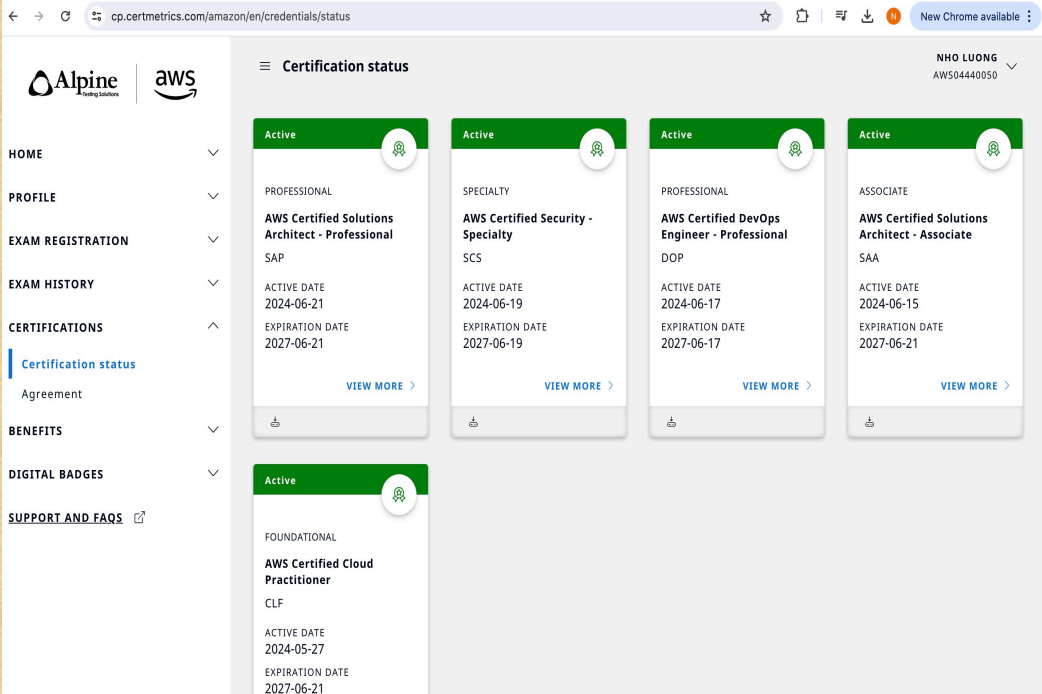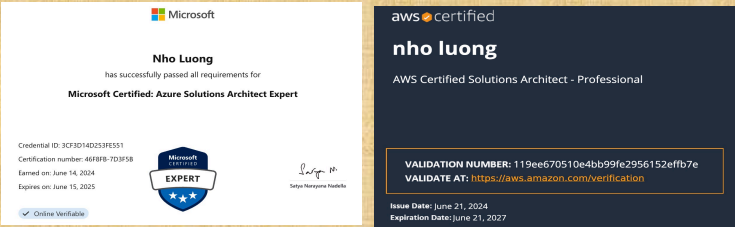# Tips for Visual Studio Lab Management

