

Performance Evaluation of a desktop security application

Protect what you value.

Ridhi Saksena
Vittalkumar G Mirajkar
Ambareen Ahmed

Agenda

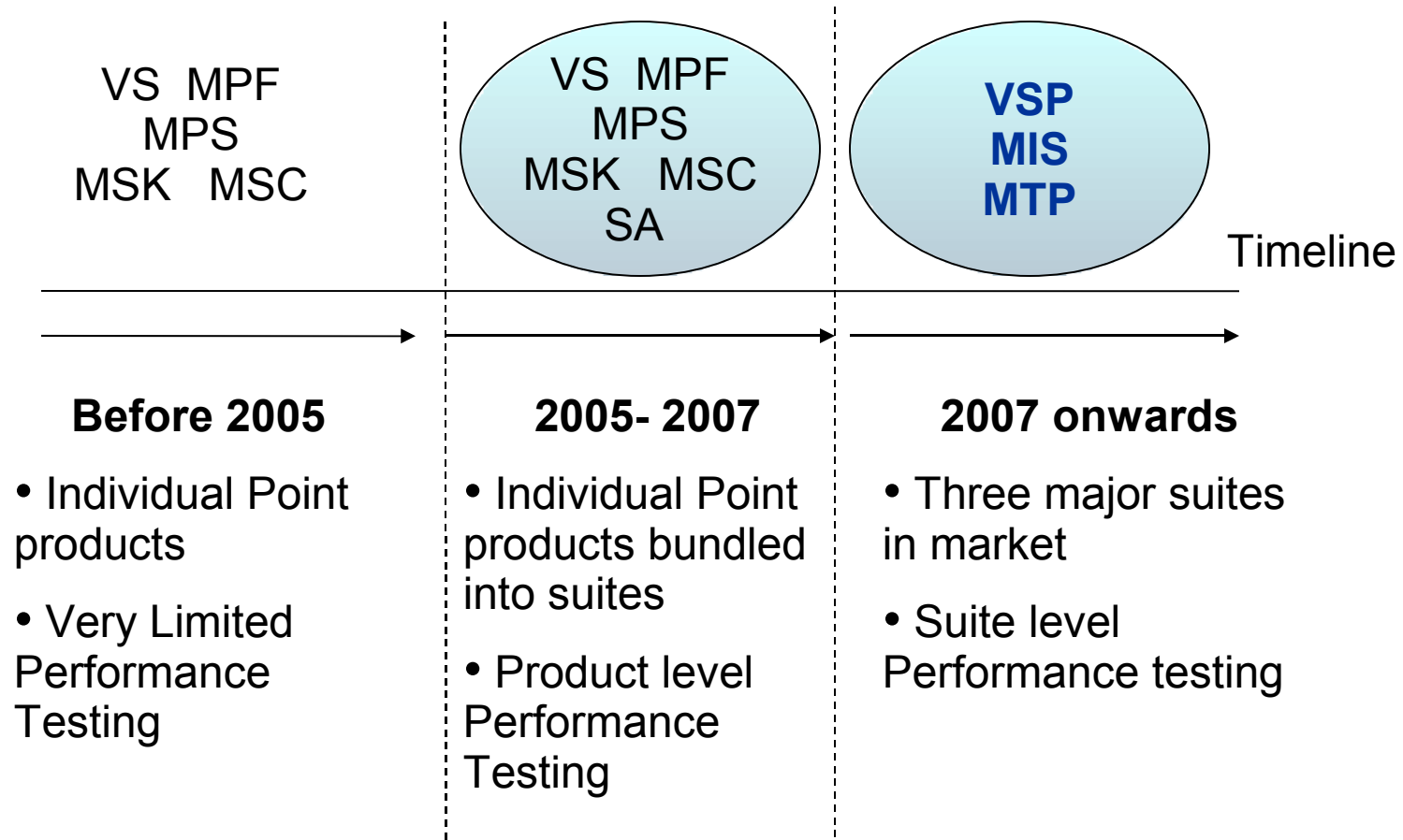
- Background
- Suite Performance Testing
- Approach
- Outcome
- Best Practices

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Evolution of Security Suites



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Requirement Gathering

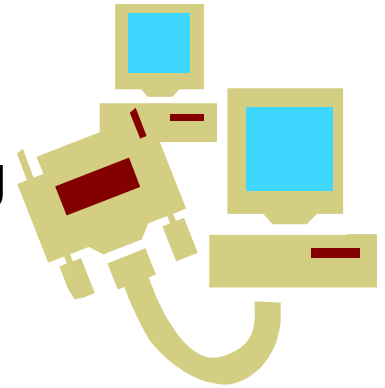
- Brainstorm with product development and QA Teams
- Collate data from popular reviewers
- Monitor the Forum and support issues
- Discuss with Product Management Team



Environment Setup

Finalized Configurations for Performance Testing

Based on this study the following setups were finalized on which suite performance was to be carried.



