

Hackensack Meridian Healthcare successfully adopts PTF

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Introduction

Why is Test automation needed for PeopleSoft ERP?

- To reduce the cost and time involved in manual testing in general
- To reduce the cost of overall PUMs implementation and applying PUMs more frequently
- To effectively implementing selective adoption
- To reduce the cost of regression testing due to major infrastructure changes

Introduction

Some Test automation tools

PTF : Part of PeopleTools, **does** understand PeopleSoft **metadata**. During application upgrade or customizations to the application PTF makes the related test case maintenance easy and cost effective by reporting the broken scripts. **No additional licensing cost** to use the tool

SELENIUM : Not part of PeopleTools, **does not** understand PeopleSoft **metadata**. During application upgrade or customizations Selenium can not identify the broken scripts. The only way to identify the broken scripts is to run all scripts in the inventory. **Open source tool, no licensing cost** to use the tool

QTP : Not part of PeopleTools, **does not** understand PeopleSoft **metadata**. During application upgrade or customizations QTP can not identify the broken scripts. The only way to identify the broken scripts is to run all scripts in the inventory. **Licensing costs** are involved in using the tool.

Objectives of PTF Implementation

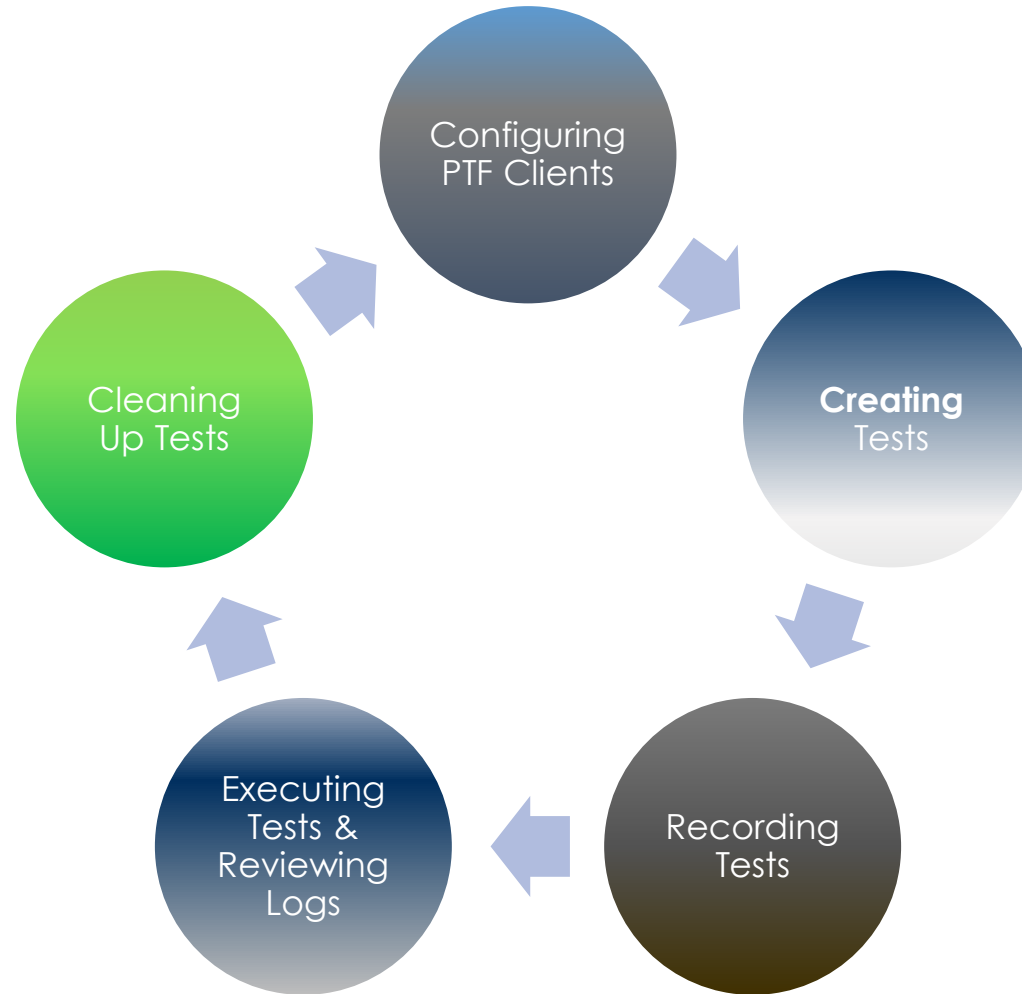
Leverage Oracle delivered PeopleSoft Test Framework for the following

