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Homi Arabshahi, Task Lead EED-2 Task 52
EOSDIS Evolution and Development - 2 Contract

10/31/19
Date

RESPONSIBLE AUTHOR



Skip Linehan, Senior Principal Systems Engineer
EOSDIS Evolution and Development - 2 Contract

10/31/19
Date

Raytheon Company
Riverdale, Maryland

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Goddard Space Flight Center
Greenbelt, Maryland

National Aeronautics and
Space Administration

ECS Requirements Volume 7 Specification Signature/Approval Page

Prepared by:

Name	Date
Title/Role	
Organization	

Reviewed by:

Name	Date
Title/Role	
Organization	

Approved by:

Name	Date
Title/Role	
Organization	

Concurred by:

Name	Date
Title/Role	
Organization	

**[Electronic] Signatures available in B32 Room E148
online at: / <https://ops1-cm.ems.eosdis.nasa.gov/cm2/>**

Preface

This document is under ESDIS Project configuration control. Once this document is approved, ESDIS approved changes are handled in accordance with Class I and Class II change control requirements described in the ESDIS Configuration Management Procedures, and changes to this document shall be made by change bars or by complete revision.

Any questions should be addressed to: esdis-esmo-cmo@lists.nasa.gov

ESDIS Configuration Management Office (CMO)

NASA/GSFC

Code 423

Greenbelt, Md. 20771

DRAFT

Abstract

This document provides the completed Level 4 Science Data Processing Segment (SDPS) Requirements for the Internetworking (ISS), Map Generation Service (MGS), System Management (MSS) and EOSDIS Metrics (EMS) subsystems.

Keywords: SDPS, ISS, MGS, MSS, EMS

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1 INTRODUCTION

The EOSDIS Core System (ECS) performs information management and data archiving and distribution for Earthdata mission datasets at NASA Distributed Active Archive Center (DAAC) locations. Each DAAC performs these functions using a combination of standard capabilities provided by ESDIS, and hardware and software specific to the DAAC. The ECS was developed using special hardware and software to support the high ingest rates of EOS instruments. ECS currently resides and operates at three DAACs: Atmospheric Science Data Center (ASDC), Land Processing (LP) DAAC and National Snow and Ice Data Center (NSIDC) DAAC.

Data products are created by NASA's Science Investigator-led Processing Systems (SIPS) or, in a few cases, by systems interfacing with the ECS at the DAACs. The ECS at the DAACs ingests the data from the processing systems and archives them. ECS has interfaces with the Common Metadata Repository (CMR) to provide metadata to support search and access through CMR clients, for example, Earthdata Search. ECS also provides software toolkits to assist instrument teams in their development of product generation software at their Science Computing Facilities (SCFs) to facilitate ingest of the resulting products into ECS or into other DAAC-specific archiving and distribution systems.

ECS is structured as two segments: the Communications and Systems Management Segment (CSMS) and the Science Data Processing Segment (SDPS).

- The Communications and Systems Management Segment (CSMS) provides the communications infrastructure for the ECS and systems management for all of the ECS hardware and software components. The CSMS provides the interconnection between users and service providers within the ECS, transfer of information between subsystems, Computer Software Configuration Items (CSCIs), Computer Software Components (CSCs), and processes of the ECS.
- The Science Data Processing System (SDPS) provides science data ingest and production, search and access functions, data archive, and system management capabilities.

The ECS includes the following subsystems:

Subsystem	Segment	Subsystem Description
AIM	SDPS	Archive Inventory Management Subsystem
BMGT	SDPS	Bulk Metadata Generation Tool
CSS	CSMS	Communications Subsystem
Data Access	SDPS	Data Access Subsystem
DMS	SDPS	Data Management Subsystem
DPL	SDPS	Data Pool Subsystem
DPL-Ingest	SDPS	Data Pool Ingest Subsystem
DSS	SDPS	Data Server Subsystem
DTS	SDPS	Defect Tracking Subsystem

Subsystem	Segment	Subsystem Description
EMS	SDPS	EOSDIS Metrics Subsystem
HEG	SDPS	HDF-EOS to Geotiff Converter Subsystem
INS	SDPS	Ingest Subsystem
ISS	CSMS	Internetworking Subsystem
MGS	SDPS	Map Generation Service
MSS	SDPS	System Management Subsystem
OMS	SDPS	Order Manager Subsystem
SSS	SDPS	Spatial Subscription Server Subsystem
TKD	SDPS	Toolkit Subsystem for DAACs
TKS	SDPS	Toolkit Subsystem for Science Teams

1.1 Purpose

The purpose of the ECS Requirements Document Set is to present the system requirements that have been implemented for ECS. This document is one volume of the set.

1.2 Scope

Because the number of requirements is large, this Requirements documentation set has been divided in to a series of Volumes, partitioned by subsystem. This is one volume in the set.

Volume	Subsystems	Requirements
1	AIM, BMGT	462
2	CSS, DMS, Data Access	249
3	DPL	1,670
4	DTS, HEG	125
5	DSS	1,245
6	INS, DPL Ingest	180
7	ISS, MGS, MSS, EMS	374
8	OMS	817
9	SSS	160
10	TKD, TKS	335
	total	5,617

1.3 Related Documentation

The latest versions of all documents below should be used. The latest Earth Science Data and Information System (ESDIS) Project documents can be obtained from Uniform Resource Locator (URL): <https://ops1-cm.ems.eosdis.nasa.gov>. ESDIS documents have a document number starting with either 423 or 505. Other documents are available for reference in the

ESDIS project library website at: http://esdisfmp01.gsfc.nasa.gov/esdis_lib/default.php unless indicated otherwise.

1.3.1 Applicable Documents

The following document contains policies or other directive matters that are binding upon the content of this document.

423-46-01	Functional and Performance Requirements Specification for the ECS Science Data Processing System
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1.3.2 Reference Documents

The following documents are not binding on the content but referenced herein and amplify or clarify the information presented in this document.

NPR 2810.1A	Security of Information Technology document
170-TP-013-001	HDF-EOS Data Format Converter User's Guide', (170-TP-013-001), January 2002
170-TP-600	HDF-EOS Library Users Guide Volume 1 (170-TP-600)
n/a	BMGTCollectionMetadata.dtd https://earthdata.nasa.gov/esdis/eso/standards-and-references/echo-metadata-standard
n/a	BMGTGranuleMetadata.dtd https://earthdata.nasa.gov/esdis/eso/standards-and-references/echo-metadata-standard
n/a	BMGTBrowseMetadata.dtd https://earthdata.nasa.gov/esdis/eso/standards-and-references/echo-metadata-standard
n/a	ECHO PackageManifest.xsd https://earthdata.nasa.gov/esdis/eso/standards-and-references/echo-metadata-standard
170-WP-023	Bulk Metadata and Browse Export Capability for the ECS Project' (170-WP-023-011, 9/27/00)
209-CD-036	Interface Control Document for ECS Interfaces That Support External Subsetters Located at DAACs', ECS Project document number 209-CD-036-001
304-CD-002	Science and Data Processing Segment (SDPS) Requirements Specification for the ECS Project (March 1995)
311-EMD-xxx	Archive Management Inventory (AIM) Database Design Schema Specifications for the EMD Project
423-41-57	Interface Control Document between the EOSDIS Core System (ECS) and the Science Investigator-led Processing Systems (SIPS), Volume 0
423-41-58	ICD between ECS and the LP DAAC

423-41-63	ICD between EMOS and the SDPS
423-45-02	Interface Control Document between EOSDIS Core System (ECS) and EOS Clearinghouse (ECHO) for Metadata Inventory and Ordering
423-45-03	Interface Control Document for ECS ECHO WSDL Order Component (EWOC) and External Processing Systems Co-located at the DAACs
423-ICD-EDOS/EGS	Interface Control Document Between the Earth Observing System (EOS) Data and Operations System (EDOS) and the EOS Ground System (EGS) Elements, renumbered as 428-ICD-EDOS/EGS
505-41-17	Interface Requirements Document between EOSDIS Core System (ECS) and the NASA Science Internet (NSI), 505-41-17
505-41-30	Interface Control Document Between EOSDIS Core Systems (ECS) and the Version 0 System for Interoperability', ESDIS document number 505-41-30
910-TDA-042	EMD Browsers Baseline
CK_70_01	ECS Ticket: End-To-End Checksum Capability
DP_72_02	ECS Ticket: Ingest of Level 0 Data from EDOS into the Data Pool
DP_72_03	ECS Ticket: Ingest of ASTER L1A and Browse into Data Pool
DP_72_04	ECS Ticket: Data Pool Ingest of Data at the ASDC DAAC
DP_72_05	ECS Ticket: Support for MISR Browse Linkages in Release 7.20
DP_S3_01	ECS Ticket: Populate Data Pool from ECS Archive
DP_S3_02	ECS Ticket: Accommodate Non ECS Data in Data Pool
DP_S4_07	ECS Ticket: Support Compression on Data Pool Insert
DP_S6_01	ECS Ticket: SIPS Ingest Into Data Pool
DP_SY_01	ECS Ticket: Data Pool FTP Service
DP_SY_03	ECS Ticket: Data Pool Cleanup
DP_SY_04	ECS Ticket: Data Pool Insert
DP_SY_06	ECS Ticket: Update Granule Expiration in Data Pool
DP_SY_08	ECS Ticket: Compile & Examine Data Pool Access Statistics
DS_7E_01	ECS Ticket: Removal of Science Data Server
ES_SY_01	ECS Ticket: External Subsetter Support
OD_S3_01	ECS Ticket: Order Manager
OD_S4_01	ECS Ticket: Improve Distribution to End Users through Data Pool
OD_S5_02	ECS Ticket: Managing HEG Orders
OD_S5_06	ECS Ticket: Hiding Order-Only Granules In The Data Pool
OG_S5_01	ECS Ticket: HEG Extensions for OWS
OM_80_01	ECS Ticket: Operational Updates to OMS
OP_S4_06	ECS Ticket: Support Multiple Data Pool File Systems
WD_S3_01	ECS Ticket: HDF-EOS Format Converter Integration with Data Pool

WD_S4_02	ECS Ticket: HEG Integration Enhancements
WL_S4_01	ECS Ticket: Synergy IV 24-Hour Workload Performance

2 REQUIREMENTS

2.1 ISS

These are the completed ECS requirements for the ISS subsystem. ISS contains one hardware configuration item (HWCI), the Internetworking HWCI (INCI). INCI provides internetworking services based on protocols and standards corresponding to the lower four layers of the Open System Interconnection (OSI) reference model: Physical, Data Link, Network, Transport.

