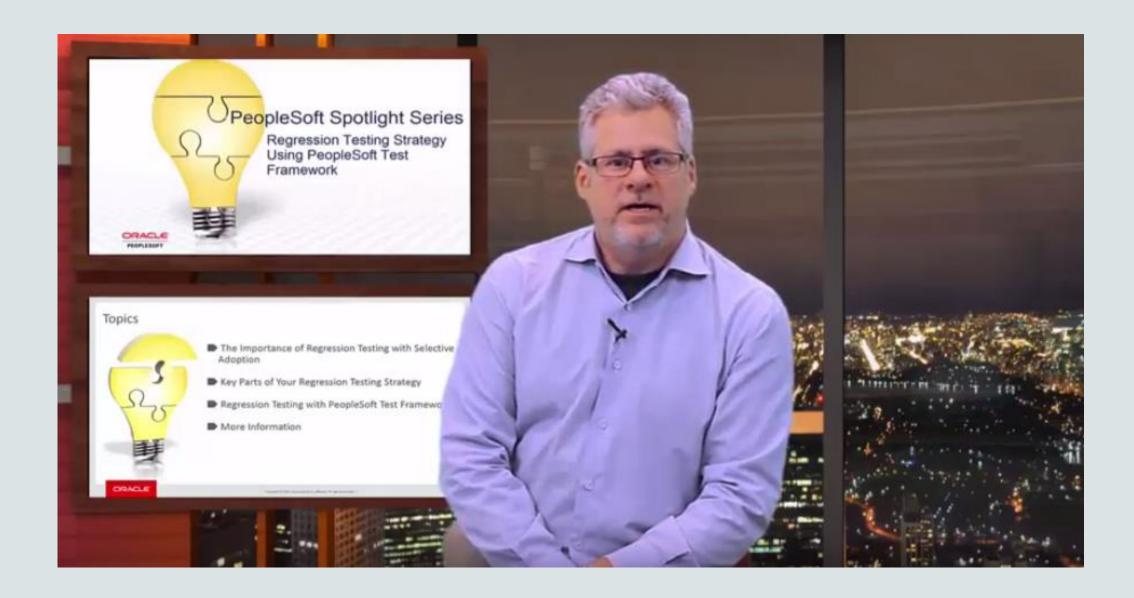# Topics

▶ The Importance of Regression Testing with Selective Adoption

▶ Key Parts of Your Regression Testing Strategy

▶ Regression Testing with PeopleSoft Test Framework

▶ More Information

Topics

▶ **The Importance of Regression Testing with Selective Adoption**

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The Importance of Regression Testing with Selective Adoption

Selective Adoption changed the way you maintain PeopleSoft Applications

- Changed your mindset
- Change your schedule
- Change your budget
- Systems must now be considered agile

See the Selective Adoption recommended practices for more information

The Importance of Regression Testing with Selective Adoption, Continued

Typical Life-cycle changes include . . .

- Make-me current on a regular 12-18 month basis

- Critical fixes for production-down issues

- Legislative requirements

- Security vulnerabilities

- Adopting new features

- Tools patches and release on a regular basis

The Importance of Regression Testing with Selective Adoption, Continued

- Improve tools that help apply change
  - PeopleSoft Update Images
  - PeopleSoft Update Manager
  - Change Assistant
  - PeopleSoft Test Framework
- Minimizing the impact of customizations
  - Change your priorities for customization
  - Change the way customizations are made
  - Better insight into impact customizations will have to change that will be applied

The Importance of Regression Testing with Selective Adoption, Continued

Automated Testing with Selective Adoption

- Improve the time it takes to validate change
  - How much of a project time is spent testing?
  - Unit testing is only a small part of the project
  - Regression testing is critical and can be very costly

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Key Parts of an Regression Test Strategy

There are many different types of testing

- Smoke test – does the system work

- Unit test – does the change applied work as a stand-alone

- System test – does the system run as expected

- Integration test – does the system integrate with other systems as expected

- Performance test – does the system perform as expected

- Load test – can the system perform as expected under heavy load

- Regression test

Key Parts of an Regression Test Strategy, Continued

1. Determine the Need
2. Determine the Scope
3. Define the Approach
4. Set the Criteria

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Key Parts of an Regression Test Strategy, Continued

