



devfest2021



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DevOps
for Network Engineer
"Network as API"



#yeswetig



 GDG Grand Mascara



Agenda

- What is DevOps ? And why ?
- DevOps Engineer Roles
- DevOps Career And Skills

- Real examples of a network engineer
- Adds (labs)

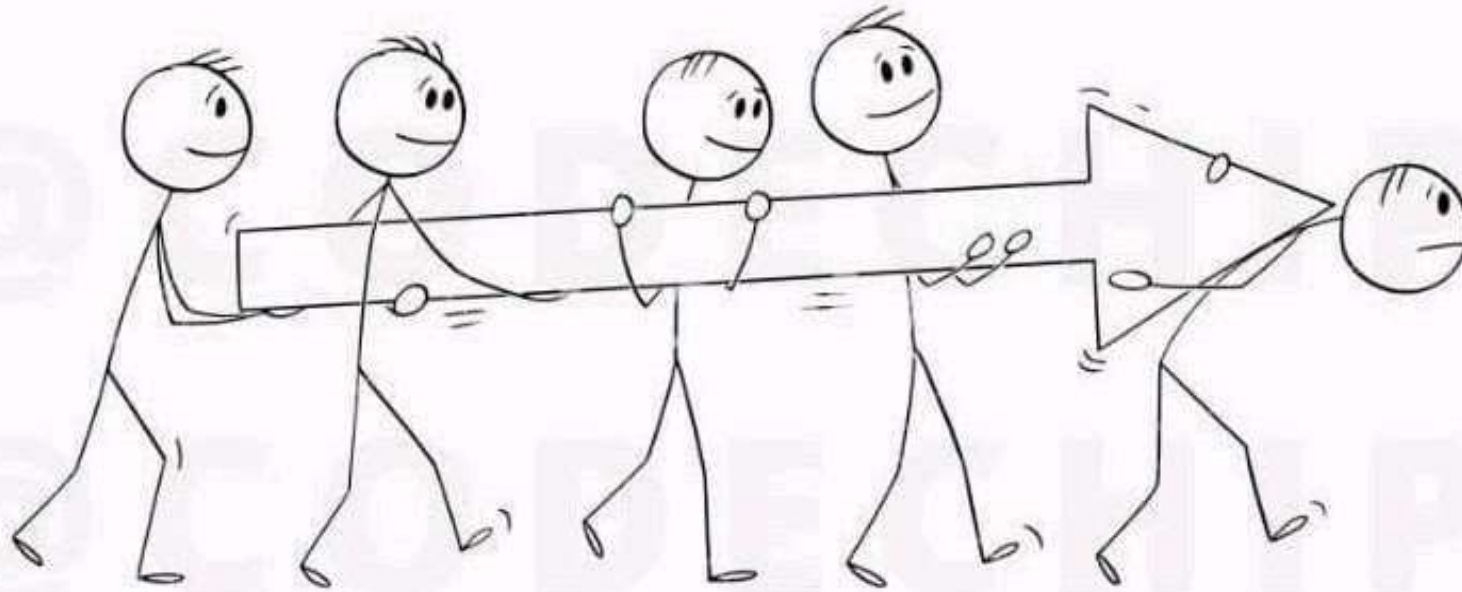
DevOps For a Network Engineer " Network as API "



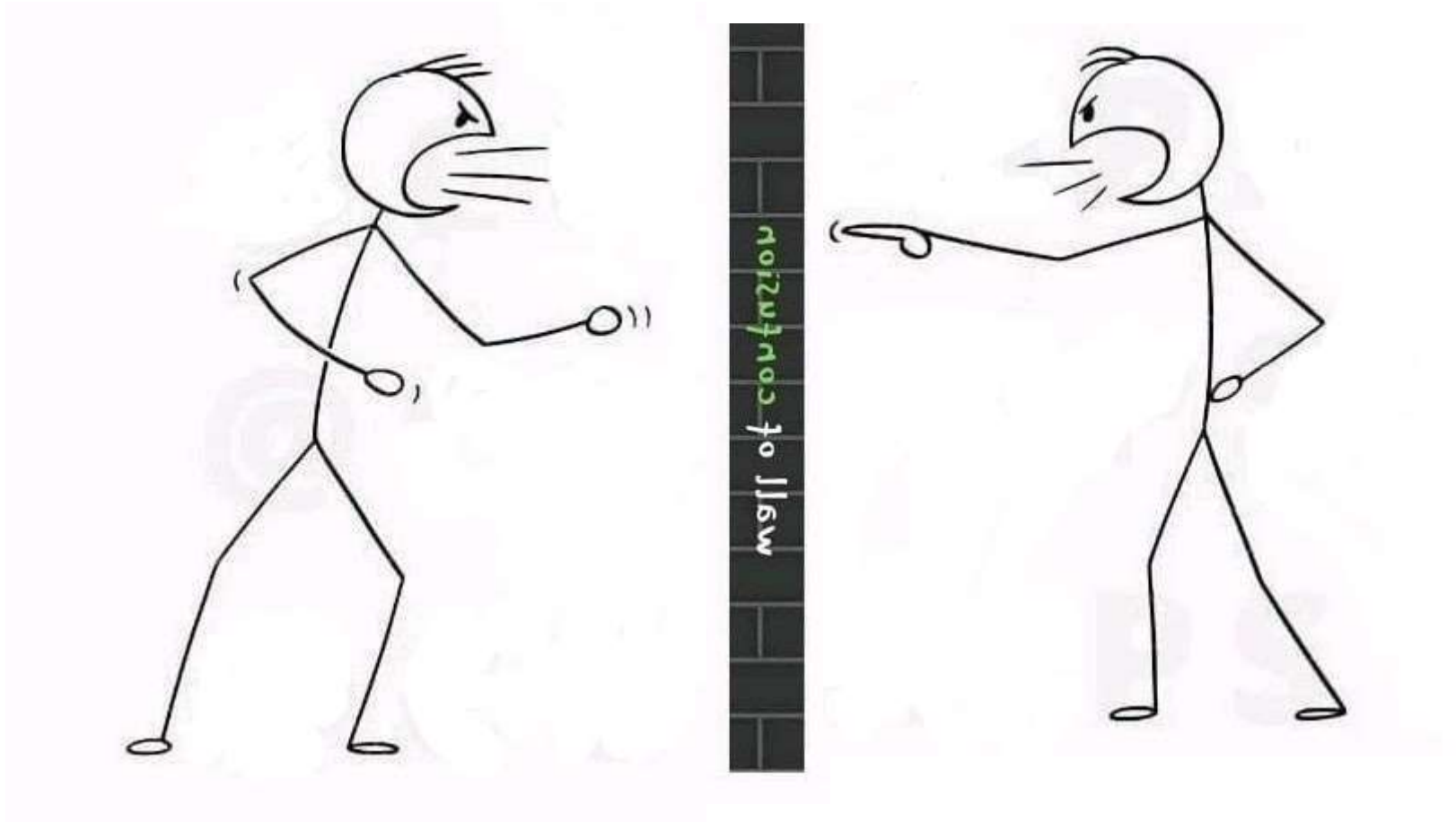
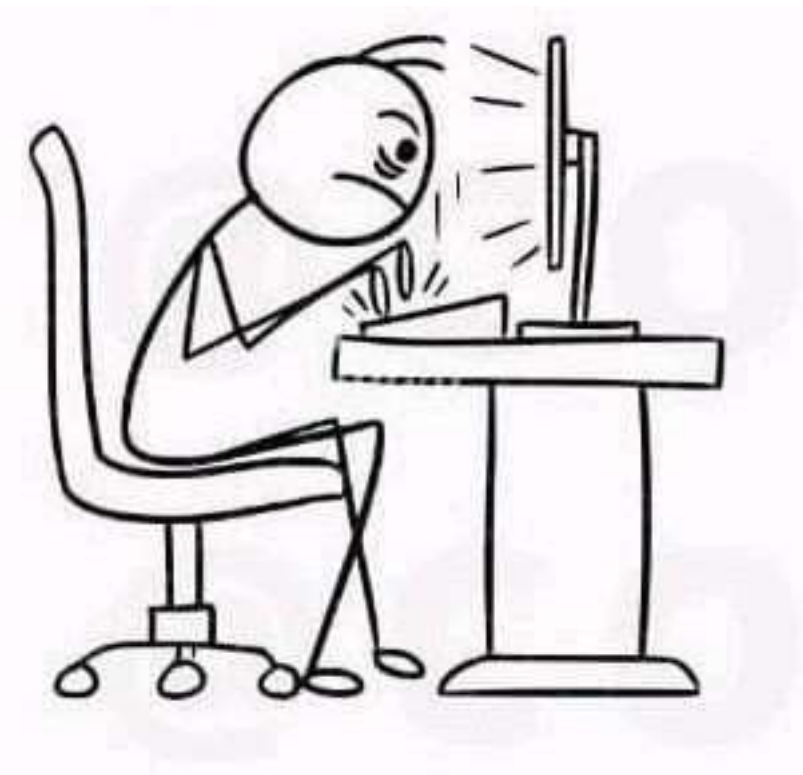
DevOps:



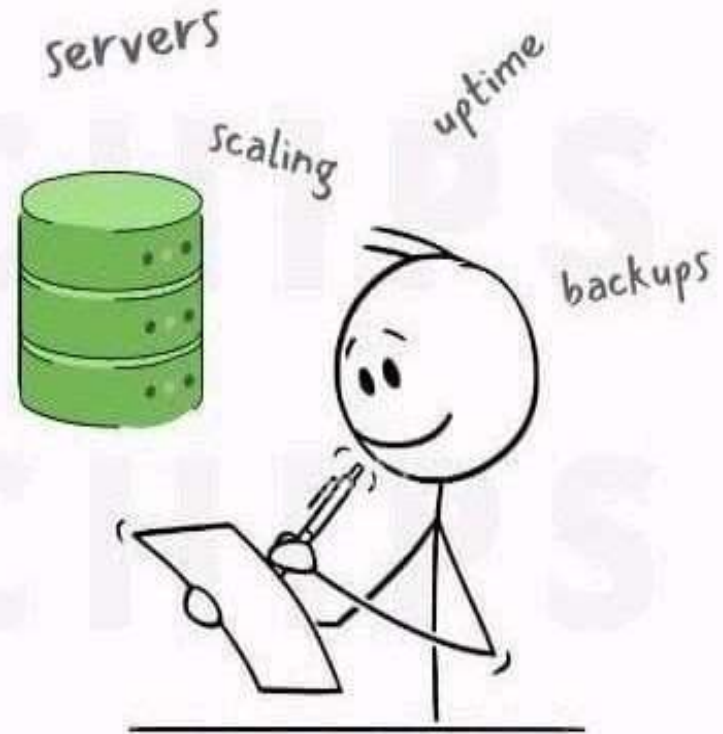
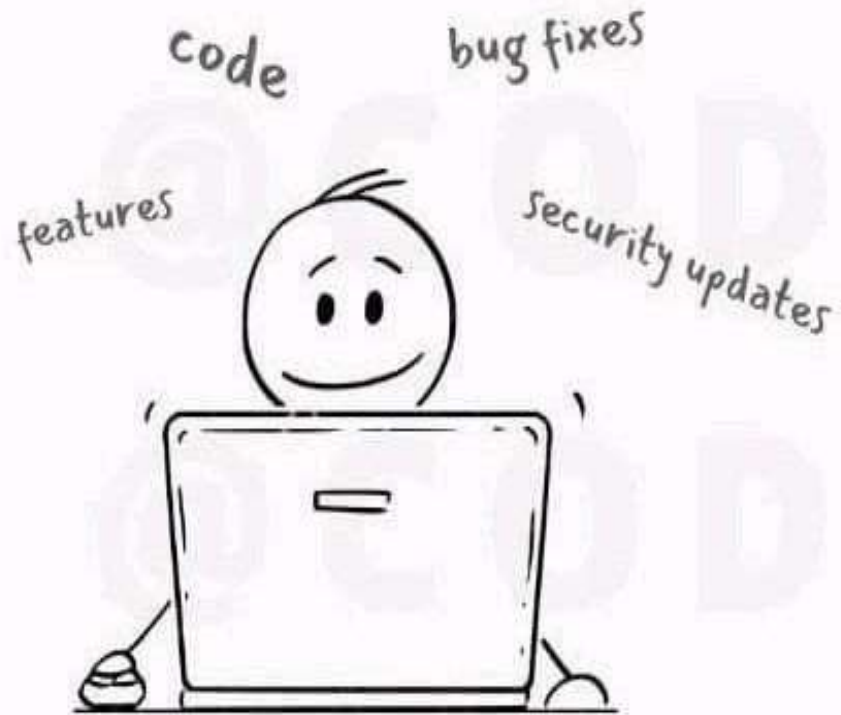
DevOps is not a technology, tool or framework.