ID	Title	Status
ECS-L4-16313	C-ISS-01040 The ISS shall provide for connectivity between the LaRC DAAC and EBnet for the ingest of L0 CERES data.	Completed
ECS-L4-16314	C-ISS-01080 The ISS shall reuse the V0 WAN and LAN links in order to provide connectivity between V0 network nodes and V1 network nodes and to provide interoperability between the systems.	Completed
ECS-L4-16315	C-ISS-01130 The ISS shall provide for connectivity to the LaRC campus network to enable transfer of data between SCF(s) located at LaRC and the LaRC DAAC.	Completed
ECS-L4-16316	C-ISS-01140 The ISS shall provide for connectivity to the GSFC campus network to enable transfer of data between SCF(s) located at GSFC and the GSFC DAAC.	Completed
ECS-L4-16317	C-ISS-01150 The ISS shall provide for connectivity between the Landsat system and the EDC DAAC to support the ingest of Landsat data.	Completed
ECS-L4-16318	C-ISS-01200 The topology of the EOC LANs shall not inhibit the reconfiguration of FOS devices to support either operational or support functions.	Completed
ECS-L4-16319	C-ISS-01210 The ISS shall provide the EOC with a separate network to support functions that will not interfere with the EOC's operational LAN.	Completed
ECS-L4-16320	C-ISS-01215 The EOC's support LAN architecture shall be identical in function and performance to that of the operational network.	Completed
ECS-L4-16321	C-ISS-01256 The ISS shall provide LAN connectivity and OSI Layer 1 through 4 services between the CSMS components at the EDC DAAC.	Completed
ECS-L4-16322	C-ISS-01270 The ISS shall provide LAN connectivity and OSI Layer 1 through 4 (i.e., from the physical to the transport layer) services between the SMC and the GSFC DAAC.	Completed
ECS-L4-16323	C-ISS-01280 The ISS shall provide LAN connectivity and OSI Layer 1 through 4 (i.e., from the physical to the transport layer) services between the SMC and the EOC via a GFE LAN.	Completed
ECS-L4-16324	C-ISS-01290 The ISS shall provide LAN connectivity and OSI Layer 1 through 4 (i.e., from the physical to the transport layer) services between the FOS EOC components and the CSMS-provided LSM within the EOC.	Completed
ECS-L4-16325	C-ISS-01330 The ISS shall provide LAN connectivity and OSI Layer 1 through 4 (i.e., from the physical to the transport layer) services between CSMS components at the LaRC DAAC.	Completed
ECS-L4-16326	C-ISS-01340 The ISS shall provide LAN connectivity and OSI Layer 1 through 4 (i.e., from the physical to the transport layer) services between CSMS and SDPS components at the LaRC DAAC.	Completed
ECS-L4-16327	C-ISS-01365 The ISS shall provide for connectivity at DAACs that support SCFs requiring remote SSI&T access via dial-up.	Completed

ID	Title	Status
ECS-L4-16328	C-ISS-01370 The ISS shall provide an 8-port Terminal Access Server at DAACs that support remote SSI&T access via a dial-up.	Completed
ECS-L4-16329	C-ISS-01380 The ISS shall provide two V.34 compatible modems for each SCF requiring remote SSI&T access via dial-up.	Completed
ECS-L4-16330	C-ISS-02000 The ISS shall provide connection oriented transport services as specified by the TCP protocol referenced in RFC 793.	Completed
ECS-L4-16331	C-ISS-02010 The ISS shall provide the capability to filter packets based on the port/socket of the transport layer protocol.	Completed
ECS-L4-16332	C-ISS-02020 The ISS shall provide connectionless transport services as specified by the UDP protocol referenced in RFC 768.	Completed
ECS-L4-16333	C-ISS-02030 The ISS shall provide network layer services as specified by the Internet Protocol (IP) suite referenced in RFC 791.	Completed
ECS-L4-16334	C-ISS-02040 The ISS shall provide the capability to filter packets based upon network layer source and/or destination addresses.	Completed
ECS-L4-16335	C-ISS-02050 The ISS shall provide ICMP network layer service as specified by RFC 792.	Completed
ECS-L4-16336	C-ISS-02060 The ISS shall provide network layer services in compliance with one or more of the following protocols as appropriate to the type of the physical network supported. a. IP over Ethernet as specified in RFCs 894, 895, 826 (ARP), 903 (RARP) b. IP over FDDI as specified in RFC 1188, 1390 (ARP, RARP) c. IP over HiPPI as specified in RFC 1374 (includes ARP, RARP)	Completed
ECS-L4-16337	C-ISS-02100 The ISS-INHW CI shall use physical devices and Medium Access Control protocols compatible with the following standards: a. IEEE 802.2 (Logical Link Control) b. IEEE 802.3 (MAC for Ethernet) c. ANSI X3.183, X3.210, X3.218, X3.222 (HiPPI) d. ANSI X3T9.5 (MAC for FDDI).	Completed
ECS-L4-16338	C-ISS-02110 The ISS-INHW CI physical components, and services shall have the capability to be monitored via SNMP agents.	Completed
ECS-L4-16339	C-ISS-02200 The ISS-INHW CI LAN Analysis Equipment shall provide protocol analysis through the transport layer for all ISS LAN protocols and interconnection protocols to MANs/WANs.	Completed
ECS-L4-16340	C-ISS-02210 The ISS-INHW CI LAN Analysis Equipment shall include a Communications line monitor.	Completed
ECS-L4-16341	C-ISS-02220 The ISS-INHW CI communications line monitor shall store and display up to 10,000 bytes of data sent and received over any of the communications lines at rates of 10Mbits/sec to 100Mbits/sec.	Completed
ECS-L4-16342	C-ISS-02230 The ISS-INHW CI communications line monitor shall support the protocols used within and interconnecting the ECS.	Completed
ECS-L4-16343	C-ISS-02250 The ISS-INHW CI LAN Analysis Equipment shall have the capability to analyze IP, Internet, and FDDI packet.	Completed
ECS-L4-16344	C-ISS-02300 The ISS-INHW CI EOC LAN loop delay contribution shall not exceed more than 500 msec (goal 250 msec) seconds of the total ECS delay of 2.5 seconds for emergency real-time commands.	Completed
ECS-L4-16345	C-ISS-02310 The ISS-INHW CI EOC Operational LAN backbone shall be able to support a peak traffic rate of 24 Mbps.	Completed
ECS-L4-16346	C-ISS-02330 The ISS-INHW CI shall provide sufficient local area network bandwidth at the LaRC DAAC to support data transfer between and among physical nodes provided by SDPS, MSS and CSS in accordance with the Release B network I/O sizing listed in Reference Table: CSMS Capacity and Performance Characteristics (Table A-2 and A-3).	Completed

ID	Title	Status
ECS-L4-16347	C-ISS-02350 The ISS-INHW CI shall provide sufficient local area network bandwidth at the GSFC DAAC to support data transfer between and among physical nodes provided by SDPS, MSS and CSS in accordance with the Release B network I/O sizing listed in Reference Table: CSMS Capacity and Performance Characteristics (Table A-2 and A-3).	Completed
ECS-L4-16348	C-ISS-02360 The ISS-INHW CI shall provide sufficient local area network bandwidth at the EDC DAAC to support data transfer between and among physical nodes provided by SDPS, MSS and CSS in accordance with the Release B network sizing listed in Reference Table: CSMS Capacity and Performance Characteristics (Table A-2 and A-3).	Completed
ECS-L4-16349	C-ISS-02390 The ISS-INHW CI LANs at the DAAC sites shall be designed in a manner that allows a. Nodes to be added to any given LAN segment. b. Additional LAN segments to be added to the LAN.	Completed
ECS-L4-16350	C-ISS-02400 The ISS-INHW CI EOC Operational LAN shall be able to support 230 network devices without redesign.	Completed
ECS-L4-16351	C-ISS-02410 The ISS-INHW CI EOC Operational LAN shall be able to support peak data rates of up to 48 Mbps without redesign.	Completed
ECS-L4-16352	C-ISS-02500 The ISS-INHW CI networks shall support the use of network and transport layer filtering to control access from internal and external interfaces.	Completed
ECS-L4-16353	C-ISS-02510 The EOC LANs shall be capable of supporting multicasting.	Completed
ECS-L4-16354	C-ISS-02520 The ISS shall provide services based on the Open Shortest Path First (OSPF) protocol referenced in RFC 1583 to route traffic between the source and destination nodes, maintain route databases, and exchange routing information between networks.	Completed
ECS-L4-16355	C-ISS-02522 The ISS shall have the capability to provide services based on the Border Gateway Protocol-4 (BGP-4) referenced in RFC 1583 to route traffic between the source and destination nodes, maintain route databases, and exchange routing information between networks.	Completed
ECS-L4-16356	C-ISS-02524 The ISS shall have the capability to provide protocol bridging services between network segments.	Completed
ECS-L4-16357	C-ISS-02526 The ISS shall provide protocol termination services in network devices.	Completed
ECS-L4-16358	C-ISS-02530 The ISS shall provide services based on the Routing Information Protocol (RIP) referenced in RFC 1058 to route network traffic between the source and destination nodes.	Completed
ECS-L4-16359	C-ISS-03005 The ECS Firewall shall provide network address translation to permit the configuration of a private address space for the ECS LAN.	Completed
ECS-L4-16360	C-ISS-02600 The ISS-INHW CI DAAC LANs shall provide transparent portability across heterogeneous site LAN architectures.	Completed
ECS-L4-16361	C-ISS-03010 The ECS Firewall shall deny all network services not explicitly configured as permitted.	Completed
ECS-L4-16362	C-ISS-02610 The ISS-INHW CI DAAC LANs shall enable expansion to GByte networks including the ability to provide increased volume of data distribution and access.	Completed
ECS-L4-16363	C-ISS-03020 The ECS Firewall shall be configurable to permit incoming tcp/ip socket connections on specific sockets and from specific ip addresses to support tcp/ip message traffic with external systems, for example, to perform network ingest (such as required for Landsat) and accept data and user profile requests (such as required for EDG, ASTER GDS, DORRAN, and the Landsat Level 1 processing system).	Completed

