Cloud Lunch and Learn

Keeping your Cloud Performing and Available

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Agenda

- Architecting for performance
- Architecting for availability
- Planning for disasters

Architect for Performance

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Performance efficiency

- Partition workloads
- Design for scaling
- Plan for growth
- Avail affinity
- Use autoscaling
- Distribute the workload
- Consider shared-nothing
- Design for Azure Storage scalability and performance targets
- Select the right SKU for your application

Application design

- Dynamic service discovery
- Connection pooling
- Data compression
- Data locking
- Asynchronous programming
- Microservices
- Session affinity

Monitoring

- What are the reasons for scaling?
- What is the goal?
- Using metrics to scale
- Monitoring best practice

Architect for Availability

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Reliability

- Define requirements
- Use architectural best practices
- Test your reliability
- Deploy consistently
- Monitor application health
- Respond to failures and disasters

Application design

- Determine service requirements
- Identify subscription limits
- Implement resiliency patterns
- Isolate critical resources
- Plan for usage patterns
- Failure analysis
- Multi-region design

Chaos engineering

- What is chaos engineering?
- How does chaos engineering help?
- When should you apply chaos?
- How can I apply it to my application?

Planning for Disasters

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Monitoring

- Early warning
- Remote call statistics
- Long running process failures
- Visualization and alerting
- Test monitoring
- Subscription and service limits
- Scalability and performance targets

Disaster recovery

- Network outage
- Manual responses
- Data management
- DR planning
- Backup strategy
- Failover and failback testing

Region wide disruption

- Resource management
- Strategies – Redeploy, warm spare, hot spare
- Load balancing

Well Architected Review

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Azure Well Architected Framework

- Cost optimization
- Operational excellence
- Performance
- Reliability
- Security

Key takeaways

- Think about your business requirements
- Consider cost, operations, performance, reliability and security as one
- All are equally important

Useful links

- https://docs.microsoft.com/en-us/azure/architecture/patterns/
- https://docs.microsoft.com/en-us/azure/architecture/framework/
- https://docs.microsoft.com/en-us/assessments/?mode=pre-assessment&session=local

- https://www.linkedin.com/in/martyncoup/
- https://www.theazureguy.blog/
- Twitter: @mrcoups