Author: Nho Luong

Skill: DevOps Engineer Lead

DEVELOP

Visual Studio®

ACCESS

INTEGRATE

Office

Customizable
Processes

Project Server

Version
Control

Build
Automation

Web Access

System Center

Requirements
Management

Test Case
Management

SharePoint

TEAM
FOUNDATION
SERVER

Windows Azure

Project
Management

End-to-End
Traceability

Team Explorer
Everywhere

Analytics

Lab Management

SQL Server

EXTENSIBLE APIs

Author: Nho Luong
Skill: DevOps Engineer Lead

SC-VMM Lab Management Architecture

Author: Nho Luong
Skill: DevOps Engineer Lead

Lab Deployment – SC-VMM

A lab build is requested

TFS SERVER → **BUILD CONTROLLER** → **BUILD AGENT(S)**

If build is OK then lab provisioned

SC VMM

TEST CONTROLLER

Deploy application and run automated tests

DEVELOPER

Debug test environments

TESTER

Run manual tests

HYPER-V HOST

ENVIRONMENT

| VM | TFS AGENT |
| VM | TFS AGENT |

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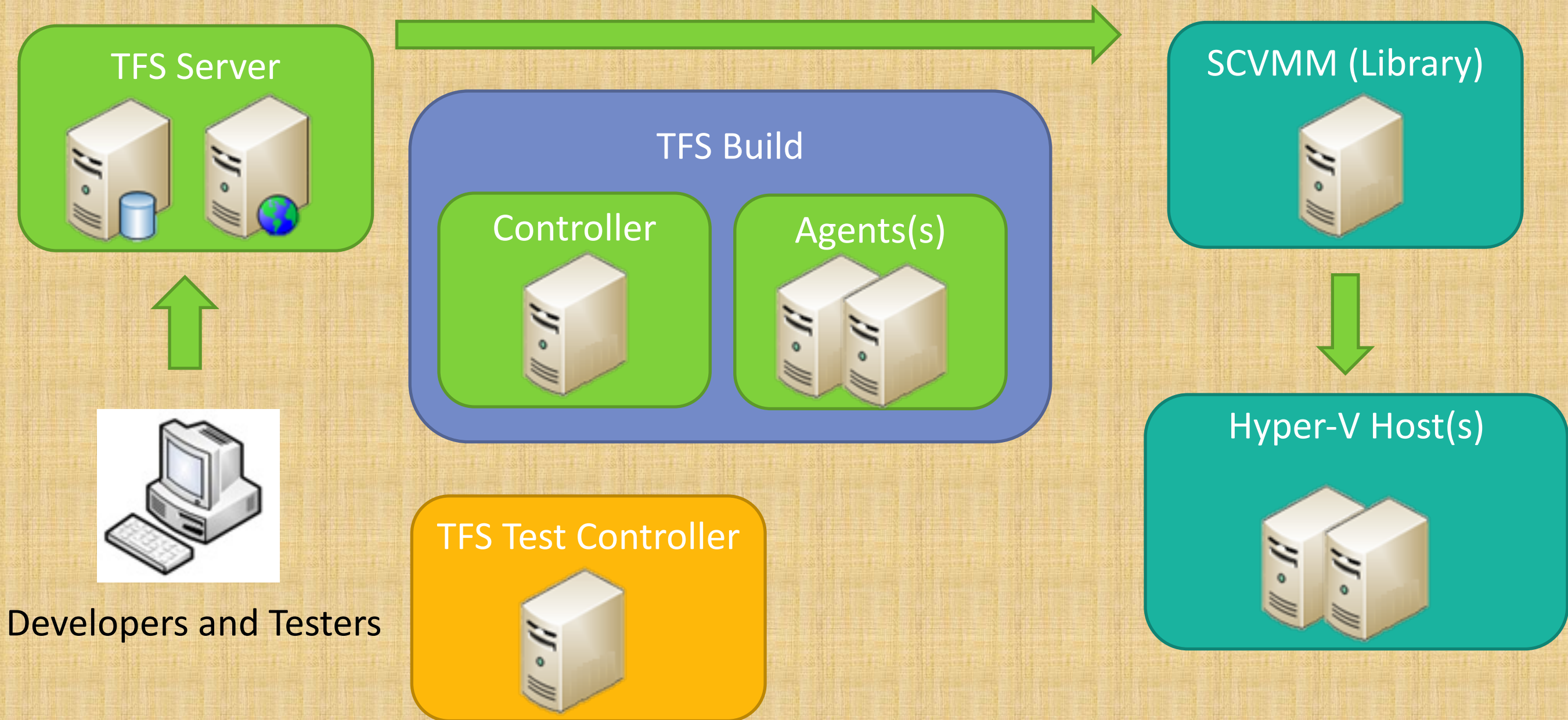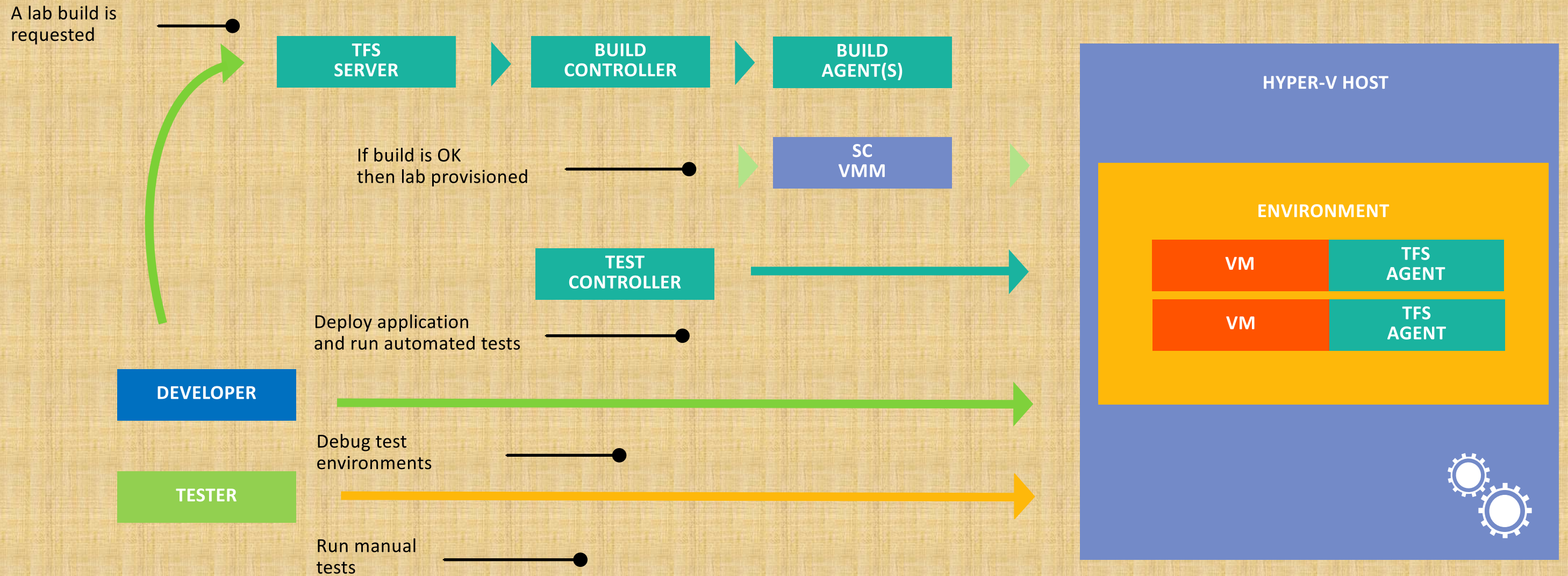
What is Network Isolation?

