

# Ansible for Legacy Systems

## Overview and Strategy

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# What we'll discuss today

- Why use Ansible on Legacy?
- Compatibility Notes
- Suggested Strategy
- Example of Incremental Projects

## Why Use Ansible on Legacy?

- Everyone like to talk about New Things
  - Greenfield deploys promise a reset of history
  - Less need to change existing patterns
  - The hope that this time we will Do Things Right
- But legacy systems persist!
  - Longstanding platforms
  - Often business critical
  - Heavy costs associated with downtime or runtime errors
  - Deep layers of configuration and management infrastructure

## ***Seriously***, Why Use ***Ansible*** on ***Legacy***?

- The reasons we avoid it are why we should!
- The problems are known
- Complexity means plenty of small, high-impact improvements are possible
- Expense of downtime means ease of demonstrating project ROI

## First, A Note on Compatibility

- Since Ansible 2.5, managed nodes require a minimum of **Python 2.6** or **3.5**
  - Individual modules may have higher requirements
- For Ansible 2.11, control node has a “soft dependency” on Python 3.8
- Consult the supported [configurations page](#) for the list of supported platforms.

## Strategy: Salami Slicing

- This is not one major project. This is a series of small projects.
- Each project has a specific, targeted goal.
- Aim for a specific improvement to stability, quality of life, and/or operational procedure
- Be pragmatic, but keep the future in mind
- “If the next project isn’t approved, we’ve still made a difference.”

# Examples

```
admin@server1 bigapp]$ ls
bin  configs  lob1  lob2  lob3  lob4
admin@server1 bigapp]$ ls bin/
prep          prep.191101  prep.CHG00385474  run_job.sh.3
prep.1        prep.200312  run_job.sh        run_job.sh.3_old
prep.171003   prep.210618  run_job.sh.1      run_job.sh.CHG00374193
prep.180525   prep.bak     run_job.sh.2      run_job.sh.old
admin@server1 bigapp]$ ls configs/
lob1.conf      lob1.conf.7  lob2.conf.4  lob3.conf.1  lob3.conf.9  lob4.conf.6
lob1.conf.    lob1.conf.8  lob2.conf.5  lob3.conf.2  lob4.conf     lob4.conf.7
lob1.conf.1    lob1.conf.9  lob2.conf.6  lob3.conf.3  lob4.conf.    lob4.conf.8
lob1.conf.2    lob2.conf    lob2.conf.7  lob3.conf.4  lob4.conf.1   lob4.conf.9
lob1.conf.3    lob2.conf.   lob2.conf.8  lob3.conf.5  lob4.conf.2
lob1.conf.4    lob2.conf.1  lob2.conf.9  lob3.conf.6  lob4.conf.3
lob1.conf.5    lob2.conf.2  lob3.conf    lob3.conf.7  lob4.conf.4
lob1.conf.6    lob2.conf.3  lob3.conf.   lob3.conf.8  lob4.conf.5
```

## Phase 1: Basic Version Control

- Goal: Clean the folders, deploy files from git
- Process Improvements:
  - Better change staging
  - Stop manual edits of controlled files
  - Easier rollback to current approved state
  - Old file states accessible through version control
- ROI wins:
  - Easier change execution
  - Fewer outages from out-of-band changes
  - Easier reversion of changes means shorter outages

```
admin@server1 roles]$ tree bigapp/  
bigapp/  
├── defaults  
│   └── main.yml  
├── files  
│   ├── lob1.conf  
│   ├── lob2.conf  
│   ├── lob3.conf  
│   └── lob4.conf  
├── handlers  
│   └── main.yml  
├── meta  
│   └── main.yml  
├── README.md  
├── tasks  
│   └── main.yml  
├── templates  
│   ├── prep.j2  
│   └── run_job.sh.j2  
├── tests  
│   ├── inventory  
│   └── test.yml  
└── vars  
    └── main.yml  
  
8 directories, 14 files
```



## Phase 2: Templates

- Goal: Templated configs and scripts
- Process Improvements:
  - Use templating to fill in or generate configs
  - Draw from Source of Truth
  - Reduce manual editing
- ROI wins:
  - Further reduce outages from manual edits

## Phase 3: Ambition Grows

- Goal: Refactoring
- Ideas:
  - Use Ansible templating for node-specific logic
  - Rework portion of LOB buildout
  - Replace management scripts with Ansible Playbooks

# Summary

- Incremental projects
- Pragmatism
- Every win is a win



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