Creating Base Images with Packer

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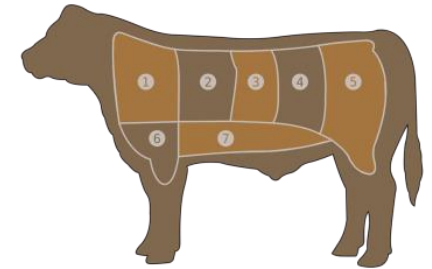
www.paulkirby.me

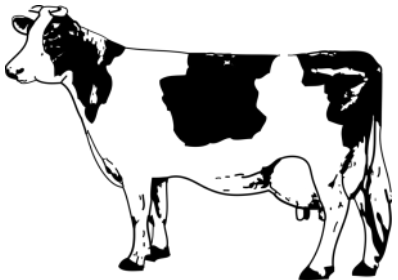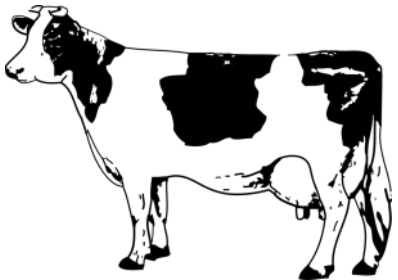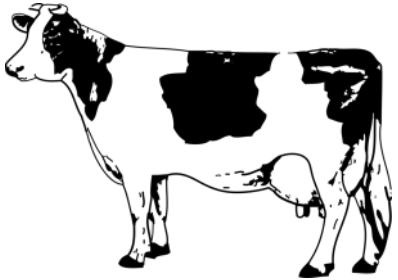# Overview

Provisioners
- Reuse your Existing Work
- Fun with Scripts!
- Move My Files!

User Variables

Bash and Ansible

Provisioners

```
{

    "type": "shell",

    "script": "makeMyCowAwesome.sh",

    "only": ["MyCowServer-AWS"]

}
```

Provisioner Types

Configuration Management

File

Script

Configuration Management Provisioners

Demo

Configuration Management Provisioners

- Reuse your work!

- Ansible-Based

- "Hands-on Ansible" by Aaron Paxson

Globomantics Middle Tier

NGINX
- Proxy, SSL offload, access logging
- Installed via Ansible

App
- Written in Go
- Deployed manually
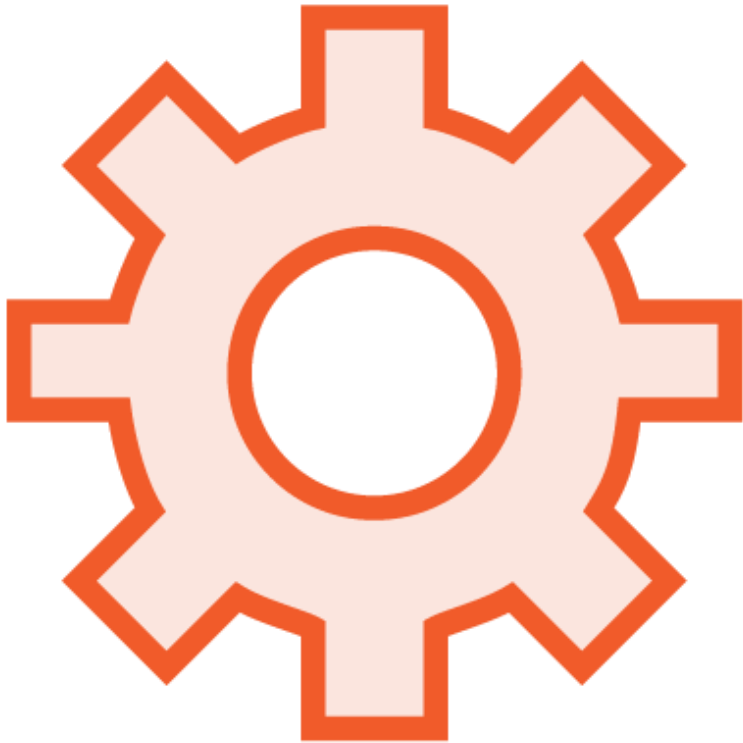
File Provisioners

Binaries, config files, HTML, graphics, etc.

Full directories!

Download too!

Move to temp directory first
- Doesn't set permissions

Demo

File Provisioners

- Configuration and binaries

- A few gotchas!

