



# QuCPE-3032/3034

Network Virtualization Premise  
Equipment to deploy virtual  
network in edge offices



Refresh 4/8-core





# Still manage a traditional messy network?

QuCPE





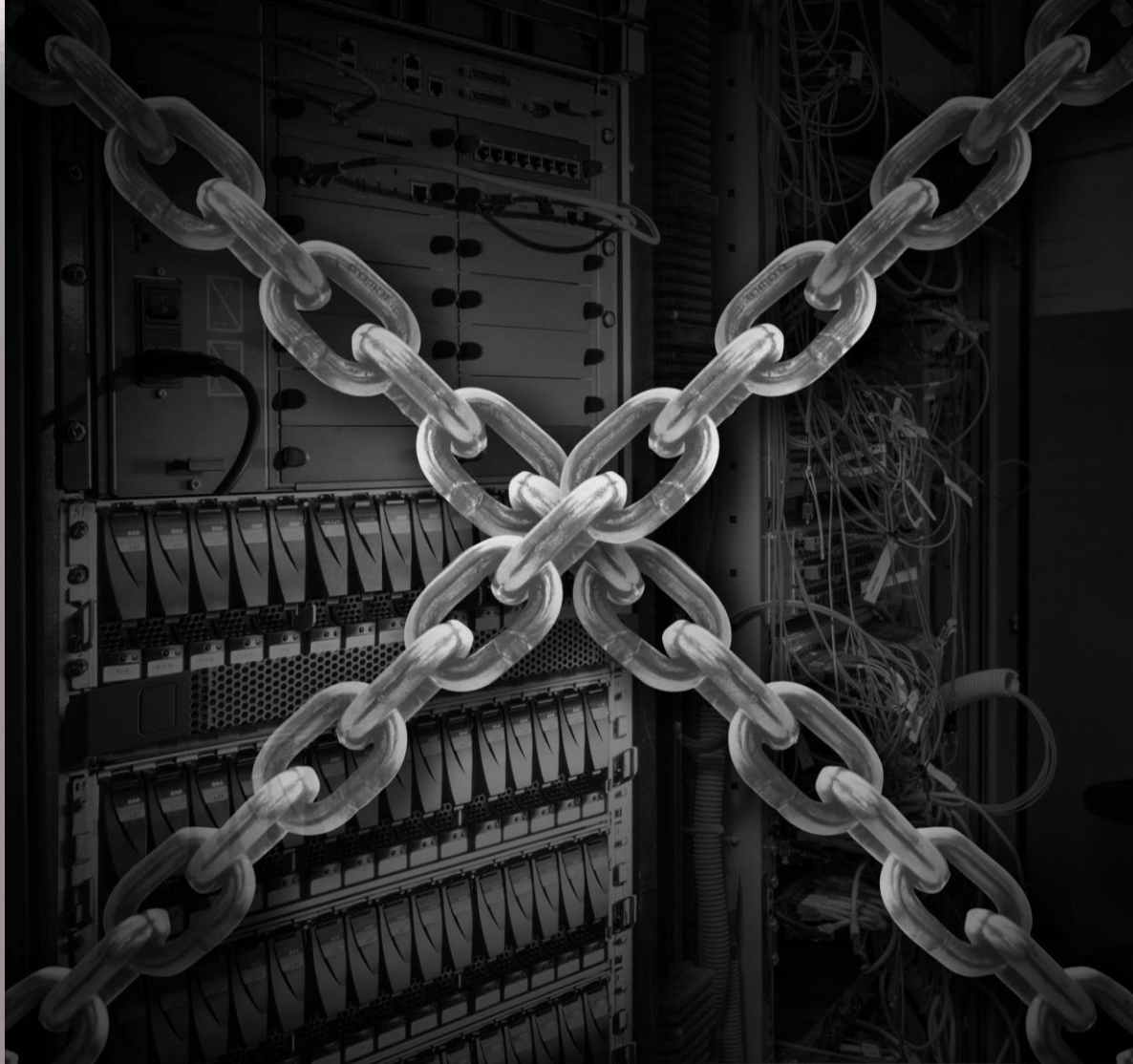
# Massive single function devices

QuCPE

- Complexity of daily operation
- More boxes, more interoperability issues
- More boxes, more failure points
- Energy wasting



# Difficulties of upgrade



- Fixed boxes lack of flexibilities for future extensions
- Too many things to worry in complicated environment
- Service down time is always long to make physical changes



# Match function? Match cost?

- Too costly and complex to replicate same functions to new branches
- Potential security breaches or additional operation expense occurs if not matching network functions with original network



# No professional IT managers in branches

QuCPE



- Difficult to identify real problems remotely without professional trouble shooting
- OPEX of IT people traveling around makes IT properties become burdens of business



# Business wait nobody

QuCPE

- Hardware boxes delivery suddenly become a critical issue nowadays (Chip shortage, port congestion, charge raises...)
- The longer new service deploy takes, the low competitiveness you got



A hand is shown from the wrist up, palm facing up, reaching towards a bright, glowing white sphere. The sphere has the word "Virtualize" written on it in a dark, sans-serif font. The background is dark with several bright, colorful light streaks in red, pink, blue, and white, creating a sense of motion and technology.

**Virtualize**

**A new era has  
come...**



# Benefit of IT virtualization

QuCPE

## Simple

Deploy new services via VM/VNF, no complicate hardware installation process.

## Minimize downtime

On site support is no longer required, remote manage, trouble shoot VM/VNF directly.

## Cost effective

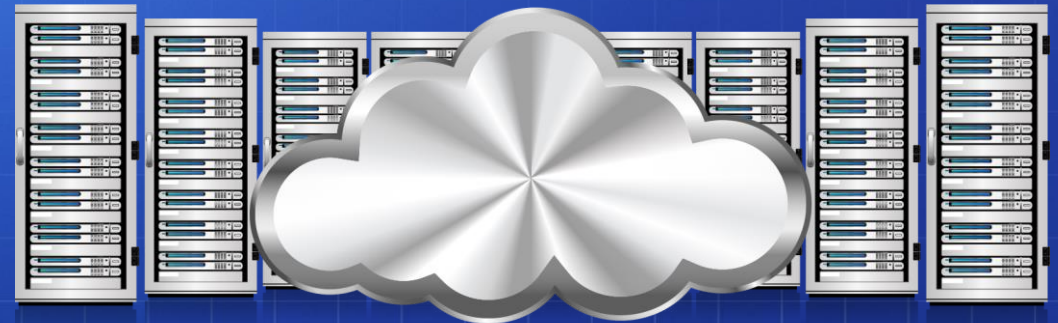
Single multiple function box instead of multiple boxes with single function.

## Quick

Few clicks to get complex jobs done. Such as service modifying, shifting or bulk deployment.

## Flexible

Software defined, breaks hardware barriers and limitations. Release the possibility of your IT environment.



