



MASTER OF PUPPETS

SESSION 5063
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ADU 8-10 NOVEMBER 2017

PRESENTER

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DBA (Oracle/MSSQL/Postgres/mysql) - 7+ Years

Systems Administration (Linux/Storage) - 3 Years

Infrastructure Architect for PeopleSoft CS 9.0 Upgrade (2011)

Infrastructure Architect for PeopleSoft CS 9.2 Upgrade (2017)



UNIVERSITY OF SOUTH AUSTRALIA

6 Campuses
4 City, 2 Regional
35,000+ Students

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UNISA & PEOPLESOFT

Campus Solutions v9.2
(Update Image 4)
PeopleTools 8.55.15

CRM for Higher Education v9.1
(Bundle 13)
PeopleTools 8.53.04

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OVERVIEW — MASTER OF PUPPETS

Using Puppet to automatically deploy PeopleSoft Infrastructure

1

WHY PUPPET & PEOPLESOFT

The what, why and how its benefited UniSA's CS 9.2 Upgrade

2

PUPPET & THE DPK

Using the PeopleSoft DPK along with Puppet

3

TIPS & TRICKS

The little things learnt along the way



WHY PUPPET & PEOPLESOFT

The what, why and how
puppet automation
benefited UniSA's CS 9.2
Upgrade project

THE UPGRADE



9.0



9.2



8.54



8.55



6



7



Physical



Virtual

THE TIMELINE

~~12~~
Months

~~6~~
Months

5
Months

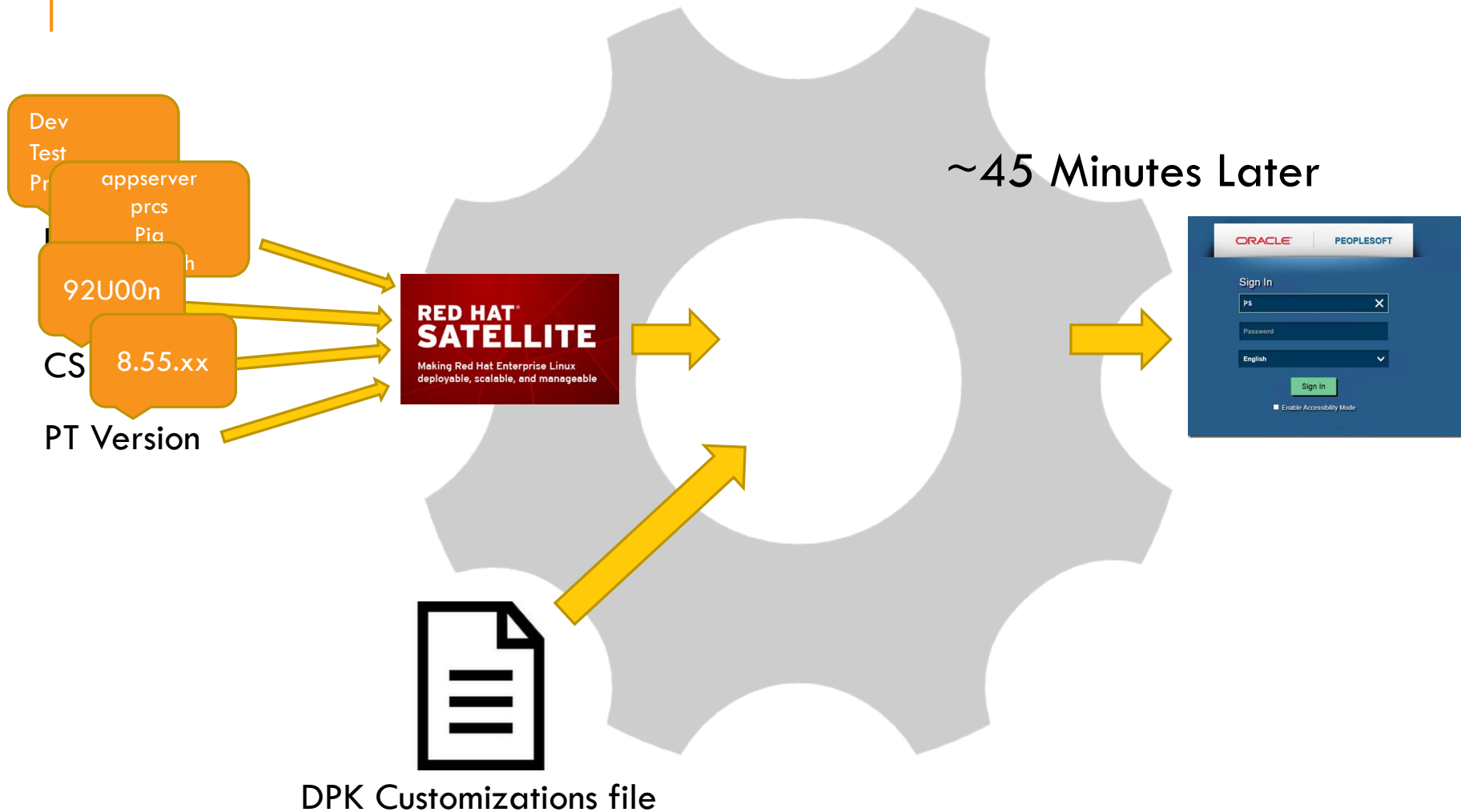
Go-Live 9am



WHY PUPPET AUTOMATION?

