

Hands-on Ansible

Introduction



What Is Ansible?

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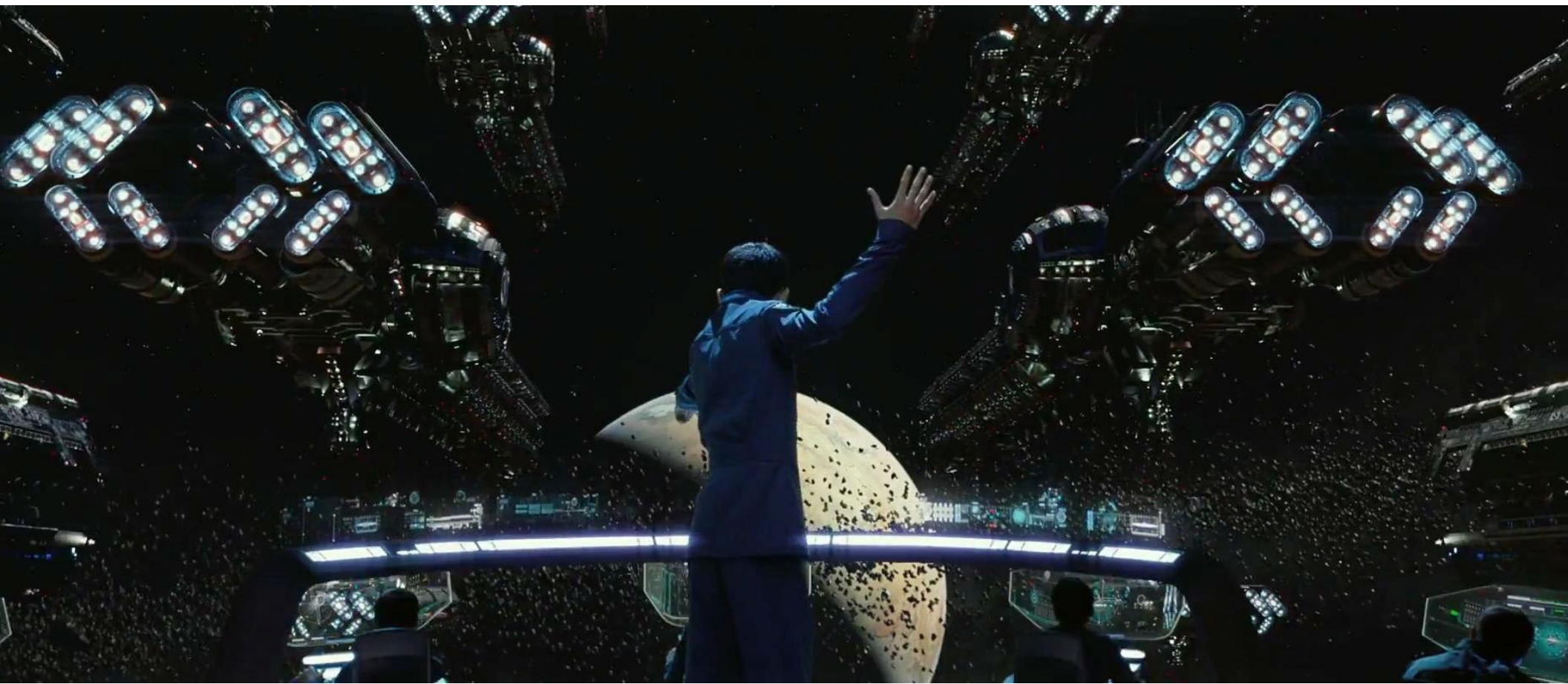


Image Credit: Courtesy of Summit Entertainment







What Is Ansible?

Change
Management

Provisioning

Automation

Orchestration

Change Management

Define a “System State”

Enforce the System State

System State

Apache Web Installed

Apache Web at version x.xx.x

Apache Web Started



CHANGE EVENT

Did the process fail??

Did someone not verify?



Did someone goof up?

Now that's what I like to see!