# Can I virtualize my IT? What do I need?

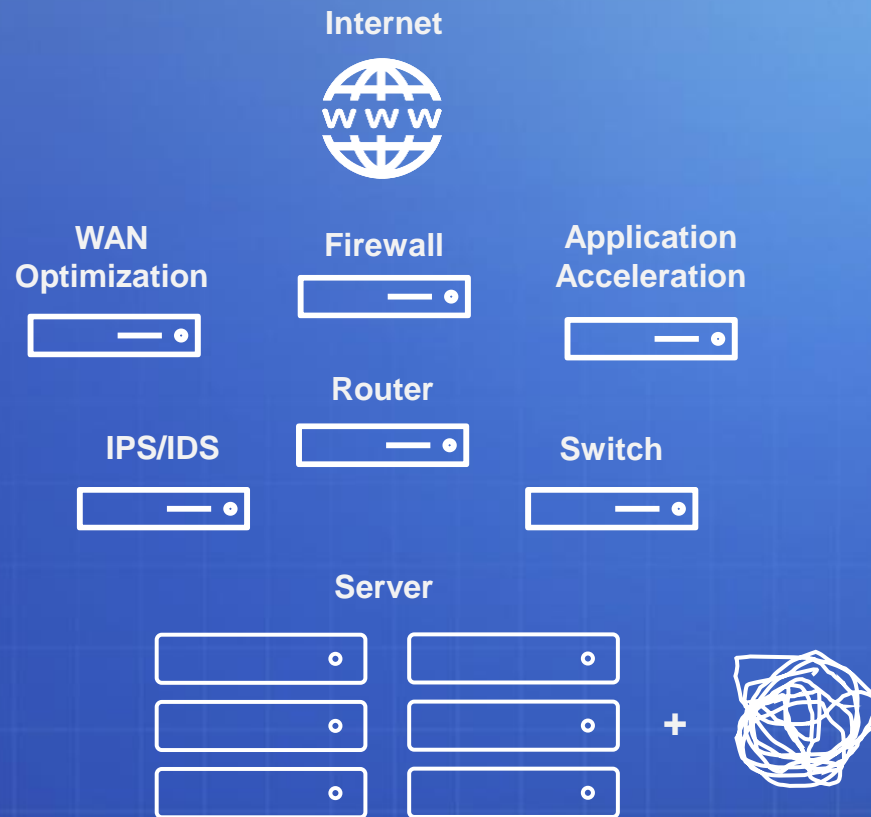
QuCPE

- Powerful device not only carry existing services but also with buffers for future upgrades.
- Flexible platform that can enable and well manage various services
- An easy way to monitor, manage all around the world.





# Traditional IT



# QNAP IT Virtualization Solution



**QNE** Operating System



**QuCPE**

# QNAP IT virtualization solution

QuCPE



AMIZ Cloud

Efficient cloud management platform allows remote deploy and manage VM or software containers to your network.

**QNE** Network  
QNE Operating System

Flexible OS provides a safe, easy managed environment to attach various services, release the possibility of your network.



QuCPE

Powerful platform to carry QNE and your services. Simplify your network and make the daily operation much easier.



Q<sub>NAP</sub>

N<sub>etworking</sub>

E<sub>quipment</sub>

Operating System

QNE  

---

Network

# Next-generation Operating System

QuCPE

## Next generation OS

### QNE (QNAP Network Equipment OS)

- Inherit the experiences for Enterprise storage OS
- The foundation for QNAP next generation products

## Break-through design than legacy Servers

### Break-through architecture

- Redesigned architecture for virtualized services
- Extremely fast service's response and migration

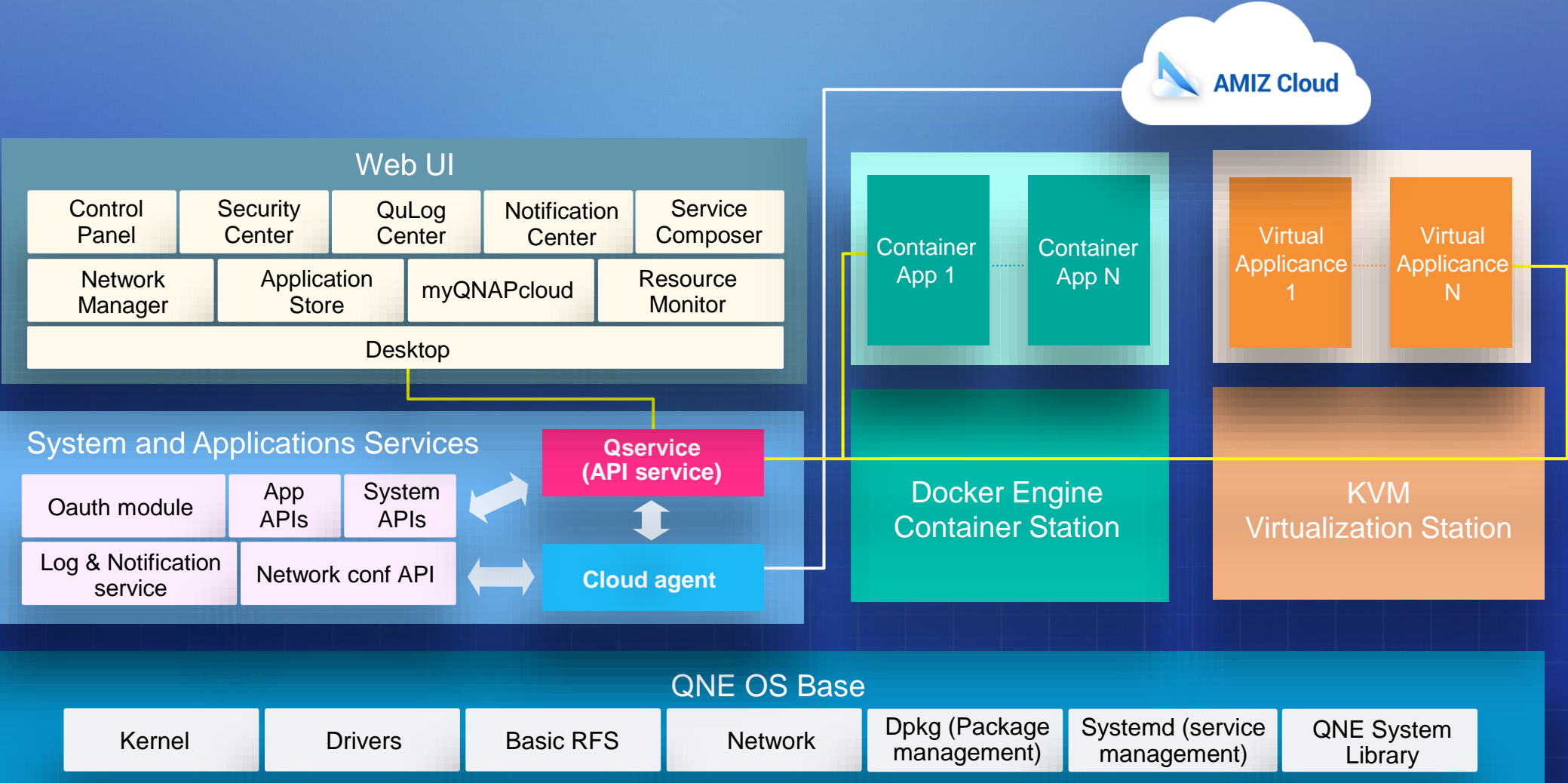
## Data center technologies from CSPs

### Flexible software-defined and virtualized technologies

- Simplified the IT management for SD-Branch
- Remotely adjustment along with business locations