Sl.No	Hardware (type of computer)	Operating System	List of third party Software categories	Comments
1	Very Low end Desktop – 512MB RAM, Intel P3~600-800MHz	Windows XPSP2	Media Players, Browsers, Instant Messengers, Office Software, Compression Software,	4-5 Yr old Processor, Almost full hard drive
2	Low end Desktop – 1GB RAM, Intel P4~1.5GHz	Windows Vista Home Basic – 32 bit		Machine should satisfy the minimum requirement which Vista required
3	Low end laptop – 1GB RAM, Intel P4~1.5GHz	Windows Vista Home Basic – 32 bit		Laptop should just meet minimum Vista requirement
4	High end desktop – 4GB RAM, Intel Core2~2.6GHz	Windows Vista Ultimate SP1- 64 bit		Modern desktop with 4GB memory, Core2 or equivalent processor, fast (7200+) hard drive
5	Common user configuration – Desktop with 2GB RAM , Intel P4~3GHz	Windows XPHomeSP3		Common Configuration system with 1GB RAM and P4 ~3GHz
		Windows Vista Home Basic SP1– 32 bit	Common Configuration system with 1GB RAM and P4 ~3GHz	



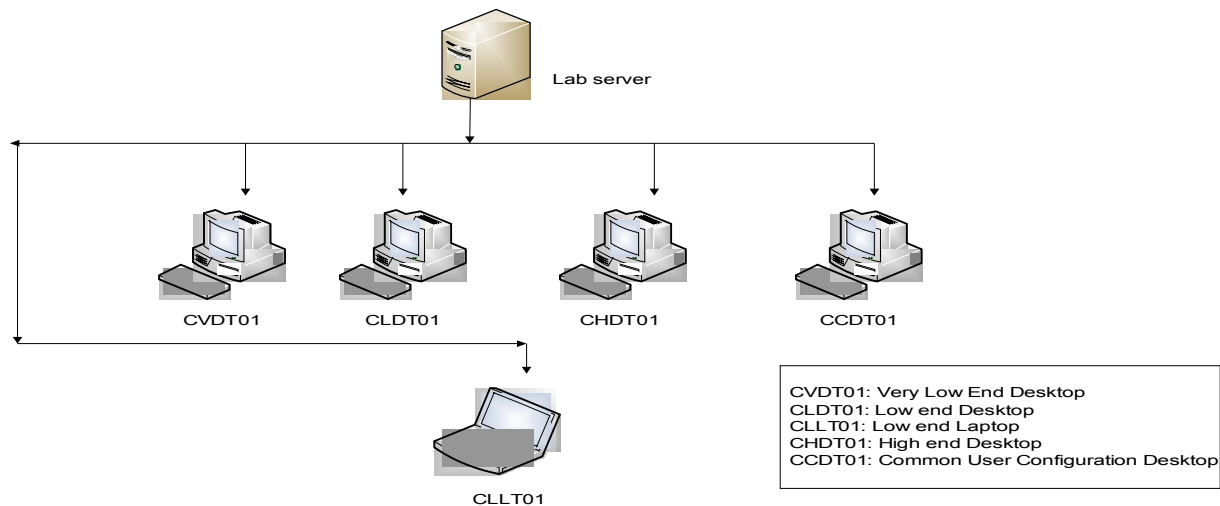
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Environment Setup

