



| *Tencent*

|  Tencent Cloud

# *DCOS*

## 面向数据中心的运营操作系统

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2019.01.15

# >> What is DCOS

*Data Center Operating System* =

*Management engine for private cloud  
over critical IT resource*

## *Full Features*

- ▶ *Server management*
- ▶ *Network device management*
- ▶ *Configuration management*
- ▶ *Alarm management*

## *Born Out Of*

- ▶ *Tencent million server operation*
- ▶ *Tencent's complex business scenario*
- ▶ *Tencent hardware device diversity*

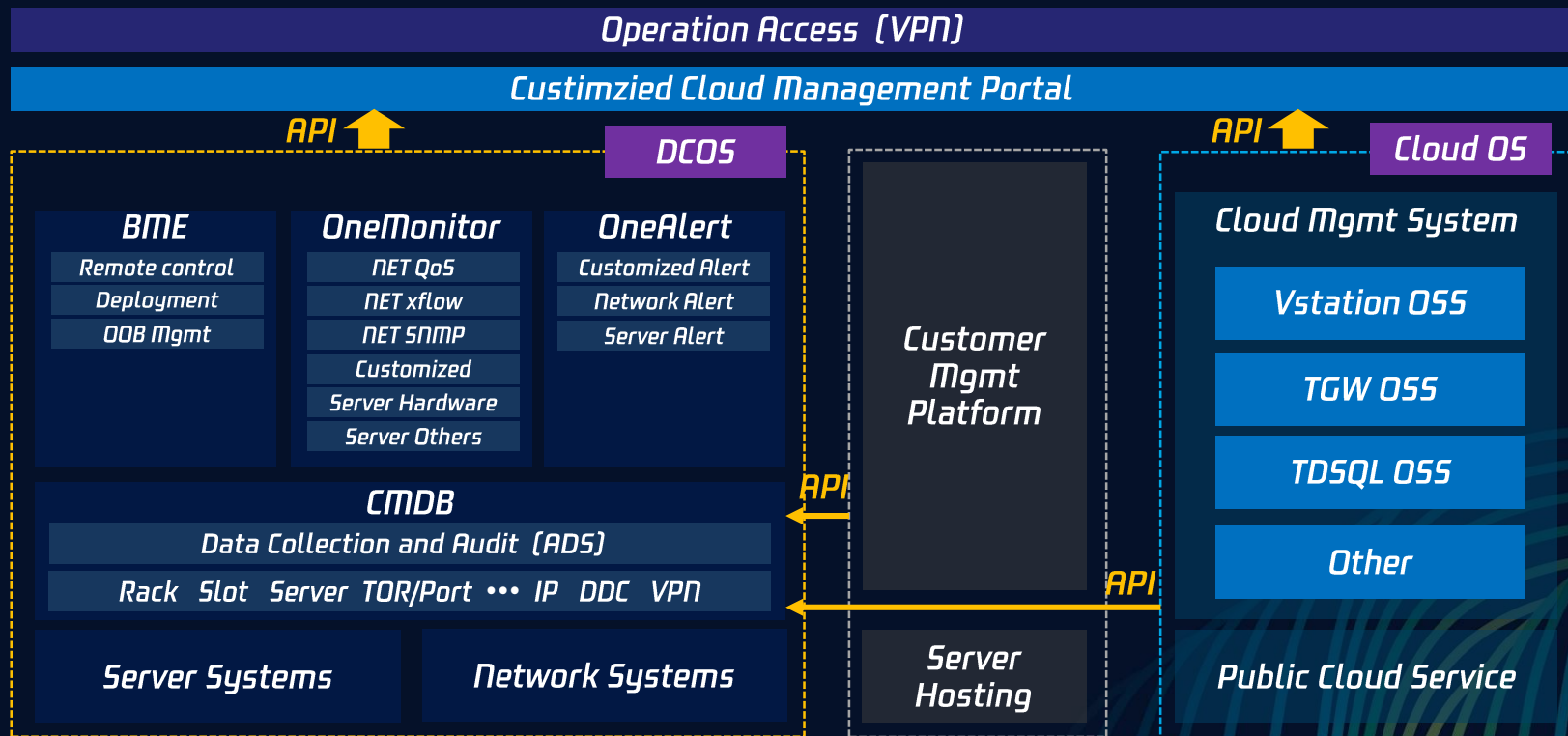
## *Modular & Hierarchical Design*

- ▶ *Modular by feature*
- ▶ *Module based installation*
- ▶ *Support distributed and central deployment*