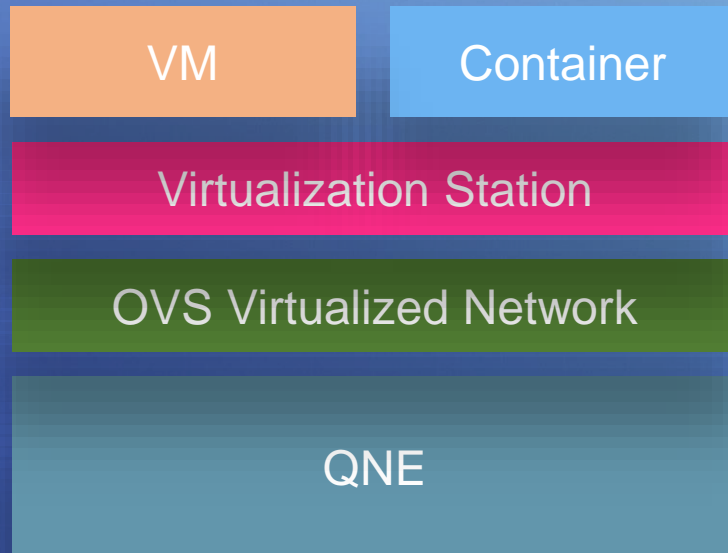


# QNE architecture



# QNE differences to server system

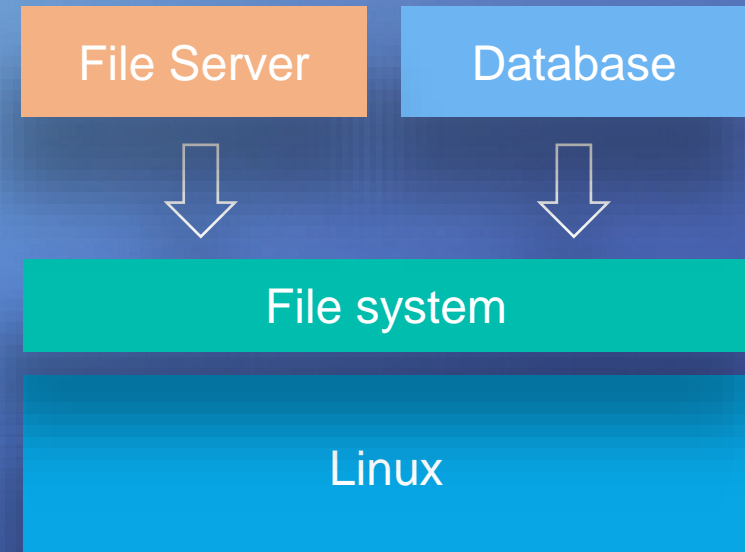
QuCPE



## QNE

VM & Container (application) are virtualized on top of hypervisors

V.S.