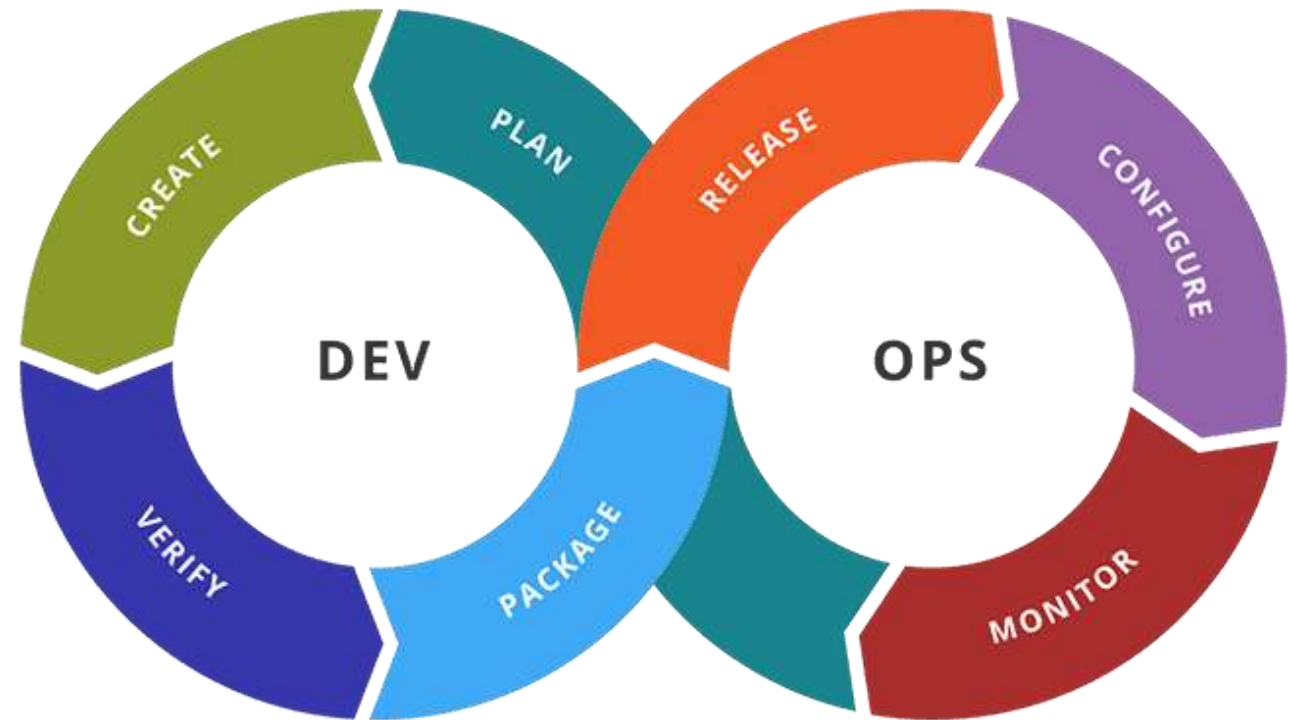
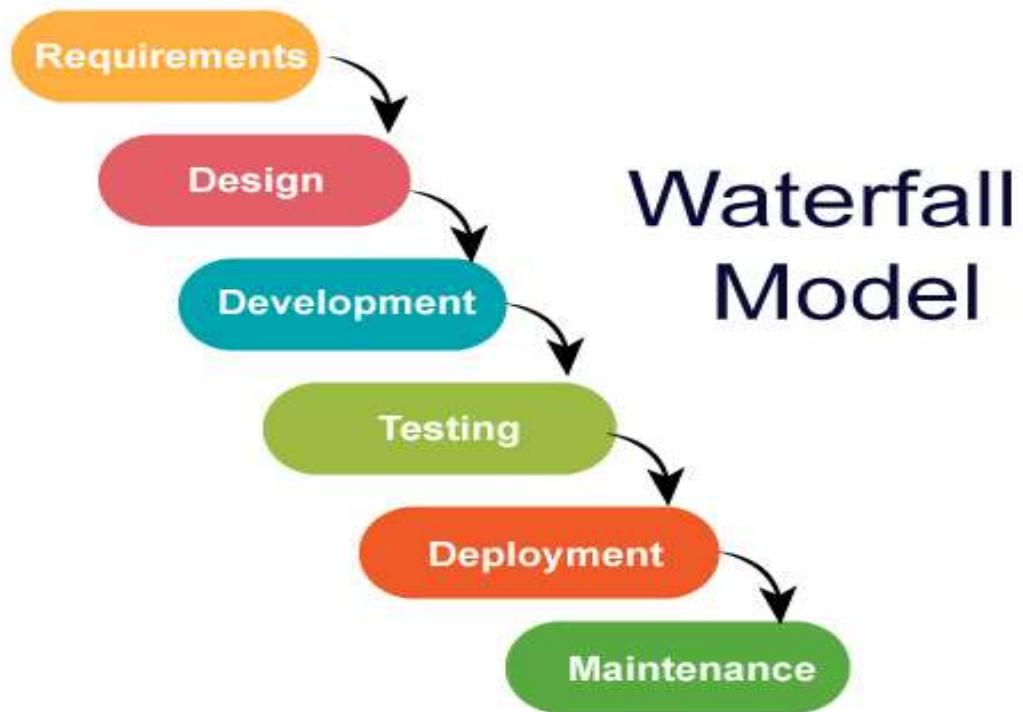
Why DevOps ?