ID	Title	Status
ECS-L4-16364	C-ISS-03000 The ISS shall include an ECS Firewall at each DAAC and the SMC isolating the ECS LAN from all external networks.	Completed
ECS-L4-16365	C-ISS-03030 The ECS Firewall shall be configurable to permit outgoing tcp/ip socket connections to support tcp/ip message traffic with remote systems, such as required for sending acknowledgment and notices to LPS, DAR to the ASTER GDS, and requests and responses to external systems such as EDG, ASTER GDS, and DORRAN.	Completed
ECS-L4-16366	C-ISS-03040 The ECS Firewall shall be configurable to permit incoming ftp connections from specific external ip addresses for ftp ingest, such as required for EDOS.	Completed
ECS-L4-16367	C-ISS-03050 The ECS Firewall shall be configurable to permit incoming ftp connections to the ftp Pull area, such as required for ftp pull distributions.	Completed
ECS-L4-16368	C-ISS-03060 The ECS Firewall shall be configurable to permit outgoing ftp connections for FTP Pull, such as needed by polling FTP ingest from external data providers, SIPS, and cross-DAAC data transfers.	Completed
ECS-L4-16369	C-ISS-03070 The ECS Firewall shall be configurable to permit outgoing ftp connections for FTP Push, such as needed for FTP Push to external users, SIPS, and for cross-DAAC data transfers.	Completed
ECS-L4-16370	C-ISS-03075 The ECS Firewall shall be configurable to permit outgoing anonymous ftp connections, such as needed to obtain a new leap second file from the US Naval Observatory.	Completed
ECS-L4-16371	C-ISS-03080 The ECS Firewall shall be configurable to provide a store-and-forward service supporting outgoing e-mail traffic, such as needed for ECS Subscription Notices, Distribution Notices, and Expedited Data Notices.	Completed
ECS-L4-16372	C-ISS-03090 The ECS Firewall shall be configurable to provide a store-and-forward service supporting incoming e-mail traffic, such as needed for ECS Subscription Requests, ECS Distribution Notices for cross-DAAC ingest and Expedited Data Requests from GDS.	Completed
ECS-L4-16373	C-ISS-03100 The ECS Firewall shall be configurable to permit incoming secure shell connections from specific external ip addresses, such as needed for M&O remote login and the machine-to-machine gateway interactions.	Completed
ECS-L4-16374	C-ISS-03110 The ECS Firewall shall be configurable to permit connection of ECS ntp servers to an external time provider.	Completed
ECS-L4-16375	C-ISS-03120 The ECS Firewall shall be configurable to permit Sybase replication, such as needed for user profile synchronization among the DAAC and SMC.	Completed
ECS-L4-16376	C-ISS-03130 The ECS Firewall shall be configurable to permit incoming web access via Http and sockets to ECS web services, such as ASTER DAR queries and submissions for the JDТ.	Completed
ECS-L4-16377	C-ISS-03135 The ECS Firewall shall be configurable to permit outgoing web access via http from individual platforms or subnetworks inside the firewall.	Completed
ECS-L4-16378	C-ISS-03140 The ECS Firewall shall be configurable to permit DNS look up and exchange traffic.	Completed
ECS-L4-16379	C-ISS-03150 The ECS Firewall shall support connectivity via 10/100 and gigabit Ethernet.	Completed
ECS-L4-16380	C-ISS-03160 The ECS Firewall shall support connectivity via FDDI.	Completed
ECS-L4-16381	C-ISS-03170 The ECS Firewall shall support connectivity via HiPPI.	Completed
ECS-L4-16382	C-ISS-04020 Backups of all router configuration files shall be maintained at the local DAAC and the Network Management Facility (NMF).	Completed

ID	Title	Status
ECS-L4-16383	C-ISS-04040 The EOC Operational LAN shall have no single point of failure for critical real-time functions.	Completed
ECS-L4-16384	C-ISS-04050 The EOC Operational LAN shall be configured to support the FOS availability of .9998 and a mean down time of < 1 minute for critical real-time data during times of staffed operation.	Completed
ECS-L4-16385	C-ISS-04055 The EOC Support LAN shall have an operational availability of at least 0.96 and shall have a mean down time of no greater than 4 hours during times of staffed operation, unless otherwise specified.	Completed
ECS-L4-16386	C-ISS-04060 The portion of the DAAC LAN supporting the SDPS function of receiving science data shall contribute to the function's operational availability of 0.999 at a minimum and a mean down time of two (2) hours or less during times of staffed operation.	Completed
ECS-L4-16387	C-ISS-04070 The portion of the DAAC LAN supporting the SDPS function of archiving and distributing data shall contribute to the function's operational availability of 0.98 at a minimum and a mean down time of two (2) hours or less during times of staffed operation.	Completed
ECS-L4-16388	C-ISS-04080 The portion of the DAAC LAN supporting the SDPS function of User Interfaces to Client, Interoperability, Data Server, and Data Management (IMS) services at Individual DAAC Sites shall contribute to the function's operational availability of 0.993 at a minimum and a mean down time requirement of two (2) hours or less during times of staffed operations.	Completed
ECS-L4-16389	C-ISS-04090 The portion of the DAAC LAN supporting the SDPS function of information searches on the ECS Directory shall contribute to the function's operational availability of 0.993 at a minimum and a mean down time of two (2) hours or less during times of staffed operation.	Completed
ECS-L4-16390	C-ISS-04102 The portion of the EDC DAAC LAN supporting the SDPS function of Data Acquisition Request (DAR) Submittal including TOOs shall contribute to the function's operational availability of 0.993 at a minimum and mean down time of two (2) hours or less during times of staffed operation.	Completed
ECS-L4-16391	C-ISS-04140 The portion of the DAAC LAN supporting the SDPS function of local data order submission across DAACs shall contribute to the function's operational availability of 0.96 at a minimum and a mean down time of four (4) hours or less during times of staffed operation.	Completed
ECS-L4-16392	C-ISS-04110 The portion of the DAAC LAN supporting the SDPS function of metadata ingest and update shall contribute to the function's operational availability of 0.96 at a minimum and a mean down time of four (4) hours or less during times of staffed operation.	Completed
ECS-L4-16393	C-ISS-04150 The portion of the DAAC LAN supporting the SDPS function of Client, Interoperability, Data Management and Data Server (IMS) Data Base Management and Maintenance Interface shall contribute to the function's operational availability of 0.96 at a minimum and a mean down time of four (4) hours or less during times of staffed operation.	Completed
ECS-L4-16394	C-ISS-04120 The portion of the DAAC LAN supporting the SDPS function of information searches on local holdings shall contribute to the function's operational availability of 0.96 at a minimum and a mean down time of four (4) hours or less during times of staffed operation.	Completed
ECS-L4-16395	C-ISS-04155 The ISS services at the SMC shall be configured to support the SMC function of Gathering and Disseminating System Management Information's Availability requirement of .998 and a Mean Down Time of < 20 minutes during times of staffed operation.	Completed

ID	Title	Status
ECS-L4-16396	C-ISS-04130 The portion of the DAAC LAN supporting the SDPS function of local data order submission shall contribute to the function's operational availability of 0.96 at a minimum and a mean down time of four (4) hours or less during times of staffed operations.	Completed
ECS-L4-16397	C-ISS-04160 The ISS elements and components shall include the on-line (operational mode) and off-line (test mode) fault detection and isolation capabilities required to achieve the specified operational availability requirements.	Completed
ECS-L4-16398	C-ISS-04165 The maximum down time of the ISS-INHCI shall not exceed twice the required MDT in 99 percent of failure occurrences.	Completed
ECS-L4-16399	C-ISS-04170 The EOC Operational LAN shall be configured to support the FOS availability of .99925 and a mean down time of < 5 minutes for non-critical real-time data during times of staffed operation.	Completed
ECS-L4-16400	C-ISS-06000 The ISS network architecture shall enable expansion to GByte networks including the ability to provide increased volume of data distribution/access.	Completed
ECS-L4-16401	C-ISS-11020 The ISS shall interface with NSI at GSFC, LaRC, EDC, and NSIDC to provide DAAC access to science users in accordance with current document "Interface Requirements Document between EOSDIS Core System (ECS) and the NASA Science Internet (NSI), 505-41-17".	Completed
ECS-L4-16402	C-ISS-11090 The ISS shall provide connectivity to V0 network nodes at the GSFC, EDC, LaRC, and NSIDC DAAC sites in order to provide interoperability between ECS and V0.	Completed
ECS-L4-16403	C-ISS-11170 The ISS shall provide for connectivity between the EOC and EBnet.	Completed
ECS-L4-16404	C-ISS-11180 The ISS shall provide for connectivity between the EOC and NSI for EOC/IST communications.	Completed
ECS-L4-16405	C-ISS-11195 The ISS shall provide for connectivity with EBnet at the following ECS sites: a. GSFC DAAC b. GSFC EOC c. GSFC SMC d. LaRC DAAC h. NSIDC DAAC i. EDC DAAC	Completed
ECS-L4-16406	C-ISS-11220 The ISS shall provide LAN connectivity and OSI Layer 1 through 4 (i.e., from the physical to the transport layer) services at the GSFC DAAC.	Completed
ECS-L4-16407	C-ISS-11230 The ISS shall provide LAN connectivity and OSI Layer 1 through 4 (i.e., from the physical to the transport layer) services at the LaRC DAAC.	Completed
ECS-L4-16408	C-ISS-11240 The ISS shall provide LAN connectivity and OSI Layer 1 through 4 (i.e., from the physical to the transport layer) services at the EDC DAAC.	Completed
ECS-L4-16409	C-ISS-11260 The ISS shall provide LAN connectivity and OSI Layer 1 through 4 (i.e., from the physical to the transport layer) services between components at the SMC.	Completed
ECS-L4-16410	C-ISS-20000 The ISS shall provide LANs at the following Release B sites: a. GSFC DAAC; b. GSFC EOC; c. EDC DAAC; d. LaRC DAAC; f. GSFC SMC; j. NSIDC DAAC	Completed
ECS-L4-16411	C-ISS-20010 The ISS shall provide LANs at the JPL and ORNL DAACs.	Completed
ECS-L4-16414	C-ISS-20080 The ISS shall provide sufficient local area network bandwidth at the NSIDC DAAC to support data transfer between and among physical nodes in accordance with the Release B network sizing listed in Reference Table: CSMS Capacity and Performance Characteristics (Table A-2 and A-3).	Completed

