Cross-Platform Automated Regression Test Framework

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Agenda

- Cross-Platform Testing Scenario and Challenges
- Need for CART Framework
- What is CART?
- How does CART work?
- Benefits of CART Framework
- Road Ahead
- Summary
- Questions
Major Challenges Faced

- Laborious
- Repetitive
- Tedious
- Error-Prone
- Manual

- Test cases run for 24-48 hours
- Monitor the test cases continuously
- Record the observations
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Typical Testing Steps

- **Test Planning** - determine applications, priority level and schedule.
- **Test Environment Preparation** - technical environment that the test(s) will be executed in.
- **Test Construction** - developing the test scripts and test cases.
- **Test Execution** - automation saves significant time.
- **Test Evaluation** - decision is made as to the readiness of the application for release.
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Features of CART

Cross-Platform Automated Regression Test Framework

• Web based GUI for launching the test plans from anywhere, anytime.

• Web based GUI for creating test plan coverage.

• STAF/STAX for peer-to-peer communication.

• Centralized and Uniform Interface for managing test devices and test builds.
Features of CART (cont..)

- Log Analyzer - highlights Warnings and Errors using different color codes.

- Support for launching tests like Java, JUnit, Ant, RFT, HttpUnit etc.,

- Intelligent cleanup of test machines

- Integrated with Version Control System – provides API support.
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CART Architecture

- **CART Application**
  - CART GUI
  - Application Server

- **Build Collector**

- **CART Engine**

- **Device Management Engine**

- **Database**

- **Local Servers**
  - Build server
  - Test Code & Logs Server
  - Dependent Software Server

- **Global Remote Build Servers**

- **Tester**

- **Test Machines with STAF**
  - Windows
  - Linux
  - AIX
  - Sun-OS
  - HP-UX

- **STAF**
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Benefits of CART

- Reduces the overall time required for managing the test cycle.
- Reduces human errors.
- Uniform interface to multiple platforms.
- Centralized repository for log files for audit purpose.
- Easy of Use – for testers to manage defects.
- Flexible for testing any kind of middleware product.
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Road Ahead

Enhancements

• End-to-End automation by launching the test plans automatically.
• Automation for z-Series and I-Series Platforms.
• Testing for a defect.
• Testing for a distributed environment.
Summary

Automation is

- strategies, tools and artifacts
- Reduces the need of manual or human involvement or interaction.
- Avoids spending time in unskilled, repetitive or redundant tasks.
- Provides bandwidth to **Innovate!!**
Thanks

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Questions