

# OPEN

Compute Engineering Workshop

March 9, 2015

San Jose

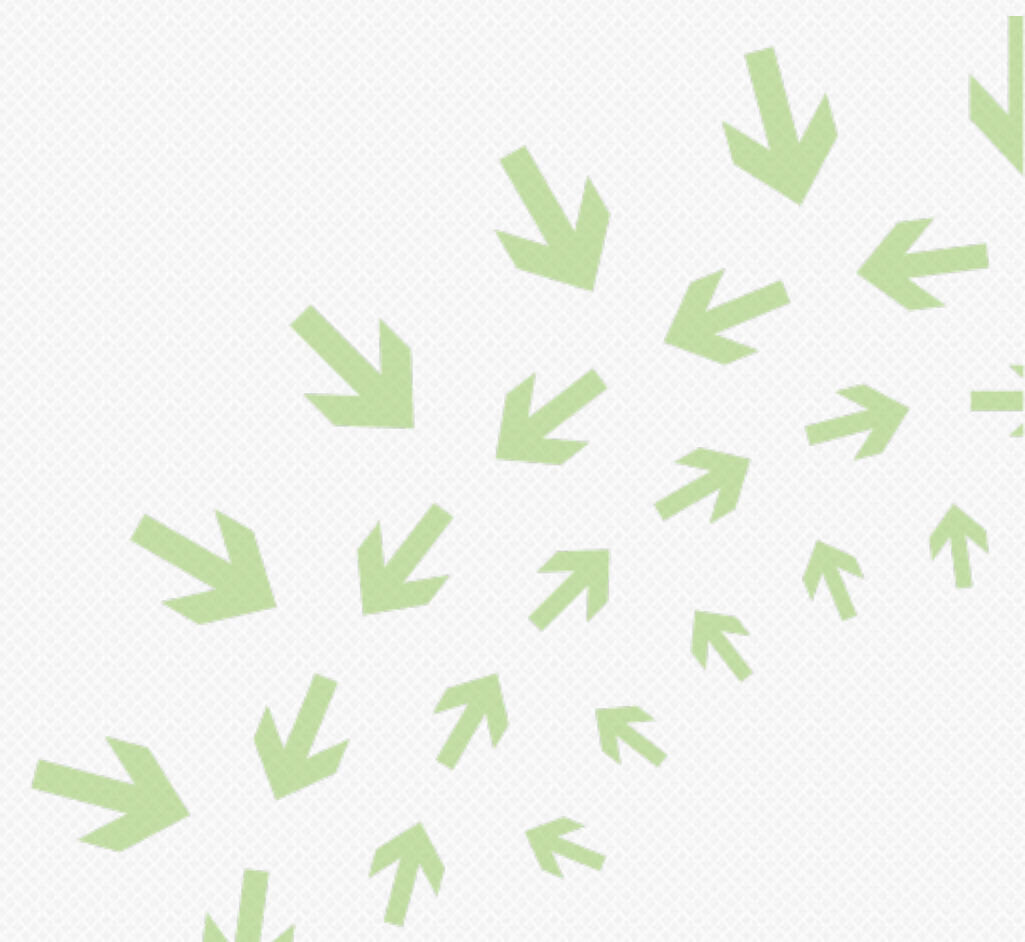


**OPEN**  
Compute Engineering Workshop

# Storage & Certification

## Joint Session

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# Agenda

- Introduction
- Summary
- License
- Reference & Glossary
- Reference
- Glossary
- Notation Rules
- Certification Principles
- Specification Requirements
- Certification Specification
- Test Case
- Test Cases Execution Sequence
- Equipment Requirements
- Appendix A - Test Report Examples



# Storage Certification

- Summary
- License
- Reference & Glossary
- Reference
- Glossary
- Notation Rules
- Certification Principles