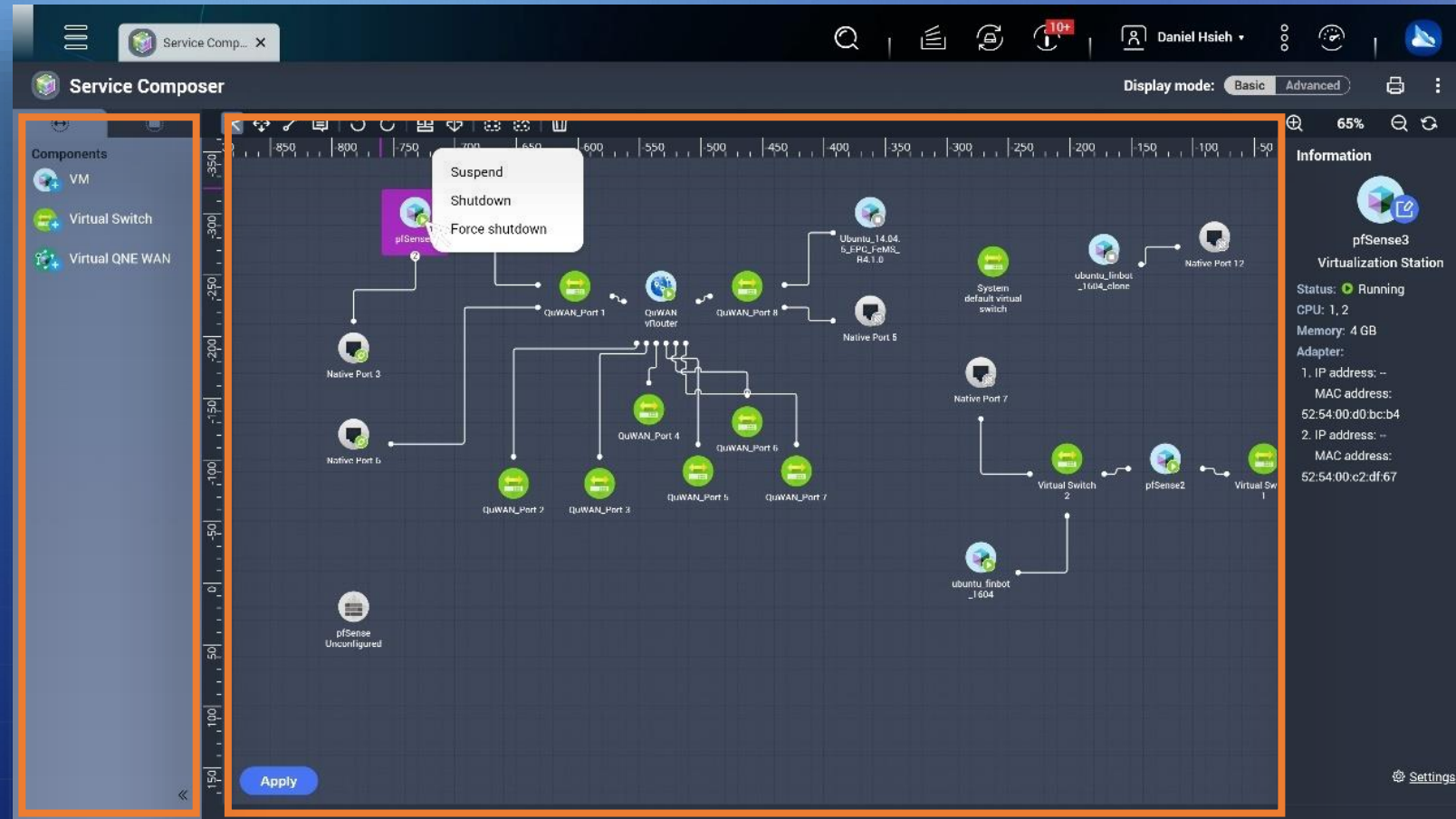
## Linux Server

Application (e.g., Database) assign disk volume from Linux



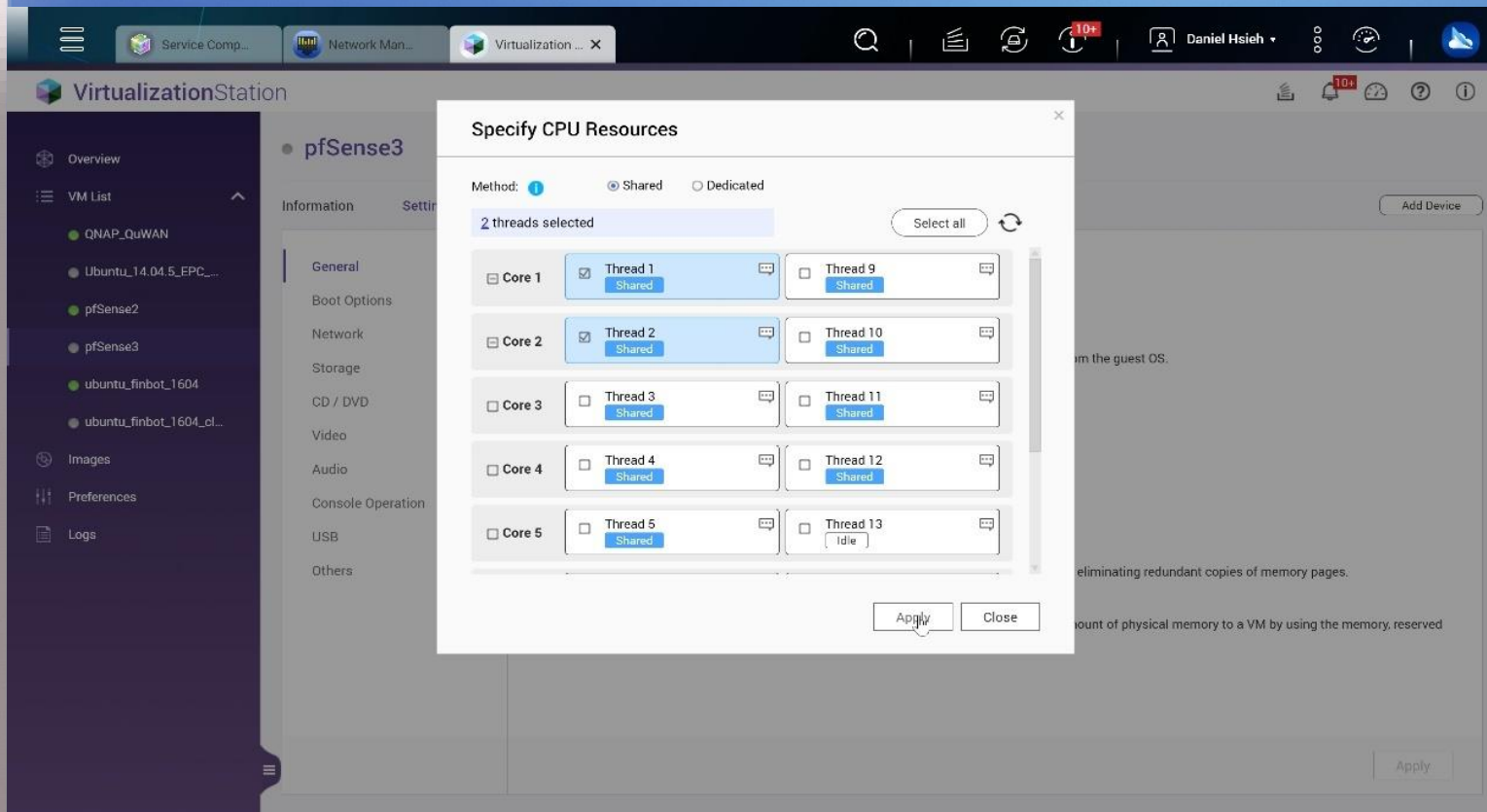
# Service composer

- Objective graphic UI help to easily create VM, VNF and links between.
- Visual virtual network topology makes the maintenance much easier.



# CPU resource arrangement

Allocate CPU resource for each VM or services through CPU pinning function. Guarantee critical services are always in good quality in your network.

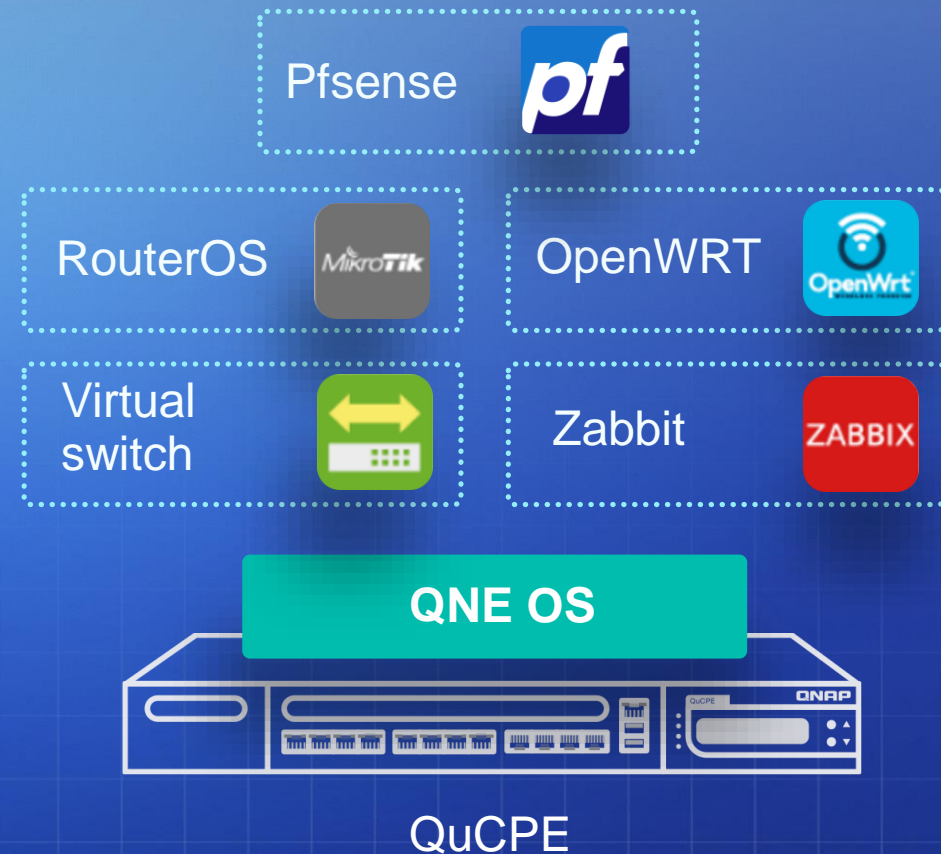




# Service to deploy

Following services are verified running on QNE

- Firewall/router (pfSense)
- Router OS (MikroTik)
- Network Management (Zabbix)
- OpenWRT
- Virtual Switch



