The Cloud Operating Model
Mainstream Trends
Cloud

Microservices

Schedulers
Benefits:

- Can be highly automated
- Globally distributed
- High-value services
- Low-cost experimentation
- Not using it? Don't pay for it.
Microservices

Benefits:

- Less surface area means higher quality
- Development parallelizes nicely
- Can update small parts of a large system
- Improved security and access control
Cloud

Microservices

Schedulers
Schedulers

Benefits:

- High resource utilization
- Uniform application deployment across different workloads
- Automatic failure recovery
- Easy scale-out of underlying resources
Cloud

Microservices

Schedulers
The Cloud Operating Model

- **Networking**
  - Infrastructure & Applications

- **Development**
  - Deploy Applications

- **Security**
  - Secure Infra & Applications

- **Operations**
  - Provision Infrastructure
The Cloud Operating Model

Traditional "Static" Model

Cloud "Dynamic" Model
The Cloud Operating Model

**Operations**
Provision Infrastructure

**Traditional "Static" Model**
- Dedicated Servers, Homogeneous
- Limited Scale

**Cloud "Dynamic" Model**
- On Demand, Heterogeneous
- Infinite Scale
The Cloud Operating Model

Operations
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Security
Secure Infra & Applications

Traditional "Static" Model
- Dedicated Servers, Homogeneous
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- Clear Perimeter, High Trust
- IP-based Security

Cloud "Dynamic" Model
- On Demand, Heterogeneous
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- Identity-based Security
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- Host-based
- Static IP addresses

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Result:
- Too many VPCs, routing tables, security groups.
- Too many servers since applications are not being scheduled.
- Bottlenecks in security, deployment
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Result:
- Extremely slow infrastructure or application deliveries because security will be struggling to maintain IP-based security.
- Poor resource utilization as applications are stuck on specific nodes.
- Security risks from over-trusting internal traffic.

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OSS Enables The Cloud Operating Model

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  Infrastructure & Applications
- Development
  Deploy Applications
- Security
  Secure Infra & Applications
- Operations
  Provision Infrastructure