ECE 495/595 – Web Architectures/Cloud Computing

Module 5, Lecture 2: Web Application Security – Authentication

Christopher Lamb Ph.D, CISSP, TCEA

University of New Mexico

UNM | Electrical &
Computer Engineering

What is Capistrano?

Capistrano is a distributed system management framework.

It supports:

- Distributed deployments.
- Command distribution.
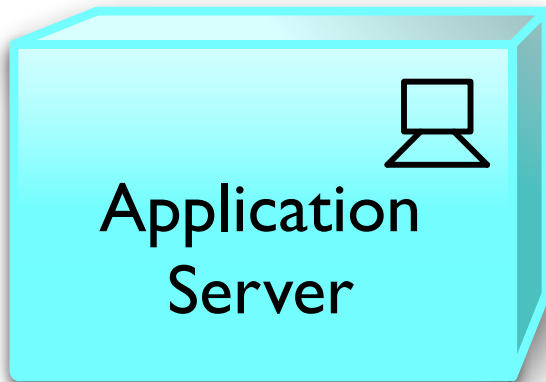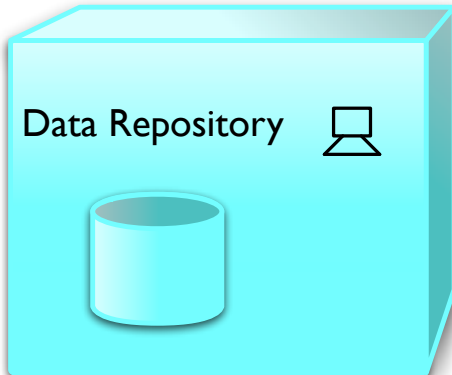- General large-scale system management.

So what?

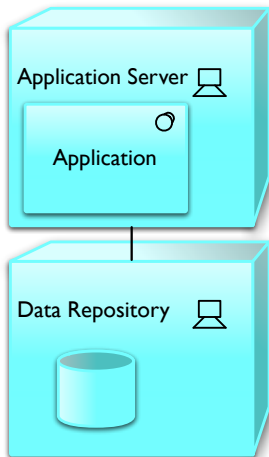THE UNIVERSITY of
NEW MEXICO

Starting out...
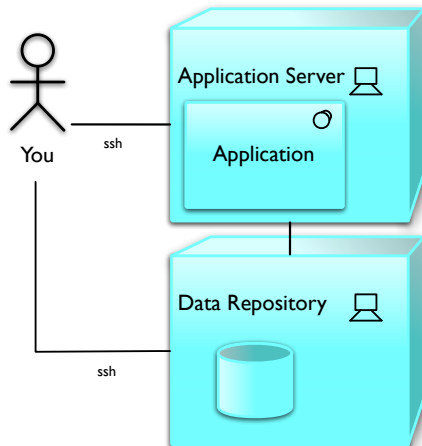
...where to put it?

...and how to store stuff?

...now linking it together...

...and this is how you manage it.

Is this sufficient?
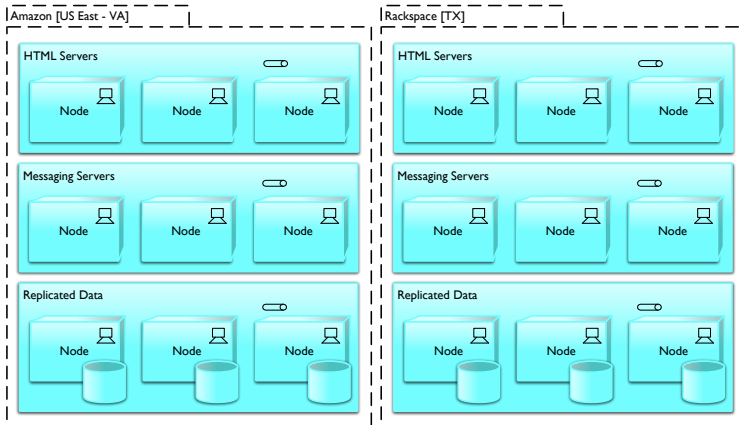
Well, probably okay for:

- School

- Departments

- Small organizations

But honestly, not very real world. Systems with any kind of availability requirements or volume usually have:
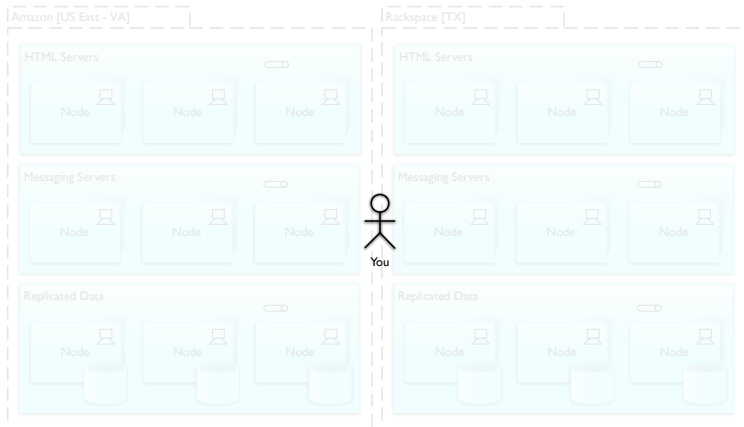
- More systems

- Specialized systems

- More providers

Really? Well, why not?

THE UNIVERSITY of
NEW MEXICO

Typical small deployment...

...and you're responsible for it.

So how do you do it?

Well, you don't want to log into each system to administer manually. And why is that?

- **Scalability** You don't scale. Sorry.

- **Reproducibility** It's very difficult to recreate the same sequence of actions and configurations across multiple systems, so you'll generally script it. Which is what Capistrano does, in a distributed way.

- **Human Error** You make lots of mistakes too. If you can tell a machine what to do, it'll do a better job than you can.

So figure out how to tell machines to configure themselves. Or, use a system built by somebody else to tell machines to configure themselves, like Capistrano.

THE UNIVERSITY of
NEW MEXICO

What you need to do first...

Capistrano can help you deploy applications, but it needs systems first.

You need to have systems set up and configured for use.

- **Chef, Puppet**
- **Vagrant**

They need to have supporting infrastructure installed, like **ruby**, **capistrano**, **bundler**, **rvm**, and **git**.

Setup isn't turnkey, but future use of Capistrano is.

THE UNIVERSITY of
NEW MEXICO

Starting Out

Now, install Capistrano on your workstation:

```
$ gem install capistrano
```

Or use bundler, with a gem file:

```
source :rubygems
gem 'capistrano'
```

Now initialize the project:

```
$ cd <project directory>
$ capify .
```

This creates, in the project directory, a `config` directory
containing a `deploy.rb` file, and a file in the project root named
`Capfile`.

THE UNIVERSITY of
NEW MEXICO

How do these files work?

Capistrano is Biased

Rails heritage
Getting around it

THE UNIVERSITY of
NEW MEXICO

Other Useful Plug-ins