



OCP
SUMMIT

October 1-2
2018
Amsterdam

OPEN. FOR BUSINESS.



Adoption of OCP Solutions in Yahoo! JAPAN's Infrastructure

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Server Infrastructure Architect
Yahoo Japan Corporation

OPEN. FOR BUSINESS.



Agenda

About Yahoo! JAPAN

Server Infra. Overview

Adoption of OCP

Agenda



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Yahoo! JAPAN



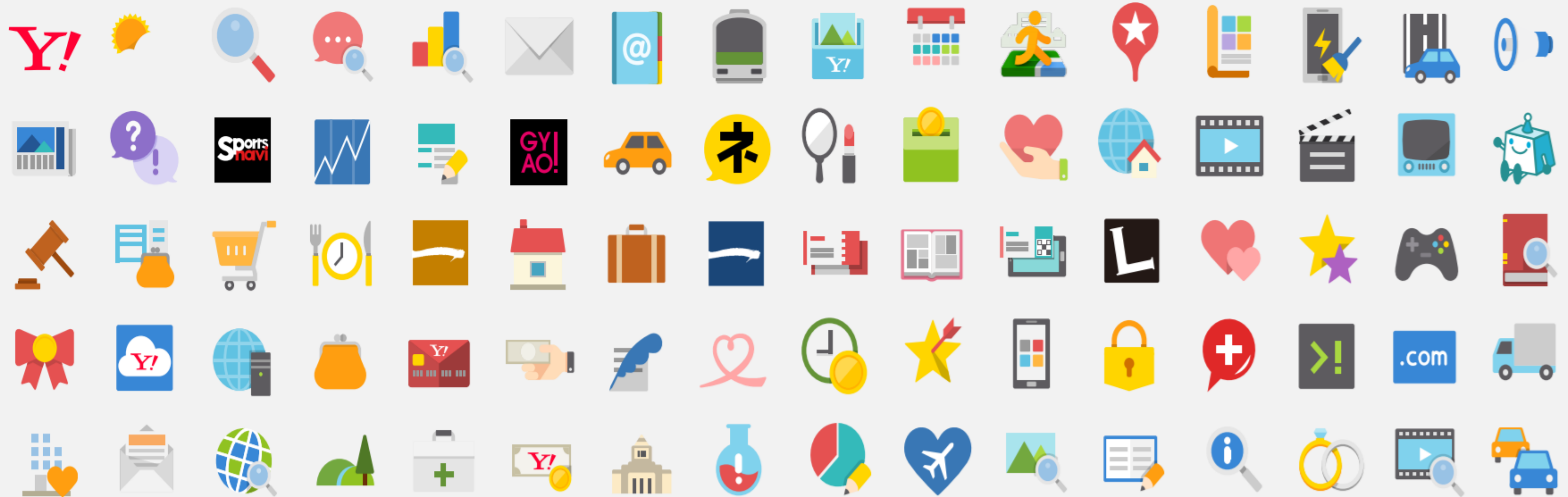
- **Founded: January 31, 1996**
- **Businesses: Internet Advertising, E-Commerce...**
- **Employees: 6,330 (Mar. 31 2017)**
- **Head Office: Chiyoda-ku, Tokyo, Japan**

(Location address) <https://yahoo.jp/4LnAXG>

The Largest Portal Site in Japan



100+ services



The famous internet service in Japan

Visited by 80% of Japanese internet users

Surveyed by Yahoo! Japan

Agenda

About Yahoo! JAPAN



Server Infra. Overview

Adoption of OCP

Overall Infra. Div. Organization



Site Operation Division
Vice President

150+
Infra. Engineer

Infrastructure Tech1
Dept. Director

Infrastructure Tech2
Dept. Director

Infrastructure Tech3
Dept. Director

Infrastructure Tech4
Dept. Director

Private Cloud
(OpenStack)
Operating System
Configuration Tools

30+
Engineer

Server
Storage
DataCenter Operation

30+
Engineer

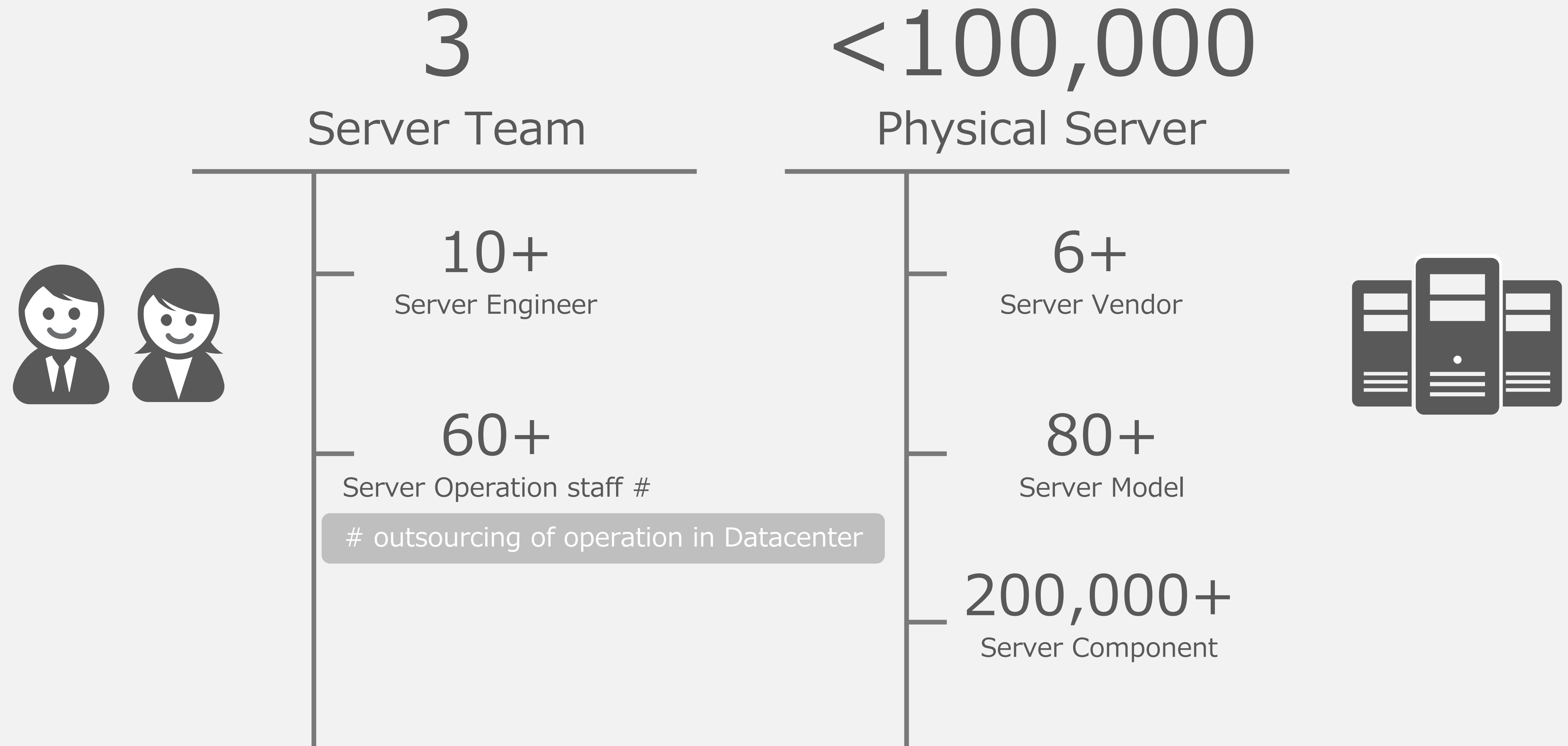
L2/L3 Network
BackBone
Network Operation