- Replace manual testing with PTF automation for Unit, Systemic, Integration and Regression testing
- Provide a unified repository of re-usable and adaptable test scripts that can continue to evolve with application changes
- To save time for functional SMEs by replacing routine manual testing with PTF scripts
- To save time for technical developers by replacing routine manual unit testing with PTF scripts to help deliver higher quality code to System Integration Testing
- Reduce effort/cost of PUM and regular enhancement project regression testing
- Increase systematic change, monitoring and auditing of test scripts

PTF Overview Highlights

- Automate functional testing, integrating with PeopleSoft metadata
 - When PTF records a test, it recognizes the metadata, the actual name of a field rather than the position of that field on a page
 - If the field is moved in a subsequent revision, PTF is still able to locate it when the test is executed
 - Similar to recording & replaying “Macro” key strokes on transactions
- In PeopleTools 8.54 & 8.55, the focus is on providing smart automation
 - Running tests based on what has happened in your application
 - Determine which tests require modification and which tests need to be run
 - Usability enhancements for creating, administering, recording, and executing tests

PeopleSoft Test Framework Overview



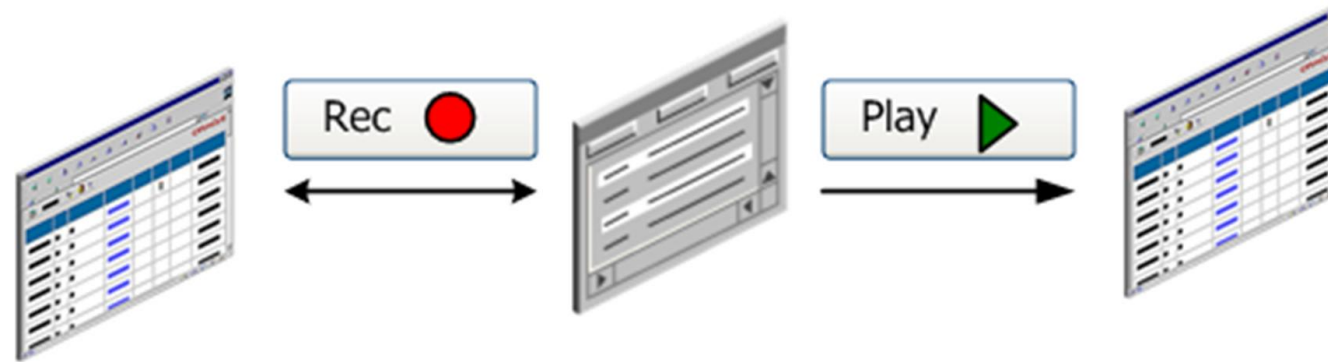
PTF Key Features

- Record and Playback tool
- Automates Functional testing within PeopleSoft Application
- More tests - Greater Accuracy- Shorter time
- Stored in Database as App Designer Objects

Benefits of PTF

- Automates testing process
- Expedites testing process
- Few resources required for testing
- More consistent testing across environments
- Can be utilized for both Technical and Functional testing
- Low effort to migrate test objects across environments
- Low effort to upgrade and maintain test cases