# Network manager

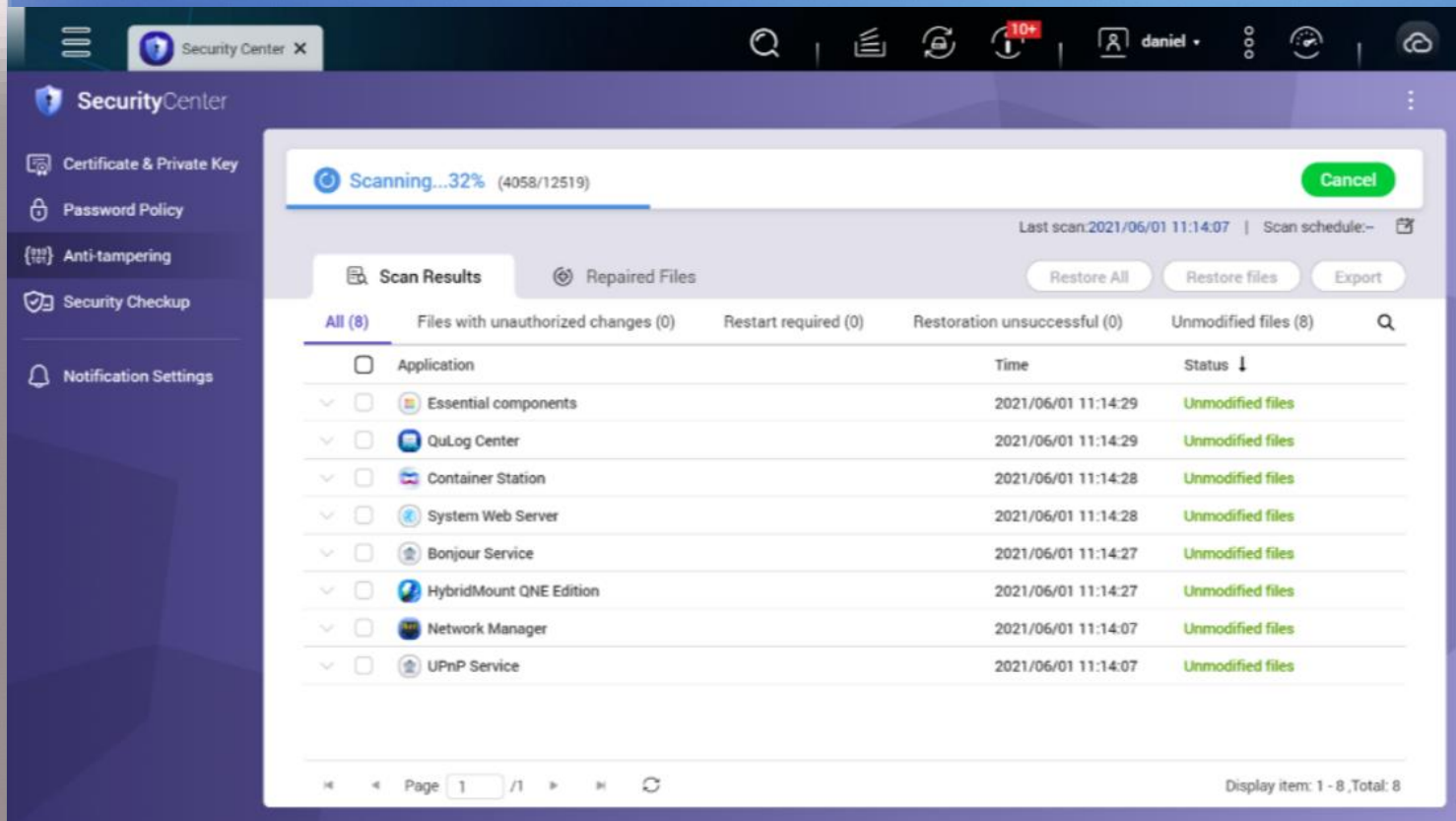
Assigning physical interfaces for VM and VNF. Hook your network services to the real network.





# Security center

QuCPE



- Military grade anti-tampering function preventing malware change QNE or app
- Auto-recovery when unauthorized change was detected.
- Ensure the security of management access through certificates or password policies.

# Stable, light platform

- Leverage Linux kernel 5.1LTS (Long Term Support) version, ensure the stability of all your services.
- QNE is a light weight OS that can finish boot up in short time.  
Helping quickly enable services to the network.





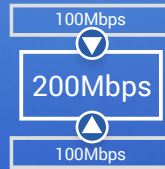
# Subscription free SD-WAN

QuCPE

- QuWAN provides an easy way to build VPN connections for your business network.
- Hub & Spoke topology suitable for network that requires fast deployment, extension and backup route.



**Auto Mesh  
VPN**



**WAN  
Optimization**



**Cloud  
Management**



**Cost  
Optimization**



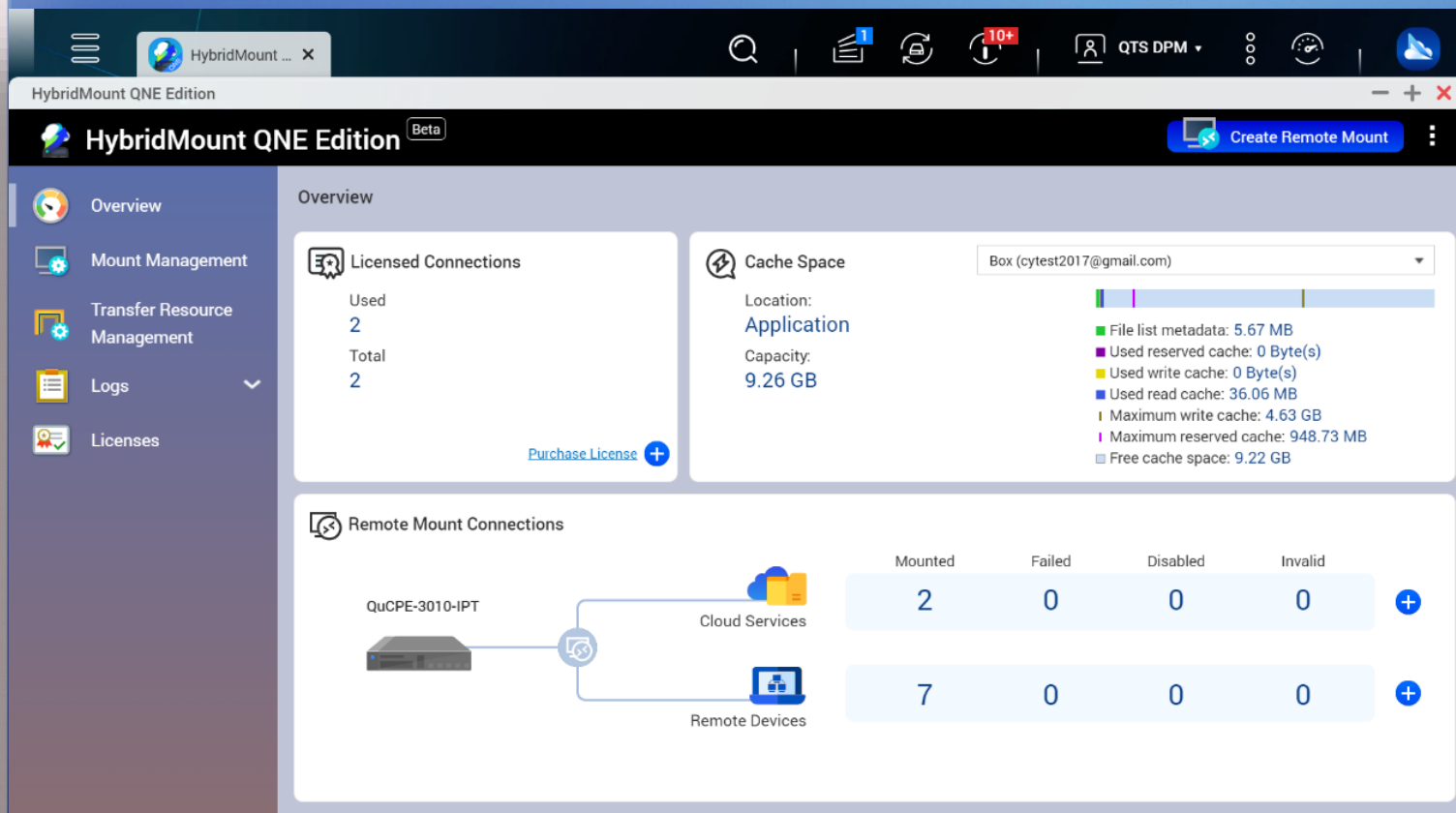
**Intuitive Web  
Management**



**Networking  
Security**

# Hybrid mount

QuCPE



- Free hybrid mount service frees your WAN bandwidth by well managed those frequent access files.
- It improves the efficiency of your intranet and also help to reduce leasing line expense.