30+
Engineer

Platform / CDN
Development
Operation

25+
Engineer

Server Infra. Overview In Figures



Server Infra. Team Work

Review Configuration

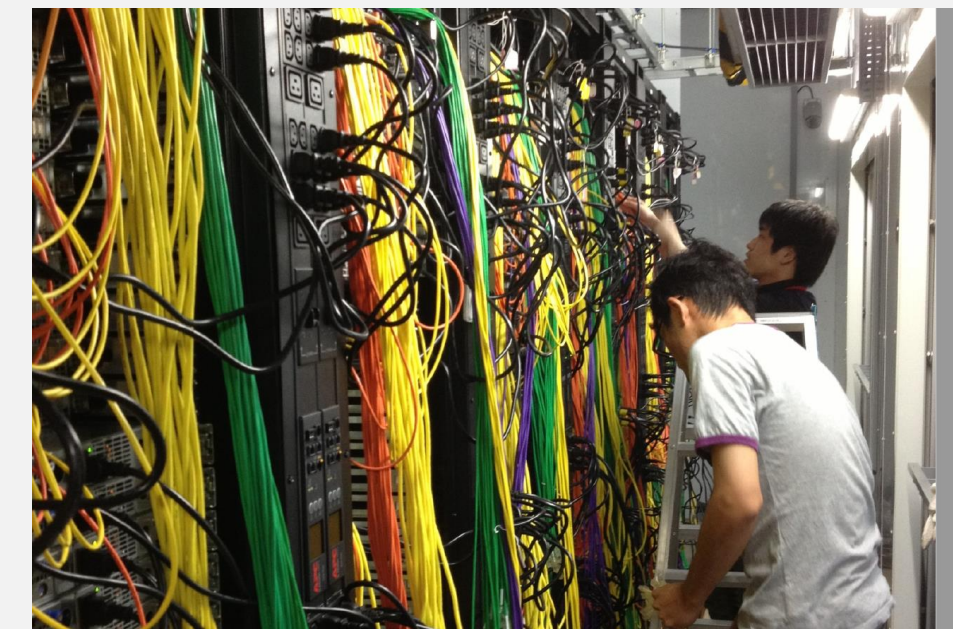
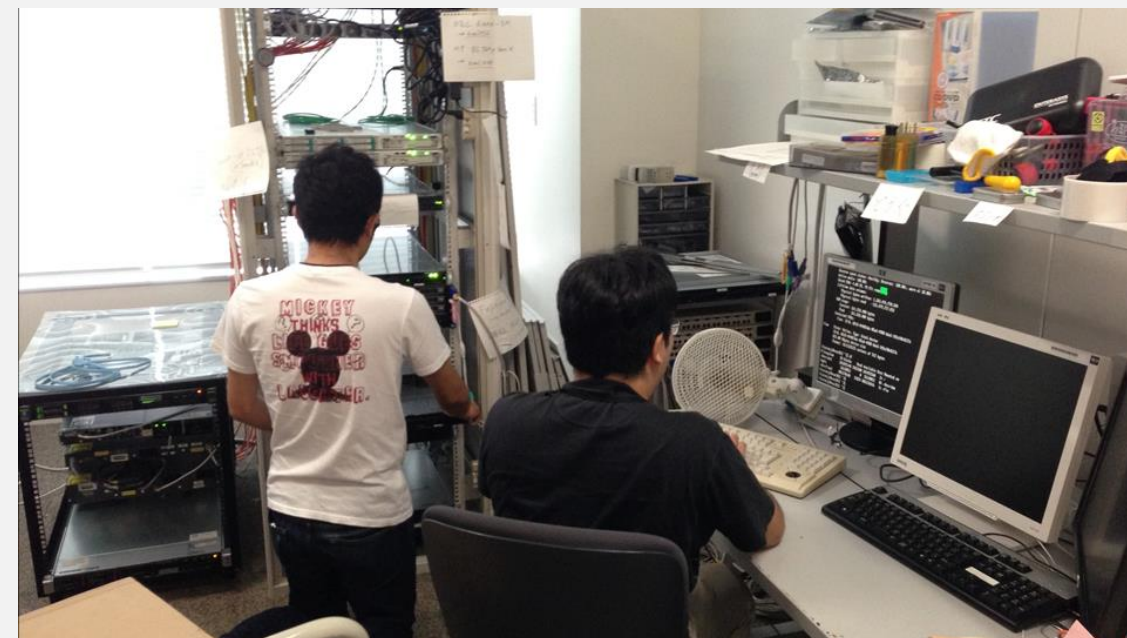
Testing Server & Component

Introduction Scheme

Server Operation

Trouble Shooting

Server Analysis



Agenda

About Yahoo! JAPAN

Server Infra. Overview

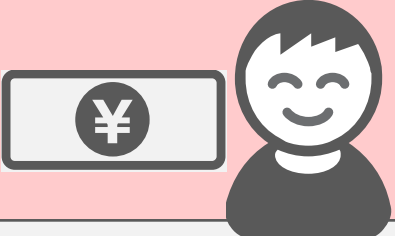


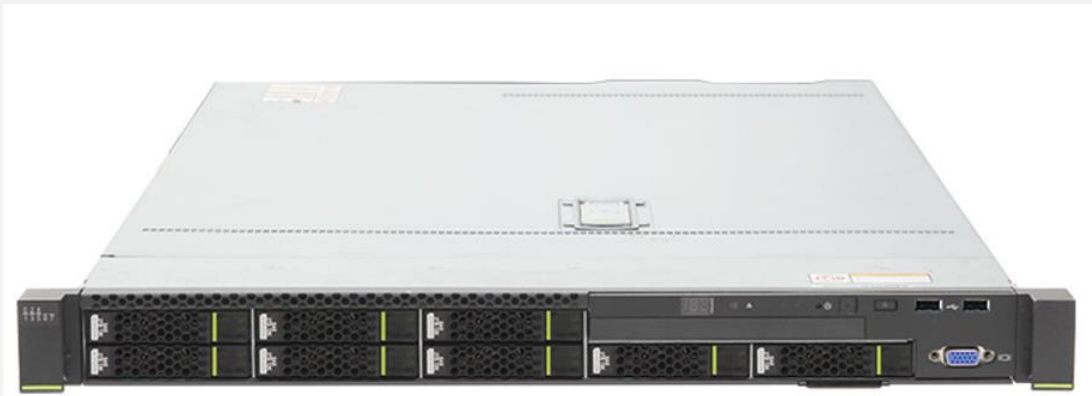
Adoption of OCP



Why OCP?