Record and Playback

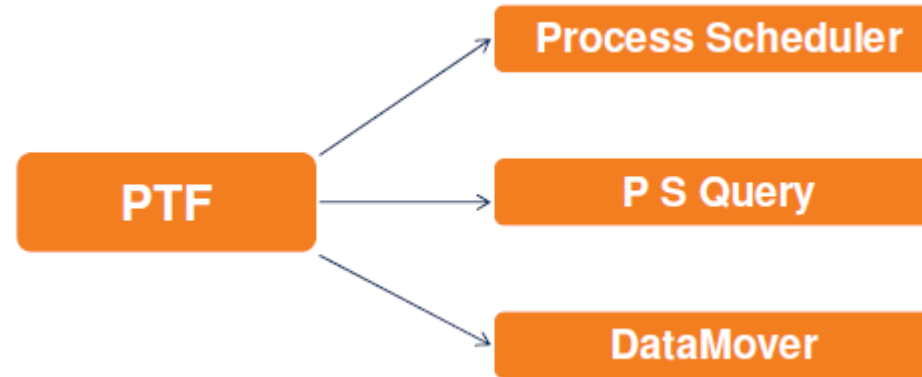


- PTF works by replicating the actions of a single user executing functional tests against the PeopleSoft browser-based application
- Users can record manual test procedures and save them within the framework
- Users can execute those tests against the application to verify whether the application still behaves as expected

PTF is natively symbiotic with your PeopleSoft environment

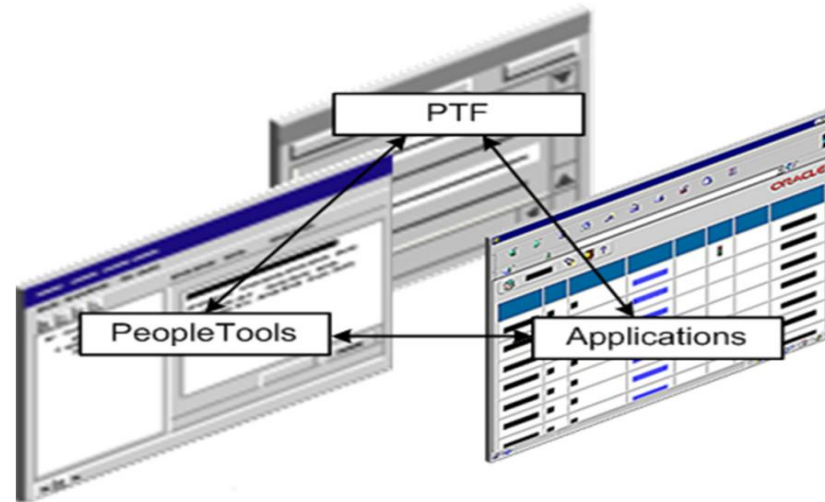
- PeopleSoft Testing Framework is delivered and maintained in PeopleTools
- PTF clients are installed on your PTF test developer machines
- Your PeopleSoft test instance can be used for recording PTF scripts and there is no need for a dedicated environment
- Configure PTF in TST environment
- Automated testing can continue to evolve and expand across the application processes
- PTF tests can be migrated across environments

PTF collaborates with other PeopleTools



- PTF tests can run processes and reports through Process Scheduler, as well as queries and Data Mover programs

PeopleTools Metadata



- When PTF records a test, it recognizes the metadata, the actual name of a field rather than the position of that field on a page
- If the field is moved in a subsequent revision, PTF is still able to locate it when the test is executed
- If field is added/removed/modified, audit reports will identify discrepancies between underlying objects and script metadata.

Type of Testing and PTF usage

<i>Use PTF</i>	<i>Test</i>	<i>Description</i>
Yes	Unit	Validate data, business rules, and business processes
Yes	System	Test all processes, such as online and batch functionality, interfaces, conversions, customizations, and reports
Yes	Integration	Test business processes and groups of related processes
Yes	Parallel	Optionally perform throughout all testing stages
Limited	Performance	Measure current system performance
Yes	Acceptance	Validate business requirements in the test move-to-production phase
Yes	Regression	Retest previous tests

Type of project and PTF usage

PTF is commonly leveraged to expedite testing in:

- New Implementation projects
- Limited / No existing testing documentation
- Limited functional resources to participate in testing
- Highly customized environment
- Significant ongoing development projects
- Routinely deploying patches and fixes Savings on cost to buy a separate test automation software
- PUM testing

Managing Change Impact

PTF delivers two tools that help test developers to determine the effect of changes:

- **Test maintenance reports**

A test maintenance report correlates PeopleTools compare report data with PTF test metadata to identify certain changes to menus, components, pages, records, and fields that may impact the PTF tests.