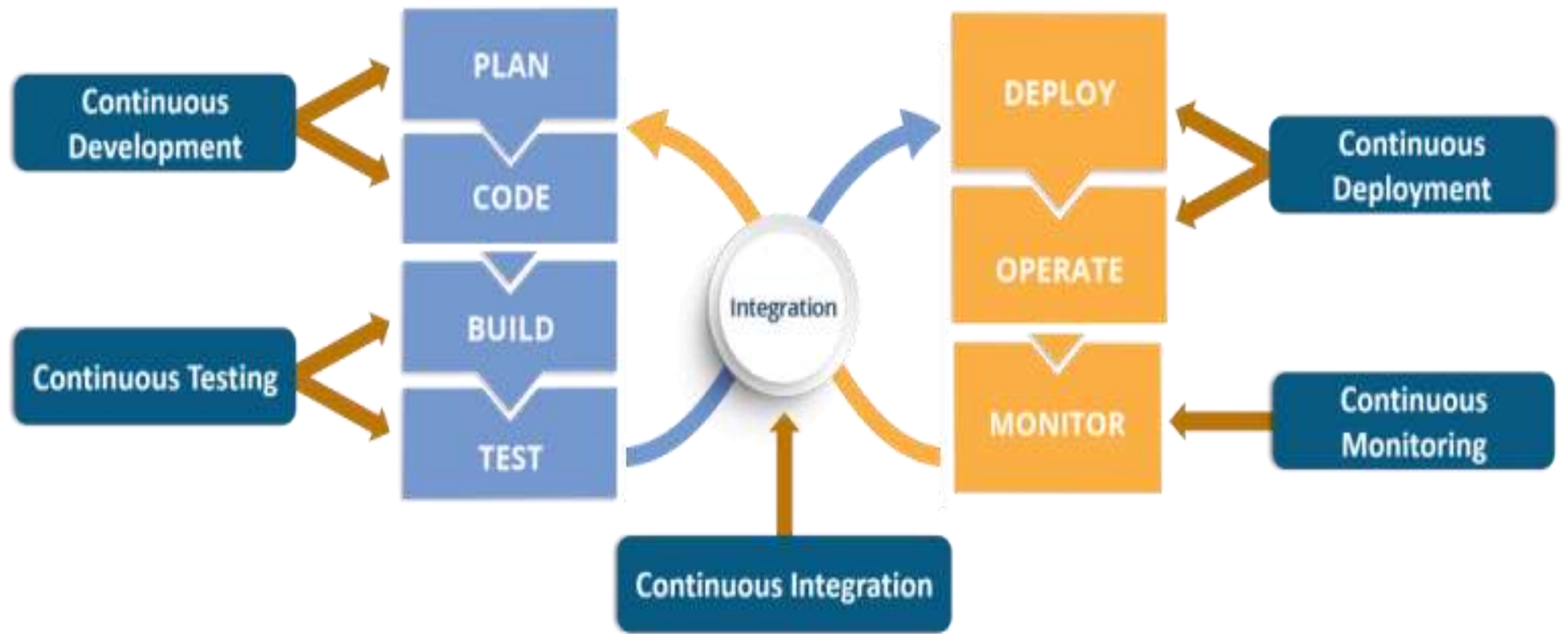
Dev (development) + Ops (operations)



Traditional model Vs DevOps model

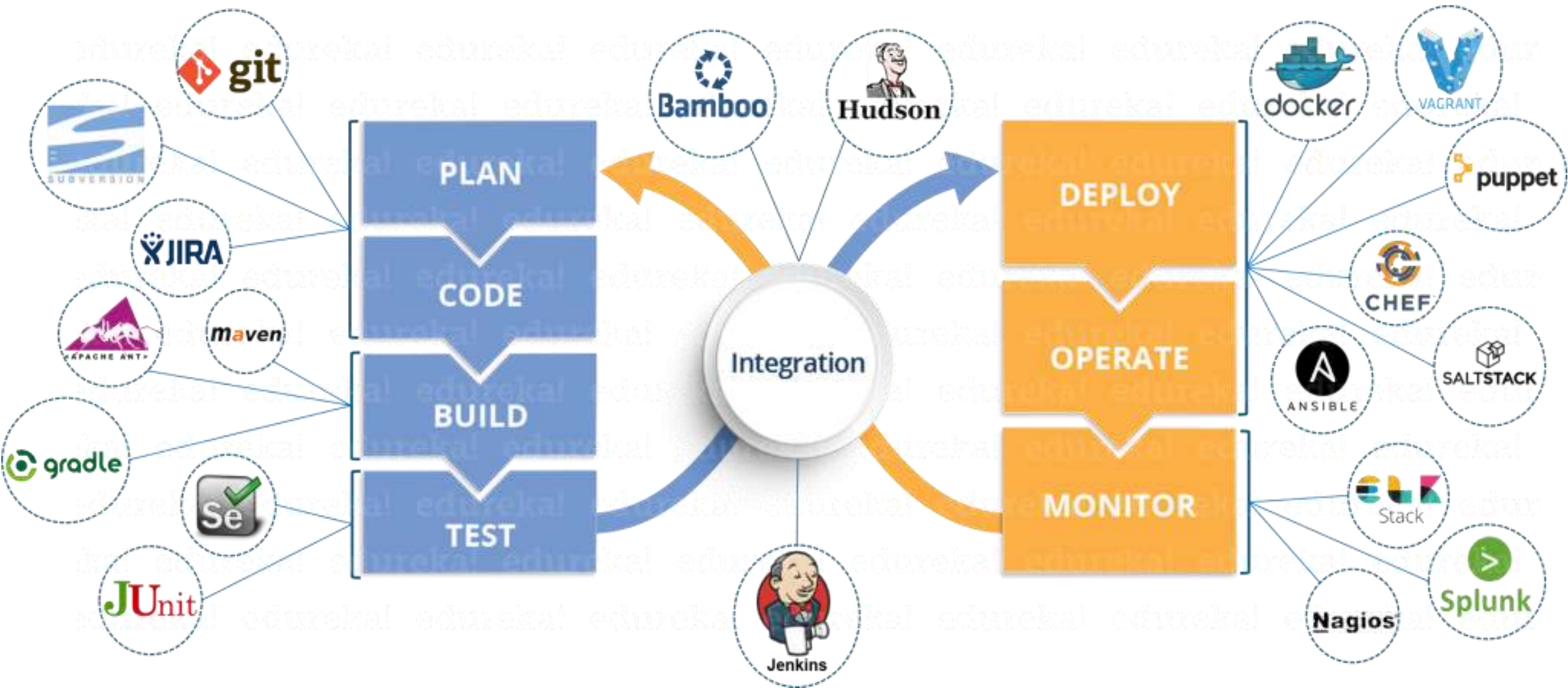


DevOps Roadmap (lifecycle)