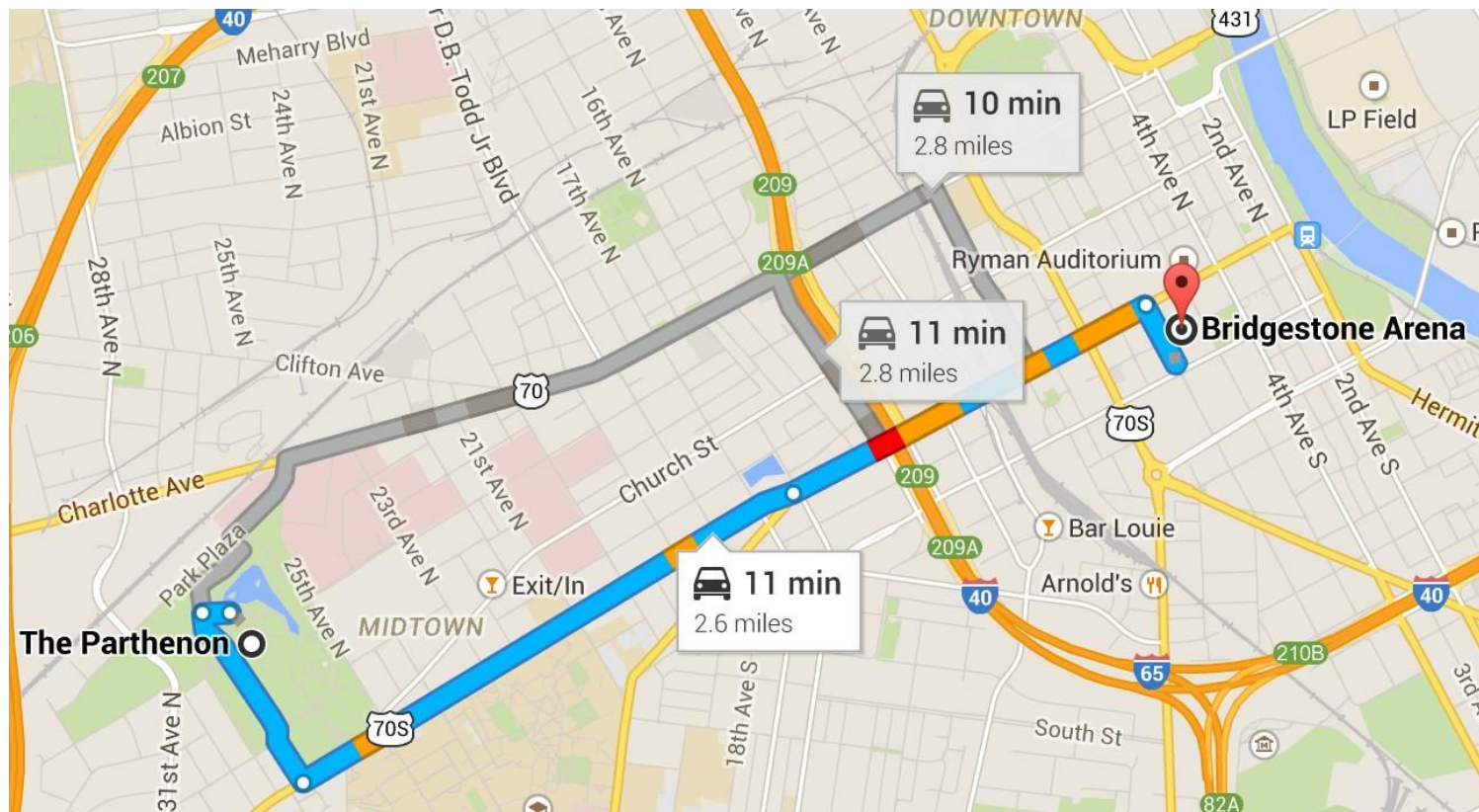
A function is idempotent if repeated applications has the same affect as a single application

IDEMPOTENCE



Defining State

Don't pay attention to the 'HOW', just the 'WHAT'