# AMIZ

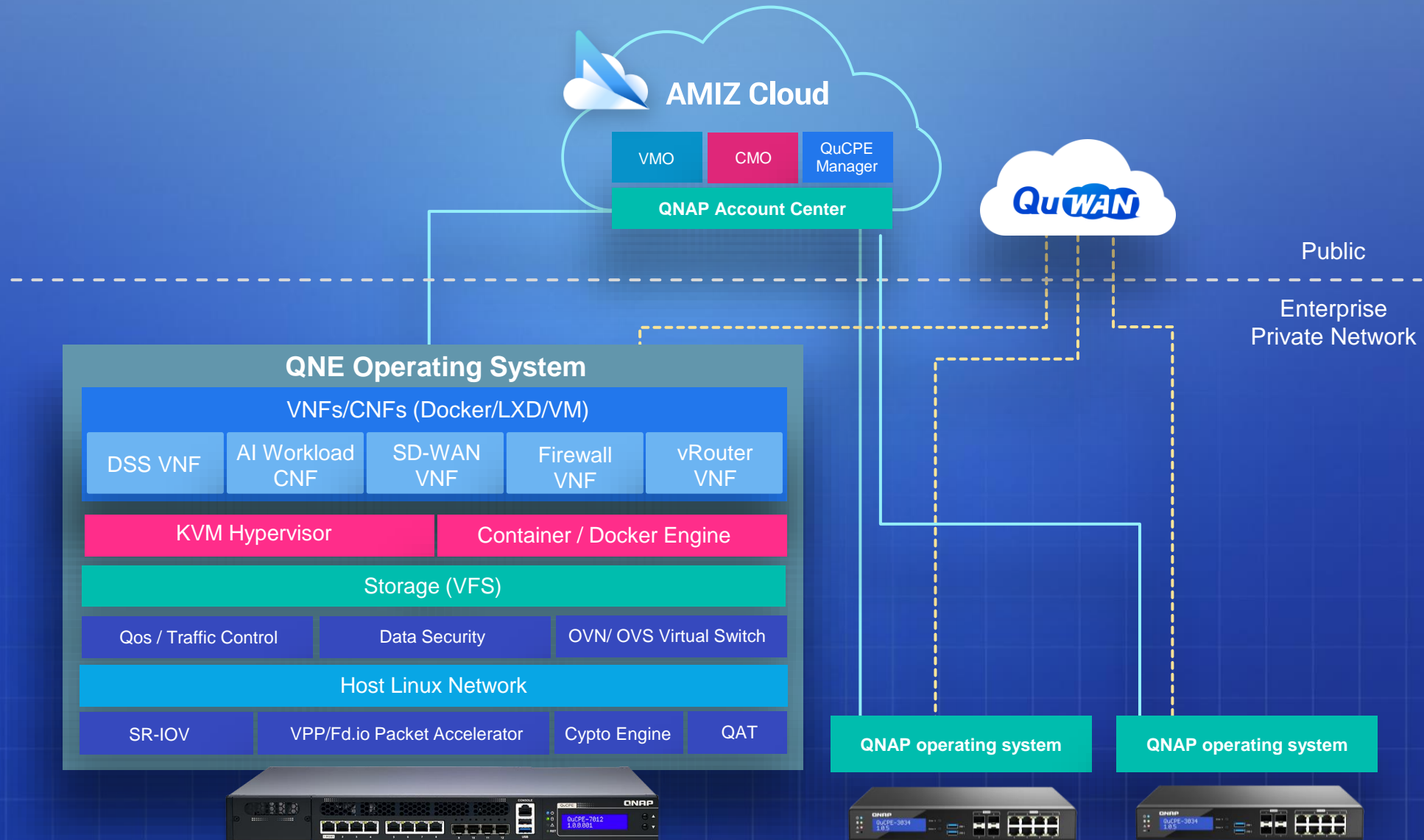
## Cloud Platform



AMIZ Cloud

# Manage QuCPEs across multiple sites or organizations

QuCPE





## QuCPE

- The screenshot displays the AMIZ Cloud Dashboard with a dark sidebar on the left and a main content area. The sidebar contains navigation links for Overview, Dashboard, Nodes, Groups, Monitor, and Manage. The main area features a top navigation bar with 'All Organizations', 'Actions', and notification icons. The dashboard is divided into several sections:

  - Dashboard Overview:** Shows 'QuCPE: 20' with a 'Caution' status bar. Below this are five status categories: Offline (14), Alert (0), Warning (0), Good (4), and Undeployed (2).
  - Performance:** Includes four circular gauges for CPU Usage, Network Upload Utilization, Memory Usage, and Network Download Utilization. Each gauge has a legend with three color-coded ranges: red (>= 90%), orange (80-90%), and green (< 80%).
  - Device Information:** Contains three panels:
    - HA groups: 0**: Shows a server icon and a status bar with Offline (0), Error (0), Warning (0), and Normal (0).
    - Virtual machines: 49**: Shows a cube icon and a status bar with Offline (32), Power... (7), Suspe... (0), and Runni... (10).
    - Containers: 0**: Shows a container icon and a status bar with Offline (0), Stopped (0), Paused (0), and Running (0).

At the bottom, there is a navigation bar with tabs for Logs, Alerts, and Tasks.

# Bulk deployment

QuCPE

**AMIZCloud** | All Organizations | Actions | 18 |

**Overview**

- Dashboard

**Nodes**

- Devices (20)
- Virtual Machines (49)
- Containers (0)

**Groups**

- HA Groups (0)

**Monitor**

- Alert Policies

**Manage**

- AMIZ Cloud Join Keys
- Settings
- Organization

**Devices: 20**

Good:4 Warning:0 Alert:0 Offline:14 Undeployed:2

Search by hostname | Action

<input type="checkbox"/>	Hostname	Status	Organi...	myQNAPcloud Device Name	Firmware V...	CPU Usage	Memory Usage	MAC
<input type="checkbox"/>	ADRA-3010P	Offline	QuCPE_Test_...	ADRACHANG	1.0.2.q484	--	--	24:5E
<input type="checkbox"/>	ADRA-3010P-CA...	Offline	Social Media ...	ADRAHenry	1.0.3.q541	--	--	24:5E
<input type="checkbox"/>	IEI-QNE-Master	Good	Social Media ...	QNEHCDave01	1.0.3.q530	27.77%	36.07%	24:5E
<input type="checkbox"/>	IEI-QNE-Slave	Offline	Social Media ...	QuCPE22	1.0.3.q530	--	--	24:5E
<input type="checkbox"/>	QuCPE-03	Offline	Social Media ...	QuCPE03	1.0.3.q530	--	--	24:5E
<input type="checkbox"/>	QuCPE-06	Undeployed	Social Media ...	QuCPE06	--	--	--	24:5E
<input type="checkbox"/>	QuCPE-11	Undeployed	Social Media ...	QuCPE11	--	--	--	24:5E
<input type="checkbox"/>	QuCPE-12	Offline	Social Media ...	QuCPE11-peer	1.0.3.q530	--	--	24:5E
<input type="checkbox"/>	QuCPE-13	Good	DaveOrg	QuCPE13dave	1.0.3.q530	6.08%	55.37%	24:5E
<input type="checkbox"/>	QuCPE-17	Offline	Social Media ...	QuCPEDonJon	1.0.3.q530	--	--	24:5E