Comparison between EIA19 and OCP

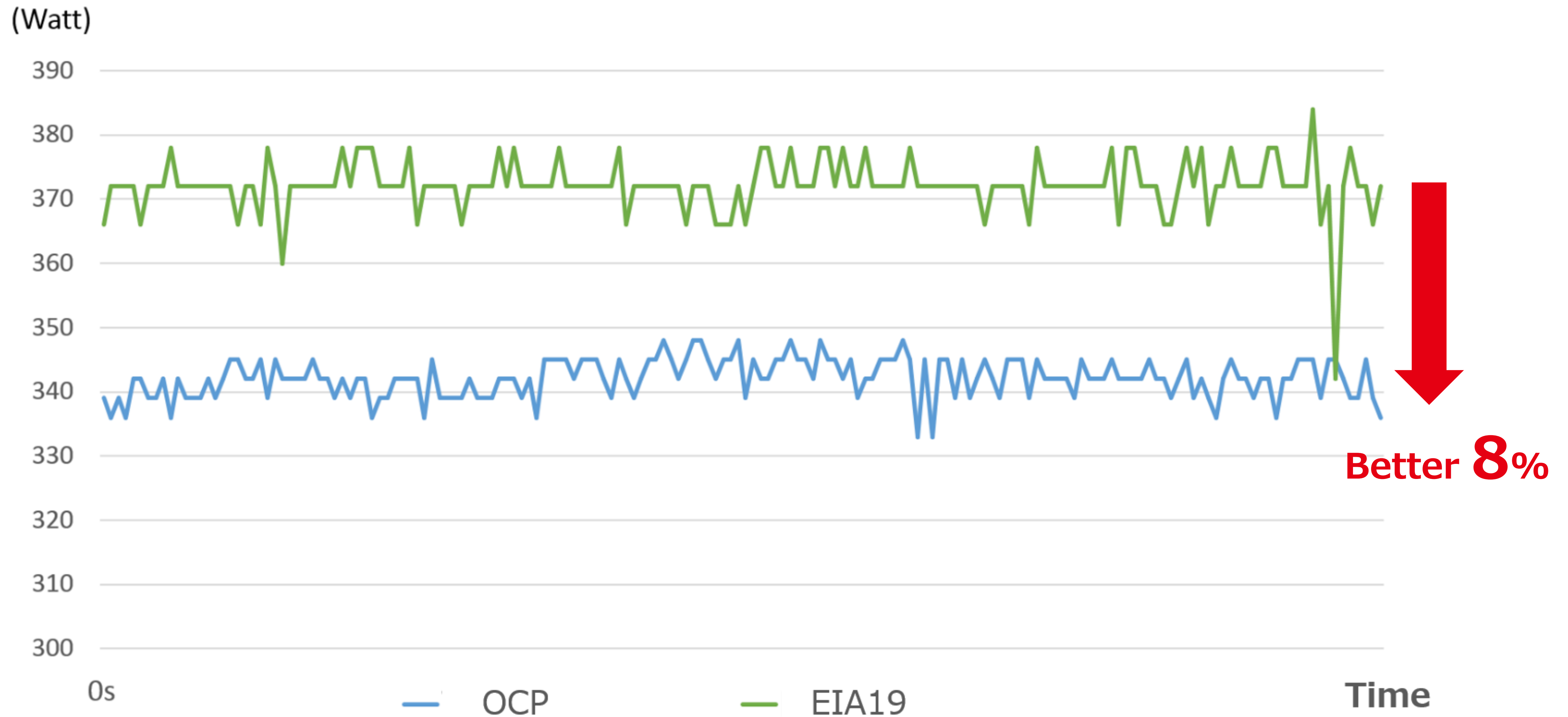
	EIA19	OCP
Customization	Restrict	Flexible
CAPEX	Same Range	
OPEX	Normal	Better 
Maintenance	Front / Rear	Front
Quality (Failure Rate)	Same Quality	
Compatibility	Each Vendor (Proprietary)	OCP Standard



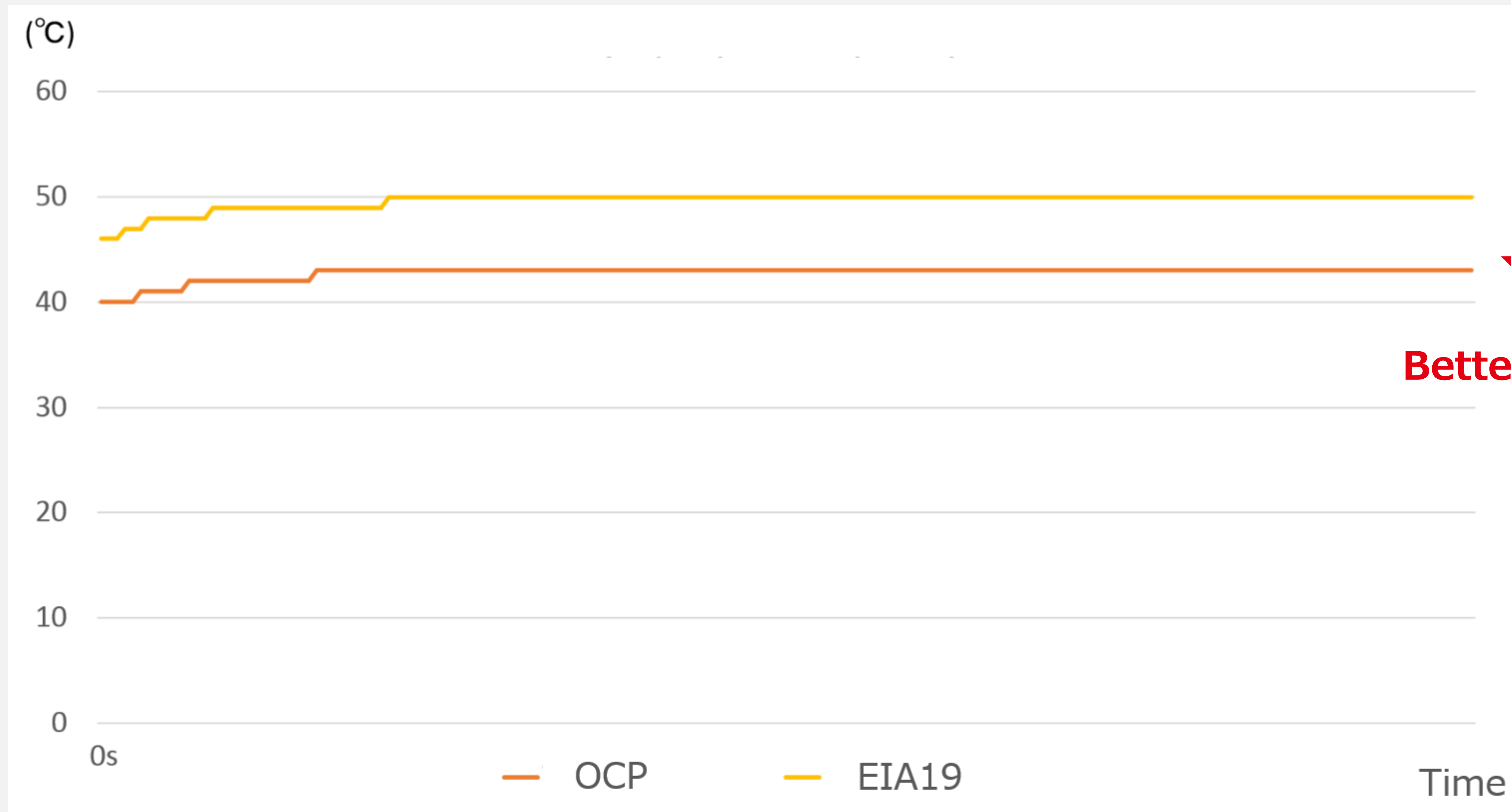
<http://e.huawei.com/jp/products/cloud-computing-dc/servers/rh-series/rh1288-v3>



