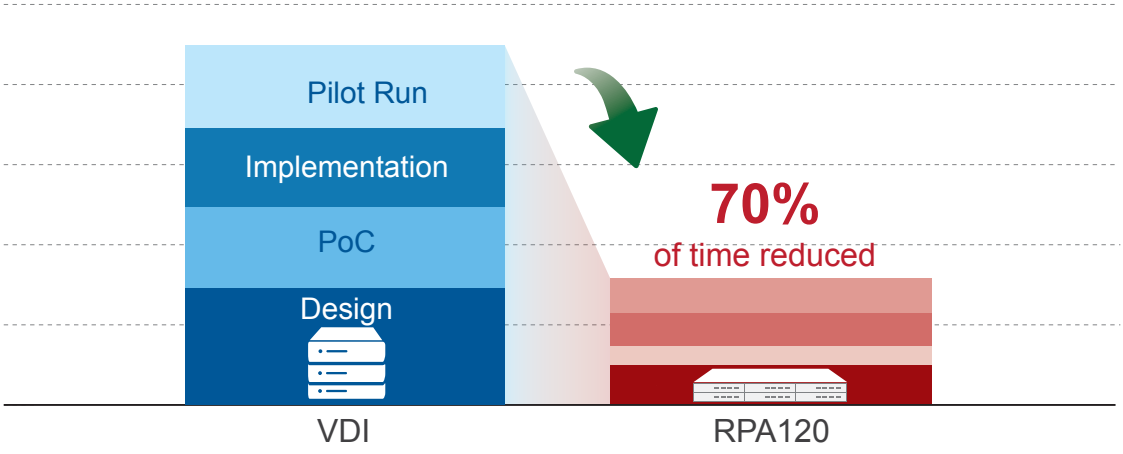
Cost comparison between VDI and RPA120



* Maintenance cost not included for both VDI and RPA120

Planning and Deployment Time

Without the setup of a hypervisor and the evaluation of performance, RPA120 reduces 70% of time to plan and deploy compared with VDI.



Planning and Deployment Time Comparison between VDI and RPA120

Unexpected Performance Issues

Potential Performance Issues of VDI

- Shared Resources
- Overload at Peak Times
- Hypervisor Issues

Benefits of RPA120

- Dedicated Resources
- No Interference from Others
- No Hypervisor Required
- Simplified Process of Troubleshooting

Unpredictable Maintenance Cost

VDI - Difficulty of Maintenance

Troubleshooting :

Step 1

Check and troubleshoot the target VM.

Step 2

When needed, you have to shut down, reboot, repair, or replace the physical server, affecting all VMs.

RPA120 - Ease of Maintenance

Troubleshooting :

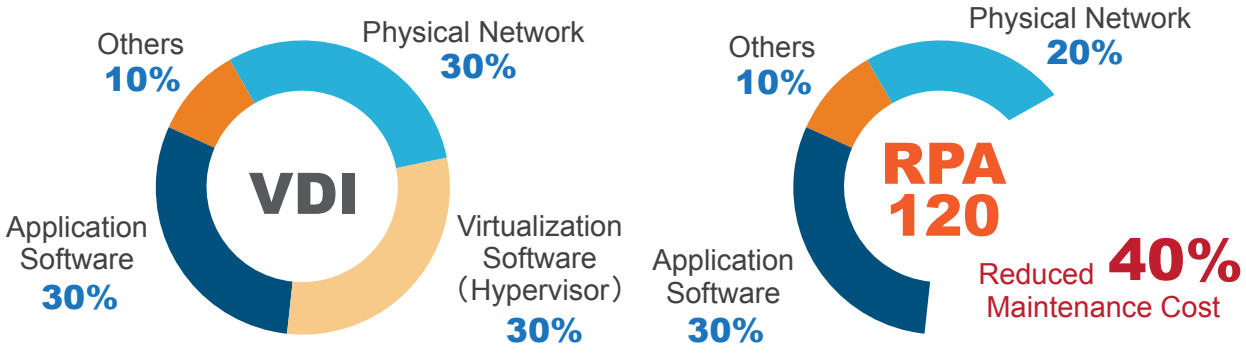
Step 1

Check and troubleshoot the target cartridge remotely (or locally).

Step 2

If needed, you can shut down and replace that cartridge while others are in operation.