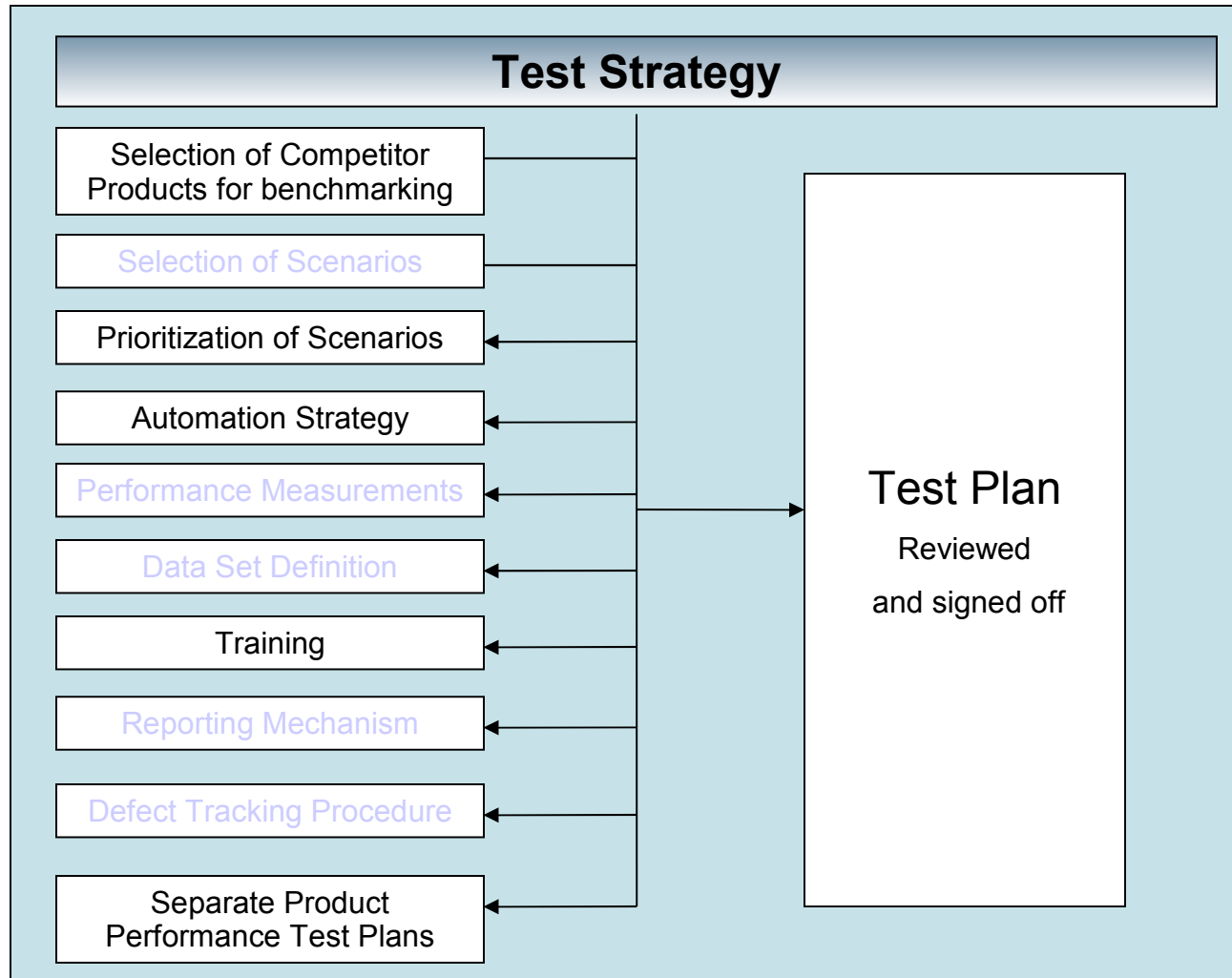
Lab Setup:

To have a controlled environment we came up with the following lab Setup that would include all the machines described above.