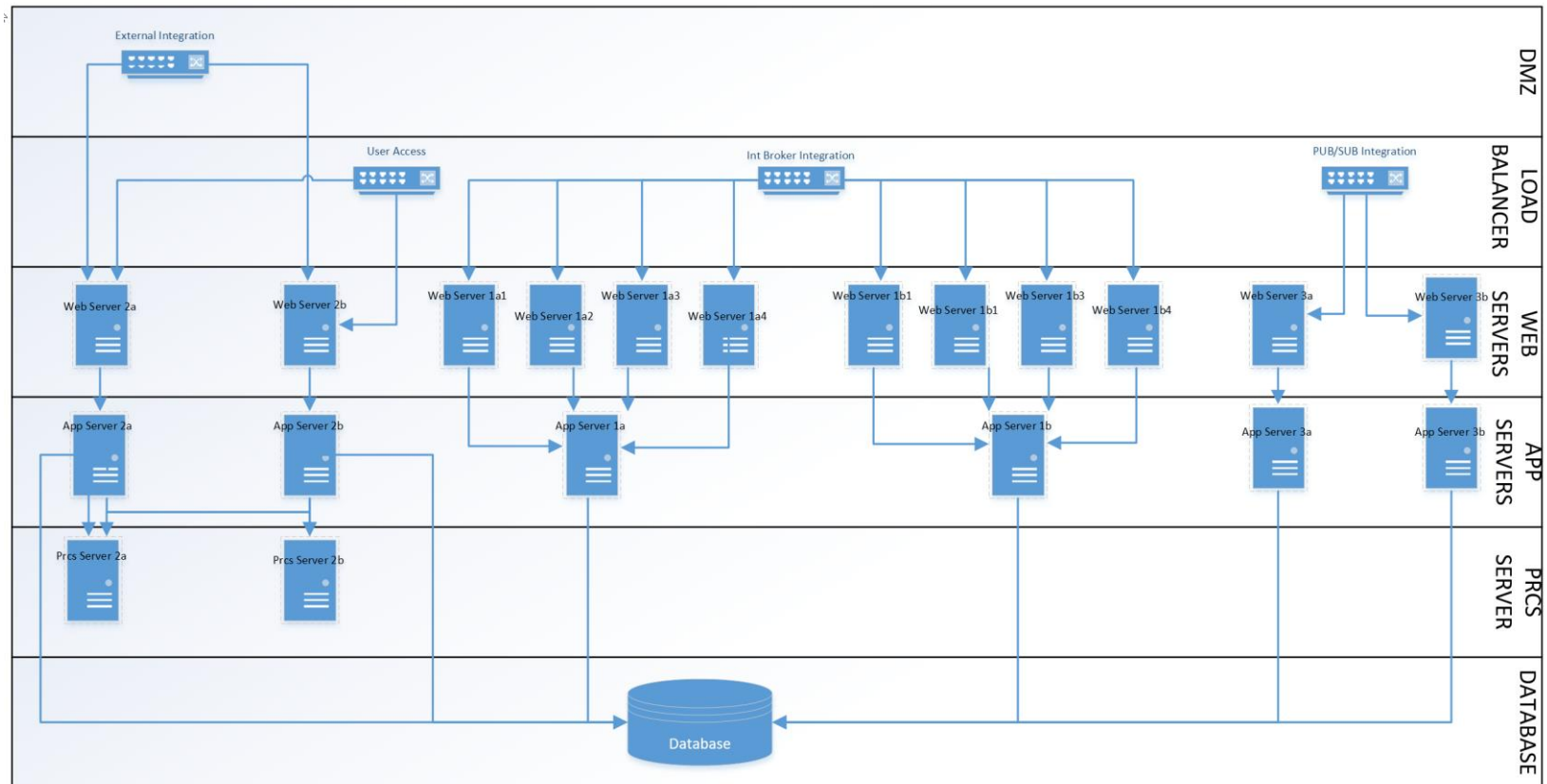


WHAT DID IT ACHIEVE?



IN THE BIGGER PICTURE

System Architecture Redesign





PUPPET & THE DPK

Using the PeopleSoft DPK
along with Puppet

PEOPLESOFT DPK

Use the “Native OS”
Download for deployment
purposes



The DPK is just a collection of Puppet Modules wrapped in an install script

AVAILABLE FOR:

- PeopleTools 8.55.01 +
- Campus Solutions 9.2
- Elastic Search
- Microfocus Cobol (This can be merged into the PT DPK)

THINGS THE DPK ASSUMES



The OS customizations from the Oracle Template have been applied:

- All the required packages are installed
