HIMNISH PATEL (Date 11/21/2024)

COURSE : UNIX -> SECT : 00002

1. Tool Selection

From Week 1's analysis, we chose **CheckMK** as the monitoring tool. This decision was based on its scalability, ease of setup, and comprehensive monitoring capabilities, including resource metrics like CPU, RAM, and disk space.

2. Server and VM Setup

- **Monitoring Server Setup**:
    - Deployed a virtual machine (VM) for the CheckMK server. Ensured this VM has sufficient resources (e.g., 2 vCPUs, 4GB RAM, 20GB disk space).
    - Installed CheckMK (use the official installation guide for your OS, e.g., Debian).
    - Configured CheckMK Web UI for easy access and monitoring setup.
- **Connecting VMs**:
    - Deployed VM for monitoring. Each VM should simulate
        - **Disk-intensive**: Write a file generator or similar process.
    - Install the CheckMK agent on these VMs to enable monitoring.
        - Use: `wget` to fetch the agent and follow installation steps.
        - Ensure the agent service is active and reachable from the server.

3.Network Simulation

- Used virtualized network tools like **VirtualBox** create an isolated network for the VMs.
- Verified connectivity using basic tools like `ping` or `telnet`.
- Ensured CheckMK server can reach the agents via the configured port

4. Resource Simulation Setup on VMs

- Simulated the disk-intensive task from the command line
    - Chat Gpt prompt : how can I simulate a disk-intensive task
    - Ans : dd if=/dev/zero of=/tmp/testfile bs=1M count=1024 # 1 GB file

5. Initial Testing

- **Monitoring Setup in CheckMK**:
    - Log in to the CheckMK Web UI.
    - Add the VMs as hosts and configure their services (e.g., CPU, Memory, Disk).
    - Check for real-time data under the "Services" tab for each VM.
- **Testing Disk Space Monitoring**:

- Simulate disk usage by creating a large file or filling up disk space.
- Verify the disk space warning/critical levels in CheckMK:
    1. Access the VM's host page on CheckMK.
    2. Observe the "Filesystem" metric. Check thresholds (e.g., 80% warning, 90% critical).
    3. Create a file to exceed the thresholds and refresh the CheckMK UI. The system should trigger an alert.

6.Sample Picture