- **Test coverage reports**

A test coverage report correlates PeopleTools project data with PTF test metadata to identify menus, components, pages, records, and fields that are referenced in PTF tests.

Test Maintenance Report

A test maintenance report lists the tests that have been impacted by changes to menus, components, records, pages, and fields, and details the changes that impacted those tests. You can choose to output the report to PIA or to BI Publisher.

Test Maintenance Report Project Name SA_PROJ_SNAP_852

Test Name: INSTRUCTORS			
2 - Medium	F01F Field	INTERNAL_EXTERNAL	Changed
		Step ID: 31 Seq. Nbr: 31 Status: Active Language: EN Pre Object Value: INTERNAL_EXTERNAL Post Object Value: INTERNAL_EXTERNAL.Character	
2 - Medium	F04F Field	INTERNAL_EXTERNAL	Changed
		Step ID: 31 Seq. Nbr: 31 Status: Active Language: EN Pre Object Value: INTERNAL_EXTERNAL Post Object Value: INTERNAL_EXTERNAL.0	
2 - Medium	P01F Page	PSU_INSTR	Deleted
		Step ID: 32 Seq. Nbr: 32 Status: Active Language: EN Pre Object Value: PSU_INSTR_TBL.MANAGER Post Object Value:	
2 - Medium	P05F Page	PSU_INSTR	Changed
		Step ID: 11 Seq. Nbr: 11 Status: Active Language: EN Pre Object Value: PSU_INSTR_TBL.FIRST_NAME.First Name Post Object Value: PSU_INSTR_TBL.FIRST_NAME.First	
Test Name: RESERVED WORDS			
2 - Medium	C01F Component	PSU_STUDENT	Deleted
		Step ID: 6 Seq. Nbr: 5 Status: Active Language: ENG Pre Object Value: PSU_STUDENT_SKED Post Object Value:	
2 - Medium	C01F Component	PSU_STUDENT	Deleted
		Step ID: 7 Seq. Nbr: 6 Status: Active Language: ENG Pre Object Value: PSU_STUDENT_SKED Post Object Value:	
2 - Medium	C01F Component	PSU_STUDENT	Deleted
		Step ID: 8 Seq. Nbr: 7 Status: Active Language: ENG Pre Object Value: PSU_STUDENT_SKED Post Object Value:	
2 - Medium	C01F Component	PSU_STUDENT	Deleted
		Step ID: 13 Seq. Nbr: 8 Status: Active Language: ENG Pre Object Value: PSU_STUDENT_SKED Post Object Value:	

Test Coverage Report

Use a Test Coverage report to determine which objects have tests and which do not. Objects without a test represent a potential gap in the test coverage.

Test Coverage Report

Project Name: SA_PROJ_SNAP_852

Impacted Objects and Objects with No Coverage					
Test Name	Object Type	Object Name	Object Detail	Test Metadata	Usage Monitor Data
** No Test Coverage **	Page	PSU_COURSE		No Data	No Data
** No Test Coverage **	Page	PSU_COURSE_MATL		No Data	No Data
** No Test Coverage **	Page	PSU_INSTR_PHOTO		No Data	No Data
** No Test Coverage **	Panel Group PeopleCode	PSU_CUST	GBL.SavePostChange	No Data	No Data
** No Test Coverage **	Panel Group Record Field PeopleCode	PSU_INSTR	GBL.DERIVED_ED_SVCS.DELETE_BTN FieldChange	No Data	No Data
** No Test Coverage **	Panel Group Record Field PeopleCode	PSU_INSTR	GBL.DERIVED_ED_SVCS.INSERT_BTN FieldChange	No Data	No Data
** No Test Coverage **	Translate	INTERNAL_EXTERNAL	O.2010-07-16	No Data	No Data
INSTRUCTORS	Component	PSU_INSTR		Active	No Data
INSTRUCTORS	Field	INTERNAL_EXTERNAL		Active	No Data
INSTRUCTORS	Page	PSU_INSTR		Active	No Data
INSTRUCTORS	Record	PSU_INSTR_TBL		Active	No Data
RESERVED_WORDS	Component	PSU_STUDENT	GBL	Active	No Data