- Folder structures exist
- Ruby + Ruby Gems are installed:
 - Puppet
 - Hierarchical-yaml
- Some of the packages are contained within the DPK itself

RUNNING THE DPK -PSFT-DPK-SETUP (USING THE SCRIPTS)

- Does a lot of the pre-work required
- Requires manual inputs
- No option for a response file
- Requires parameters for:
 - Environment Type
 - Domain Type
- DPK Installation instructions are good for this type of deployment



DKP KEY FILES — DEFAULTS.YAML

<PUPPET_HOME>/data

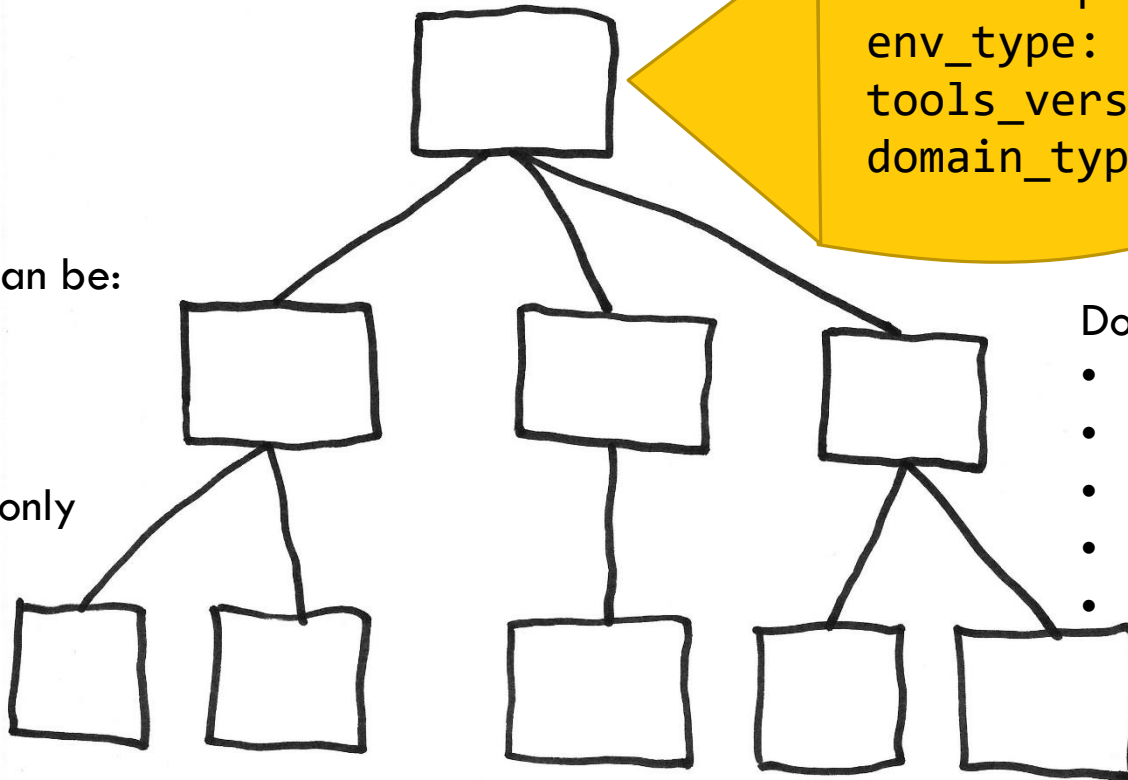
ensure: present/absent
env_type: midtier
tools_version: 8.55.14
domain_type: appserver