## *Availability & Scalability*

- ▶ *Rich open API to support customized service development*
- ▶ *Disaster recovery oriented for data and service with 2A*

# >>> DCOS Functional Block Diagram



# >> DCOS Function List

## BME

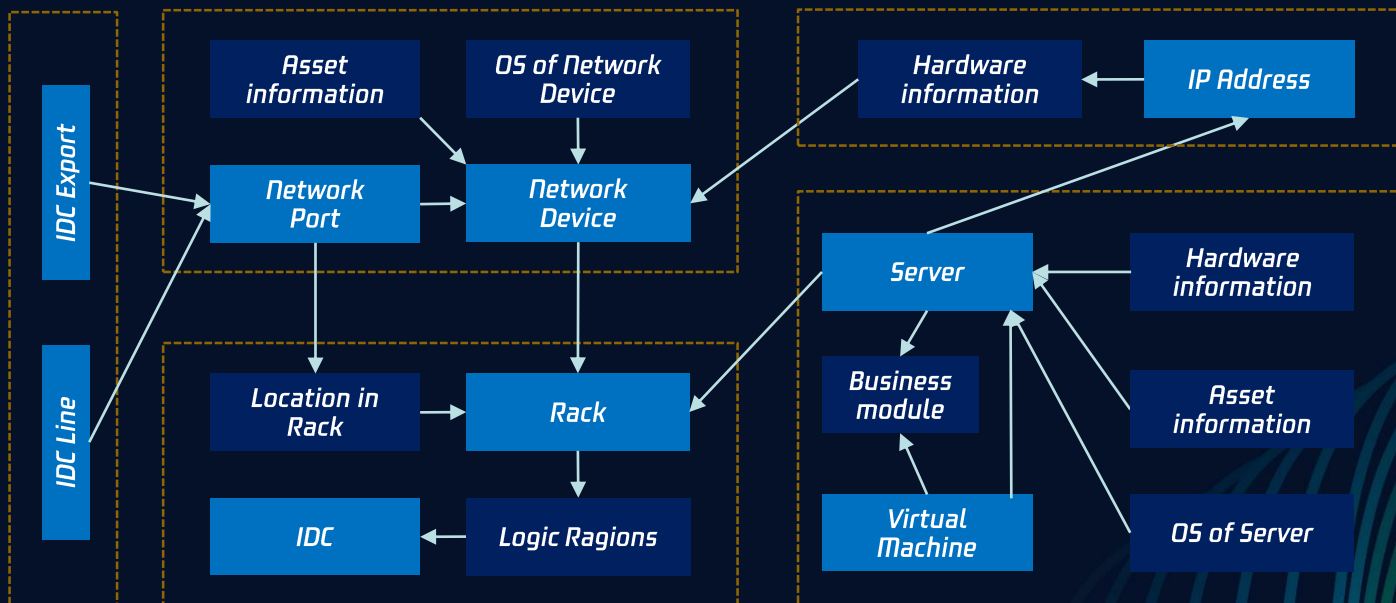
## OneMonitor

## OneAlert

Cfg Mgmt (CMDB)	OOB & Deployment	Server Control	Server Monitor	Network Monitor	Alarm Mgmt
IDC/Server/ Net Device	Power Operation	Command Execution	OS Performance	SNMP	Alarm Strategy
Export/Lines	PXE Install	File Transfer	OS Status	Syslog	Alarm Deduplication
IP Resource	Quick Reinstall	Reset OS Passwd	Process/Port	Xflow	Alarm Judgement
Server Parts	Oob Passwd Management	Work Platform	Hardware	Quality Detection	Alarm Masking
TOR Ports			Custom	Connectivity Detection	Alarm Notification
					Alarm Recovery