- Ties to next step, script provisioners

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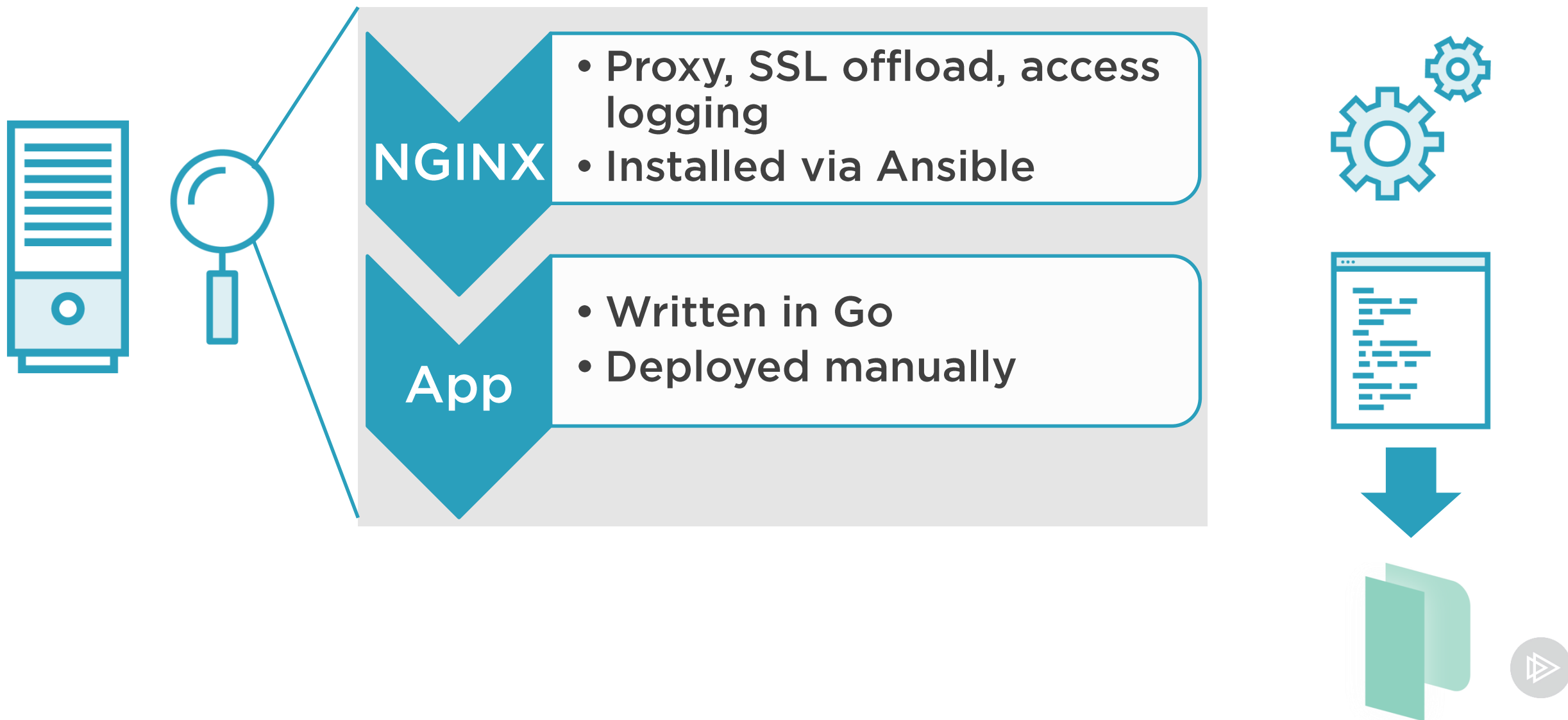
Script Provisioners

Local Shell

Remote Shell

Powershell

Windows Shell

Windows Restart

Demo

Script Provisioners

- Inline and file-based
- Tips and tricks for error handling

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User Variables

```
{

    "variables": {

        "aws_region": ""

    },

    "builders": [{

        "type": "amazon-ebs",

        "region": "{{user `aws_region`}}"

    }]

}
```

User Variables – Environment Variables

```json
{

    "variables": {

        "aws_region": "{{env `AWS_REGION`}}"

    },

    "builders": [{

        "type": "amazon-ebs",

        "region": "{{user `aws_region`}}"

    }]

}
```

Built-In Functions

```
build_name

build_type

isotime [FORMAT]

lower

pwd

clean_ami_name

timestamp

uuid

…
```

clean_ami_name

Amazon Only

Remove unwanted characters

Apply with pipe
- `{{ "10:02:36" | clean_ami_name }}`
- `Output: 10-02-36`

Commonly used with isotime

Timestamp

Replace with Unix Timestamp

Keep Image Names from Colliding

User Variables - Setting

```
> packer build –var 'aws_region=us-west-1' template.json


> packer build –var-file=variables.json template.json


{

    "aws_region": "us-west-1"

}
```

Demo

User Variables

- Simple usage in fields

- Fun technique – script templating!

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Summary

Specialize your Cow Servers!

Reuse your Existing Work!

Infinite Flexibility

Next: Cross-Provider Images & Post-Processors