- Identify the Need
  - Does your organization need automated regression testing?
  - How have your testing needs changed with Selective Adoption?
  - Automated tests vs. Manual tests

Key Parts of an Regression Test Strategy, Continued

- Barriers to automation
  - Manual testing is
    - Easily understood by everyone
    - Requires little commitment from IT staff
    - Can be the least expensive option if only done once
  - Automated testing is
    - Requires collaboration between business analyst and test creator
    - Must be created, documented, and maintained
    - Becomes more cost efficient over time

Key Parts of an Regression Test Strategy, Continued

- Determine the Scope
  - Define the test cases
  - Automate parts of the system most susceptible to regression issues
  - Automate parts of the system that contain the most customizations
  - Start slow and grow over time

Key Parts of an Regression Test Strategy, Continued

- Define the approach
  - Determine the tools to be used
  - Determine standards for documenting test cases
  - Determine what data will be used for testing
  - Determine how the test case is created
  - Determine how test results are validated
  - Determine how tests will be run

Key Parts of an Regression Test Strategy, Continued

- Identify Entry and Exit Criteria
  - When is the system ready for regression testing
  - When can the system leave regression testing
  - How to account for
  - Pass/fail scenarios
  - Confirmation that a defect is repeatable
  - Analyze code-coverage and quantify the risk

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Regression Testing with PeopleSoft Test Framework

- PeopleSoft Test Framework (PTF) is:
  - Record and playback regression test tool
    - Captures online use of a PeopleSoft Application
    - Plays back online
  - Integrated with PeopleSoft technology
    - PTF Client is secured with PeopleSoft user IDs and roles
    - Tests are stored in a PeopleSoft database and accessible to anyone with authorization
    - Built-in capabilities for PeopleSoft Applications
  - Provided free to all customers of PeopleSoft Applications
  - Only works with PeopleSoft Applications

Testing with PeopleSoft Test Framework, Continued

How to use PTF to implement your regression testing strategy

1. Determine the Need
2. Determine the Scope
3. Define the Approach
4. Set the Criteria

Testing with PeopleSoft Test Framework, Continued

Need and Scope

- Typically outside the realm of the Automated Testing Tool

- Maintenance Report that will tell if a test is broken

- Barriers to Automation

  – PTF is a rich in feature automated record/playback utility

  – Requires time to get proficient

  – Collaboration between IT and business analyst

  – Developer will be involved in creating the test case

Testing with PeopleSoft Test Framework, Continued

Regression Test Strategy – Approach

- Determine standards for documenting test cases
  - PFT test cases are store in the test repository in a PeopleSoft application data base
  - Build-in hierarchy to organize test cases
  - Name and description for each test case
  - Support for comments in the test script

Testing with PeopleSoft Test Framework, Continued

- Determine the data for testing
  - Test cases can be built to discover the test case at test execution time
    - Discover the test data requires developing the criteria into the test case
      - Note: This approach is portable across images and over time
  - Test case using a fixed instance of data
    - Fixed instance data requires the test be idempotent or refreshed after each run
      - Note: Fixed instance tests must be maintained over the life of the test case
  - Factor in virtualization and cloud computing to allow refreshing

Testing with PeopleSoft Test Framework, Continued

- Determine how results will checked
  - Values can be checked in the test case
  - Data from a prior run can be saved and compared

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Testing with PeopleSoft Test Framework, Continued

- Determine which tests to run
  - Test coverage report – based on the scope of change, the coverage report will show which tests to run and what is not covered by automation
  - Usage monitor can be used to track the objects covered by a test case
  - Pass/Fail criteria is build-in to the tests

Testing with PeopleSoft Test Framework, Continued

- Features of PeopleSoft Test Framework
  - PTF is specifically designed to interact with internal PeopleSoft structures
  - Test Maintenance Report will identify which tests could be affected by change
  - Test Coverage Report will identity which tests to execute
  - Start_Login action to allow tests to be portable
  - Access to system variables and reserved words
  - Conditional logic and global variables
  - Page prompting to bypass the menu

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More Information

PeopleSoft Online Help - PeopleSoft Test Framework 8.55

Oracle University Training:
- PeopleSoft Test Framework Rel 8.52 (3 day course)
- PeopleSoft Test Framework Rel 8.55 (3 day course) – Coming Soon!