OPEX (Power)



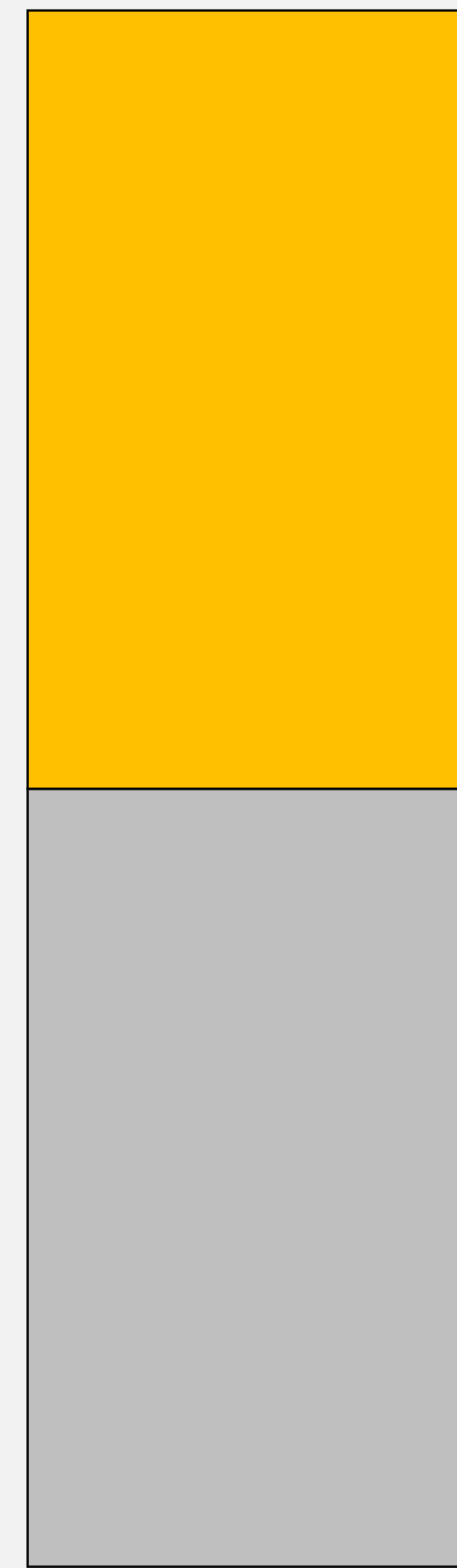
OPEX (Temperature)



Better 13%

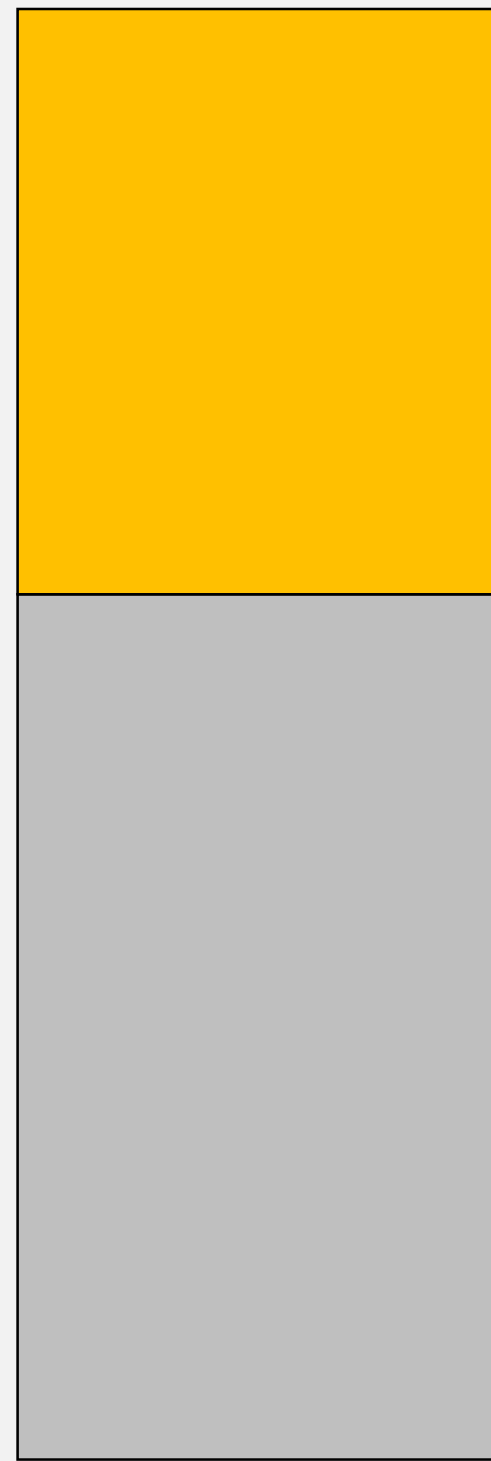
Total Cost is better

Total Cost



EIA19

Reduce TCO



OCP

OPEX

Power consumption

Temperature

CAPEX

Server Node

Rack

Others

Introduction of OCP in Japan



2016

Leopard(v1)



2017

Leopard(v2)



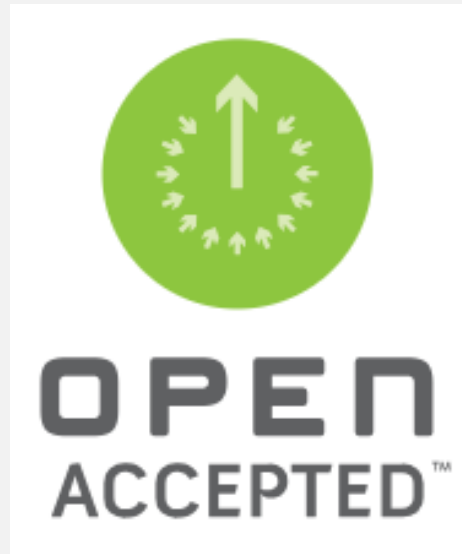
2018 (#plan)