ID	Title	Status
ECS-L4-16415	C-ISS-20090 The ISS LANs at the GSFC, GSFC EOC, GSFC SMC, EDC, LaRC, and NSIDC DAACs shall be capable of supporting twice the R-B network traffic load estimates without redesign.	Completed
ECS-L4-16416	C-ISS-20095 The ISS LANs at JPL and ORNL DAACs shall be capable of supporting twice the R-B network traffic load estimates without redesign.	Completed
ECS-L4-16417	C-ISS-20100 The ISS LANs shall be designed in a manner that allows a. Nodes to be added to any given LAN segment.; b. Additional LAN segments to be added to the LAN.	Completed
ECS-L4-16418	C-ISS-20124 The EOC Operational LAN backbone shall be able to support a peak traffic rate of 24 Mbps to support AM-1 flows from the EBnet interface.	Completed
ECS-L4-16419	C-ISS-20130 The ISS shall provide LAN connectivity and OSI Layer 1 through 4 (i.e., from the physical to the transport layer) services at the JPL DAAC.	Completed
ECS-L4-16420	C-ISS-20150 The ISS shall provide LAN connectivity and OSI Layer 1 through 4 (i.e., from the physical to the transport layer) services at the ORNL DAAC.	Completed
ECS-L4-16421	C-ISS-20160 The ISS shall provide LAN connectivity and OSI Layer 1 through 4 (i.e., from the physical to the transport layer) services at the NSIDC DAAC.	Completed
ECS-L4-16422	C-ISS-20170 The ISS shall provide LAN connectivity and OSI Layer 1 through 4 (i.e., from the physical to the transport layer) services at the GSFC EOC.	Completed
ECS-L4-16423	C-ISS-21020 The ISS shall interface with NSI at JPL and ORNL to provide DAAC access to science users in accordance with current document "Interface Requirements Document between EOSDIS Core System (ECS) and the NASA Science Internet (NSI), 505-41-17".	Completed
ECS-L4-16424	C-ISS-20180 The ISS shall receive diagnostic test requests from the MSS.	Completed
ECS-L4-16425	C-ISS-21090 The ISS shall provide connectivity to V0 network nodes at the ORNL and JPL sites in order to provide interoperability between ECS and V0.	Completed
ECS-L4-16426	C-ISS-20190 The ISS-INHW CI shall contribute to the response time and performance requirements specified in Reference Table: A/B Service Performance Response Time Budgets by Subsystem (Table E-8.2).	Completed
ECS-L4-16427	C-ISS-21195 The ISS shall provide for connectivity with EBnet at the JPL DAAC.	Completed
ECS-L4-16428	C-ISS-20200 The ISS shall send diagnostic test requests to the MSS.	Completed
ECS-L4-16429	C-ISS-21210 The ISS-INCI shall ensure that the following calendar transitions are handled completely and accurately: a. New Year b. New Decade c. New Century d. Leap Year..	Completed

2.2 MGS

These are the completed ECS requirements for the MGS subsystem (the Map Generation Service Subsystem). MGS generates and archives HDF4 maps (HDF maps) and ensures they are available for distribution.

ID	Title	Status
ECS-L4-16430	S-MGS-00020 The Map Generation Service shall provide the following options for the generation of HDF4 archive maps: Generate HDF 4 archive map files for granules for a specific ESDT Generate HDF4 archive map files for a list of ESDTs Generate HDF4 archive map files for a specified insert time interval, in combination with (a) or (b) Generate HDF4 archive map files for specific granules identified by granule ID Generate replacement HDF4 archive map files for science granules which already have one	Completed
ECS-L4-16431	S-MGS-00010 ECS shall provide a stand-alone HDF4 archive map generation utility (MGS) which supports the following modes of operation: Demo mode – results are not committed to the AIM database, and map files are placed in a destination directory specified at the command line, intended for testing. Stand-alone operational mode – results are committed to the AIM database, intended for generating HDF4 archive map files for granules already resident in the on line archive.	Completed
ECS-L4-16432	S-MGS-00030 The Map Generation Service shall generate HDF4 archive maps in gzip compressed format.	Completed
ECS-L4-16433	S-MGS-00040 The Map Generation Service shall compute a checksum for the HDF4 archive map file in gzip compressed format.	Completed
ECS-L4-16434	S-MGS-00045 The Map Generation Service shall not generate a granule XML metadata file for HDF4 archive map granules.	Completed
ECS-L4-16435	S-MGS-00050 The Map Generation Service will provide the following results at the conclusion of an HDF4 archive map file generation operation: HDF4 archive map file name (reserved) The checksum for the HDF4 archive map file The date/time that the HDF4 archive map file was created The version of the HDF4 archive map file generation software that was used to create the HDF4 archive map file Service that was used to generate the HDF4 archive map file (NOTE: TBD by design, the service will be identified by which process queued the event for the MGS, DPL Ingest or Stand-alone MGU)	Completed
ECS-L4-16436	S-MGS-00060 The Map Generation Service shall not generate a replacement HDF4 archive map file for a science granule unless explicitly requested to do so.	Completed
ECS-L4-16437	S-MGS-00070 The Map Generation Service shall not generate an HDF4 archive map files for granules whose native format is not HDF4.	Completed
ECS-L4-16438	S-MGS-00080 The Map Generation Service must be capable of running concurrently with all other ECS functions and all ECS modes.	Completed
ECS-L4-16439	S-MGS-00090 The Map Generation Service must be capable of executing in parallel with a configurable number of concurrent instances.	Completed
ECS-L4-16440	S-MGS-00100 The MGS must allow DAAC staff to configure the platforms on which to perform HDF4 Map file generation and the number of concurrent executions on each platform.	Completed
ECS-L4-16441	S-MGS-00110 The Map Generation Service shall store and archive the HDF4 archive map file in the on-line archive.	Completed
ECS-L4-16442	S-MGS-00120 The Map Generation Service shall compute a checksum for the HDF4 archive map file and store it in the AIM Inventory Metadata for the HDF4 archive map granule.	Completed
ECS-L4-16443	S-MGS-00130 Upon HDF4 archive map generation for a science granule, the Map Generation Service shall store the linkage information between the HDF4 archive map and the science granule in the AIM Inventory metadata for the science granule.	Completed

ID	Title	Status
ECS-L4-16444	S-MGS-00140 Upon HDF4 archive map file generation for a science granule, the Map Generation Service shall update the XML metadata for the science granule with linkage information about the associated HDF4 archive map file.	Completed
ECS-L4-16445	S-MGS-00150 Upon HDF4 archive map file generation for a science granule, the Map Generation Service shall store the filename of the HDF4 archive map in the AIM Inventory.	Completed
ECS-L4-16446	S-MGS-00160 Upon HDF4 archive map file generation for a science granule, the Map Generation Service shall store the file creation date/time for the HDF4 archive map file in the AIM Inventory.	Completed
ECS-L4-16447	S-MGS-00170 Upon HDF4 archive map file generation for a science granule, the Map Generation Service shall store the version of the HDF4 archive map file generation software that was used to create the HDF4 archive map file in the AIM Inventory.	Completed
ECS-L4-16448	S-MGS-00180 The Map Generation Service must log the failures of HDF4 archive map file creation.	Completed
ECS-L4-16449	S-MGS-00190 The Map Generation Service must include the HDF4 archive map file generation in performance logging.	Completed

2.3 MSS

These are the completed ECS requirements for the MSS subsystem (System Management Subsystem). MSS provides a complement of tools and services to manage ECS operations. The management services provided cover five major areas including fault, configuration, accountability, performance, and security (FCAPS). The MSS is implemented using COTS products customized to meet ECS requirements, wherever possible.