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Standard Lab Management Architecture

TFS Server

Any PCs and VMs

TFS Build

Controller

Agents(s)

Developers and Testers

TFS Test Controller

Author: Nho Luong
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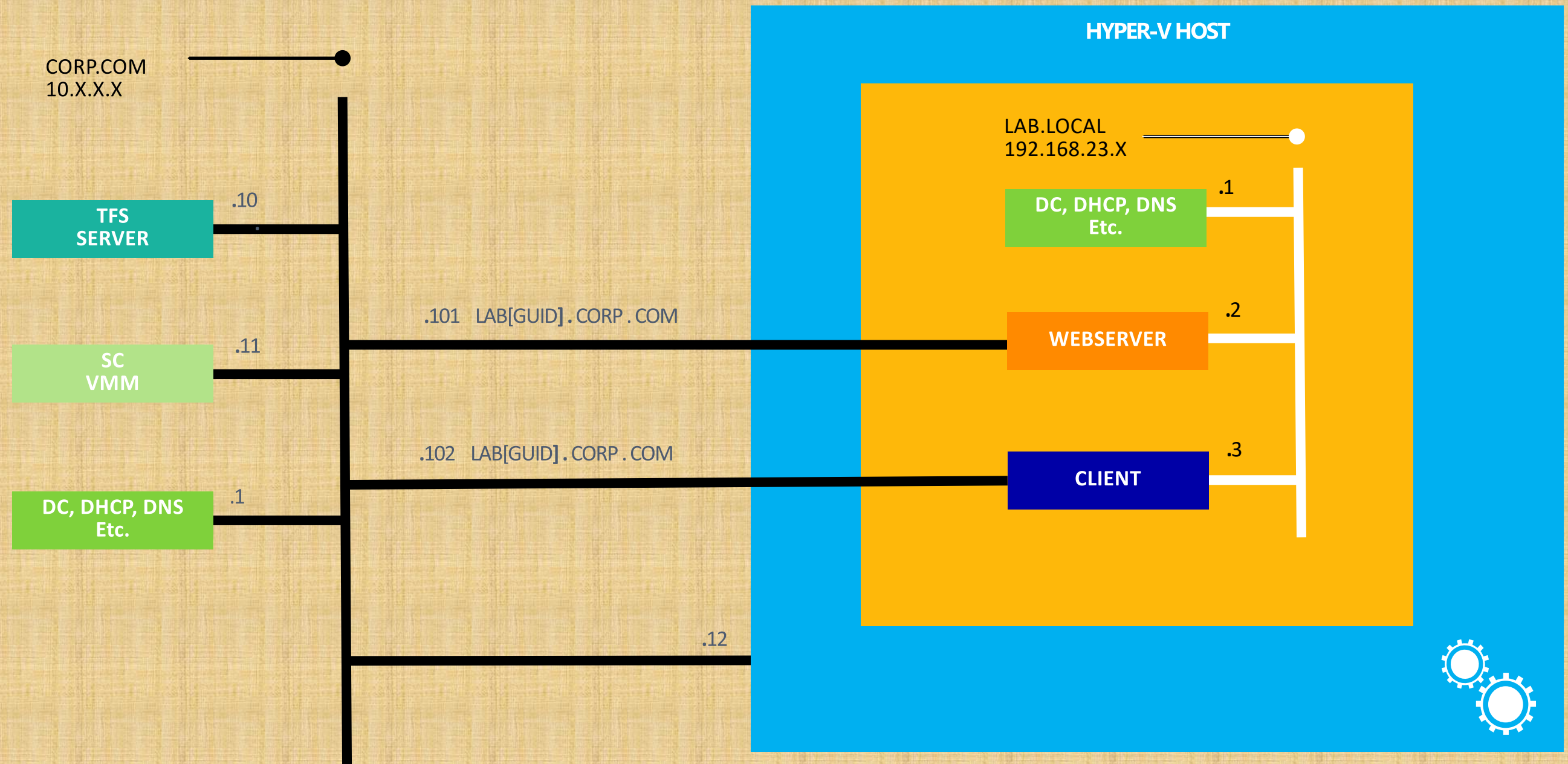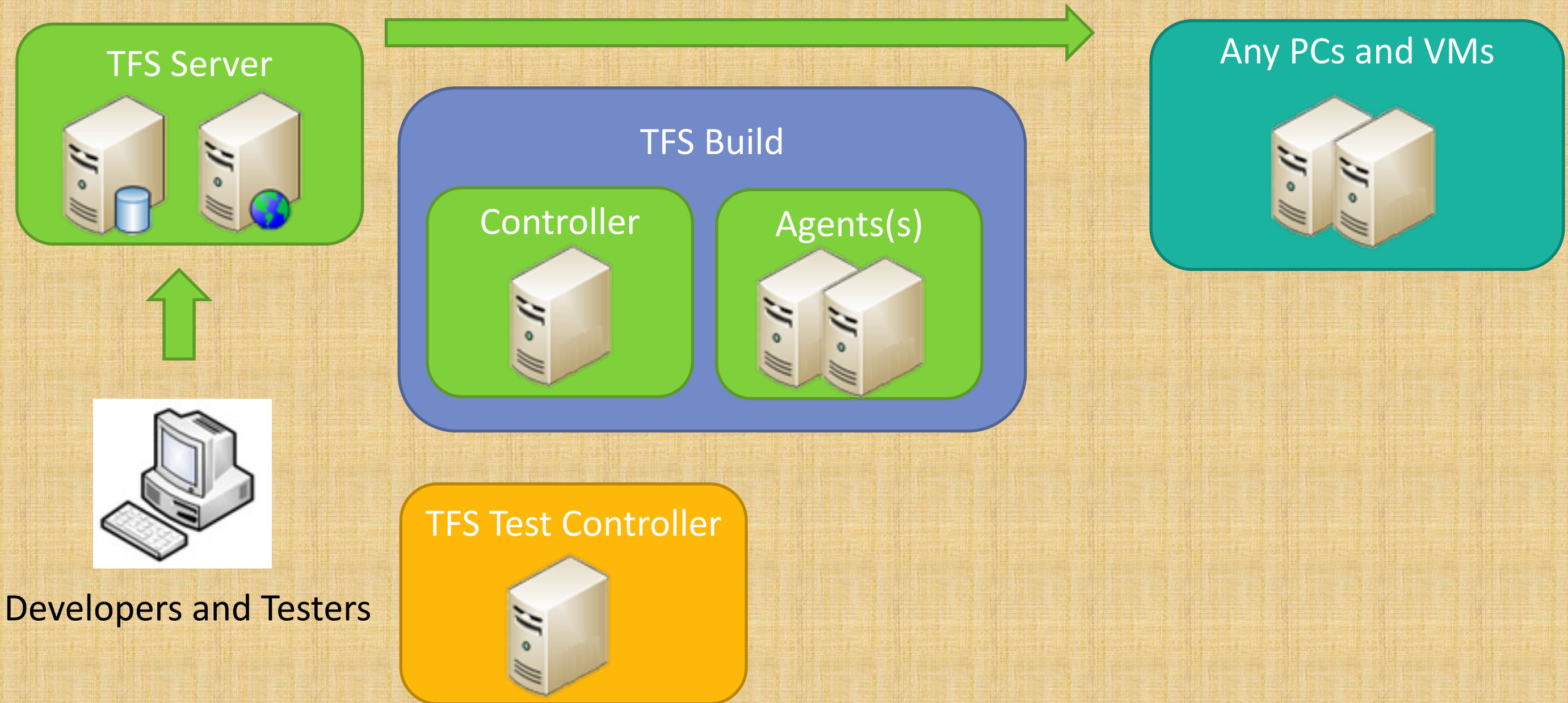
Lab Deployment – Standard