PTF has some Limitations

- PeopleSoft Testing Framework does not work outside PIA instance.
 - Example:
 - Scripts between PS HCM and Taleo will not work. It will only work inside PS HCM.
 - Scripts between PS FSCM and Enterprise Data Warehouse will only in PS FSCM.
- Test steps that involve any manual interventions such as File Scanning transactions shall be excluded for automation scope

PTF Implementation Approach

- Evaluate current testing methodology and manual test scripts
- Create or Confirm the scope for PTF tests.
- Map the selected PTF tests to PeopleSoft project in scope
- Record PTF tests and organize them into folders
- Train CFW PTF implementation team members on PTF framework and best practices
- Implement PTF tests for the PeopleSoft project in scope
- Avoid building complex login into PTF tests , make it easy to run and generate new test cases for users
- Make it to maintain test data and deploy quickly for new project

Assess Requirements and Scope of Automation

- Understand depth and/or gaps in manual test scripts inventory
 - Determine appropriate transformation of manual to automated
 - Establish criteria for selecting scripts to be automated from existing inventory
 - Identify opportunities for addressing gaps in testing
- Identify and prioritize desired application processes and features to leverage PTF automated testing in Phase II
- Recommend and provide a roadmap for successfully implementing in-scope PTF

Resource Requirements

Standard Resource Requirements

- Project manager
- Tech Lead
- PTF Solution Consultant
- PTF script developers (can be CFW and/or external resources)
- Functional Lead for evaluating and creating scope for test suites
 - Unit, Functional and Regression
- **CFW SMEs to provide manual test scripts business process and scenario docs**
 - CFW will provide reasonable documentation of manual test scripts
 - CFW will provide business process and scenarios documentation required to develop PTF shell tests
 - CFW will to provide valid data sets for all PTF tests

Environment/ Infrastructure Needs

- TST environment can be used for recording PTF scripts, there is no need for a dedicated environment
- Configure PTF in TST environment
- Install PTF client on PTF developer machines
- PTF tests can be migrated across environments

Pre-requisite for Creating PTF Tests

- Reasonable documentation of manual test scripts
- Familiarity PeopleSoft Navigation
- Understanding of business process to create a shell test
- Shell test specifications
- Document additional Logic/ validation during business process to be incorporated into PTF tests and Shell tests
- Data set provided by business team to create a test/shell case
 - Static
 - Dynamic

Implementation Methodology

Defining Test Automation Requirements and scope

- Current state of testing and pain points
- Inventory of current manual tests
- Identify the requirements
- Writing specifications