DevOps Engineer Duties

•Professionals who can use automation CI/CD tools



DevOps Engineer Tools



DevOps Engineer Skills

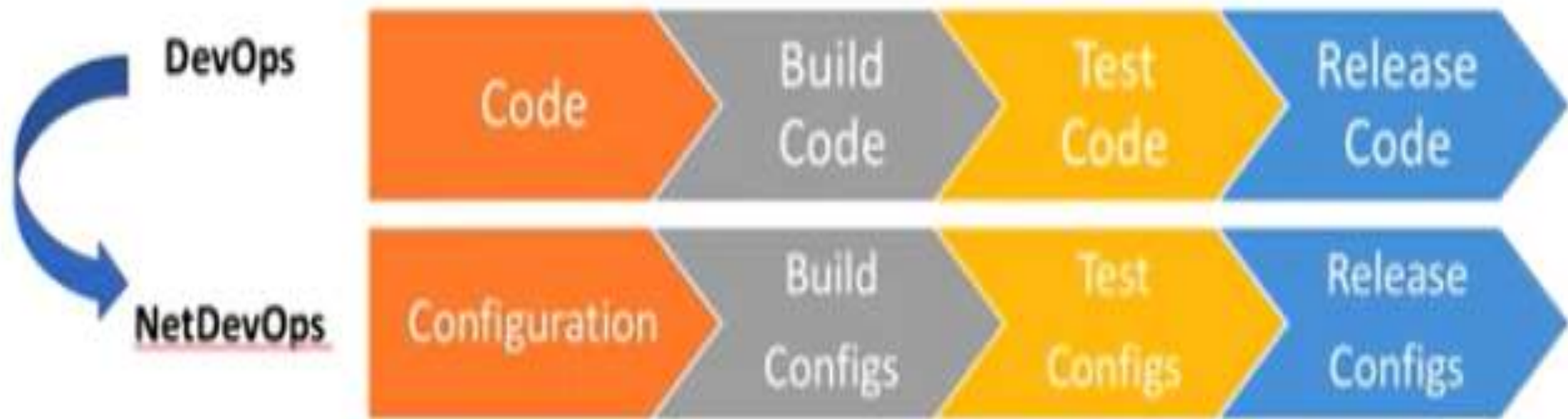


- ✓ **Source Control (GitHub, Azure Repos, GitLab)**
- ✓ **Continuous Integration (Azure Pipeline, Jenkins, Bamboo)**
- ✓ **Infrastructure Automation (ARM, Terraform, Puppet, Chef, Script tools Bash, PowerShell)**
- ✓ **Deployment Automation & Orchestration (Azure Pipeline, Jenkins)**
- ✓ **Container Concepts (Docker, LXD)**
- ✓ **Orchestration (K8s, Docker Swarm)**
- ✓ **Cloud (Azure, AWS, digitalocean)**
- ✓ **Soft skills and collaboration, understanding business needs, flexibility, multi-tasking.**
- ✓ **Testing Skills, network and security awareness**

TYPES OF DEV-OPS TOOLS

- 1. Continuous Integration
- 2. Build Tools
- 3. Continuous Deployment
- 4. Version Control Systems
- 5. Run Tools
- 6. Configuration Management
- 7. Orchestration Platforms
- 8. Compute Platforms
- 9. Monitoring Systems
- 10. App Errors Management
- 11. IT Service Management
- 12. Security & Vulnerability Detection
- 13. Release Management
- 14. Artifact Management
- 15. Collaboration Tools
- 16. Project Management
- 17. CRM Help Desk
- 18. Notification Tools
- 19. Software Quality Tools
- 20. Infrastructure Provisioning
- 21. Serverless Platforms
- 22. Automation Frameworks
- 23. Testing Frameworks & Tools