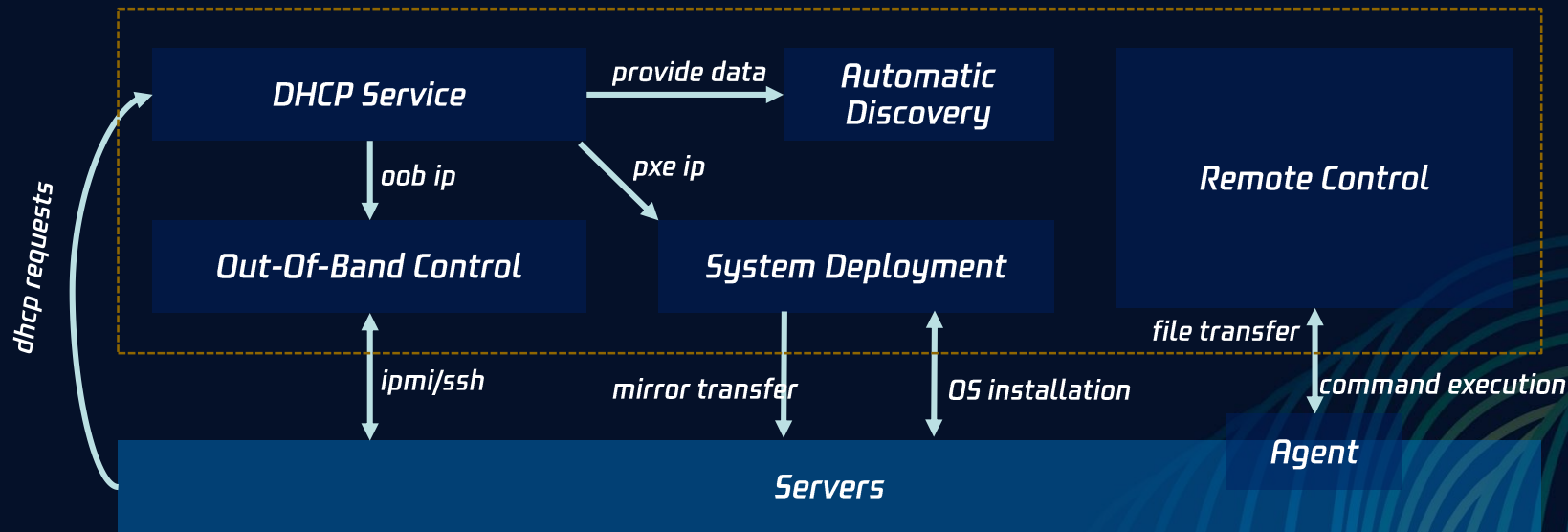
# >>> DCOS Modules - CMDB

- ▶ Based on Tencent's years of experience in IDC operations.
- ▶ It covers lifecycle management of physical information such as servers, network devices and so on.



# >> DCOS Modules - Server Management

- ▶ Based on Tencent's deployment experience of hundreds of models, and management experience for massive servers.
- ▶ Responsible for the management of physical servers, including automatic resource discovery, out-of-band management, OS deployment, and remote control.



# >> DCOS Modules - Server Monitor

- ▶ *Software and hardware information collection and alarm, while providing middleware monitoring and custom data reporting.*

## OS Basic Monitoring

- ▶ *CPU/Memory*
- ▶ *Disk/IO*
- ▶ *TCP/UDP/Network Card*
- ▶ *...*

## Hardware Monitoring

- ▶ *Power&Fans*
- ▶ *Network Card&Memory*
- ▶ *HardDisk&Raid*
- ▶ *Temperature*

## APP&Middleware Monitoring

- ▶ *Process&Port.*
- ▶ *Custom configuration for middleware monitoring, such as mysql and so on.*