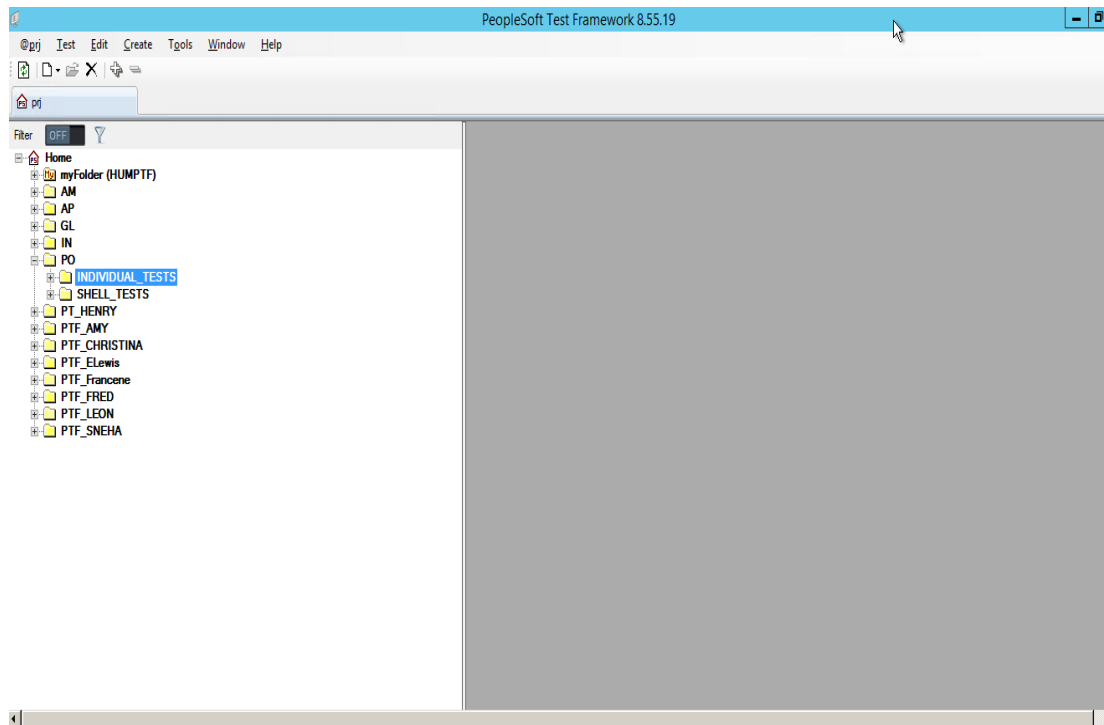


**Shell
Requirement Definition**



**Manual Tests
Analysis**

PTF Explorer User Interface



- Assets appear in a tree structure with collapsible folders for organizing test assets
- Use of PTF Explorer
 - Create tests and folders
 - Delete tests and folders
 - Copy and move tests
 - Rename tests and test cases
 - Navigate to and open test assets.
 - Associate tests with Application Designer projects.

PTF Editor

Seq	ID	Comment	Active	Scroll ID	Type	Action	Recognition	Parameters
1	1		<input checked="" type="checkbox"/>		Browser	Start_Login		
2	20		<input checked="" type="checkbox"/>		Page	Prompt	REQUISITION_ITEMS.REQUISITIONS.GBL	add
3	21		<input checked="" type="checkbox"/>		Text	Set_Value	name=REQ_ADD_SRCH_BUSINESS_UNIT	MM01C
4	22		<input checked="" type="checkbox"/>		Text	Set_Value	name=REQ_ADD_SRCH_REQ_ID	NEXT
5	23		<input checked="" type="checkbox"/>		Page	PromptOk		
6	24		<input checked="" type="checkbox"/>		Text	Set_Value	name=REQ_HDR_ORIGIN	ONL
7	25		<input checked="" type="checkbox"/>		Text	Set_Value	name=REQ_HDR_REQ_DT	04/11/2018
8	26		<input checked="" type="checkbox"/>		Page	SecPage_Open	name=REQ_HDR_WRK_DEFAULTS_PB	page=REQ_HDR_DEFAULTS
9	27		<input checked="" type="checkbox"/>		Radio	Set_Value	name=REQ_DFLT_TBL_DEFAULT_OPT\$\$\$	D
10	28		<input checked="" type="checkbox"/>		Text	Set_Value	name=REQ_DFLT_TBL_BUYER_ID	RR6373
11	29		<input checked="" type="checkbox"/>		Text	Set_Value	name=REQ_DFLT_TBL_VENDOR_ID	0000630266
12	30		<input checked="" type="checkbox"/>		Text	Set_Value	name=ITM_CAT_WRK_CATEGORY_CD	CAPMMCE
13	31		<input checked="" type="checkbox"/>		Text	Set_Value	name=REQ_DFLT_TBL_SHIPTO_ID	HMM2
14	32		<input checked="" type="checkbox"/>		Text	Set_Value	name=BUSINESS_UNIT_GLS0	G01
15	33		<input checked="" type="checkbox"/>		Text	Set_Value	name=DEPTID\$0	8331
16	35		<input checked="" type="checkbox"/>		Text	Set_Value	name=PROJECT_ID\$0	2014HUMC018
17	39		<input checked="" type="checkbox"/>		Browser	Frame_Cat	rlMnrlFrame_ ##	