Network Changes with NetDevOps Pipeline

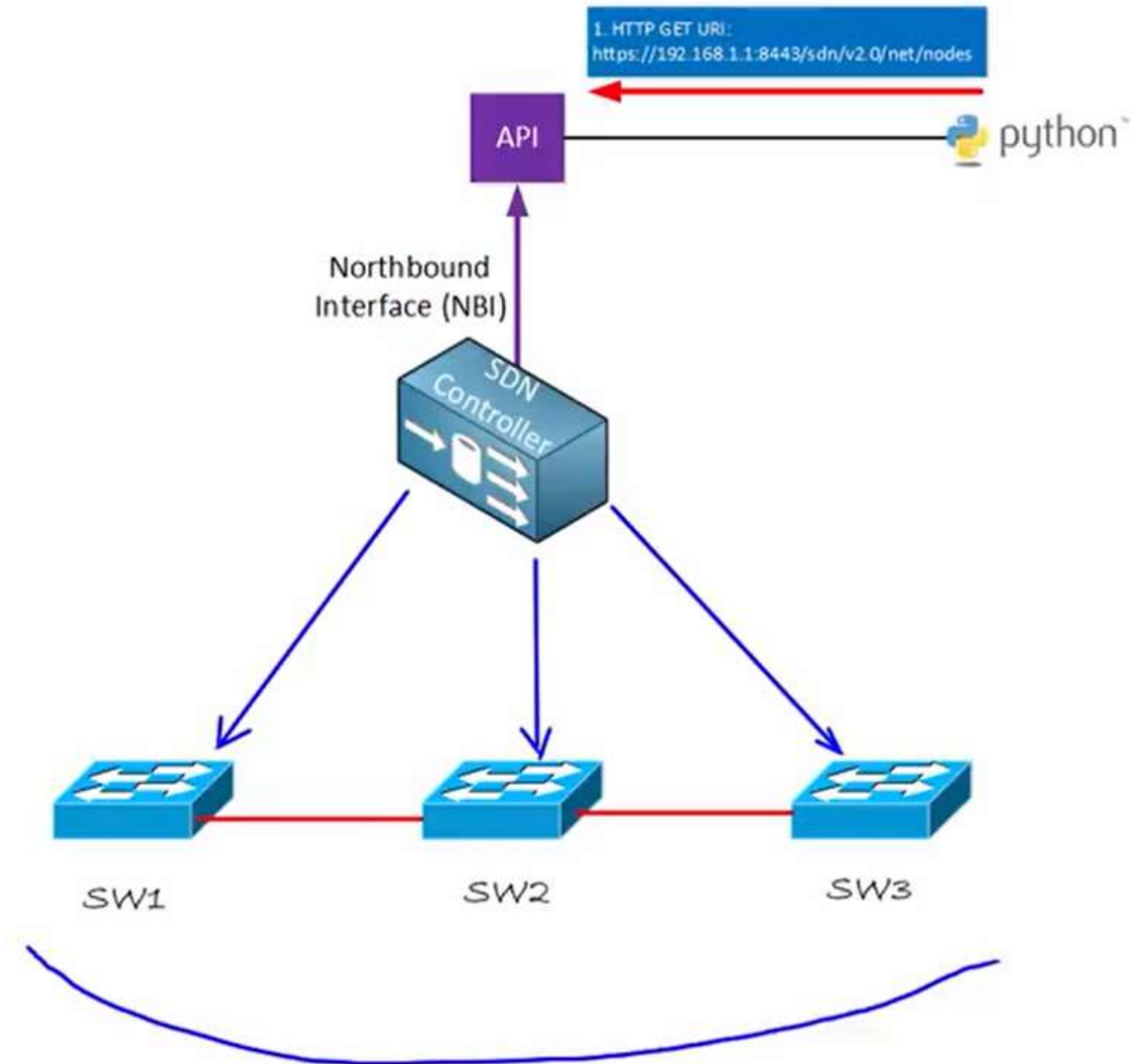
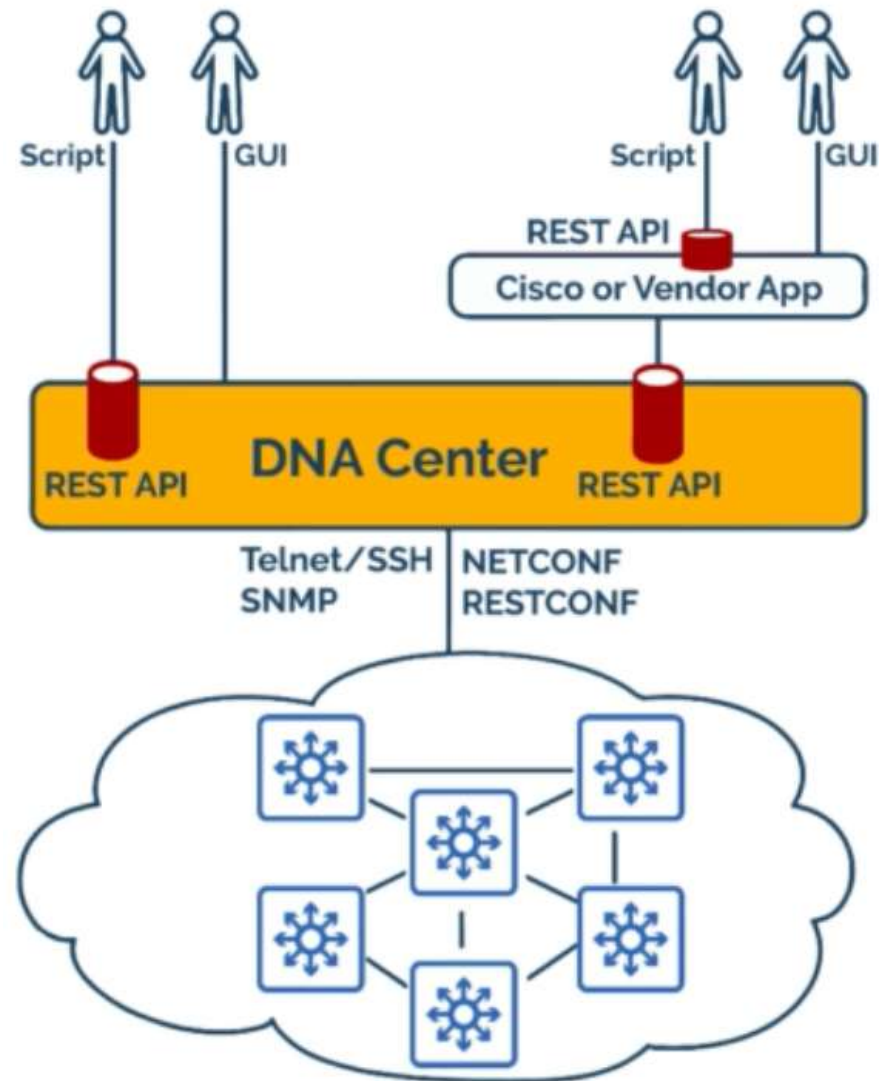


