

Troubleshooting Cloud Deployment Issues

6.3 Given a scenario, troubleshoot network issues

Description

- In this episode, we will delve into common cloud deployment issues and look into tools and techniques that are useful when troubleshooting said issues.

Resources

- <https://health.aws.amazon.com/health/status>
- <https://docs.aws.amazon.com/cli/latest/reference/ec2/create-launch-template.html>
- <https://azure.microsoft.com/en-us/explore/global-infrastructure/products-by-region/>

Learning Objectives

- List and describe common cloud deployment issues
- List and describe common tools and techniques to troubleshoot cloud deployment issues

Notes

- Incompatibility
 - Technology used in your deployment doesn't work well or at all with other technology used in your deployment
 - Symptoms
 - Errors/Crashes
 - Poor Performance
 - Example
 - Web app is developed using Python3 and Django
 - Back end DB relies on PostgreSQL 11
 - Cloud deployed using AWS Elastic Beanstalk
 - Elastic Beanstalk is utilizing PostgreSQL 12
- Misconfigurations
 - Insufficient Resource Allocation
 - Permission Issues
 - Oversubscription
 - Cloud Provider over sells resources betting that tenants won't need all of it at one time
 - Noisy Neighbor Effect
 - Sizing Issues
- Outdated component definitions
 - The specifications, configurations, and parameters that define various elements within a cloud environment like...
 - VMs
 - Containers
 - Storage
 - Networks
 - These definitions can become outdated, leading to issues
 - Example: VM Templates
 - Definitions in the Template could include
 - OS and software versions
 - Resource allocation (CPU, RAM, Disk Space)
 - Network config
 - Security policy
 - Custom actions (scripts and other configurations)

- [AWS Launch Template Docs](https://docs.aws.amazon.com/cli/latest/reference/ec2/create-launch-template.html)
(<https://docs.aws.amazon.com/cli/latest/reference/ec2/create-launch-template.html>)
 - See "aws-launch-template.txt"
 - Issues
 - Performance
 - System stability (Crashes)
 - Inconsistent behavior
 - Errors
- Deprecation of functionality
- Outages
 - Full
 - Partial
 - Responsibility?
 - Cloud Provider
 - [AWS Health Status \(https://health.aws.amazon.com/health/status\)](https://health.aws.amazon.com/health/status)
 - Tenant
- Resource Limits
 - API Throttling
 - Service Quotas
- Regional Service Availability
 - [Azure Regional Product Availability \(https://azure.microsoft.com/en-us/explore/global-infrastructure/products-by-region/\)](https://azure.microsoft.com/en-us/explore/global-infrastructure/products-by-region/)