Page 1 / 1 | Display items: 1-20, Total: 20 | Show 20 items

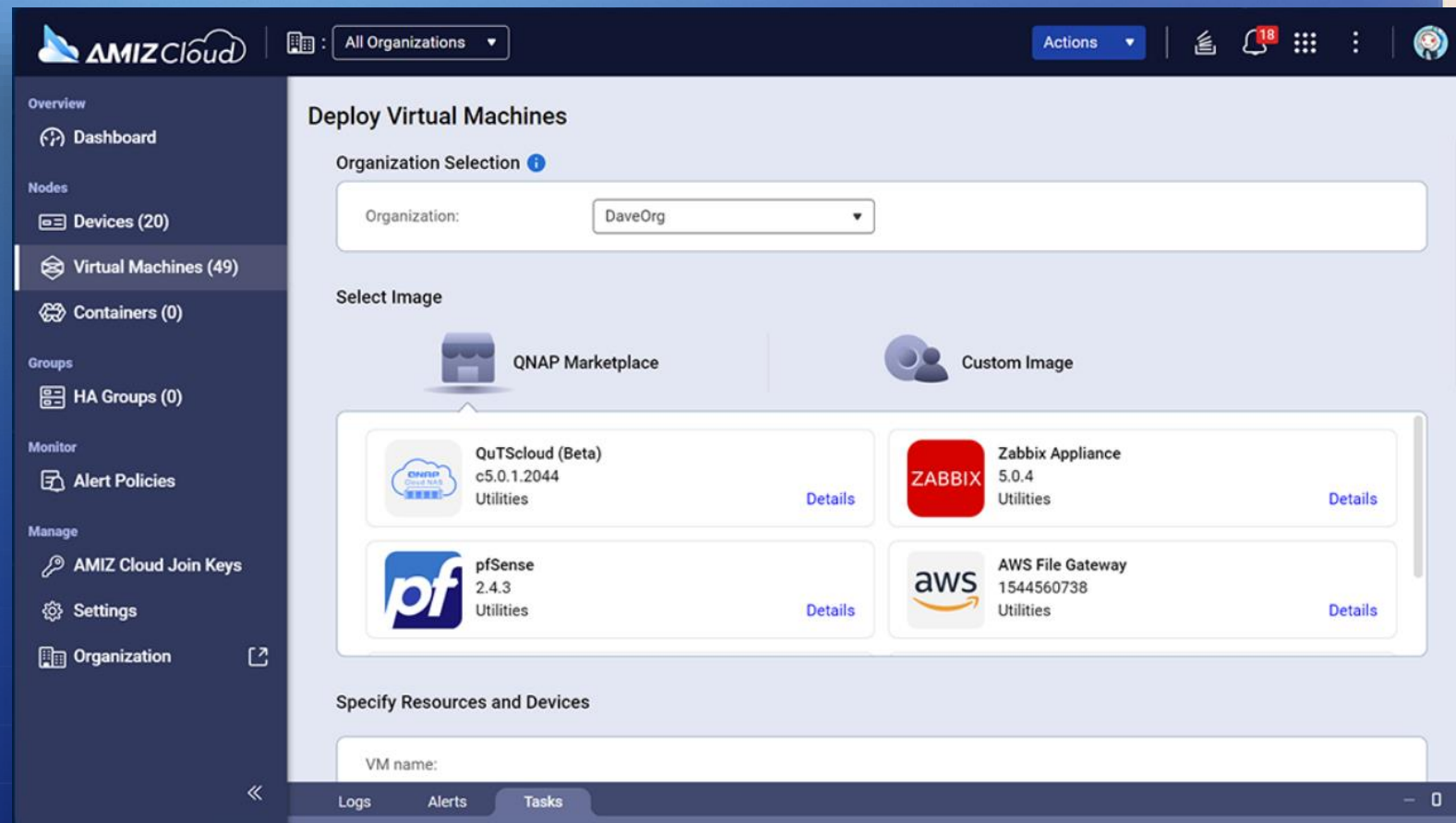
Logs Alerts Tasks

Deploy dozens or even hundreds of VM/VNF by simply clicks on GUI. Enable new services quickly to catch business chances.



# VM image management

Save/copy the VM images allows you the replicate or shift VMs to new sites, or recover disasters even more quickly.



QNAP

Universal

Customer

Premises

Equipment







### QuCPE-7012- D2166NT-64GB

### QuCPE-7012- D2146NT-32GB

### QuCPE-7012- D2123IT-8GB

### QuCPE-3034- C3758R-16G

### QuCPE-3032- C3558R-8G

CPU

Intel Xeon D-2166NT  
12 cores, 24 treads  
2.0GHz (Max 3.0GHz)

Intel Xeon D-2146NT  
8 cores, 16 treads  
2.3GHz (Max 3.0GHz)

Intel Xeon D-2123IT  
4 cores, 8 treads  
2.2GHz (Max 3.0GHz)

Intel Atom C3758R  
8 cores, 8 treads  
2.4GHz

Intel Atom C3558R  
4 cores, 4 treads  
2.4GHz

Memory

64GB DDR4 ECC  
(4x16GB)

32GB DDR4 ECC  
(2x16GB)

8GB DDR4 ECC  
(2x4GB)

16GB DDR4  
(2x8GB)

8GB DDR4  
(2x4GB)