## Custom Monitoring

- ▶ *Provide reporting tools to support business custom report data.*

# >>> DCOS Modules - Network Monitor

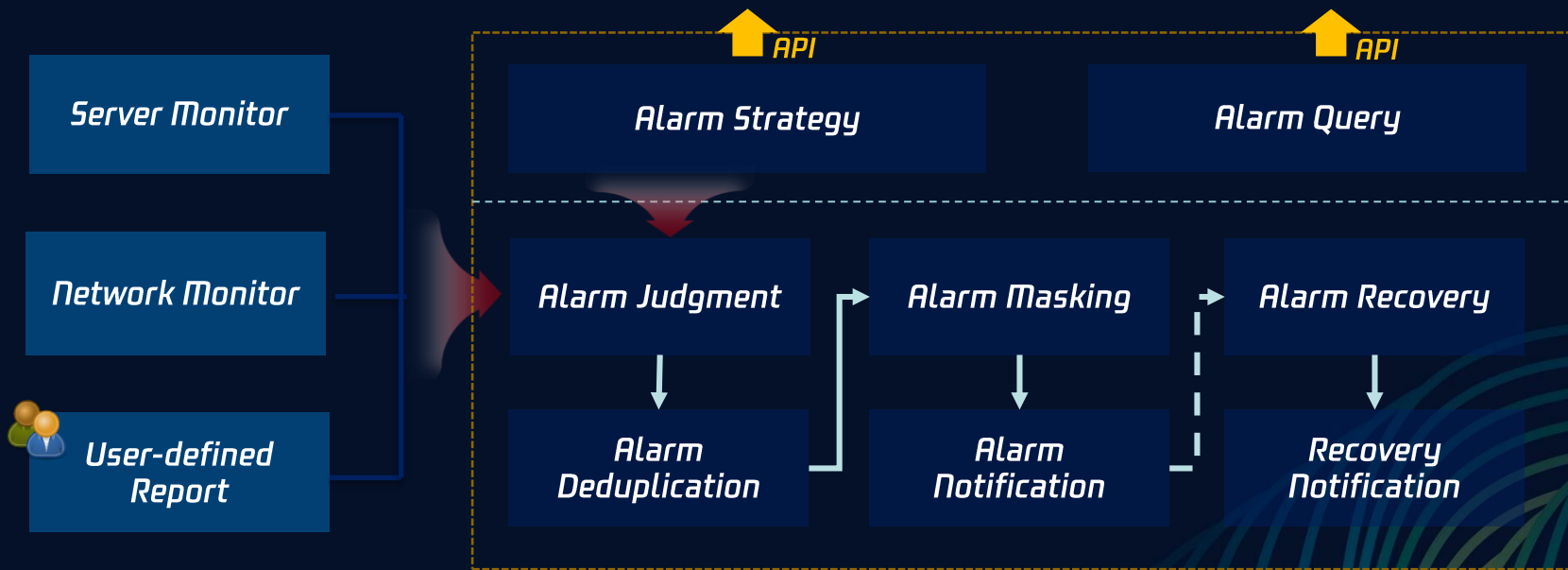
- ▶ Responsible for collecting port configuration, port traffic information, device logs, session traffic, and network quality detection.





# >> DCOS Modules - Alarm Mgmt

- Provides alarm strategy configuration, alarm judgment, alarm deduplication, alarm masking, alarm notification, and alarm recovery.



# >>> DCOS Project Landed & Openness

## CMDB

- IDC
- Server
- Network Device
- IP Resource
- IDC line
- IDC Export

## Server Related

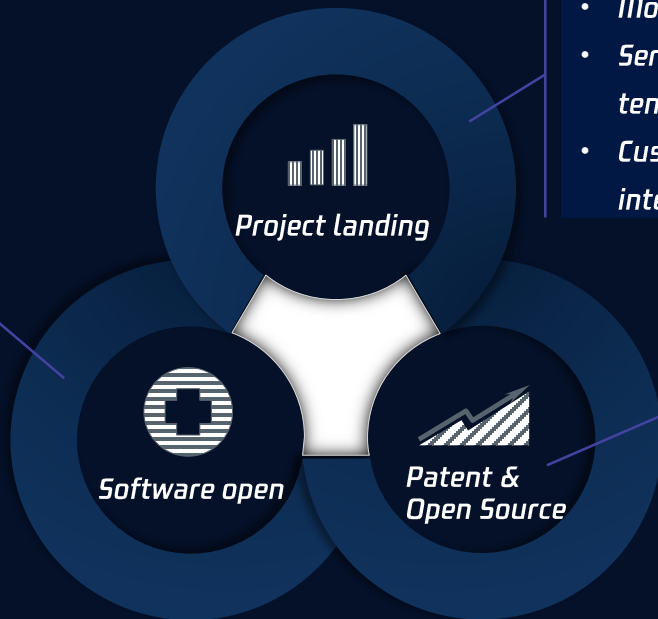
- File transfer
- Command execution
- OS deployment
- Oob mgmt
- Server monitor

## Alarm Related

- Custom alarm management
- Server alarm management
- Network alarm management

## To Be Continue

- Network quality
- Session traffic
- SNMP
- SYSLOG
- Hardware monitor



- More than 15 cloud customers landed.
- Server size ranges from a few hundred to tens of thousands.
- Customer types include banks, exchanges, internet companies, etc.

- Multiple domestic and international patents.
- CMDB has internal open source, other modules are being carried out one after another.



*THANKS*