



Grid Computing

# Customer Interest, Expectation, and Requirement for Grid in Dependability Context

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Takanori Seki, Distinguished Engineer  
Technical Sales Support, IBM Japan

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# Customer Expectation to Grid

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- Many customers expects Grid as
  - Platform for a wider variety of applications
    - Small enterprise HPC market
    - Transactional and e-business applications
  - Transparent adoption to applications
    - Less/no application modification
    - Transparent migration from current assets
  - Grid benefits >> Current tech implementation
    - Faster execution, higher throughput, lower IT costs etc.
    - Substantial benefits needed for new platform
      - Faster and cheaper implementation with open computing

# Customer Expectation to Grid

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- Many customers expects Grid as
  - Reasonable dependability environment
    - Availability with high availability or disaster recovery
    - Policy-based service level or expected service level
      - Only run in batch window/expected response time
      - Allocate resource for you anytime
    - Simple maintenance ability like single system
      - No more complexity
    - Secure like dedicated resources
  - Comparison to current platform
    - If not equal or better, good excuse not to adopt
  - Do not care standards yet
    - Within enterprise

# Roadblocks for Grid Implementation

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- IT Silo
  - Application platform dependence
    - Fairly connected with OS/database/middleware
  - Application-specific system management
    - System monitoring/operation
    - High availability and disaster recovery
- Non-IT Silo
  - Financial
    - IT budget allocated to each end user (Business owner, not IT dept.)
  - Organizational
    - No incentive to share as culture
- Enterprise IT optimization initiative needed
  - CEO/CIO high priority issue
  - Enterprise Architecture/IT Governance

# Grid with Reasonable Dependability

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- Grid as Enterprise-wide initiative
  - Not only tech. but total IT governance initiative
  - Restoration of the mainframe-idea but virtual
    - Total system management/IT resource optimization
    - User does not care the infrastructure, but application only
- Great benefits
  - With reasonable dependability
  - Open computing had great benefits but reasonable dependability
    - Quick implementation, cheap HW/SW, rich/interactive GUI
- Approach could be
  - As a part of enterprise optimization direction
  - Packaged solution even only for a single application
  - Almost middleware supports Grid (cross organization feature)
    - Open Standard maturity needed

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