Suite Performance Lab Diagram



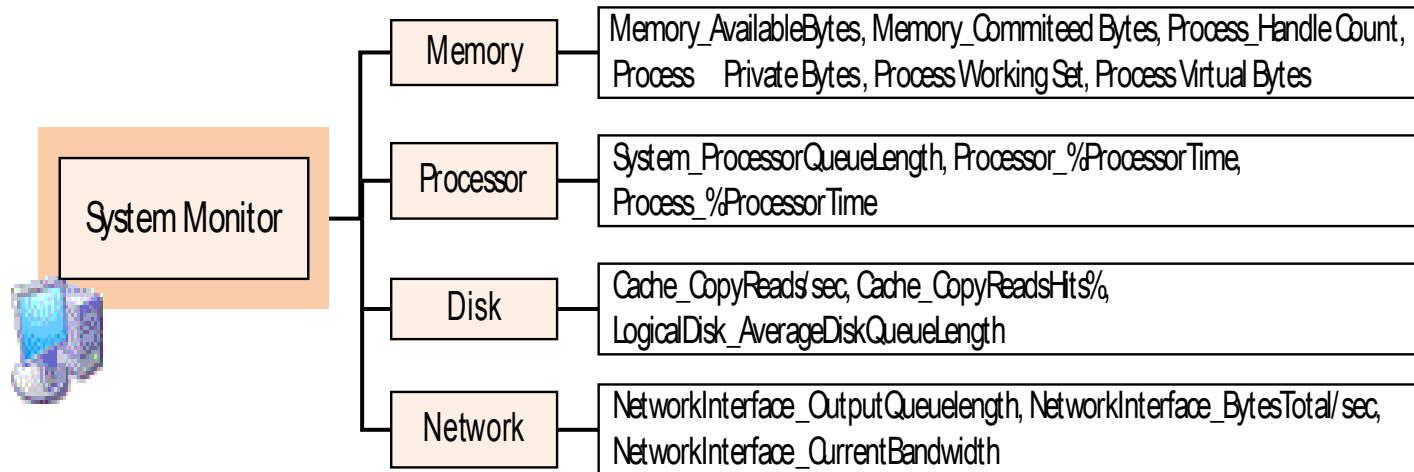
Test Strategy



Performance Measurements

For all the Competitor comparison and Legacy comparison scenarios - **Response time**

For the soak tests - important **Performance counters** for each of McAfee processes using Perfmon



Reporting Mechanism



- Simple and informative
- Published to senior management periodically

Types of Reports:

- Competitor Comparison Report
- Legacy Comparison Report
- Memory Footprint Report



