

# Automating AWS and vSphere with Terraform

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## AUTOMATING WITH TERRAFORM



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SOLUTIONS PRINCIPAL

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# Summary



**It's time to Terraform!**

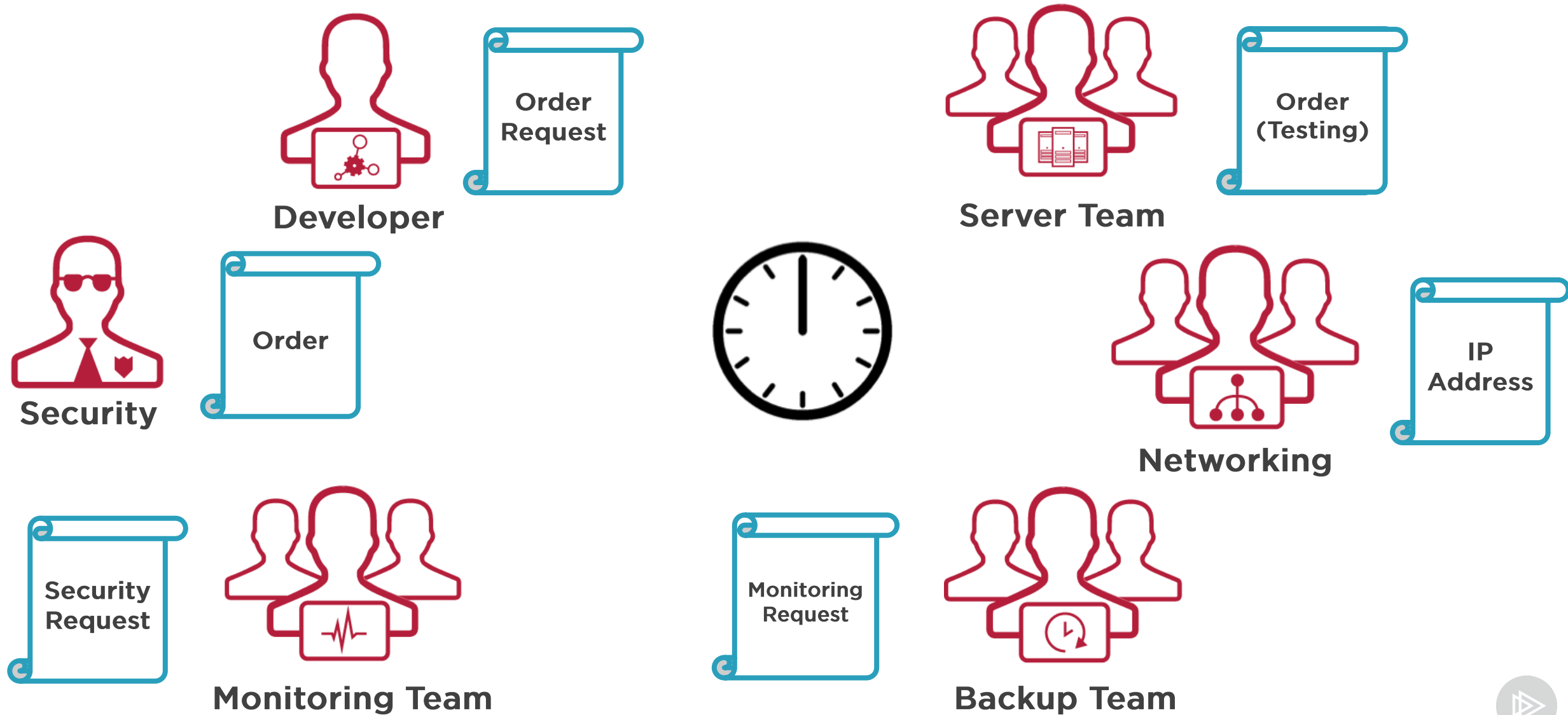
**A quick history lesson...**

**Leads us to...Infrastructure as Code**

**Examples of Terraform in Action**



# THE OLD WAY TO GET AN IT SERVICE



# The Infrastructure as Code (IaC) Way

```
1  provider "aws" {
2      access_key = "████████████████████"
3      secret_key = "██████████████████████████████████████"
4      region     = "us-east-1"
5  }
6
7  resource "aws_instance" "pluralsightExample" {
8      ami          = "ami-ee7805f9"
9      instance_type = "t2.micro"
10     key_name     = "AWS EC2 - SEP 2016"
11 }
```



# Benefits of IaC

**Improved Quality  
from IT to Business**

**Speed**

**Innovation**



# Terraform and Configuration Management



- OS Configuration
  - Application Installation
    - Declarative
- Limited Infrastructure Automation



- Infrastructure Automation
- VM and Cloud Provisioning
- Declarative like Configuration Management Tools
- Limited OS Configuration Management



# Declarative vs Procedural

## Procedural

Connect to VMware vCenter  
Create VM  
Install Windows Operating System  
Configure NIC Settings  
Install Software Package A  
Install Software Package B

## Declarative

Give me a Virtual Machine with the following configuration:

CPU: 2

Memory: 2GB

OS: Windows Server 2012

1 NIC with IP 10.0.0.101/24

Puppet Role: SQL Server



# Orchestration Examples

## Microservices Task Library

Configure F5

Join AD

Request IP

Update Backup

Update DNS

Update Alerting

Configure ASA

Create Snapshot

### Workflow Example A

Request IP

Update DNS

Configure F5

Update Backup

### Workflow Example B

Request IP

Update Alerting

Configure ASA

Join AD





# Demo



## Terraform in Action



# Summary



Learned about Terraform

The Benefits of Infrastructure as Code

The differences between Terraform and Configuration Management Tools

A quick example of Terraform in Action