Tioga Pass
BryceCanyon
Lightning



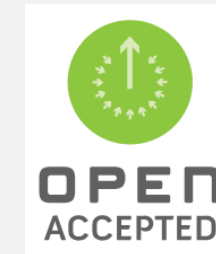
OCP Model

Our OCP Models



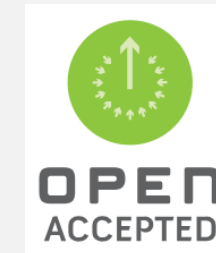
SV7220G2

<http://www.wiwynn.com/english/product/type/details/56?ptype=28>



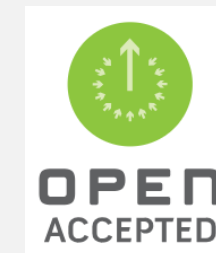
SV7220G3

<http://www.wiwynn.com/english/product/type/details/65?ptype=28>



ST7200-30P

<http://www.wiwynn.com/english/product/type/details/45?ptype=28>



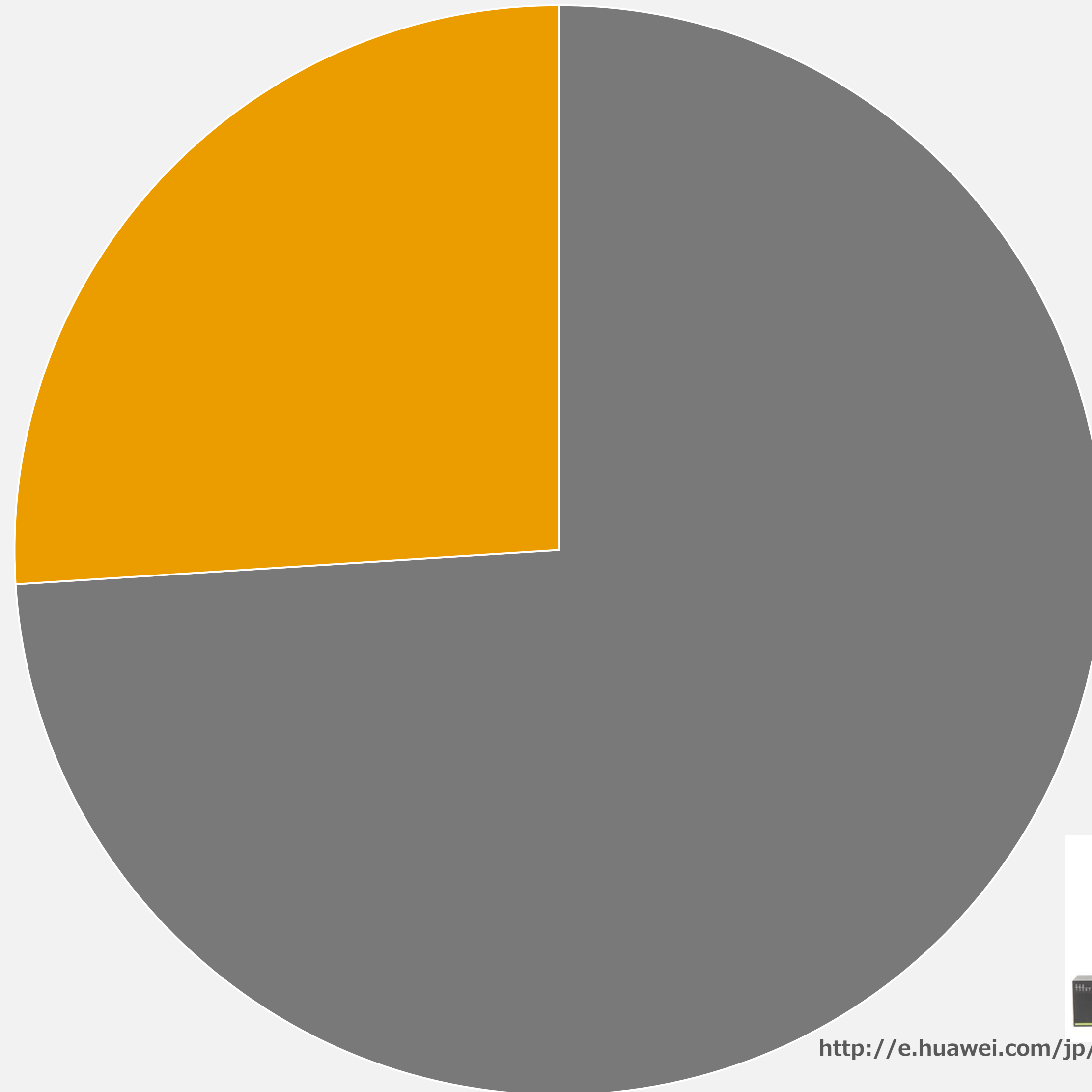
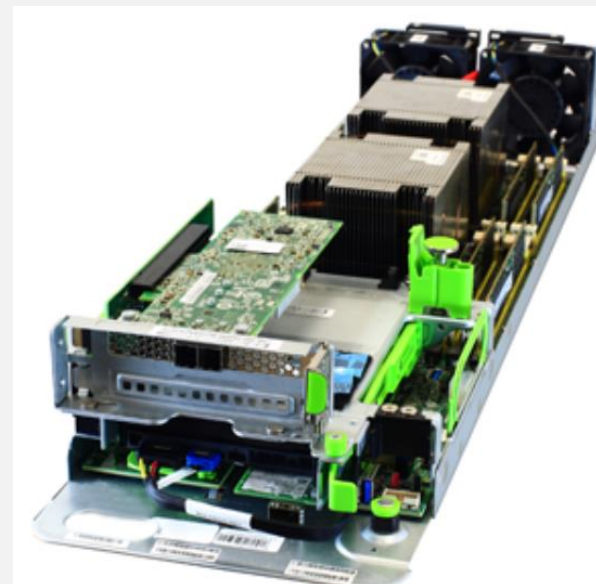
SV7000G2