Port

10GbE SFP+ x4  
2.5GbE RJ45 x8

10GbE SFP+ x4  
2.5GbE RJ45 x8

10GbE SFP+ x4  
2.5GbE RJ45 x8

10GbE SFP+ x4  
2.5GbE RJ45 x8

10GbE SFP+ x2  
2.5GbE RJ45 x8

Network  
Module

1

1

1

-

-

PCIe Slot

1x PCIe Gen3 x8

1x PCIe Gen3 x8

1x PCIe Gen3 x8

-

-

HDD Slot

2x 2.5" SATA slots

2x 2.5" SATA slots

2x 2.5" SATA slots

-

-

M.2 SSD  
Slot

-

-

-

2x 2280 M.2 MVMme

2x 2280 M.2 MVMme

# Network performance acceleration

QuCPE

- **OVS-DPDK**

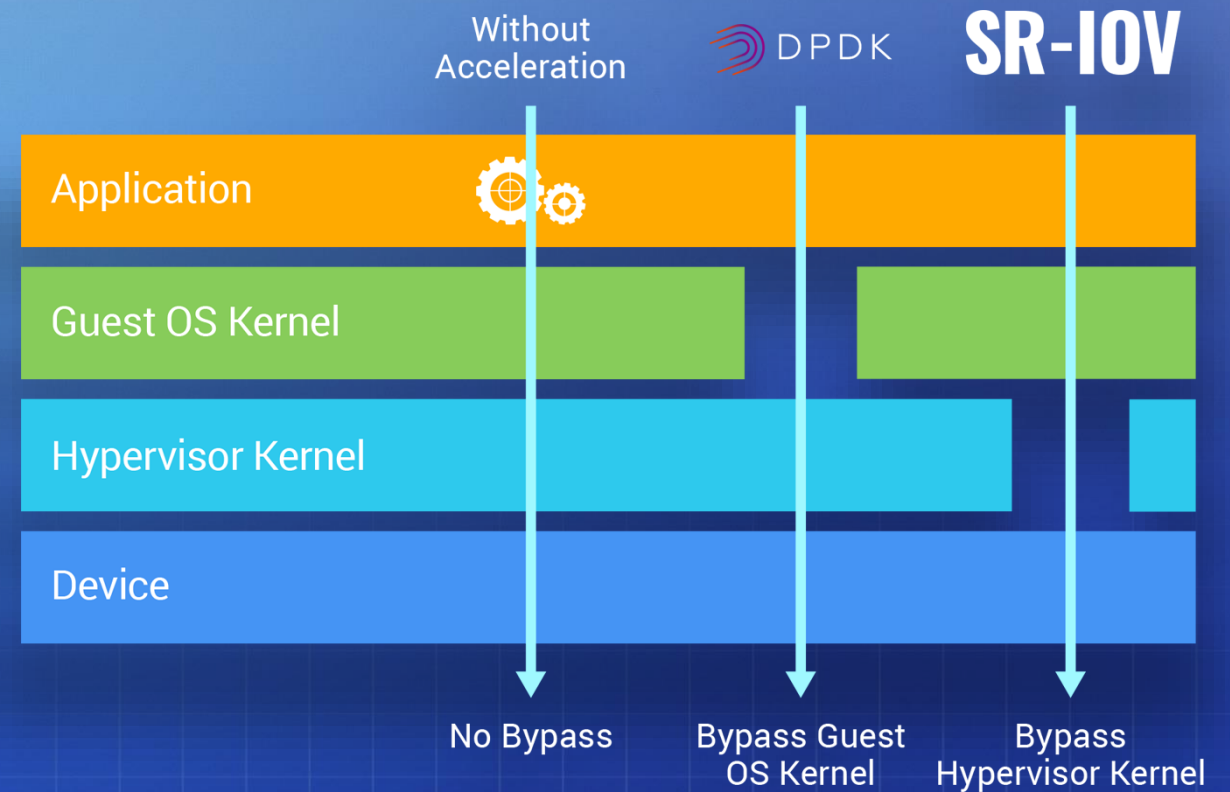
Accelerate packet processing speed in between physical / virtual networks

- **SR-IOV**

Accelerate 10Gbps+ Smart NIC via SR-IOV.  
Best-in-class pass through for Smart-NIC

- **Intel @ QAT**

Speed up QuWAN or IPSec encryption and decryptions

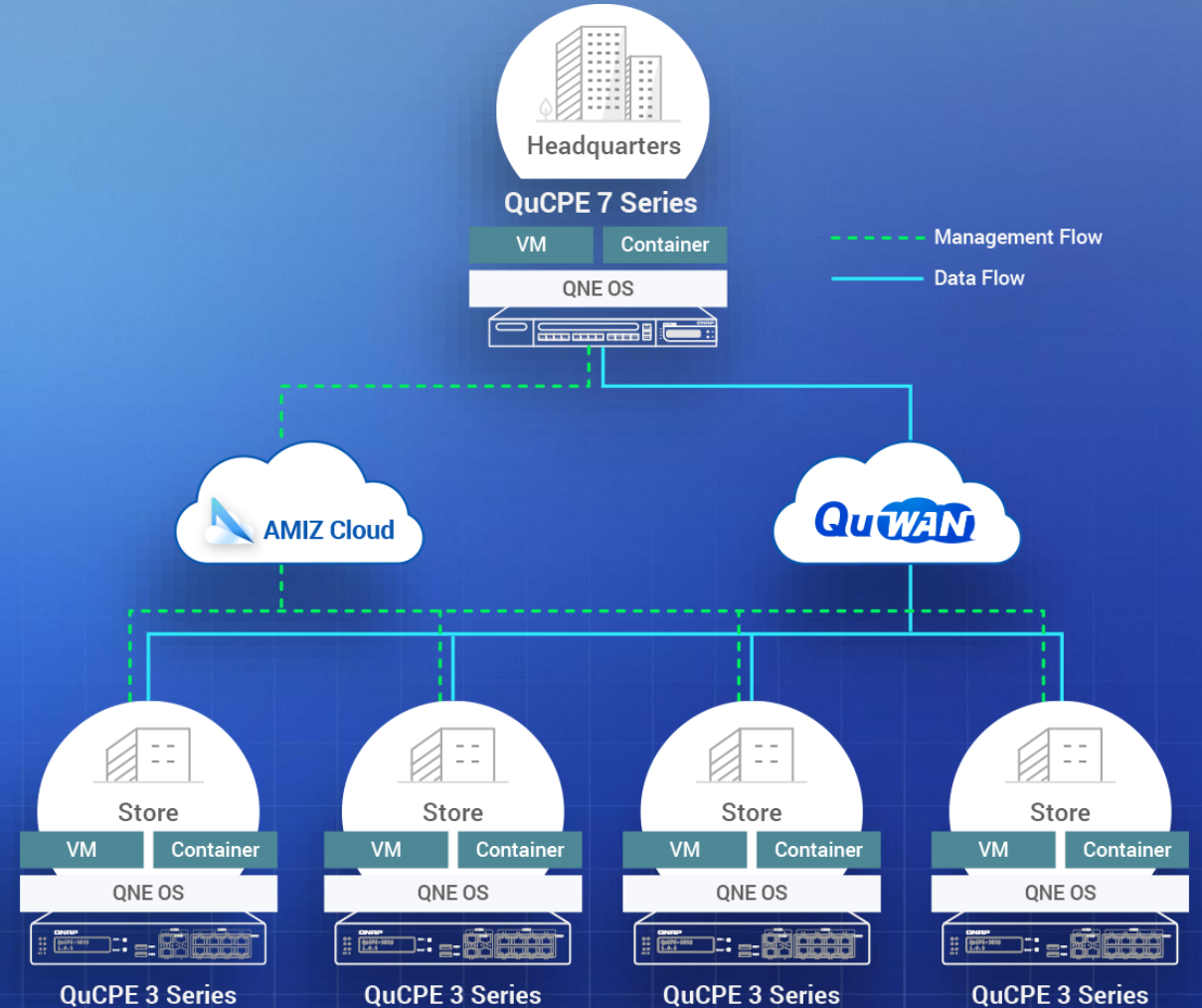




# Best fit for multi-site deployment

QuCPE

- **HQ:** Powerful QuCPE 7 series
- **Branches:** Cost effective QuCPE 3 series
- **Intranet VPN:** Subscription-free QuWAN
- **Central management:** AMIZ cloud



# QuCPE-3032/3034

is your best choice





# LIVE DEMO

QuCPE-3032/3034

