

**adaptTo()**

APACHE SLING & FRIENDS TECH MEETUP  
BERLIN, 28-30 SEPTEMBER 2015

Updating Apache Sling based Applications  
Dominik Suess, Adobe

# About the Speaker

- Initiator of adaptTo()
- Software Engineer, Adobe



# The live after initial deployment

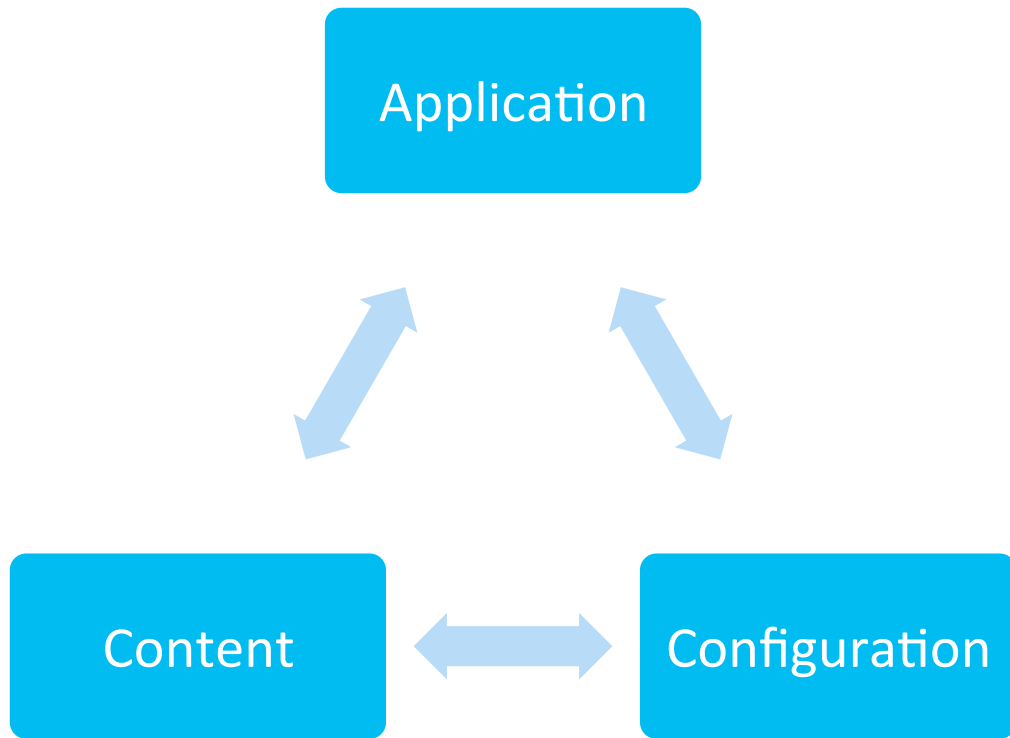




# Maintenance and Evolution



# Update relevant pieces of an instance



## Application

- No changes between versions  
(immutable characteristic)
- Defines behavior of the system based on given content and configuration
- Defines available ResourceTypes & Services
- Often implicitly defines the structure of Resources (Hardwiring Attributes to be looked up)

## Content

- Mutable data to be presented
- Constant changes & additions
- Characteristic (Size & Count) has biggest impact on performance
- Content structure is influenced by application

#1 Try just to add and not to alter sample & test data





## #2 Avoid the need to alter content for changed application behavior

2

## Configuration

- Only rarely changed but deployment independent
- Scopes might vary (global vs subtree)
- Impacts behavior of application
- Changes to configuration should be tested

# Staging update deployments

- Similar Infrastructure (HW / OS / Backends)
- Realistic Data (Backstaging)
- Avoid differences between the installables

## #3 Limit differences between stages

3

## #4 Unify installables between stages



# Deployment process

- Needs to be the same on all stages
- Needs to be automated as much as possible
- Differences need to be static configuration
- Needs to take failure and rollback into account



## #5 Don't alter deployment process between stages

5

## #6 Automate deployment process

6

# #7 Extract userinput for deployment in versionable configuration

7

# Smoke Testing

- Verify success in limited time frame
- Subset of a full test suite
- Test destructive / irreversible operations
- Sling health checks for non-destructive tests

# #8 Integrate automated smoke tests in your scripted deployment

# 8

## #9 Consider automated rollback

9



Of specific interest for update deployments:

- Regression Testing
- Load-, Stress- & Soak-Testing



# #10 Include upgrade specific tests and metrics in your test suite

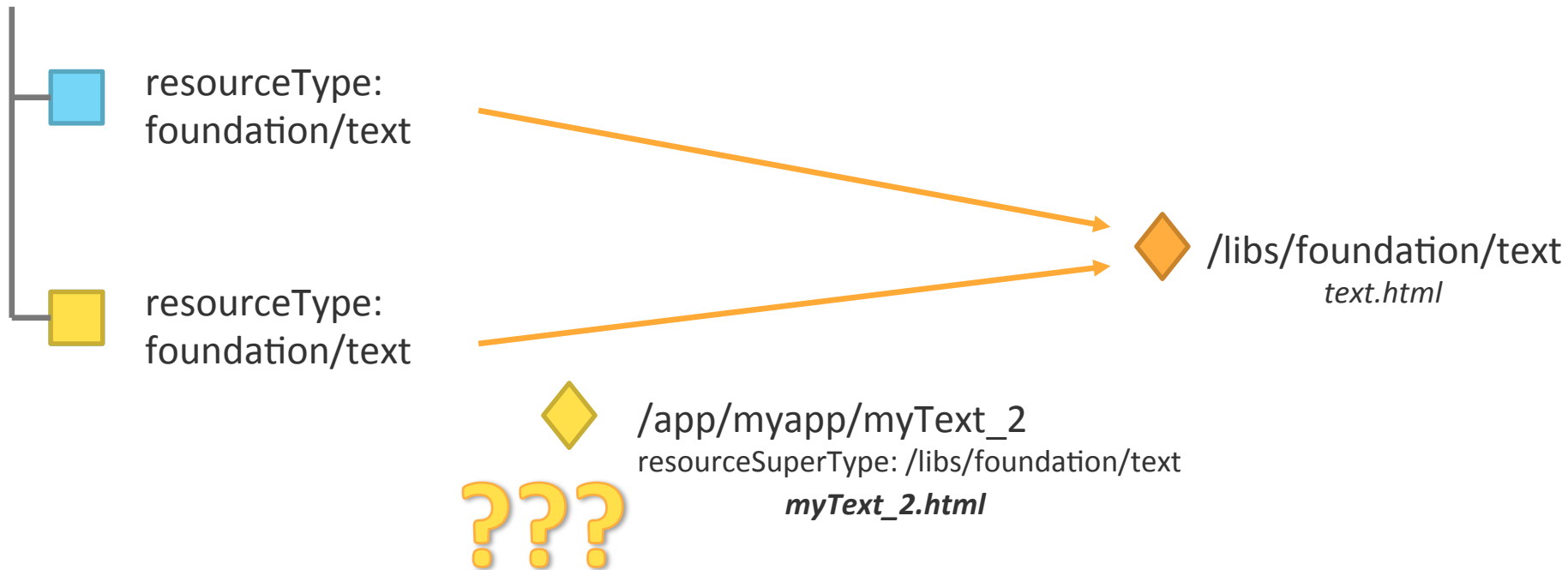
# 10

# My 10 recommendations

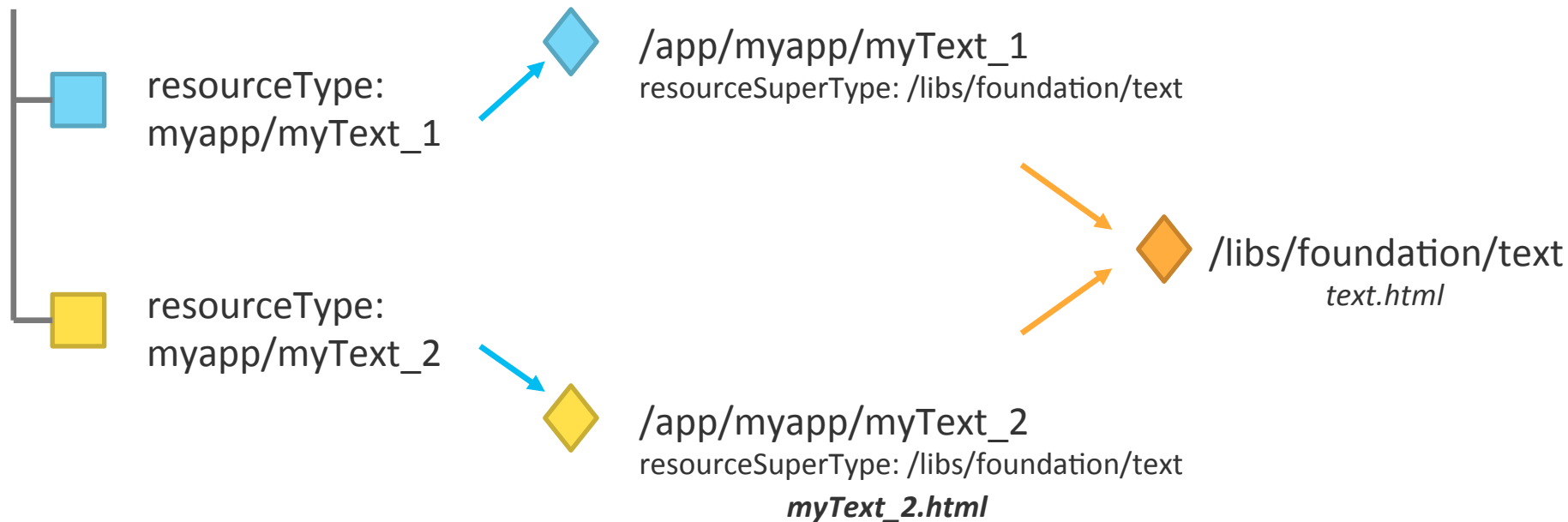
1. Try just to add and not to alter sample & test data
2. Avoid the need to alter content for changed application behavior
3. Limit differences between stages
4. Unify installables between stages
5. Don't alter deployment process between stages
6. Automate deployment process
7. Extract userinput for deployment in versionable configuration
8. Integrate automated smoke tests in your scripted deployment
9. Consider automated rollback
10. Include upgrade specific tests and metrics in your test suite



# An implementation Situation



# An implementation Pattern



# Q & A