Maintenance Cost comparison between VDI and RPA120



Estimate for Expansion Cost

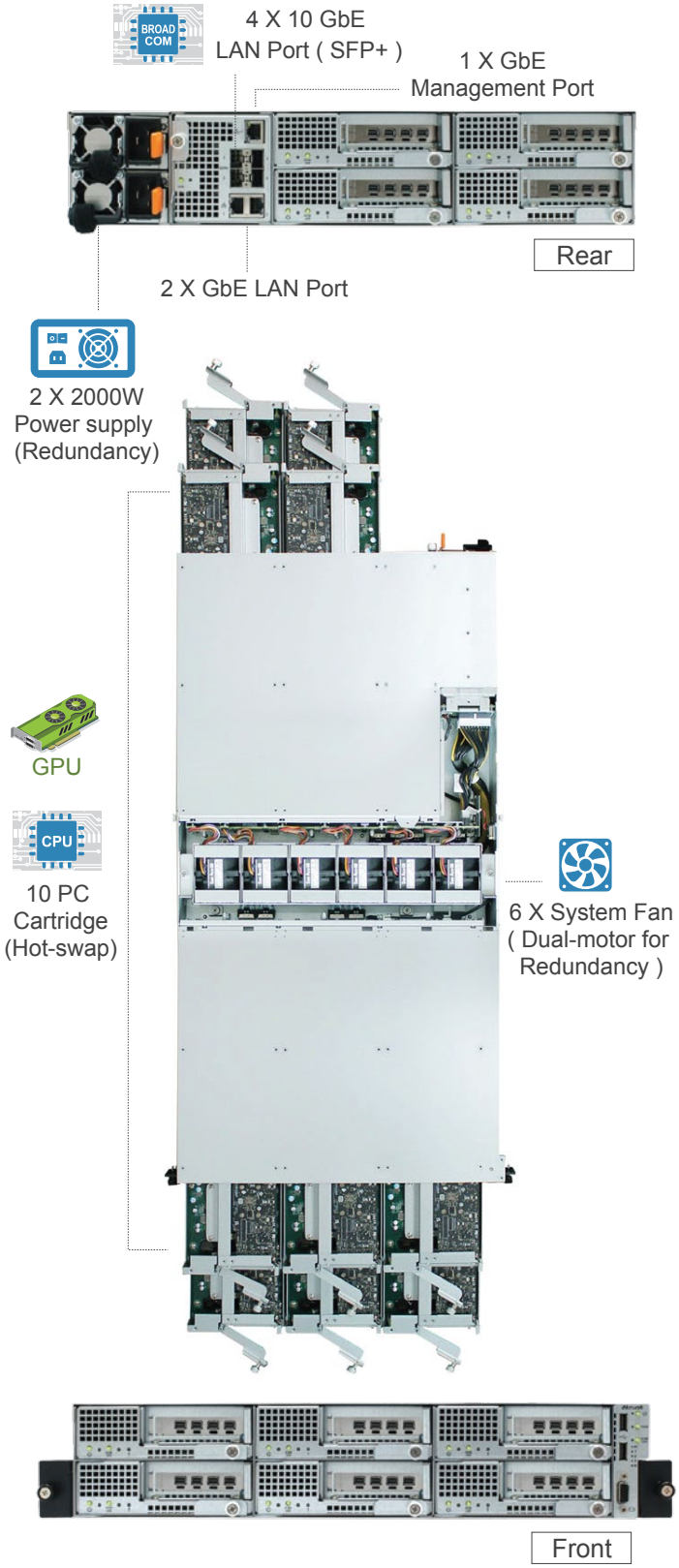
VDI - Difficulty of Scale-up

- **Hard to plan in advance what you need in the future**
  (For example, license number of VM)
- **Hard to plan and deploy when scaleup is needed**
  (You may need to re-allocate resources and fine-tune your VMs)

RPA120 - Ease of Scale-up

- **Add new RPA120 for new users**
  (Purchase new devices only when needed)
- **Add new RPA120 without downtime**
  (Set up new devices while others are in operation)

Remote PC Array–RPA120



PC Cartridge	
Processor	Intel® Core™ i7-13700E, i7-14700 Intel® Core™ i5、i9 Support Gen. 13,14 (manufacturing option)
Memory	DDR5 ECC U-DIMM 32 GB (Total 4 DIMM slots, Dual-Channel, Max. 192 GB)
GPU	Standard modules, up to 10 cartridges : ● NVIDIA® RTX A1000 8 GB Advanced modules, up to 5 cartridges (upgrade option) : ● NVIDIA® L4 Tensor Core GPU 24 GB ● NVIDIA® RTX 4000 SFF Ada Gen. 20 GB
Storage	M.2 PCIe NVMe SSD 128 GB / 256 GB / 512 GB 1 TB / 2 TB (upgrade option)
Network	Dual GbE NIC Per PC cartridge
Network Switch	
VLAN	Tag / Untag
LAG	Static, Dynamic (LACP)
Spanning-Tree	STP, RSTP, MSTP
Management	GUI, CLI
Chassis	
Dimensions	(W) 430 x (H) 86 x (D) 864 mm
Weight	32 kg (approximate) (including 10 cartridges fully loaded)
Built-in component	10 x Cartridge 1 x KVM switch 1 x Ethernet switch 1 x Management console
Power supply	Dual 2000W redundant power supply 200-240 Vac (hot-swap)
Operating humidity (Rh)	10% ~ 90% (non-condensing)
Operating temperature	5°C ~ 35°C
I/O ports	Front : 1 x VGA 2 x USB 2.0 Rear : 2 x 1 GbE (RJ45) 4 x 10 GbE (SFP+) 1 x Management port (RJ45)
OS	
Supported OS	Microsoft® Windows® 10 Pro Microsoft® Windows® 11 Pro Ubuntu® Desktop LTS Ubuntu® Server LTS

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