# Specification Requirement

- SR-001 External management interfaces
  - SR-001-0001 SES commands
  - SR-001-0002 Diagnostics CLI
- SR-002 I/O connectivity and PHY control/monitoring
  - SR-002-0001 SMP functions
  - SR-002-0002 PHY error counters
  - SR-002-0003 Topology discovery and routing table management
  - SR-002-0004 Staggered disk drive spin-up
- SR-003 General enclosure management features
  - SR-003-0001 Enclosure service processes
  - SR-003-0002 Power monitoring and control
  - SR-003-0003 Intelligent cooling fan control scheme
- SR-004 Reliability, availability and serviceability
  - SR-004-0001 Power on self-test
  - SR-004-0002 24 hours idle test
  - SR-004-0003 Enclosure event log
  - SR-004-0004 EEPROM contents update for each field replaceable unit
  - SR-004-0005 Firmware in-system upgrade for each SAS expander
  - SR-004-0006 One command/script to upgrade firmware for all HDDs
  - SR-004-0007 HDD healthiness checking
- SR-005 Interoperability with application client
  - SR-005-0001 RAID 0 test
  - SR-005-0002 RAID 1 test
  - SR-005-0003 RAID 6 test



# Certification Specification

- CS-001 External management interfaces
  - CS-001-0001 SES commands
  - CS-001-0002 Diagnostics CLI
- CS-002 I/O connectivity and PHY control/monitoring
  - CS-002-0001 SMP functions
  - CS-002-0002 PHY error counters
  - CS-002-0003 Topology discovery and routing table management
  - CS-002-0004 Staggered disk drive spin-up
- CS-003 General enclosure management features
  - CS-003-0001 Redundant enclosure service processes
  - CS-003-0002 Power monitoring and control
  - CS-003-0003 Intelligent cooling fan control scheme
- CS-004 Reliability, availability and serviceability
  - CS-004-0001 Power on self-test
  - CS-004-0002 24 hours idle test
  - CS-004-0003 Enclosure event log
  - CS-004-0004 EEPROM contents update for each field replaceable unit
  - CS-004-0005 Firmware in-system upgrade for each SAS expander
  - CS-004-0006 One command/script to upgrade firmware for all HDDs
  - CS-004-0007 HDD healthiness checking
- CS-005 Interoperability with application client
  - CS-005-0001 RAID 0 test
  - CS-005-0002 RAID 1 test
  - CS-005-0003 RAID 6 test



# Test Case

- TC-001 External management interfaces
  - TC-001-0001 SES commands
    - TC-001-0001-001 SES commands
  - TC-001-0002 Diagnostics CLI
    - TC-001-0002-001 Diagnostics CLI
- TC-002 I/O connectivity and PHY control/monitoring
  - TC-002-0001 SMP functions
    - TC-002-0001-001 SMP functions
  - TC-002-0002 PHY error counters
    - TC-002-0002-001 PHY error counters
  - TC-002-0003 Topology discovery and routing table management
    - TC-002-0003-001 Topology discovery and routing table management
  - TC-002-0004 Staggered disk drive spin-up
    - TC-002-0004-001 Staggered disk drive spin-up
- TC-003 General enclosure management features
  - TC-003-0001 Enclosure service processes
    - TC-003-0001-001 Enclosure service processes
  - TC-003-0002 Power monitoring and control
    - TC-003-0002-001 Power monitoring and control
  - TC-003-0003 Intelligent cooling fan control scheme
    - TC-003-0003-001 Intelligent cooling fan control scheme
- TC-004 Reliability, availability and serviceability
  - TC-004-0001 Power on self-test
    - TC-004-0001-001 Power on self-test
  - TC-004-0002 24 hours idle test
    - TC-004-0002-001 24 hours idle test
  - TC-004-0003 Enclosure event log
    - TC-004-0003-001 Enclosure event log
  - TC-004-0004 EEPROM contents update for each field replaceable unit
    - TC-004-0004-001 EEPROM contents update for each field replaceable unit
  - TC-004-0005 Firmware in-system upgrade for each SAS expander
    - TC-004-0005-001 Firmware in-system upgrade for each SAS expander
  - TC-004-0006 One command/script to upgrade firmware for all HDDs
    - TC-004-0006-001 One command/script to upgrade firmware for all HDDs
  - TC-004-0007 HDD healthiness checking
    - TC-004-0007-001 HDD healthiness checking
- TC-005 Interoperability with application client
  - TC-005-0001 RAID 0 test
    - TC-005-0001-001 RAID 0 test
  - TC-005-0002 RAID 1 test
    - TC-005-0002-001 RAID 1 test
  - TC-005-0003 RAID 6 test
    - TC-005-0003-001 RAID 6 test