ID	Title	Status
ECS-L4-16452	C-MSS-00030 The MSS services shall be extensible in its design to provide capability for growth and enhancement.	Completed
ECS-L4-16453	C-MSS-00200 The MSS services shall allocate 10% of development resources for IV&V activity.	Completed
ECS-L4-16473	C-MSS-05100 The SDPS shall provide a System Monitoring, Event Detection, and Response service.	Completed
ECS-L4-16474	C-MSS-05110 The System Monitoring, Event Detection, and Response service shall provide the ability to monitor the up or down status of all SDPS host machines, including: SDPS custom application hosts Sybase database host Storage Management primary metadata server Storage Management secondary metadata server DESIRABLE: Firewall host	Completed
ECS-L4-16475	C-MSS-05120 The System Monitoring, Event Detection, and Response service shall provide the ability to monitor resource usage on all SDPS hosts , including: Memory usage CPU usage I/O characteristics (e.g., I/O rates, counts, queue size, service time, wait time, average I/O size) Paging rate Swap space	Completed
ECS-L4-16476	C-MSS-05130 The System Monitoring, Event Detection, and Response service shall provide the ability to monitor up or down status of ECS local area network devices, wide area network devices, and storage area network devices, including: Fabric switches Ethernet switches Wide area Network routers Controllers LUNs TBD by design: whether to use existing COTS products such as MRTG and Finisar to collect status information.	Completed

ID	Title	Status
ECS-L4-16477	C-MSS-05140 The System Monitoring, Event Detection, and Response service shall provide the ability to monitor I/O rates of ECS local area network devices, wide area network devices, and storage area network devices.	Completed
ECS-L4-16478	C-MSS-05150 The System Monitoring, Event Detection, and Response service shall provide the ability to monitor up or down status of ECS network services and daemons , including: inetd dns http ssh nfs wu-ftp sendmail	Completed
ECS-L4-16479	C-MSS-05160 DESIRABLE: The System Monitoring, Event Detection, and Response service shall provide the ability to monitor performance parameters of the wu-ftp service, including: session statistics (e.g., number of active sessions) flow rates checksumming workload	Completed
ECS-L4-16480	C-MSS-05170 DESIRABLE: The System Monitoring, Event Detection, and Response service shall provide the ability to monitor performance of internal file transfer services (e.g., ftp or ssh), including: session statistics (e.g., number of active sessions) flow rates	Completed
ECS-L4-16481	C-MSS-05180 The System Monitoring, Event Detection, and Response service shall provide the ability to monitor up or down status of web application servers, including: Tomcat/Apache Sun Java System Web server	Completed
ECS-L4-16482	C-MSS-05190 The System Monitoring, Event Detection, and Response service shall provide the ability to monitor the up or down status of external ECS services – e.g. HSA	Completed
ECS-L4-16483	C-MSS-05200 The System Monitoring, Event Detection, and Response service shall provide the ability to monitor up or down status of database servers , including: Sybase server Sqs instances Stornext Linter database server	Completed
ECS-L4-16484	C-MSS-05210 DESIRABLE: The System Monitoring, Event Detection, and Response service shall provide the ability to monitor the up or down status of system mount points .	Completed
ECS-L4-16485	C-MSS-05220 The System Monitoring, Event Detection, and Response service shall provide the ability to monitor space utilization of ECS components , including: Data Pool file systems SNAC (e.g. snfs , amfs) Sybase database devices DAAC configured directories (e.g., log directories, output file directories, metadata validation warning directory)	Completed
ECS-L4-16486	C-MSS-05230 The System Monitoring, Event Detection, and Response service shall provide the ability to monitor I/O rates of ECS components , including: Data Pool file systemsSNAC Tape archive Sybase database devices	Completed
ECS-L4-16487	C-MSS-05240 The System Monitoring, Event Detection, and Response service shall provide the ability to monitor performance parameters for ECS databases, including: number of deadlocks Representative response times for stored procedure calls Number of database connections	Completed
ECS-L4-16488	C-MSS-05250 The System Monitoring, Event Detection, and Response service shall provide the ability to monitor the up or down status of ECS custom code and COTS servers and processes which are designed to run continuously, including, Quick Servers Ingest servers OMS server EPD DPAD SSS AIM processes (IIU, XVU) BMGT servers StorNext TSM, FSM, MSM HEG server EWOC	Completed

ID	Title	Status
ECS-L4-16489	C-MSS-05260 DESIRABLE: The System Monitoring, Event Detection, and Response service shall provide the ability to monitor the up or down status of ECS command line utilities, including: Granule Deletion utilities QA Update utility Online Archive utilities Move Collection utility Checksum Verification utilities Data Pool cleanup utilities	Completed
ECS-L4-16490	C-MSS-05265 The System Monitoring, Event Detection, and Response service shall provide the ability to monitor the following metrics for configured ECS custom code servers and utilities: CPU utilization Memory utilization	Completed
ECS-L4-16491	C-MSS-05270 The System Monitoring, Event Detection, and Response service shall provide the ability to monitor the numbers of alerts and interventions detected by the ECS custom code, including: Number of Ingest Alerts Number of Ingest Interventions Number of OMS Alerts Number of OMS Interventions Number of Data Pool registration failures Number of Data Pool publication failures	Completed
ECS-L4-16493	C-MSS-05290 The System Monitoring, Event Detection, and Response service shall provide the ability to monitor queue processing for the following custom code queues: Ingest queues OMS queues Data Pool DIInsertActionQueue SSS BMGT (e.g., DsMdBmgReExportQueue) Quick Server queues NOTE: This requirement is for a capability similar to the current Vital Stats implemented in the PVC.	Completed
ECS-L4-16494	C-MSS-05300 The System Monitoring, Event Detection, and Response service shall provide the ability to monitor throughput rates of ECS components, including: Ingest Distribution Data Pool Inserts	Completed
ECS-L4-16495	C-MSS-05310 DESIRABLE: The System Monitoring, Event Detection, and Response service shall provide the ability to monitor StorNext tape statistics, including: number of tape mounts per time period number of tape errors per time period	Completed
ECS-L4-16496	C-MSS-05320 The System Monitoring, Event Detection, and Response service shall provide a (TBD single) graphical user interface (GUI) which supports the entry and display of all information collected and controlled by the System Monitoring, Event Detection, and Response service.	Completed
ECS-L4-16497	C-MSS-05330 The System Monitoring, Event Detection, and Response GUI shall allow multiple operators to monitor and manage system status and event response concurrently from different workstations.	Completed
ECS-L4-16498	C-MSS-05340 The System Monitoring, Event Detection, and Response GUI shall support concurrent monitoring and managing of system status and event response in multiple modes on the same and different workstations.	Completed
ECS-L4-16499	C-MSS-05350 The System Monitoring, Event Detection, and Response GUI shall display the mode in which it is operating.	Completed
ECS-L4-16500	C-MSS-05360 The System Monitoring, Event Detection, and Response GUI shall be compatible with the EMD baseline versions of web browsers and operating systems.	Completed
ECS-L4-16501	C-MSS-05370 It must be possible to protect the System Monitoring, Event Detection, and Response GUI against external access via appropriate ECS or DAAC security policy.	Completed
ECS-L4-16502	C-MSS-05380 The System Monitoring, Event Detection, and Response service shall allow secured operator access to the GUI from outside of the DAAC facility. NOTE: This may be accomplished by local DAAC security rules, e.g., the use of a VPN tunnel or ssh.	Completed

ID	Title	Status
ECS-L4-16503	C-MSS-05390 The System Monitoring, Event Detection, and Response GUI shall permit authorized operators ('security admin' operators) to define the authorizations for each operator that shall apply when that operator uses the System Monitoring, Event Detection, and Response GUI.	Completed
ECS-L4-16504	C-MSS-05400 The System Monitoring, Event Detection, and Response GUI shall support an authorization and login scheme which allows DAAC operations to distinguish between users that have view only permissions ('view-only' operators), those that can alter general configuration parameters ('monitoring admin' operators), and those that can maintain the security information ('security admin' operators).	Completed
ECS-L4-16505	C-MSS-05410 TBD: The System Monitoring, Event Detection, and Response GUI shall support an authorization and login scheme which distinguishes between users with system administration responsibilities, users with database management responsibilities, users with hardware maintenance responsibilities, and users with ECS operations responsibilities.	Completed
ECS-L4-16506	C-MSS-05420 The System Monitoring, Event Detection, and Response GUI shall allow an authorized operator to configure (i.e., enter and edit) the list of system components which will be monitored for up and down status. For each such component, the GUI shall allow the operator to configure: the component name TBD by design: the monitoring interval for the component, in minutes	Completed
ECS-L4-16507	C-MSS-05430 The System Monitoring, Event Detection, and Response service shall monitor the up or down status of all components which are configured to be so monitored, at the configured monitoring interval.	Completed
ECS-L4-16508	C-MSS-05440 The System Monitoring, Event Detection, and Response GUI shall display the current up or down status of all components which are configured to be so monitored.	Completed
ECS-L4-16509	C-MSS-05450 The System Monitoring, Event Detection, and Response GUI shall allow an authorized operator to configure (i.e., enter and edit) the list of system resources whose usage will be monitored. For each such resource, the GUI shall allow the operator to configure: the resource name TBD by design: the monitoring interval for the resource, in minutes the hosts/devices on which the resource will be monitored DESIRABLE: Optionally, the resource usage warning threshold for each host/device Optionally, the resource usage alert threshold for each host/device DESIRABLE: the default resource usage warning threshold the default resource usage alert threshold for each threshold, whether the threshold is to be considered as a lower limit or an upper limit	Completed
ECS-L4-16510	C-MSS-05460 The System Monitoring, Event Detection, and Response service shall monitor the resource usage of all components which are configured to be so monitored on each configured host/device, at the configured monitoring interval, on each selected host/device.	Completed
ECS-L4-16511	C-MSS-05470 The System Monitoring, Event Detection, and Response GUI shall display the current usage statistics of all system resources which are configured to be monitored. Usage statistics shall include: raw number percentage of available resource	Completed
ECS-L4-16512	C-MSS-05480 DESIRABLE: If the current usage of a monitored system resource crosses the configured warning threshold, the System Monitoring, Event Detection, and Response GUI shall display an indication that this has occurred.	Completed
ECS-L4-16513	C-MSS-05490 If the current usage of a monitored system resource crosses the configured alert threshold, the System Monitoring, Event Detection, and Response GUI shall display an indication that this has occurred.	Completed