<http://www.wiwynn.com/english/product/type/details/71?ptype=28>

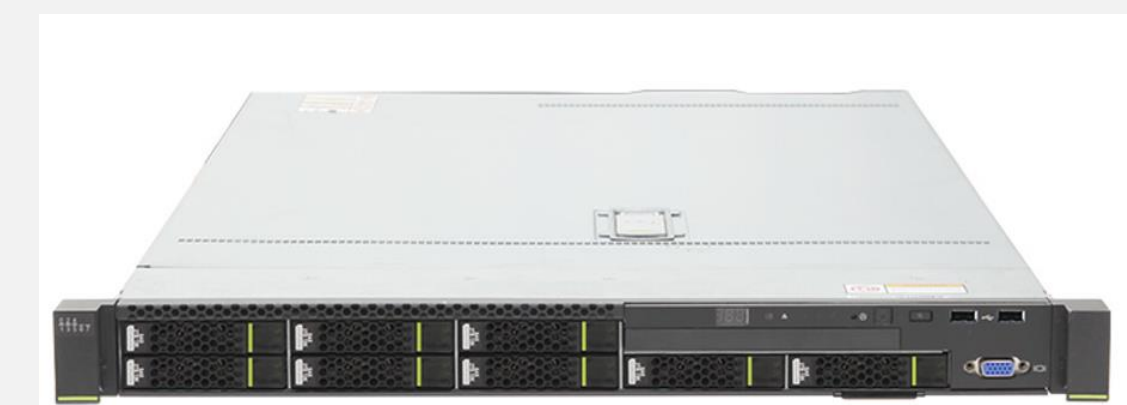


Ratio of FF(OCP, EIA19) in Our Cloud

26%, OCP



74%, EIA19



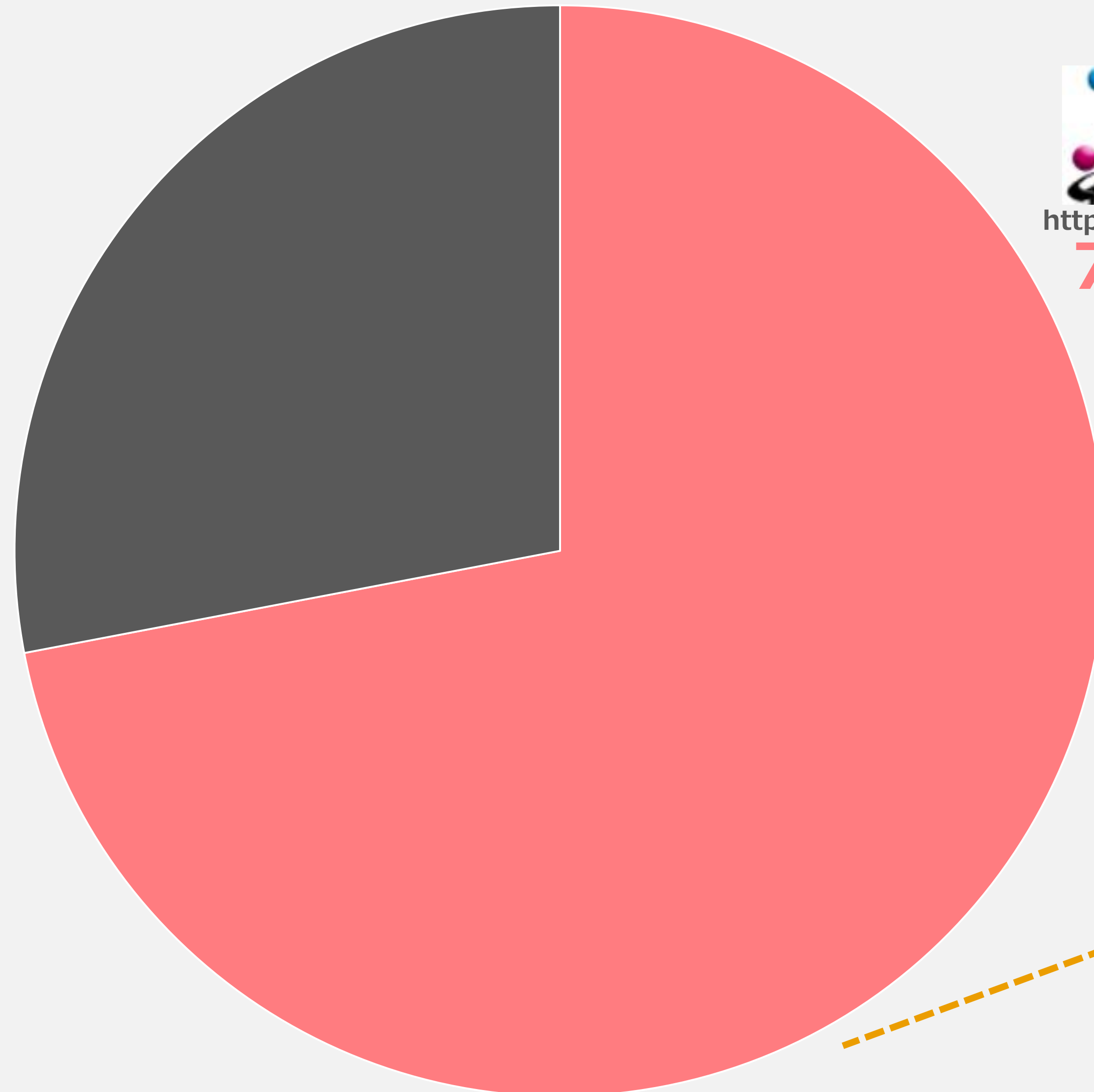
<http://e.huawei.com/jp/products/cloud-computing-dc/servers/rh-series/rh1288-v3>