# Storage Certification

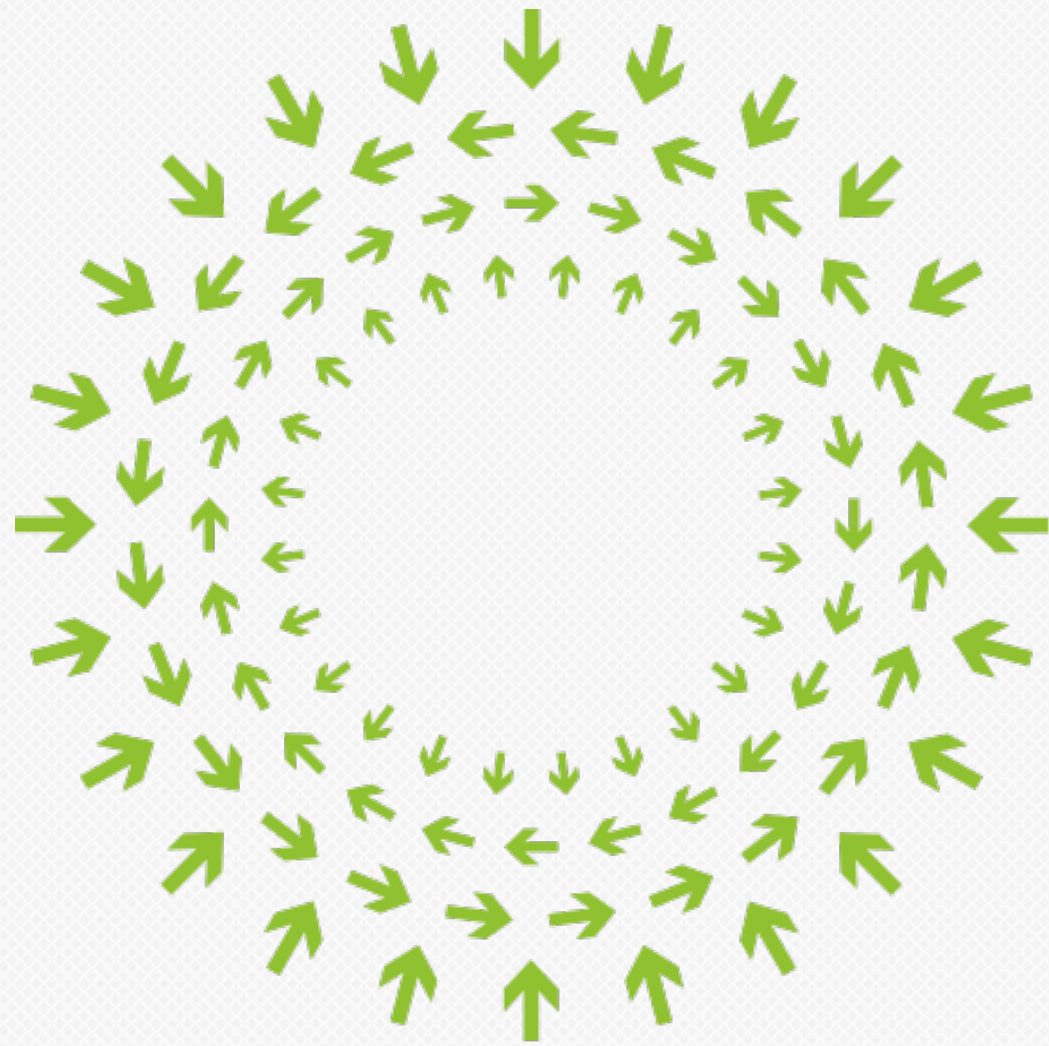
- Test Cases Execution Sequence
- Equipment Requirements
- OCP C&I Certified Pre-requisite
- Hardware Requirements
- Test Equipment
- Software Needed
- Lab Equipment
- Appendix A - Test Report Examples
- Full Test Report Example





THANK YOU





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