ID	Title	Status
ECS-L4-16514	C-MSS-05500 The System Monitoring, Event Detection, and Response service shall use the configured default warning and alert thresholds for each host/device for which no host/device-specific thresholds have been configured.	Completed
ECS-L4-16515	C-MSS-05510 The System Monitoring, Event Detection, and Response GUI shall allow an authorized operator to configure (i.e., enter and edit) the list of system components whose I/O rates will be monitored. For each such component, the GUI shall allow the operator to configure: the component name TBD by design: the monitoring interval for the resource, in minutes DESIRABLE: the I/O rate warning threshold the I/O rate alert threshold for each threshold, whether the threshold is to be considered as a lower limit or an upper limit	Completed
ECS-L4-16516	C-MSS-05520 The System Monitoring, Event Detection, and Response service shall monitor the I/O rates of all components which are configured to be so monitored, at the configured monitoring interval.	Completed
ECS-L4-16517	C-MSS-05530 The System Monitoring, Event Detection, and Response GUI shall display the current I/O rates of all system components which are configured to be monitored.	Completed
ECS-L4-16518	C-MSS-05540 DESIRABLE: If the current I/O rate of a monitored system component crosses the configured warning threshold, the System Monitoring, Event Detection, and Response GUI shall display an indication that this has occurred.	Completed
ECS-L4-16519	C-MSS-05550 If the current I/O of a monitored system component crosses the configured alert threshold, the System Monitoring, Event Detection, and Response GUI shall display an indication that this has occurred.	Completed
ECS-L4-16520	C-MSS-05560 The System Monitoring, Event Detection, and Response GUI shall allow an authorized operator to select, from a list of available StorNext tape statistics, which statistics to monitor. For each statistic selected, the GUI shall allow the operator to configure: DESIRABLE: the warning threshold for that statistic The alert threshold for that statistic TBD the monitoring interval for that statistic, in TBD units for each threshold, whether the threshold is to be considered as a lower limit or an upper limit	Completed
ECS-L4-16521	C-MSS-05570 The System Monitoring, Event Detection, and Response service shall monitor the StorNext tape statistics which are selected to be monitored, at the configured monitoring interval.	Completed
ECS-L4-16522	C-MSS-05580 The System Monitoring, Event Detection, and Response GUI shall display the current value of each StorNext tape statistic which is selected to be monitored.	Completed
ECS-L4-16523	C-MSS-05590 If the current value of a monitored StorNext tape statistic crosses the configured warning threshold, the System Monitoring, Event Detection, and Response GUI shall display an indication that this has occurred.	Completed
ECS-L4-16524	C-MSS-05600 If the current value of a monitored StorNext tape statistic crosses the configured alert threshold, the System Monitoring, Event Detection, and Response GUI shall display an indication that this has occurred.	Completed

ID	Title	Status
ECS-L4-16525	C-MSS-05610 The System Monitoring, Event Detection, and Response GUI shall allow an authorized operator to configure (i.e., enter and edit) the list of file systems whose space utilization will be monitored. For each such file system, the GUI shall allow the operator to configure: the file system name the file system path TBD by design: the file system monitoring interval, in minutes DESIRABLE: the file system space utilization warning threshold, as a percentage of available space the file system space utilization alert threshold, as a percentage of available space whether or not to calculate the file system growth rate TBD: if the file system growth rate is calculated, the growth rate warning threshold If the file system growth rate is calculated, the growth rate alert threshold for each threshold, whether the threshold is to be considered as a lower limit or an upper limit	Completed
ECS-L4-16526	C-MSS-05620 The System Monitoring, Event Detection, and Response service shall monitor the space utilization of all file systems which are configured to be so monitored, at the configured monitoring interval.	Completed
ECS-L4-16527	C-MSS-05630 The System Monitoring, Event Detection, and Response service shall calculate the growth rate in TBD units of all file systems which are configured for growth rate calculation, at the configured monitoring interval.	Completed
ECS-L4-16528	C-MSS-05640 The System Monitoring, Event Detection, and Response GUI shall display the current space utilization of all file systems which are configured to be monitored. Space usage information shall include: raw number percentage of available space	Completed
ECS-L4-16529	C-MSS-05650 The System Monitoring, Event Detection, and Response GUI shall display the current file system growth rate of all files systems which are configured for growth rate calculation.	Completed
ECS-L4-16530	C-MSS-05660 DESIRABLE: If the current space utilization of a monitored file system crosses the configured warning threshold, the System Monitoring, Event Detection, and Response GUI shall display an indication that this has occurred.	Completed
ECS-L4-16531	C-MSS-05670 If the current space utilization of a monitored file system crosses the configured alert threshold, the System Monitoring, Event Detection, and Response GUI shall display an indication that this has occurred.	Completed
ECS-L4-16532	C-MSS-05680 DESIRABLE: If the current growth rate of a monitored file system crosses the configured warning threshold, the System Monitoring, Event Detection, and Response GUI shall display an indication that this has occurred.	Completed
ECS-L4-16533	C-MSS-05690 If the current growth rate of a monitored file system crosses the configured alert threshold, the System Monitoring, Event Detection, and Response GUI shall display an indication that this has occurred.	Completed
ECS-L4-16534	C-MSS-05700 The System Monitoring, Event Detection, and Response GUI shall allow an authorized operator to configure (i.e., enter and edit) the list of directories whose space utilization will be monitored. For each such directory, the GUI shall allow the operator to configure: the directory name the directory path TBD by design: the directory monitoring interval, in minutes DESIRABLE: the directory space utilization warning threshold, as a percentage of available space the directory space utilization alert threshold, as a percentage of available space whether or not to calculate the directory growth rate TBD: if the directory growth rate is calculated, the growth rate warning threshold If the directory growth rate is calculated, the growth rate alert threshold for each threshold, whether the threshold is to be considered as a lower limit or an upper limit	Completed

ID	Title	Status
ECS-L4-16535	C-MSS-05710 The System Monitoring, Event Detection, and Response service shall monitor the space utilization of all directories which are configured to be so monitored, at the configured monitoring interval.	Completed
ECS-L4-16536	C-MSS-05720 The System Monitoring, Event Detection, and Response service shall calculate the growth rate in TBD units of all directories which are configured for growth rate calculation, at the configured monitoring interval.	Completed
ECS-L4-16537	C-MSS-05730 The System Monitoring, Event Detection, and Response GUI shall display the current space utilization of all directories which are configured to be monitored. Space usage information shall include: raw number percentage of available space	Completed
ECS-L4-16538	C-MSS-05740 The System Monitoring, Event Detection, and Response GUI shall display the current directory growth rate of all directories which are configured for growth rate calculation.	Completed
ECS-L4-16539	C-MSS-05750 DESIRABLE: If the current space utilization of a monitored directory crosses the configured warning threshold, the System Monitoring, Event Detection, and Response GUI shall display an indication that this has occurred.	Completed
ECS-L4-16540	C-MSS-05760 If the current space utilization of a monitored directory crosses the configured alert threshold, the System Monitoring, Event Detection, and Response GUI shall display an indication that this has occurred.	Completed
ECS-L4-16541	C-MSS-05770 DESIRABLE: If the current growth rate of a monitored directory crosses the configured warning threshold, the System Monitoring, Event Detection, and Response GUI shall display an indication that this has occurred.	Completed
ECS-L4-16542	C-MSS-05780 If the current growth rate of a monitored directory crosses the configured alert threshold, the System Monitoring, Event Detection, and Response GUI shall display an indication that this has occurred.	Completed
ECS-L4-16543	C-MSS-05790 The System Monitoring, Event Detection, and Response GUI shall allow an authorized operator to select, from a list of available database performance parameters, which parameters to monitor. For each parameter selected, the GUI shall allow the operator to configure: the parameter name TBD by design: the monitoring interval for the parameter, in TBD units the databases for which the parameter will be monitored optionally, the stored procedures for which the parameter will be monitored DESIRABLE: Optionally, the parameter value warning threshold for each selected database Optionally, the parameter value alert threshold for each selected database DESIRABLE: the default parameter value warning threshold the default parameter value alert threshold for each threshold, whether the threshold is to be considered as a lower limit or an upper limit	Completed
ECS-L4-16544	C-MSS-05800 The System Monitoring, Event Detection, and Response service shall monitor the database performance parameters which are selected to be monitored, at the configured monitoring interval, for each selected database and optionally, each selected stored procedure.	Completed
ECS-L4-16545	C-MSS-05810 The System Monitoring, Event Detection, and Response GUI shall display the current value of each database performance parameter which is selected to be monitored, for each selected database, and optionally, for each selected stored procedure.	Completed

ID	Title	Status
ECS-L4-16546	C-MSS-05820 If the current value of a monitored database performance parameter crosses the configured warning threshold, the System Monitoring, Event Detection, and Response GUI shall display an indication that this has occurred.	Completed
ECS-L4-16547	C-MSS-05830 If the current value of a monitored database performance parameter crosses the configured alert threshold, the System Monitoring, Event Detection, and Response GUI shall display an indication that this has occurred.	Completed
ECS-L4-16548	C-MSS-05840 The System Monitoring, Event Detection, and Response service shall use the configured default warning and alert thresholds for each database for which no database-specific thresholds have been configured.	Completed
ECS-L4-16549	C-MSS-05850 The System Monitoring, Event Detection, and Response GUI shall allow an authorized operator to select, from a list of available queues, which ECS database queues to monitor. For each queue selected, the GUI shall allow the operator to configure: DESIRABLE: the queue size warning threshold the queue size alert threshold TBD by design: the queue monitoring interval, in minutes DESIRABLE: whether or not to calculate the queue growth rate DESIRABLE: if the queue growth rate is calculated, the growth rate warning threshold DESIRABLE: If the queue growth rate is calculated, the growth rate alert threshold DESIRABLE: whether or not to calculate the queue service rate DESIRABLE: if the queue service rate is calculated, the service rate warning threshold DESIRABLE: If the queue service rate is calculated, the service rate alert threshold DESIRABLE: whether or not to calculate the average queue service time DESIRABLE: if the average queue service time is calculated, the average service time warning threshold DESIRABLE: If the average queue service time is calculated, the average service time alert threshold DESIRABLE: whether or not to calculate the average queue wait time DESIRABLE: if the average queue wait time is calculated, the average wait time warning threshold DESIRABLE: If the average queue wait time is calculated, the average wait time alert threshold DESIRABLE: whether or not to calculate the age of the oldest queue item DESIRABLE: if the age of the oldest queue item is calculated, the queue item age warning threshold DESIRABLE: if the age of the oldest queue item is calculated, the queue item age alert threshold DESIRABLE: whether or not to calculate the longest queue service time in a specified time period DESIRABLE: if the longest queue service time is calculated, the longest queue service time warning threshold DESIRABLE: if the longest queue service time is calculated, the longest queue service time alert threshold for each threshold, whether the threshold is to be considered as a lower limit or an upper limit	Completed
ECS-L4-16550	C-MSS-05860 The System Monitoring, Event Detection, and Response service shall monitor the size of all queues which are selected to be monitored, TBD at the configured monitoring interval.	Completed
ECS-L4-16551	C-MSS-05870 DESIRABLE: The System Monitoring, Event Detection, and Response service shall calculate the growth rate in entries/hour, service rate in entries/hour, average service time in seconds, average wait time in seconds, age of oldest queue item in minutes, and longest queue service time in seconds, of all queues which are configured for such calculation, TBD at the configured monitoring interval.	Completed
ECS-L4-16552	C-MSS-05880 The System Monitoring, Event Detection, and Response GUI shall display the following information for all queues which are configured to be monitored: queue name queue size	Completed

