Performance Testing Mobile Applications

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Why Performance Testing

- What are the consequences if the application doesn't work under load? What is the risk?
  - Safety Risk?
  - Financial Risk?
  - Reputation Risk?
- Good reasons for not Performance testing:
  - If it doesn't work, it doesn't matter
- Bad reasons for not testing:
  - Our vendor told us that it will be fine
  - We have bought a lot of servers

Performance Test Planning

- What type of application is to be performance tested?
- What is the business process?
- What is the scope of testing?
- Who should be involved in the testing?
- How should the servers be monitored?
- How results should be analysed?

Performance Test- Planning

- Start Performance Test Planning early.
- Create a Value Proposition outlining
  - What is the total project budget?
  - What is the value of the project to the business?
  - What is the cost of application failure?

Performance Test Planning

- Allocate budget for
  - -Performance test tools
  - -Performance test environment
  - -Performance testers

Performance Test Planning

- Tool Selection

  -Proof Of Concept

- Prepare performance strategy / test plan incorporating:
  - Benchmark expectations and acceptance levels for performance, presentation, application, transaction, battery performance.

Non Functional Requirements/SLAs

- The Project must define Non functional requirements.
- The SLAs should be defined and agreed with the stakeholders
- Where to get this information from

  -Capacity Planning Data

  -Current Production Logs

  - Meeting with Stakeholders

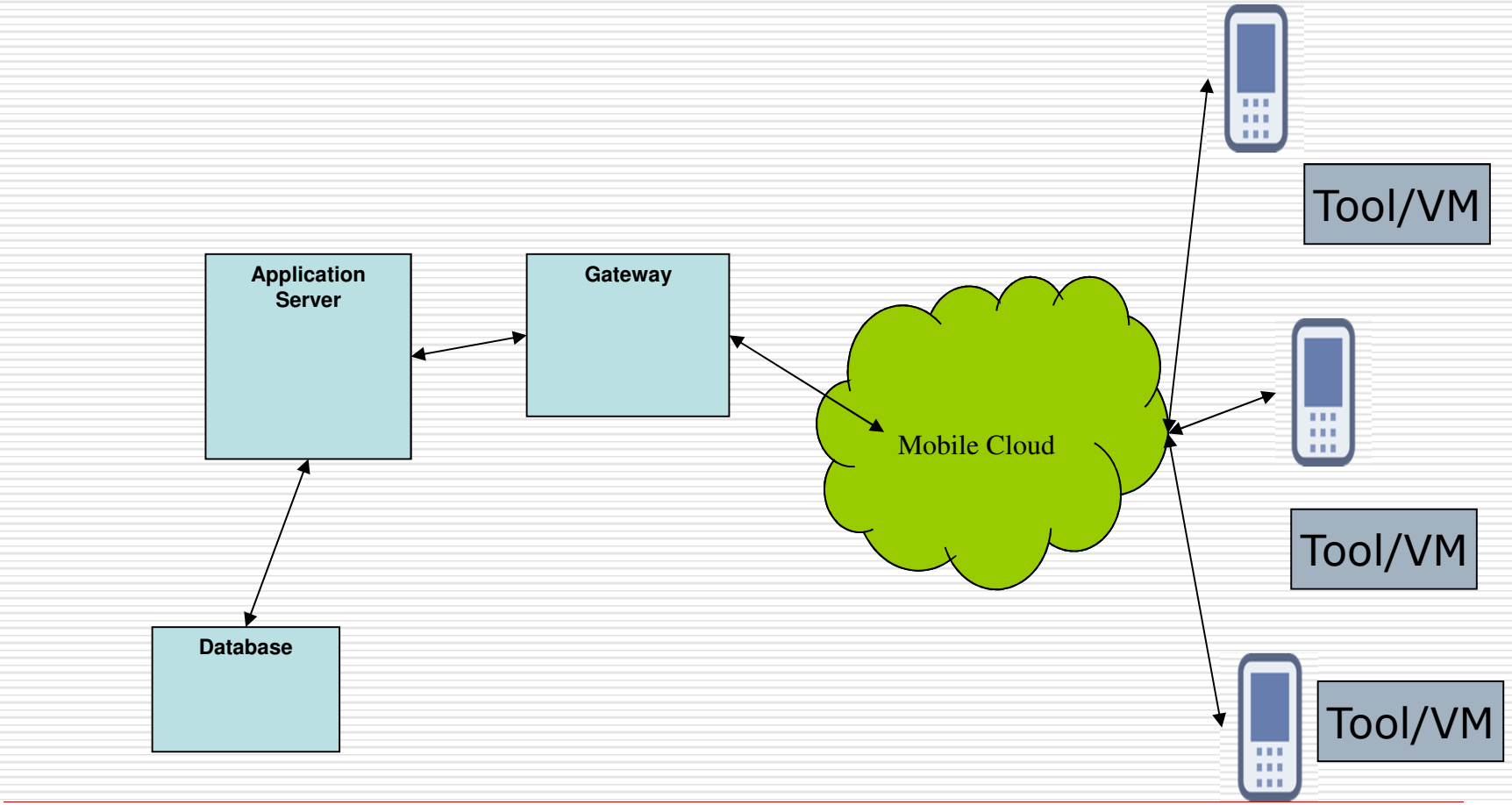
Peak Hour Data

Business Process	Load
Register/Login	10
Search	100
Browse results	3000
Update results	1600
Log Off	50

Test Environment

- The Performance Test Environment should mirror the Production Environment.
  - -Schedule the Performance Test Environment
- Justify extrapolated results from a very small environment to a very large one.
- Don’t assume more hardware is going to resolve issues.

Mobile Architecture



Performance Test

- Performance test areas including:
  - Application client performance (presentation level, how long does the client application take to load a screen, present work list, map etc),
  - Base transaction level (within core application),
  - Network performance and behaviour
  - Component performance (servers, routers, firewalls etc),
  - Software updates

Performance Test-Results

- Performance Defects takes long time to fix.
  -Allocate time to fix defects
  - Define proper Defect Management Process
- Change Management
  - Document all changes-Hardware, Code etc
- Reporting
  - Make Report simple for Business