Which Hypervisor on OCP

28%, VMware



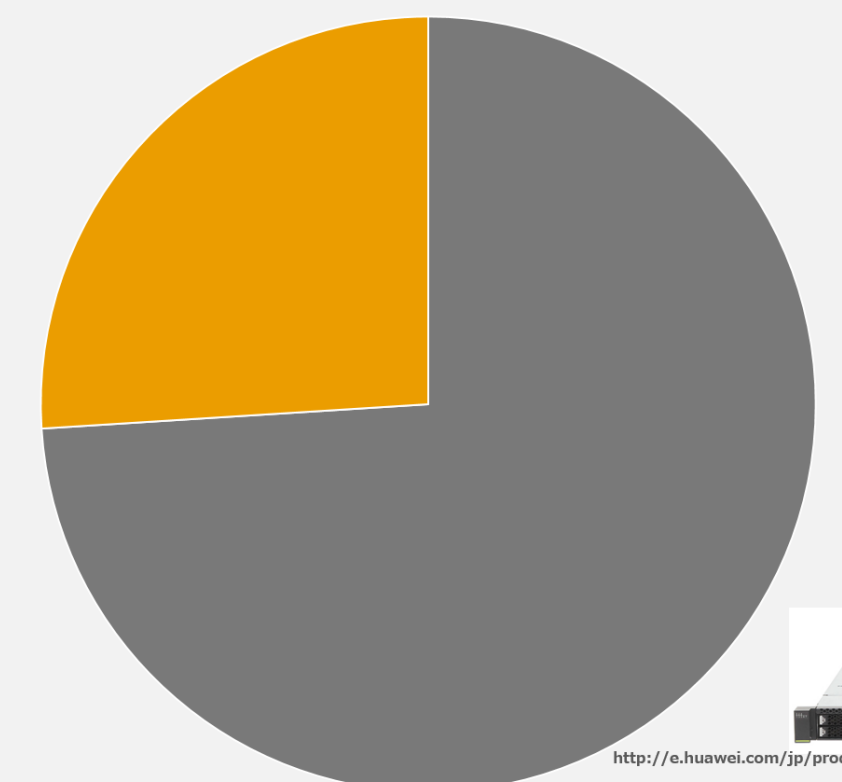
<https://www.vmware.com/jp.html>



https://www.linux-kvm.org/page/Main_Page

72%, KVM

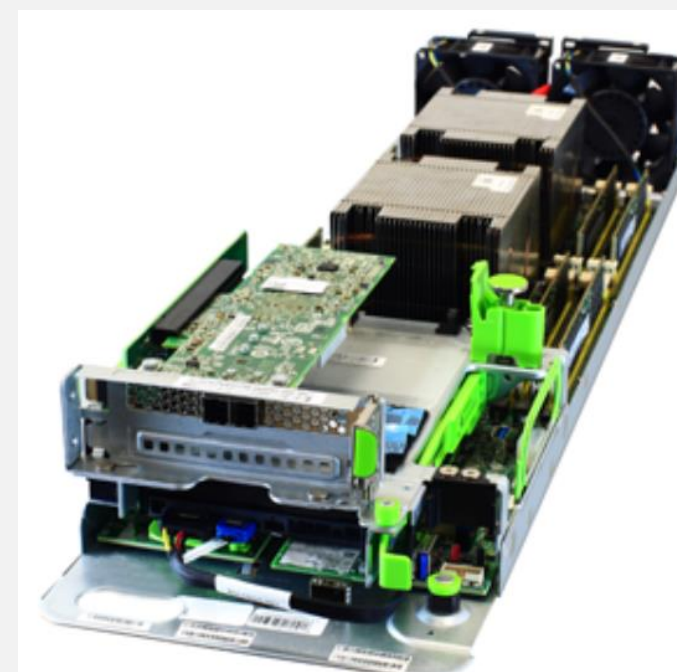
26%, OCP



<http://e.huawei.com/jp/proc>

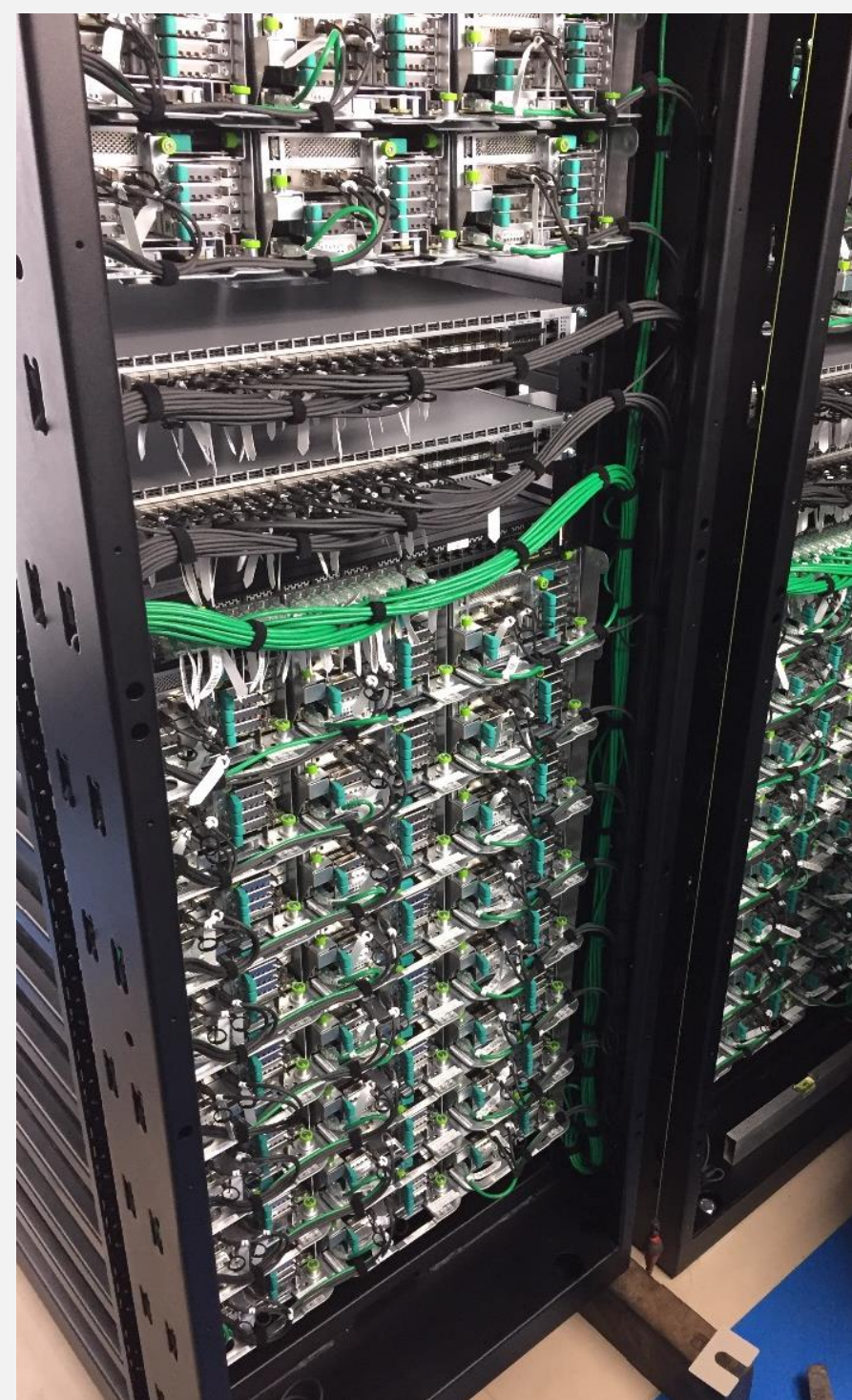
VMware on OCP Configuration

Hardware		Software	
SKU	2CPU x E5-2683v4	Version	VMware vSphere Hypervisor 6.0
DIMM	DDR4 32GB x 16	Workload	PaaS (Pivotal Cloud Foundry)
SSD	SFF SATA SSD 240GB	vSAN	N/A
NIC	10GBaseSR x 4port	SAN	Storage Appliance



<https://www.vmware.com/jp.html>

VMware on OCP Overview



IaaS



<https://www.openstack.org>

PRESS RELEASE (Japanese)

<https://pivotal.io/platform/press-release/yahoo-japan-adopts-pivotal-cloud-foundry>

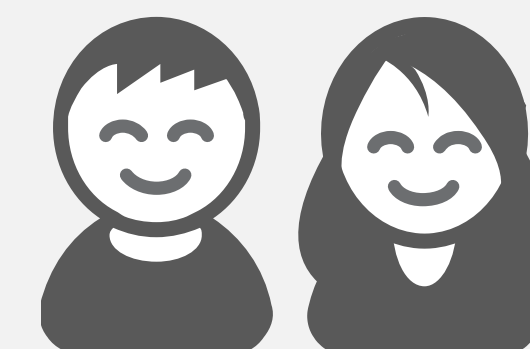


<https://pivotal.io/jp/platform>

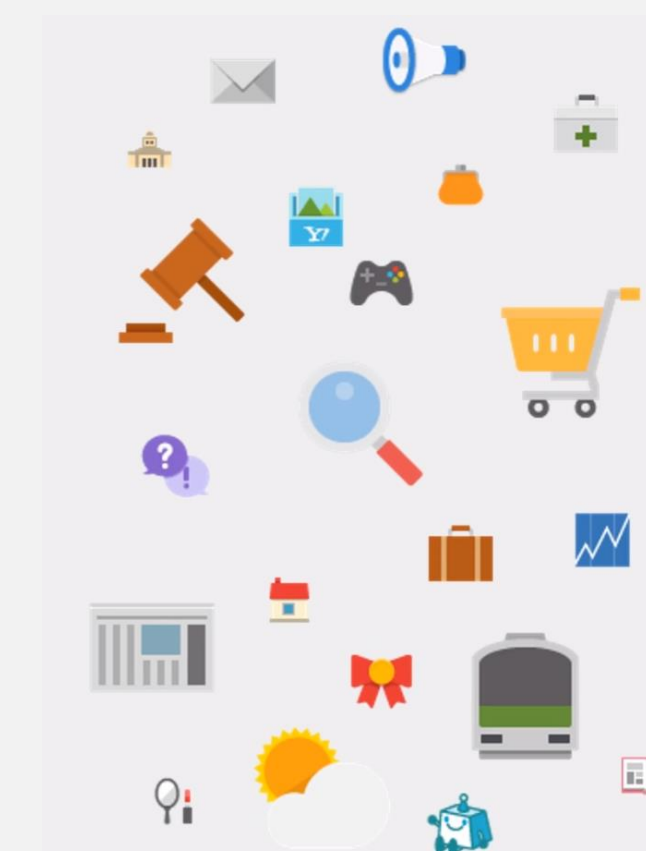


<https://www.vmware.com/jp.html>

PaaS



Application Developer



Not using vSAN (Why?)