Real examples of a network engineer

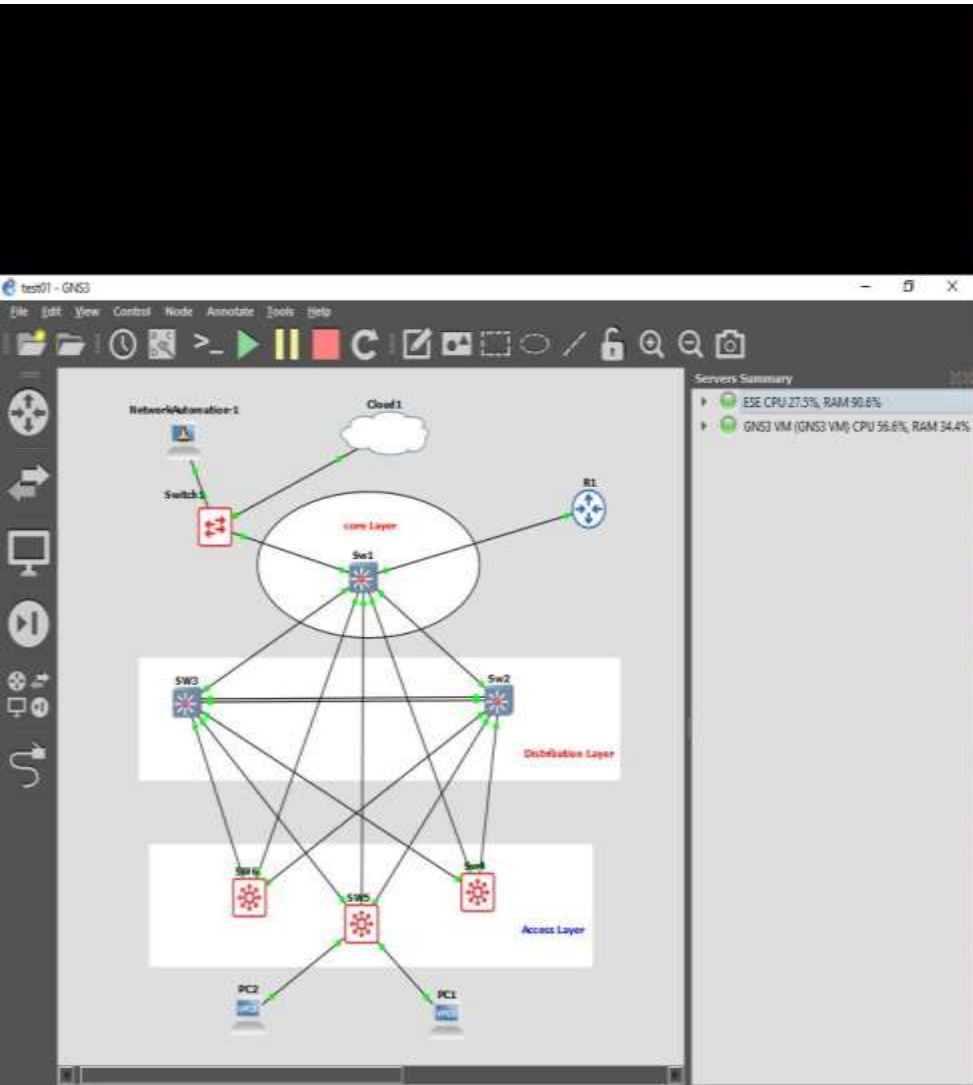


- ✓ SDN | SDS | SD-wan | SDI ...
- ✓ Terraform (Write , Plan, Apply)
- ✓ Ansible (NetAuto) > NAPLAM | Netmiko | pyats (JSon) | telnetlib
- ✓ Container (Docker)
- ✓ TCL Script or EEM Script or Linux Shell
- ✓ Network Function Virtualization (NFV) | Vxlan (underlay and overlay)

SDN :