ID	Title	Status
ECS-L4-16553	C-MSS-05890 DESIRABLE: The System Monitoring, Event Detection, and Response GUI shall display the current growth rate, current service rate, current average service time, current average wait time, current age of oldest queue item, and current longest service time of all queues which are configured for such calculation.	Completed
ECS-L4-16554	C-MSS-05900 DESIRABLE: If the current size of a monitored queue crosses the configured warning threshold, the System Monitoring, Event Detection, and Response GUI shall display an indication that this has occurred.	Completed
ECS-L4-16555	C-MSS-05910 If the current size of a monitored queue crosses the configured alert threshold, the System Monitoring, Event Detection, and Response GUI shall display an indication that this has occurred.	Completed
ECS-L4-16556	C-MSS-05920 DESIRABLE: If the current growth rate, service rate, average service time, average wait time, age of oldest queue item, or longest service time of a monitored queue crosses the associated configured warning threshold, the System Monitoring, Event Detection, and Response GUI shall display an indication that this has occurred, for all queues where such statistics are calculated.	Completed
ECS-L4-16557	C-MSS-05930 DESIRABLE: If the current growth rate, service rate, average service time, average wait time, age of oldest queue item, or longest service time of a monitored queue crosses the associated configured alert threshold, the System Monitoring, Event Detection, and Response GUI shall display an indication that this has occurred, for all queues where such statistics are calculated.	Completed
ECS-L4-16558	C-MSS-05940 The System Monitoring, Event Detection, and Response GUI shall allow an authorized operator to select, from a list of available file transfer performance parameters, which parameters to monitor. For each parameter selected, the GUI shall allow the operator to configure: the parameter name TBD by design: the monitoring interval for the parameter, in TBD units the file transfer services for which the parameter will be monitored (e.g., ftp, scp, wu-ftp) DESIRABLE: Optionally, the parameter value warning threshold for each selected file transfer service Optionally, the parameter value alert threshold for each selected file transfer service DESIRABLE: the default parameter value warning threshold the default parameter value alert threshold for each threshold, whether the threshold is to be considered as a lower limit or an upper limit	Completed
ECS-L4-16559	C-MSS-05950 The System Monitoring, Event Detection, and Response service shall monitor the file transfer performance parameters which are selected to be monitored, at the configured monitoring interval, for each selected file transfer service.	Completed
ECS-L4-16560	C-MSS-05960 The System Monitoring, Event Detection, and Response GUI shall display the current value of each file transfer performance parameter which is selected to be monitored, for each selected file transfer service.	Completed
ECS-L4-16561	C-MSS-05970 If the current value of a monitored file transfer performance parameter crosses the configured warning threshold, the System Monitoring, Event Detection, and Response GUI shall display an indication that this has occurred.	Completed
ECS-L4-16562	C-MSS-05980 If the current value of a monitored file transfer performance parameter crosses the configured alert threshold, the System Monitoring, Event Detection, and Response GUI shall display an indication that this has occurred.	Completed

ID	Title	Status
ECS-L4-16563	C-MSS-05990 The System Monitoring, Event Detection, and Response service shall use the configured default warning and alert thresholds for each file transfer service for which no service-specific thresholds have been configured.	Completed
ECS-L4-16564	C-MSS-06000 The System Monitoring, Event Detection, and Response GUI shall allow an authorized operator to select, from a list of available types of ECS custom code alerts and interventions (e.g., OMS, Ingest, DataPool), which type of alerts and interventions to monitor. For each type of alert or intervention selected, the GUI shall allow the operator to configure: DESIRABLE: the warning threshold count for that type of alert or intervention The alert threshold count for that type of alert or intervention TBD: the monitoring interval for counts of that type of alert or intervention, in minutes for each threshold, whether the threshold is to be considered as a lower limit or an upper limit	Completed
ECS-L4-16565	C-MSS-06010 The System Monitoring, Event Detection, and Response service shall monitor the counts of all types of alerts and interventions which are selected to be monitored, at the configured monitoring interval.	Completed
ECS-L4-16566	C-MSS-06020 The System Monitoring, Event Detection, and Response GUI shall display the following information for all types of alerts and interventions which are configured to be monitored: Type of alert or intervention Current count of that type of alert or intervention	Completed
ECS-L4-16567	C-MSS-06030 DESIRABLE: If the current count of a monitored type of alert or intervention crosses the configured warning threshold, the System Monitoring, Event Detection, and Response GUI shall display an indication that this has occurred.	Completed
ECS-L4-16568	C-MSS-06040 If the current count of a monitored type of alert or intervention crosses the configured alert threshold, the System Monitoring, Event Detection, and Response GUI shall display an indication that this has occurred.	Completed
ECS-L4-16569	C-MSS-06050 The System Monitoring, Event Detection, and Response GUI shall allow an authorized operator to select, from a list of available ECS components, which components to monitor for throughput. For each component selected, the GUI shall allow the operator to configure: DESIRABLE: the warning threshold for the component's throughput The alert threshold for the component's throughput TBD the monitoring interval for the component's throughput, in minutes The units for the component's throughput (granules, MB, requests) for each threshold, whether the threshold is to be considered as a lower limit or an upper limit	Completed
ECS-L4-16570	C-MSS-06060 The System Monitoring, Event Detection, and Response service shall monitor the throughput of all components which are selected to be monitored, at the configured monitoring interval.	Completed
ECS-L4-16571	C-MSS-06070 The System Monitoring, Event Detection, and Response GUI shall display the current throughput for each component to be monitored.	Completed
ECS-L4-16572	C-MSS-06080 If the current throughput of a monitored component crosses the configured warning threshold, the System Monitoring, Event Detection, and Response GUI shall display an indication that this has occurred.	Completed
ECS-L4-16573	C-MSS-06090 If the current throughput of a monitored component crosses the configured alert threshold, the System Monitoring, Event Detection, and Response GUI shall display an indication that this has occurred.	Completed

ID	Title	Status
ECS-L4-16574	C-MSS-06100 When displaying any indication that a configured warning or alert threshold has been crossed, the System Monitoring, Event Detection, and Response service shall display the threshold value and whether the threshold is an upper limit or lower limit.	Completed
ECS-L4-16575	C-MSS-06110 The System Monitoring, Event Detection, and Response service shall provide the ability for a DAAC to define a list of its business processes.	Completed
ECS-L4-16576	C-MSS-06120 The System Monitoring, Event Detection, and Response service shall provide the ability to configure a mapping from each defined business process to all of the monitored component services and resources which support that business process. TBD by design: whether the mapping is hierarchical or flat.	Completed
ECS-L4-16577	C-MSS-06130 The System Monitoring, Event Detection, and Response GUI shall display current status of all monitored component services and resources, grouped by business process.	Completed
ECS-L4-16578	C-MSS-06135 If a business process is in the 'Down', 'Degraded', or 'Inactive' state the System Monitoring, Event Detection, and Response GUI shall display the resource(s) causing that state first in the list along with an indication of the problem with that resource.	Completed
ECS-L4-16579	C-MSS-06140 The System Monitoring, Event Detection, and Response GUI shall display whether the ECS system is in attended (operators are on duty) or unattended operation.	Completed
ECS-L4-16580	C-MSS-06150 The System Monitoring, Event Detection, and Response GUI shall allow an authorized operator to configure the default times for unattended operation and attended operation.	Completed
ECS-L4-16581	C-MSS-06160 The System Monitoring, Event Detection, and Response service shall assume that the ECS system is in attended or unattended mode according to the configured default times.	Completed
ECS-L4-16582	C-MSS-06170 DESIRABLE: The System Monitoring, Event Detection, and Response GUI shall allow an authorized operator to manually switch the ECS system status from attended to unattended status and vice versa.	Completed
ECS-L4-16583	C-MSS-06180 The System Monitoring, Event Detection, and Response service shall support the definition of the following types of event response actions: notification action corrective action reporting action	Completed
ECS-L4-16584	C-MSS-06190 The System Monitoring, Event Detection, and Response service shall support the following types of notification actions : 1) email; 2) text message.	Completed
ECS-L4-16585	C-MSS-06200 The System Monitoring, Event Detection, and Response service shall allow the mapping of one or more notification recipients to each notification action.	Completed
ECS-L4-16586	C-MSS-06210 DESIRABLE: The System Monitoring, Event Detection, and Response service shall accept acknowledgement of notification from a notification recipient.	Completed
ECS-L4-16587	C-MSS-06220 DESIRABLE: The System Monitoring, Event Detection, and Response service shall allow the configuration of an acknowledgement response time for each notification action.	Completed
ECS-L4-16588	C-MSS-06230 The System Monitoring, Event Detection, and Response service shall support the following types of corrective actions : 1) restart of a process; 2) restart of a custom code server; 3) stop of a process; 4) stop of a custom code server; 5) execution of a UNIX script.	Completed