vSAN Pros and Cons

Pros

- Simple Architecture
- Flexible Configuration
- High Cost Performance

Cons

- Strict HW compatibility
 - Vendor
 - Model
 - Device
 - Firmware



Yahoo! Japan's Background

- Various Candidates (Vendor, Model, Device)
- In some cases, depending on business need Workload changes after H/W purchase
- Buy a lot and assign later
- Firmware management isn't enough

Because of

Not Using vSAN based on this Background

Difficult to buy server for vSAN 's Configuration

Benefit of VMware on OCP

VMware Benefit

- High Availability
- Security Incident



- vMotion, vSphere HA
- HV/VM Isolation
- Avoid LockDown

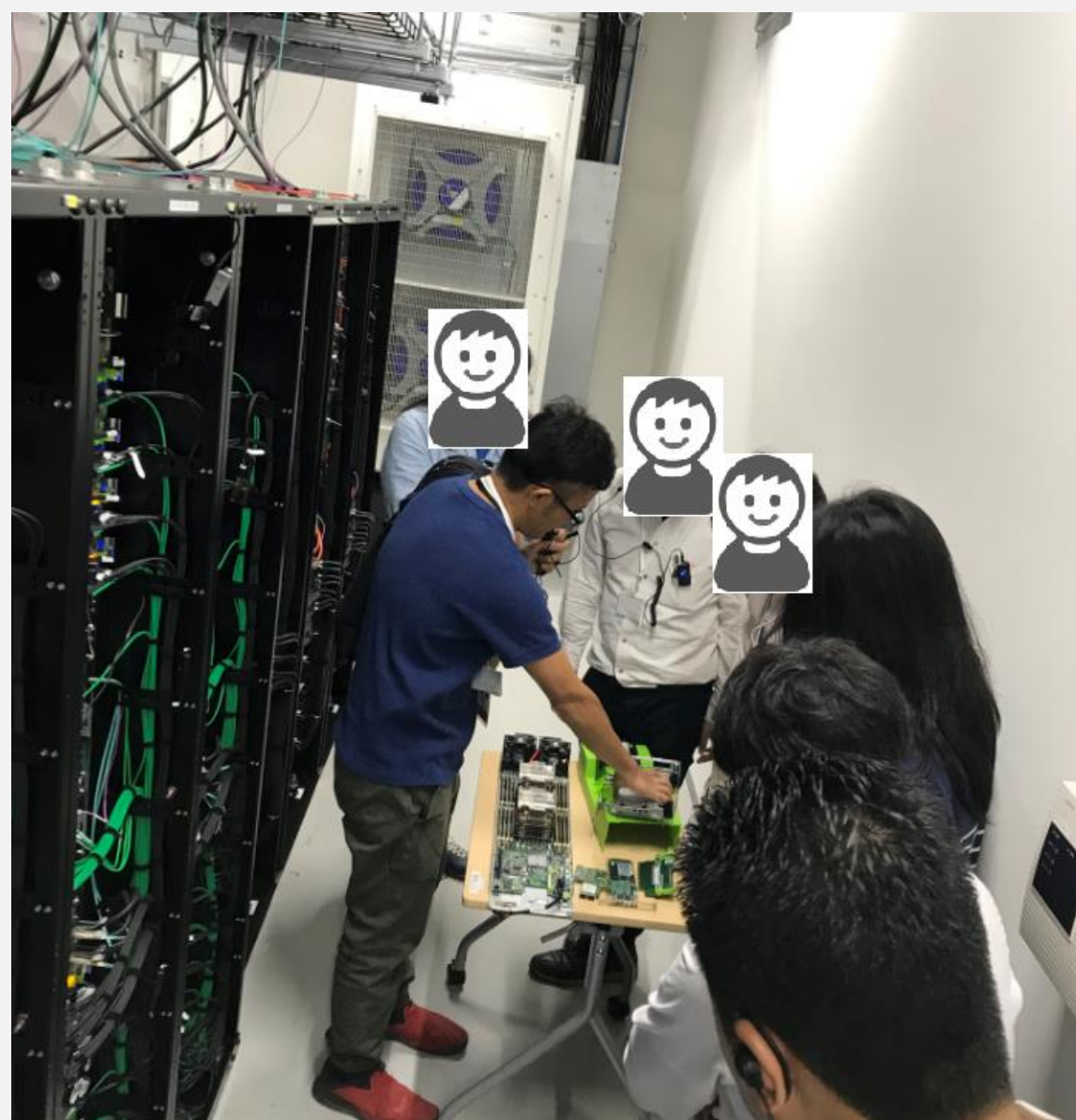
OCP Benefit

- High Density
- Reduce OPEX/CAPEX



- Limited Rack Space / Power
- Better Power / Temperature each Node
- Lower Initial Cost

Yahoo! JAPAN Activity for OCP



OCP Tour

- OCP Server, Rack Tour
- For Competitive ISP in Japan
- In Yahoo! JAPAN' DataCenter



<https://cloud.watch.impress.co.jp/docs/cdc/extra/1129886.html>

Media

- Web Article
- Magazine



Presentation

- Event, Conference, Seminar
- Talk about OCP as Adopter

Summary

Today's summary



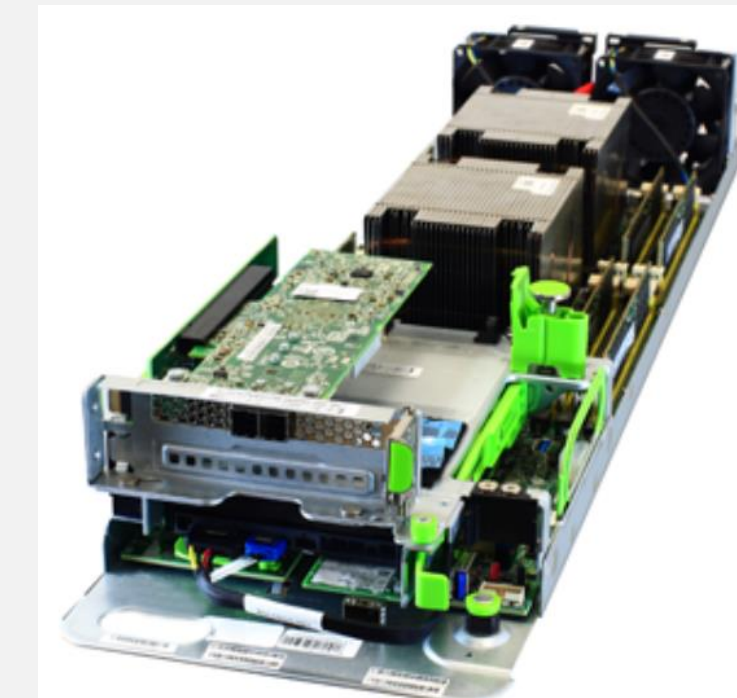
Yahoo! JAPAN

- Top-Class ISP in Japan
- Provide 100+ Services
- Visited by 80% JP-People



Server Infra. Overview

- 150+ Engineers in Infra. Div.
- Cloud, HW, NW, Platform
- 10+ Engineers as Server Eng.
- < 100,000 Servers



OCP

- Started in 2016
- Main Usage is Cloud(OpenStack)
- OPEX better than EIA19
- Many Activities for OCP

Contact Info

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