NetAuto



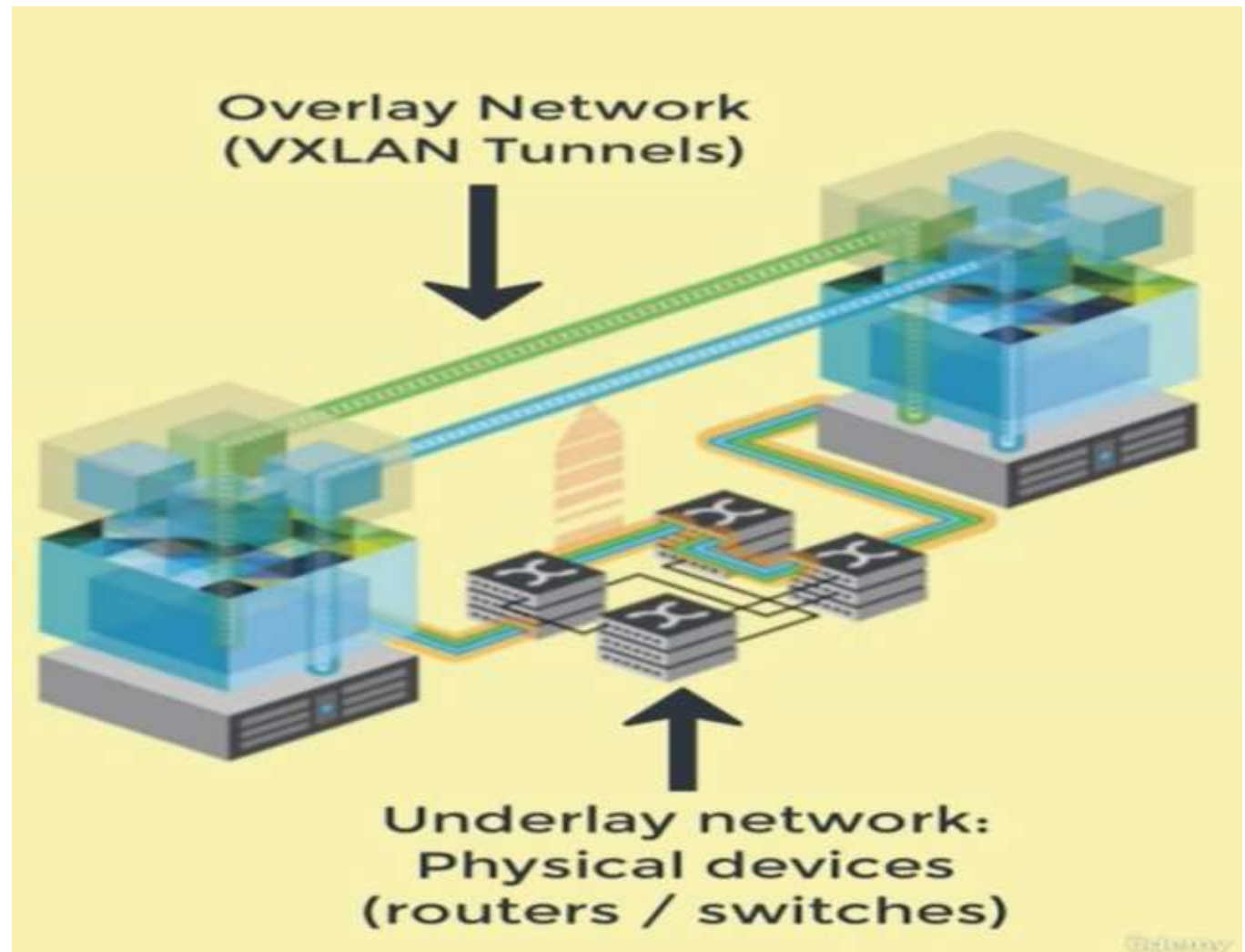
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        "accepted_prefixes": 2,
        "sent_prefixes": 1
      }
    }
  },
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    "remote_as": 65001,
    "remote_id": "0.0.0.0",
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    "is_enabled": true,
    "description": "",
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    "address_family": {
      "ipv4 unicast": {
        "received_prefixes": -1,
        "accepted_prefixes": -1,
        "sent_prefixes": -1
      }
    }
  }
}
}
}
}
}
Connecting to 192.168.23.71
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    "peers": {
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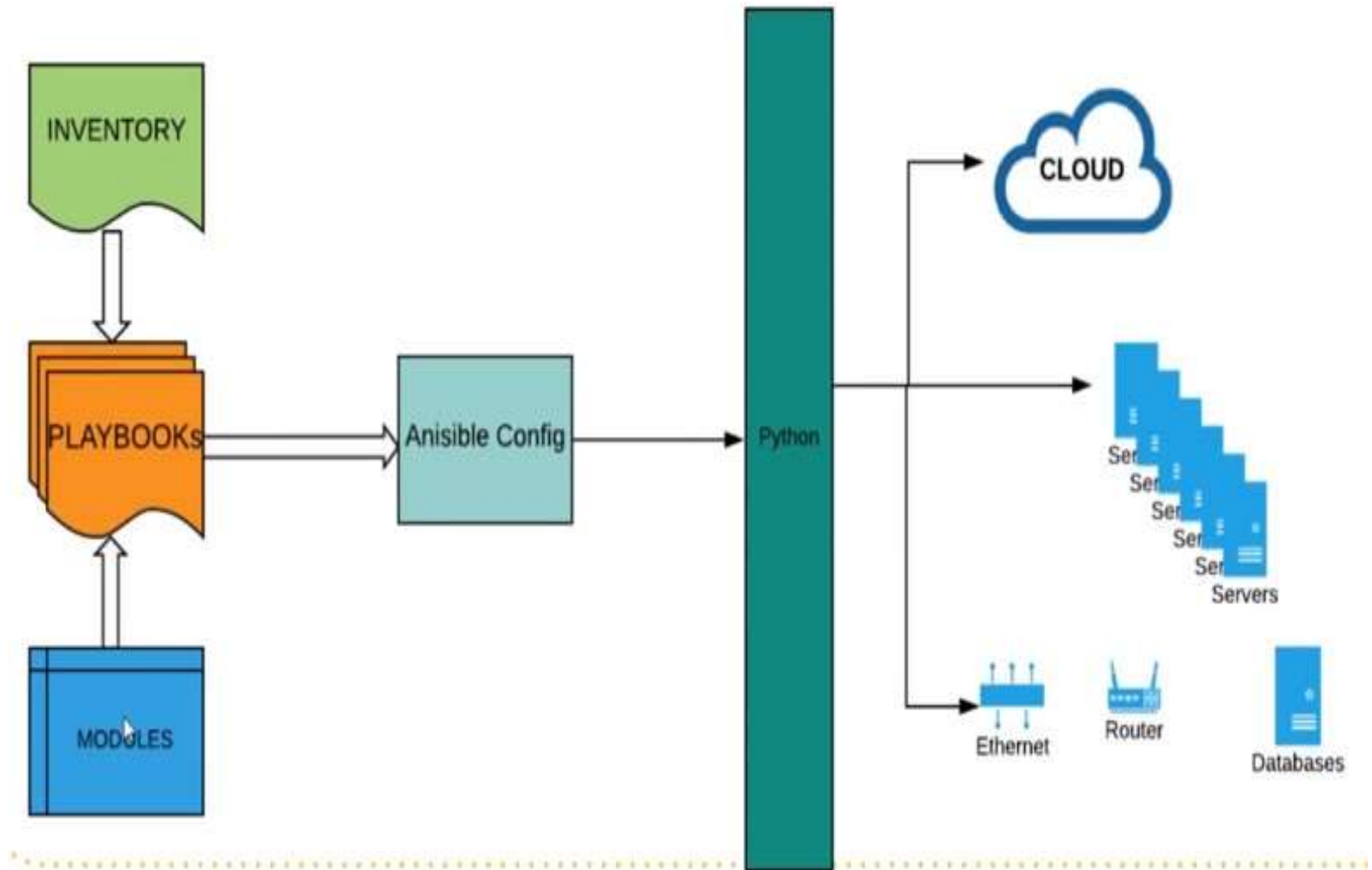
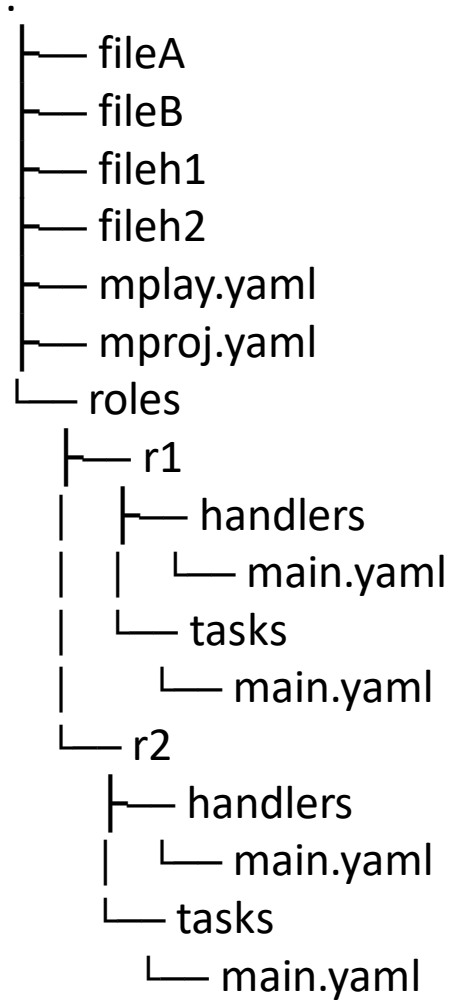
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Vxlan :



Ansible Architecture



Summary



DevOps pipeline, process, mechanism, tools and technologies do effect the outcome of your application development and delivery.



Any question, please!

Thank You