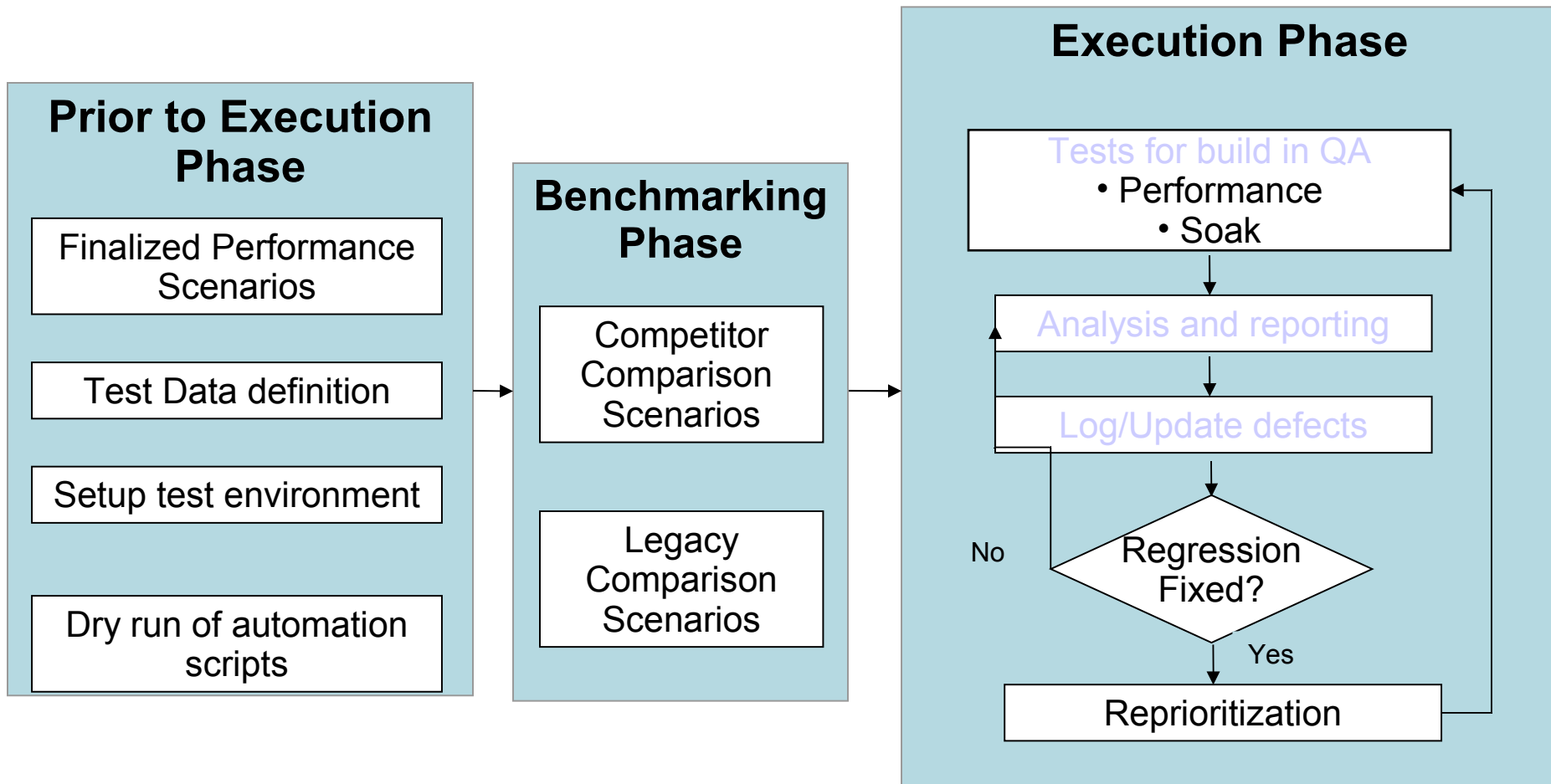
Defect Tracking Process



- Field **defect type** with option 'Performance' in the defect tracking tool
- Dedicated development Manager responsible for all the performance defects logged
- Regular performance defect scrub meetings with all the dev managers



Performance Test Execution



Effective Execution

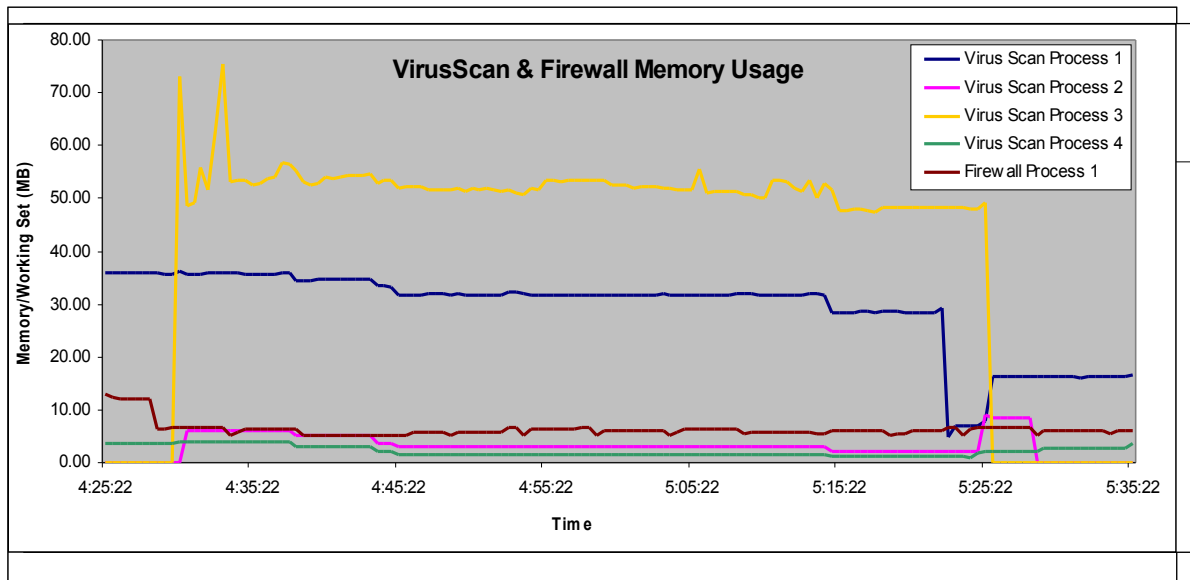
- Maintain a constant setup
- Variables in the same state as benchmarking
- Consistent readings
- Test execution pattern identical to the benchmarking
- Time measurement method should be the same



Reporting

Following reports published:

- **Competitor Comparison Report**
- **Legacy Comparison Report**
- **Memory Foot Print Reports**



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Defect Reporting



Additional information provided in Performance Defect Report

- Environment Setup
- Automation scripts
- Performance logs (Perfmon Logs) and product logs
- Memory leak defects
- Remote access to the machine
- Comparative data with previous builds
- Build details of all the products in suite



Achievements

- Number of issues reported in Forums for performance has come down
- 5 fold increase in number of defects logged for performance
- All performance critical defects fixed
- Performance of all the products improved
- Confidence of management is high



Environment Setup



- Test machine setup close to customer machines setups
 - ✓ Commonly user software
 - ✓ Commonly used hardware configuration

- Test environment
 - ✓ Network setup (number of machines on the network)
 - ✓ Machine state (number of drivers, number of files on each drive)

- System images with all the 3rd party software installed



Reporting

- Simple and informative
- Published to senior management periodically



Defect Logging

- Appropriate fields for performance defects in Defect tracking tool
- Log defects timely
- Have a well defined defect reporting template
- Regular meetings with related Product Development managers



Automation



- All P1 and most of P2 Performance scenarios should be automated
- 100% automation of soak defects.