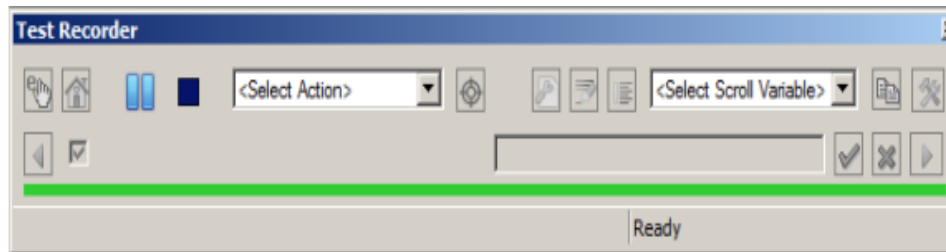
- Record and edit test steps.
- Add, copy, and delete test steps
- Create and edit test cases
- View both test and test case in a single view
- Debug tests.

PTF Test Recorder/Play

Show Test Recorder



Test Recorder



Test Play



- Open a test
- Launch the test recorder
- Hook a browser
- Start recording
- Perform the test steps in the PeopleSoft application
- Stop recording
- Close the rest recorder
- Save the test

PTF Test

The screenshot displays the PeopleSoft Test Framework 8.55.19 interface. The main window shows the configuration for a test case named 'IN_PO_CREATE_REQUISITION'. The test case information includes the name, description, and test case name. Below this, there is a table of test steps with columns for sequence number, ID, comment, active status, scroll ID, type, action, recognition, and parameters.

Seq	ID	Comment	Active	Scroll ID	Type	Action	Recognition	Parameters
1	1		<input checked="" type="checkbox"/>		Browser	Start_Login		
2	20		<input checked="" type="checkbox"/>		Page	Prompt	REQUISITION_ITEMS.REQUISITIONS.GBL	add
3	21		<input checked="" type="checkbox"/>		Text	Set_Value	name=REQ_ADD_SRCH_BUSINESS_UNIT	&BU_ID
4	22		<input checked="" type="checkbox"/>		Text	Set_Value	name=REQ_ADD_SRCH_REQ_ID	NEXT
5	23		<input checked="" type="checkbox"/>		Page	PromptOk		
6	24		<input checked="" type="checkbox"/>		Text	Set_Value	name=REQ_HDR_ORIGIN	&ORIGIN
7	25		<input checked="" type="checkbox"/>		Text	Set_Value	name=REQ_HDR_REQ_DT	&REQ_DT
8	26		<input checked="" type="checkbox"/>		Page	SecPage_Open	name=REQ_HDR_WRK_DEFAULTS_PB	page=REQ_HDR_DEFAULTS
9	27		<input checked="" type="checkbox"/>		Radio	Set_Value	name=REQ_DFLT_TBL_DEFAULT_OPT\$\$\$	&DEF_OPT
10	28		<input checked="" type="checkbox"/>		Text	Set_Value	name=REQ_DFLT_TBL_BUYER_ID	&BUYER_ID
11	29		<input checked="" type="checkbox"/>		Text	Set_Value	name=REQ_DFLT_TBL_VENDOR_ID	&VENDOR_ID
12	30		<input checked="" type="checkbox"/>		Text	Set_Value	name=ITM_CAT_WRK_CATEGORY_CD	&CATEGORY
13	31		<input checked="" type="checkbox"/>		Text	Set_Value	name=REQ_DFLT_TBL_SHIPTO_ID	&SHIP_TO
14	32		<input checked="" type="checkbox"/>		Text	Set_Value	name=BUSINESS_UNIT_GL\$0	&GL_BU
15	33		<input checked="" type="checkbox"/>		Text	Set_Value	name=DEPTID\$0	&DEPT_ID
16	35		<input checked="" type="checkbox"/>		Text	Set_Value	name=PROJECT_ID\$0	&PROJECT_ID
17	39		<input checked="" type="checkbox"/>		Browser	Frame_Set	intModFrame ##	