Provisioning

Prepare a system to make it ready
Transition from one state to a different state

Examples

Make an FTP Server

Make an Email Server

Make a DB Server

Basic OS



Web server



1. Install web software
2. Copy configurations
3. Copy web files
4. Install security updates
5. Start web service

Automation

Define tasks to be executed automatically

Ordered Tasks

Make decisions

Ad-hoc tasks

Set it and Forget it

Run the task

Get a cup of coffee

Walk back to desk seeing tasks finished

Sip your coffee and feel productive

Orchestration

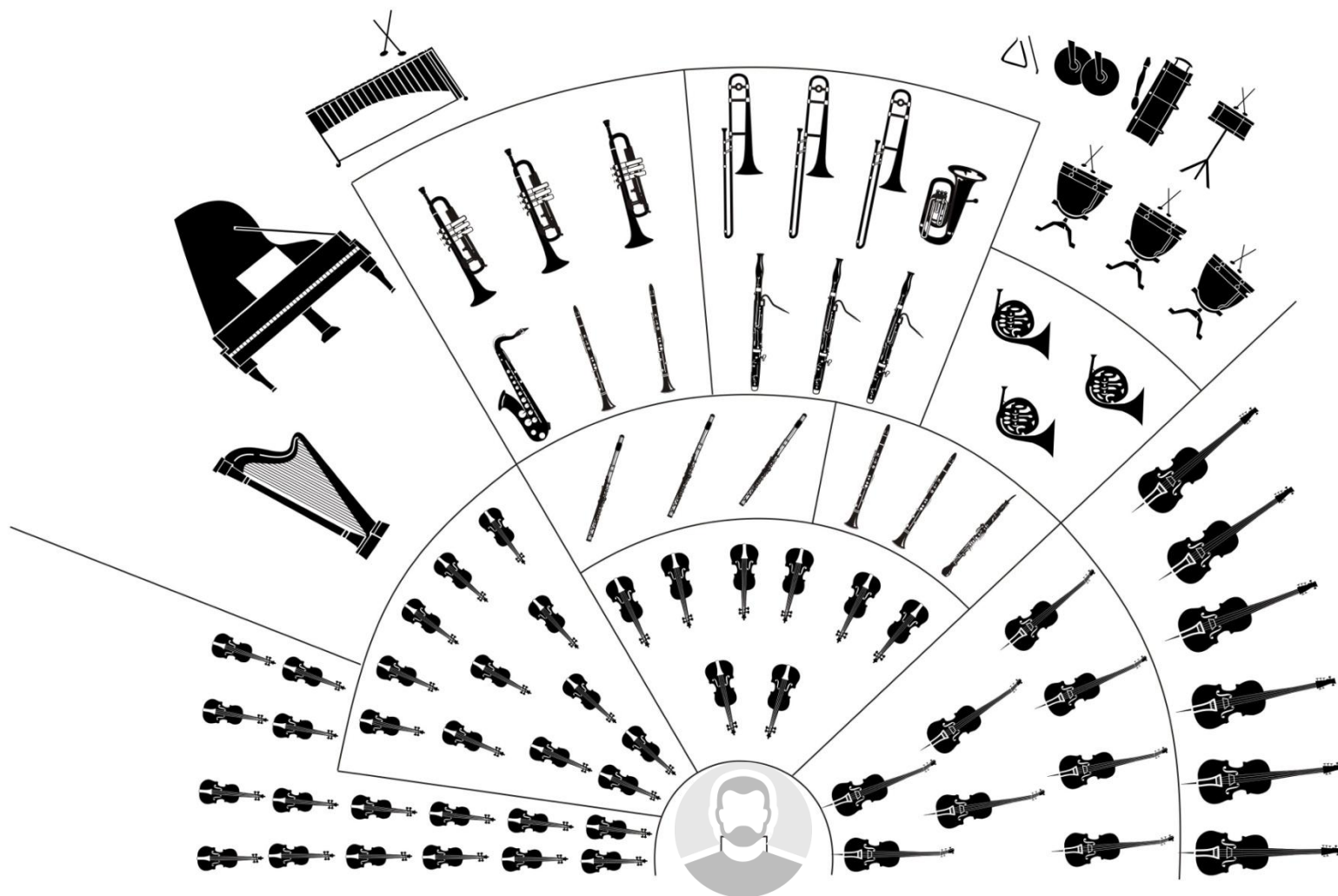
Coordinates automation BETWEEN systems

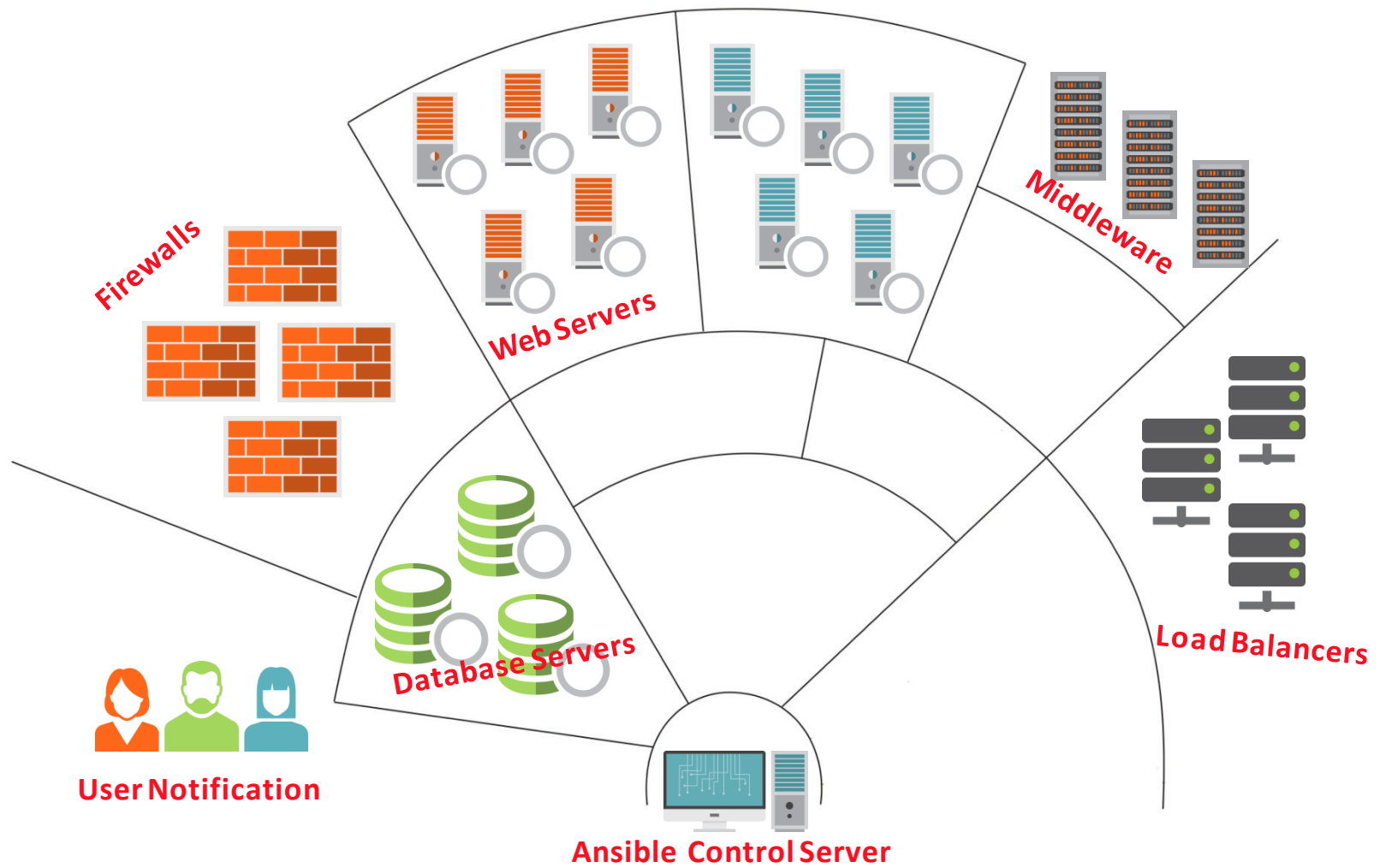
Task 1 - System 1

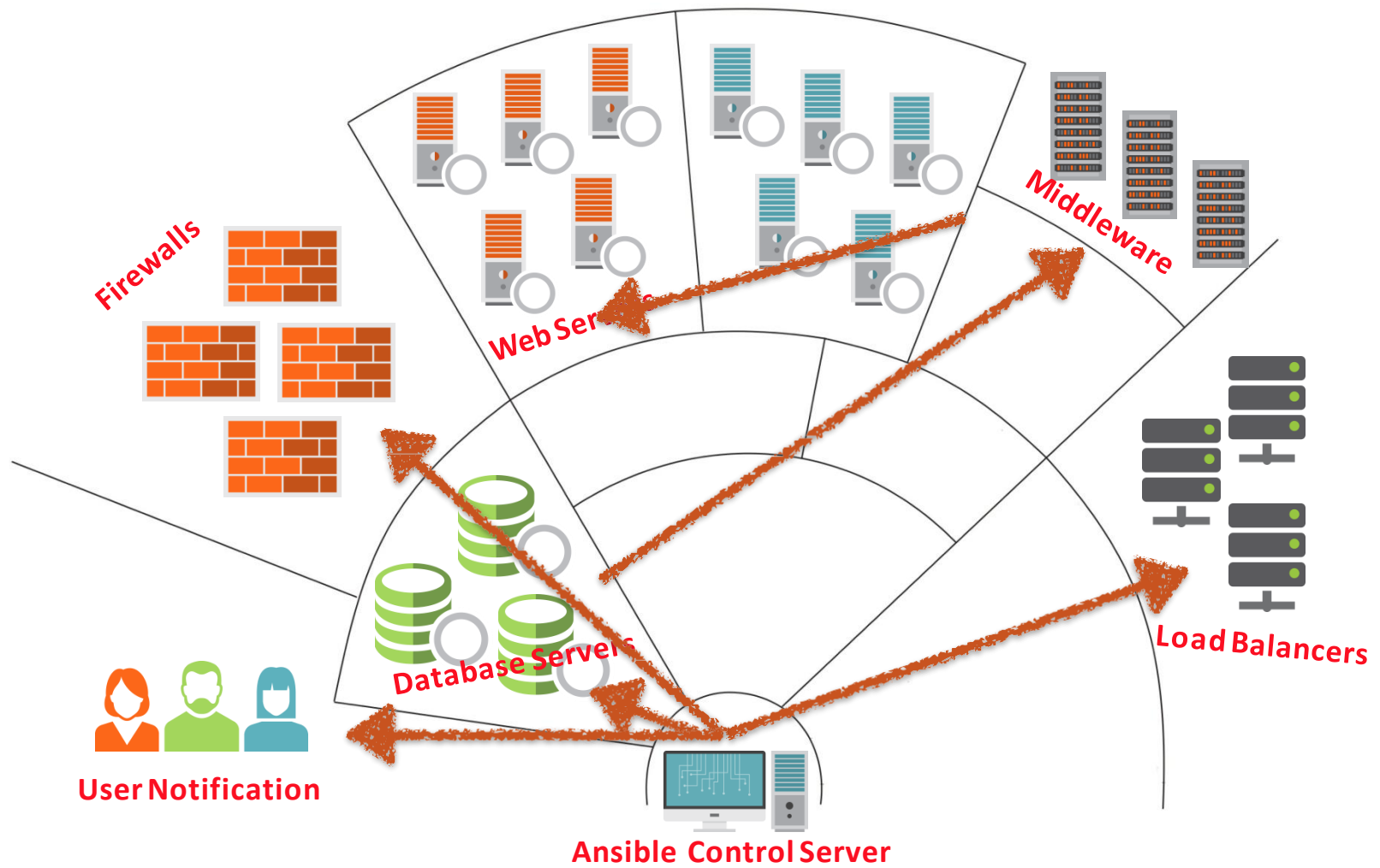
Task 2 - System 2

Task 3 - System 3

Task 4 - System 1







Why Ansible?

What makes it so different?



It's clean!

No agents

No database

No residual software

No complex upgrades

YAML

Ansible Execution

No programming required

NOT a markup language

Structured

Easy to read and write



Built-in security

Uses SSH

Root / Sudo usage

Encrypted vault

No PKI needed



Easy to extend

URL / RESTful calls

Shell Commands

Scripts

Ansible-Galaxy

Ansible Introduction

Ansible IS:

Change Management

Provisioning

Automation

Orchestration

Ansible IS:

Easy to implement

Easy to program

Inherently Secure

Very extendable