Env_type can be:

- fulltier
- midtier
- Ddtier
- pshomeonly

Domain_type can be:

- tools_home
- appserver
- prcs
- pia
- appbatch



DKP KEY FILES- PSFT_CUSTOMIZATIONS.YAML

<PUPPET_H

Database Settings

PIA Settings

DPK/Archive Paths

DB Platform

PS Home

Java Home

Weblogic Home

Oracle Client

- psft_dep

User Definitions

Group Definitions

Kernel Parameters

Ulimit Settings

- psft_unix_system.yaml



STRINGING THE PUPPETS TOGETHER

Creating a puppet module for automated process for deployment

- 1) Install packages (RPM,Ruby gems)
- 2) Create users/groups
- 3) Create home/app directories
- 4) Copy DPK files to host
- 5) Copy puppet files into puppet home
- 6) Deploy CS92 Application files
- 7) Deploy PT855 DPK
- 8) Post Deploy File Customizations



MANUALLY DEPLOY TOOLS DPK

```
puppet apply -e 'include ::pt_role::${pt_profile_name}' --parser future
```

Pt_profile_name options:

- pia: pt_tools_pia
- appserver: pt_tools_appserver
- appbatch: pt_tools_appbatch
- prcs: pt_tools_prcs





TIPS & TRICKS

The little things we learnt
along the way.

CUSTOMIZATION QUIRKS

Add Cobol install into deployment:

```
setup_cobol: true
cobol:
  location: "%{hiera('pt_location')}/cobol/svrexpr.5.1.WP11"
  license_serial_number: ""
  license_key: ""
```

This doesn't install the
ULP

Each must be unique

Groups:

```
psft_runtime_group_name: psft
psft_app_install_group_name: appinst
oracle_install_group_name: oinstall
oracle_runtime_group_name: dba
```

Each must be unique

Users:

```
psft_install_user_name: psadm1
psft_runtime_user_name: psadm2
psft_app_install_user_name: psadm3
oracle_user_name: oracle
```

CUSTOMIZATION QUIRKS

PIA Domains:

pia_domain_list:

```
"{%hiera('pia_domain_name')}":
  os_user:                "{%hiera('domain_user')}}"
  ps_cfg_home_dir:        "{%hiera('ps_config_home')}}"
  gateway_user:           "{%hiera('pia_gateway_user')}}"
  gateway_user_pwd:       "{%hiera('pia_gateway_user_pwd')}}"
  auth_token_domain:      ".{%::domain}"

  webserver_settings:
    webserver_type:        "{%hiera('webserver_type')}}"
    webserver_home:        "{%hiera('weblogic_location')}}"
    webserver_admin_user:  system
    webserver_admin_user_pwd: <WEBSERVER_ADMIN_PWD>
    webserver_admin_port:  "{%hiera('pia_http_port')}}"
    webserver_http_port:   "{%hiera('pia_http_port')}}"
    webserver_https_port:  "{%hiera('pia_https_port')}}"

  site_list:
    "{%hiera('pia_site_name')}":
      appserver_connections: "{%hiera('pia_psserver_list')}}"
      domain_conn_pwd:       "{%hiera('domain_conn_pwd')}}"
      webprofile_settings:
        profile_name:        "{%hiera('pia_webprofile_name')}}"
        profile_user:         PTWEBSERVER
        profile_user_pwd:     <WEBPROFILE_USER_PWD>
        report_repository_dir: "{%hiera('report_repository_dir')}}"
```

Can define
multiple of these
to create multiple
PIA's

CUSTOMIZATION QUIRKS

- Passwords can be encrypted in the `psft_customization.yaml`
- Run the following from `<puppet_home>/secure`

```
eyaml encrypt -s <password>
```

- Copy the encrypted output into the customization file
- Key pairs for encryption stored in `<puppet_home>/secure/keys`
- If you want to use the same encrypted password on multiple servers....
- **Copy the same key pair to the other servers**



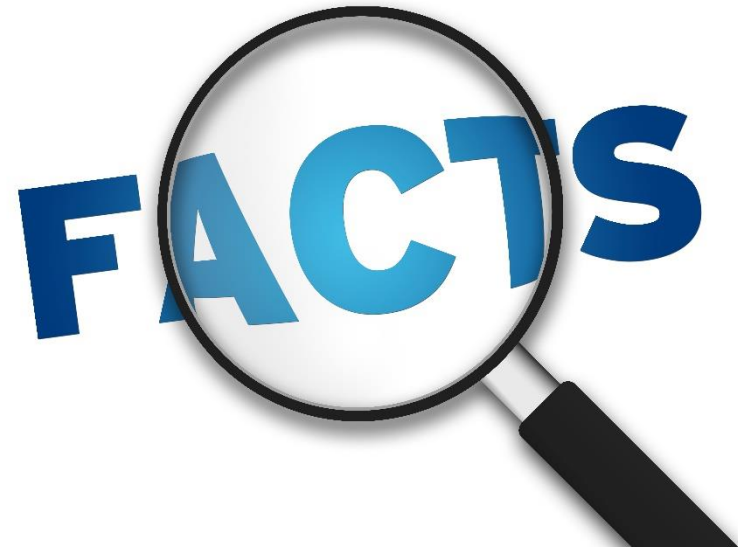
WEBLOGIC CONFIGURATIONS

- Custom Weblogic Settings can be defined
- Anything that is accessible via the WLST can be set



```
config_settings:
  Servers/PIA:
    CustomIdentityKeyStorePassPhrase: ENC[PKCS7,MIIBeQYJK]
    CustomTrustKeyStorePassPhrase: ENC[PKCS7,MIIBeQYJK]
    KeyStores:
      CustomIdentityAndCustomTrust
  Servers/PIA/SSL/PIA:
    ServerPrivateKeyAlias: pskey
    ServerPrivateKeyPassPhrase: ENC[PKCS7,MIIBeQYJK]
  Servers/PIA/WebServer/PIA/WebServerLog/PIA:
    LoggingEnabled: true
  RestfulManagementServices/PIA:
    Enabled: true
  WebAppComponent/peoplesoft:
    WeblogicPluginEnabled: true
```

USING A PUPPET MASTER



POST DEPLOY CUSTOMIZATIONS



JOB DONE

PATCHING

DPK doesn't deploy the latest patches...



Don't forget to apply the latest Java/Weblogic Patches



FUTURE UPGRADES

What if we wanted to upgrade to a later People Tools patch?



CONCLUDING THOUGHTS

ANY QUESTIONS?

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**ALL ALLIANCE PRESENTATIONS WILL BE AVAILABLE FOR
DOWNLOAD FROM THE CONFERENCE SITE**



THANK YOU!



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