A lab build is requested

TFS SERVER ▶ **BUILD CONTROLLER** ▶ **BUILD AGENT(S)**

TEST CONTROLLER

Deploy application and run automated tests

DEVELOPER

Debug test environments

TESTER

Run manual tests

YOUR NETWORK

ENVIRONMENT

| VM | TFS AGENT |
| PHYSICAL | TFS AGENT |

Author: Nho Luong
Skill: DevOps Engineer Lead
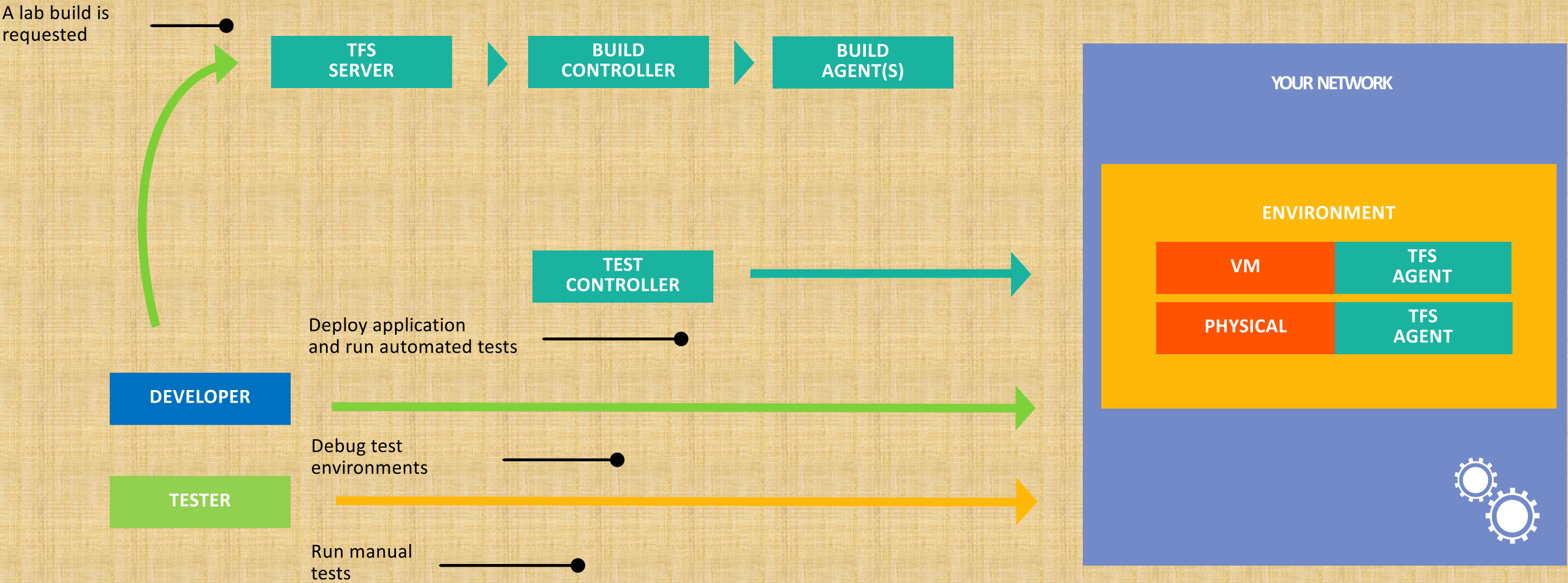
Tips

- You are probably licensed for Lab Management
- Invest in good hardware for VM Hosts
- Look at the ALM Rangers VM Factory as a way to create VMs
- If you wish to use Templates you have to set properties via SC-VMM 2012 now, can't be done in MTM anymore
- VM & Lab Environments are bound to Team Projects, you can move them but it is awkward

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Skill: DevOps Engineer Lead

Tips

- **Don't** create labs directly in the SC-VMM library
  - Build your VMs and domains first
  - Store them in the SCVMM library as VMs
  - Build your network isolated environments from these
  - Only when all is working store the whole environment in the library

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Tips

- Important to consider governance
- Think about dedicated host groups to separate the Lab Management from other VMs
- Don't try to be clever, and be patient
- Don't tinker in SCVMM let Lab Management automation do the work if possible (but you will need to tinker!)
- Remember even if you don't have Hyper-V you can still run standard environments

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Thank You

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