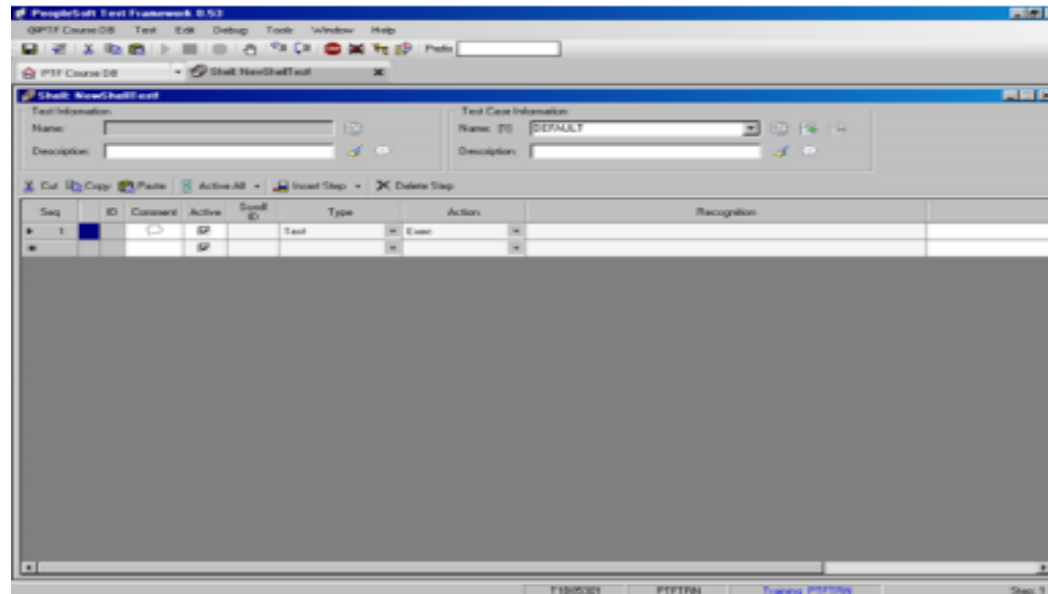
- Record and edit test steps.
- Add, copy, and delete test steps
- Create and edit test cases
- View both test and test case in a single view
- Debug tests.

Tests and Test Cases

- PTF test explanation (steps related to actions)
- How PTF test action relate to the target application and/or module
- Create, record and execute tests and test cases
- Developing Tests using PTF Test Language
- Test Logs: PTF Explorer location and purpose

PTF Shell Test

- A shell test is a type of test that is meant to be used primarily to call other tests.
 - Test.Exec - calling other tests.
 - DataMover.Exec - calling data mover scripts
 - Query.Exec - running queries
 - Log.Message and Log.Screenshot.
 - Variable.Set_Value - manipulating variables



Shell: NewShellTest! window

PTF Log Manager

The screenshot displays the PTF Log Manager interface. On the left, a tree view shows the test execution steps, including 'Use of Message Recognition', 'Browser.Start_Login', and 'Page.Prompt'. A box labeled 'Log Details' points to the right-hand pane, which contains a detailed view of the test execution options and system information. The 'Execution Options' section includes fields like 'Name', 'Appl - User', and 'Output - LogFolder'. The 'Portal URL Info' section shows the current URL. The 'Test Info' section lists the parent folder, test name, and test case name. The 'System Info' section shows the machine name. At the bottom of the log view, a 'Result' field shows 'Pass' and a 'Message' field contains 'Test Start: 4/12/2018 3:22:00 AM'. A 'Time' field shows '03:22:00'.

Info	Information message only.
Info	Information message only.
Pass	Step was successful.
Warning	Step was successful, but with a warning.
Fail	Step failed.
Script Fail	The test encountered a condition that it was not configured to handle.

Operationalizing PTF

- Creating and maintaining core PTF suites
- Copying from core and creating PTF suite specific to a project/cycle.
- Test data management using delivered features and best practices
- Migrating PTF across test environments
- Upgrading PTF to newer tools version
- Generating test data metrics after each automation cycle
- Scripts and queries to be used in operations – PS Queries, DMS scripts etc.



Please complete a session evaluation

Session ID: 101230

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