ID	Title	Status
ECS-L4-16589	C-MSS-06240 DESIRABLE: The System Monitoring, Event Detection, and Response service shall support the following types of reporting actions : 1) create a trouble ticket in TTPro; 2) write a report file to a configured directory location; 3) write data to a database table to be used by EMS or another metrics reporting system.	Completed
ECS-L4-16590	C-MSS-06250 The System Monitoring, Event Detection, and Response service shall consider a system alert event to be: any change from up to down status for a monitored service or component, except where the service or component was shut-down by the operator, or the detection of a monitored or calculated metric crossing its configured alert threshold.	Completed
ECS-L4-16591	C-MSS-06260 The System Monitoring, Event Detection, and Response service shall allow the mapping of one or more primary alert event response actions to a defined system alert event.	Completed
ECS-L4-16592	C-MSS-06270 The System Monitoring, Event Detection, and Response service shall allow the mapping of one or more secondary alert event response actions to a defined system alert event.	Completed
ECS-L4-16593	C-MSS-06280 The System Monitoring, Event Detection, and Response service shall execute each configured primary alert event response action each time the corresponding system alert event is detected, at a configurable frequency for the same occurrence of the system alert event.	Completed
ECS-L4-16594	C-MSS-06290 The System Monitoring, Event Detection, and Response service shall allow the configuration of the frequency at which a primary alert response action is executed for the same occurrence of the system alert event.	Completed
ECS-L4-16595	C-MSS-06300 The System Monitoring, Event Detection, and Response service shall execute each configured secondary alert event response action if the corresponding system alert event has not been cleared within a configured amount of time.	Completed
ECS-L4-16596	C-MSS-06310 The System Monitoring, Event Detection, and Response service shall allow the configuration of a time limit for clearing of a detected system alert event, after which the secondary alert event response action(s) will be executed.	Completed
ECS-L4-16597	C-MSS-06320 The System Monitoring, Event Detection, and Response service shall allow an authorized operator to manually clear a system alert event.	Completed
ECS-L4-16598	C-MSS-06330 DESIRABLE: The System Monitoring, Event Detection, and Response service shall consider a system warning event to be: the detection of a monitored or calculated metric crossing its configured warning threshold	Completed
ECS-L4-16599	C-MSS-06340 DESIRABLE: The System Monitoring, Event Detection, and Response service shall allow the mapping of one or more primary warning event response actions to a defined system warning event.	Completed
ECS-L4-16600	C-MSS-06350 DESIRABLE: The System Monitoring, Event Detection, and Response service shall allow the mapping of one or more secondary warning event response actions to a defined system warning event.	Completed
ECS-L4-16601	C-MSS-06360 DESIRABLE: The System Monitoring, Event Detection, and Response service shall execute each configured primary warning event response action each time the corresponding system warning event is detected, at a configurable frequency for the same occurrence of the system warning event.	Completed

ID	Title	Status
ECS-L4-16602	C-MSS-06370 DESIRABLE: The System Monitoring, Event Detection, and Response service shall allow the configuration of the frequency at which a primary warning event response action is executed for the same occurrence of the system warning event.	Completed
ECS-L4-16603	C-MSS-06380 DESIRABLE: The System Monitoring, Event Detection, and Response service shall execute each configured secondary warning event response action if the corresponding system warning event has not been cleared within a configured amount of time.	Completed
ECS-L4-16604	C-MSS-06390 DESIRABLE: The System Monitoring, Event Detection, and Response service shall allow the configuration of a time limit for clearing of a detected system warning event, after which the secondary warning event response action(s) will be executed.	Completed
ECS-L4-16605	C-MSS-06400 DESIRABLE: The System Monitoring, Event Detection, and Response service shall allow an authorized operator to manually clear a system warning event.	Completed
ECS-L4-16606	C-MSS-06402 The System Monitoring, Event Detection, and Response service shall allow an authorized operator to disable all system alert events and warning events for a component.	Completed
ECS-L4-16607	C-MSS-06406 The System Monitoring, Event Detection, and Response service shall not execute any configured primary or secondary alert event responses as long as a service is disabled.	Completed
ECS-L4-16608	C-MSS-06408 The System Monitoring, Event Detection, and Response service shall not execute any configured primary or secondary warning event responses as long as a service is disabled.	Completed
ECS-L4-16609	C-MSS-06410 The System Monitoring, Event Detection, and Response service shall support alternate mappings of response actions to system events, depending upon whether the system is in attended or unattended mode.	Completed
ECS-L4-16610	C-MSS-06420 DESIRABLE: The System Monitoring, Event Detection, and Response service shall produce reports showing the correlation of events to service outages (cause and effect correlation, to recognize early warning signs of a problem; helps adjust threshold rules for later problem detection)	Completed
ECS-L4-16611	C-MSS-06430 The System Monitoring, Event Detection, and Response service shall be able to produce the following reports for each component monitored for up or down status: total uptime and total downtime over a specified time period a graph of up and down status over time, for a specified time period	Completed
ECS-L4-16612	C-MSS-06440 The System Monitoring, Event Detection, and Response GUI shall be able to display the following information for each component monitored for up or down status: total uptime and total downtime over a specified time period a graph of up and down status over time, for a specified time period	Completed
ECS-L4-16613	C-MSS-06450 The System Monitoring, Event Detection, and Response service shall be able to produce the following reports for each monitored or calculated system statistic (resource usage, I/O rate, space utilization, growth rate, queue size, number of alerts, number of interventions, etc.): Min, Max, and Average value of the statistic over a specified period of time Graph of values of the statistic over a specified period of time	Completed

ID	Title	Status
ECS-L4-16614	C-MSS-06460 The System Monitoring, Event Detection, and Response GUI shall be able to display the following information for each monitored or calculated system statistic (resource usage, I/O rate, space utilization, growth rate, queue size, number of alerts, number of interventions, etc.): Min, Max, and Average value of the statistic over a specified period of time Graph of values of the statistic over a specified period of time	Completed
ECS-L4-16615	C-MSS-06470 The System Monitoring, Event Detection, and Response service shall persistently store the information needed to create the reports and displays in C-MSS-06430, C-MSS-06440, C-MSS-06450, and C-MSS-06460 for a configured amount of time.	Completed
ECS-L4-16616	C-MSS-06480 The System Monitoring, Event Detection, and Response GUI shall allow an authorized operator to configure the amount of time, in days, for which to persistently store the information needed to create the reports and displays in C-MSS-06430, C-MSS-06440, C-MSS-06450, and C-MSS-06460.	Completed
ECS-L4-16617	C-MSS-06490 The System Monitoring, Event Detection, and Response service shall function without interaction from DAAC staff beyond that required for initial setup and configuration.	Completed
ECS-L4-16618	C-MSS-06500 The System Monitoring, Event Detection, and Response service shall recognize when its database is unavailable, and shall inform the operator of this status.	Completed
ECS-L4-16619	C-MSS-06510 The System Monitoring, Event Detection, and Response service shall log the following: Start up of the System Monitoring, Event Detection, and Response service Shut down of the System Monitoring, Event Detection, and Response service Detection of up or down status changes for monitored components Detection of warning thresholds for monitored or calculated statistics Detection of alert thresholds for monitored or calculated statistics Execution of a notification response to a system event Execution of a corrective response to a system event Execution of a Reporting response to a system event Receipt of notification acknowledgement Change to any configuration parameter available on the System Monitoring, Event Detection, and Response GUI Change from attended to unattended operations, and vice versa Change from operations to maintenance mode, and vice versa	Completed
ECS-L4-16620	C-MSS-06520 The System Monitoring, Event Detection, and Response service shall time stamp each log entry.	Completed
ECS-L4-16621	C-MSS-06530 The System Monitoring, Event Detection, and Response GUI shall include the following as the possible statuses for a business process: 'Active' 'Inactive' 'Degraded' 'Down'	Completed
ECS-L4-16622	C-MSS-06540 The System Monitoring, Event Detection, and Response GUI shall provide the ability for the DAAC to configure rules to assign the business process status based on alerts for a resource. Each alert can map to one of the statuses defined in C-MSS-06530.	Completed
ECS-L4-16623	C-MSS-06550 The System Monitoring, Event Detection, and Response service shall consider a business process as 'Down' if there are any open alerts which are mapped to a 'Down' status for the business process.	Completed
ECS-L4-16624	C-MSS-06560 The System Monitoring, Event Detection, and Response services shall consider a business process as 'Degraded' if there are any open alerts which are mapped to a 'Degraded' status for the business process, and there are no open alerts which would map the business process to a 'Down' status.	Completed

ID	Title	Status
ECS-L4-16625	C-MSS-06570 The System Monitoring, Event Detection, and Response service shall consider a business process as 'Inactive' if there are any open alerts which are mapped to an 'Inactive' status for the business process, and there are no open alerts which would map the business process to a 'Down' or 'Degraded' status.	Completed
ECS-L4-16626	C-MSS-06580 The System Monitoring, Event Detection, and Response service shall consider a business process as 'Active' if there are no open alerts which would map the business process to a 'Down', 'Degraded', or 'Inactive' status.	Completed
ECS-L4-16627	C-MSS-06590 The System Monitoring, Event Detection, and Response GUI shall display the current status of all business processes on a single page.	Completed
ECS-L4-16628	C-MSS-06600 The System Monitoring, Event Detection, and Response service shall include the following as the possible statuses for each component within a business process: 'Available' 'Unavailable' 'Alert Pending'	Completed
ECS-L4-16629	C-MSS-06700 The System Monitoring, Event Detection, and Response service shall provide the ability to monitor connectivity to database servers, including: Sybase Server SQS instances [See NCR 8049056, NCR 8049095].	Completed
ECS-L4-16630	C-MSS-06710 The System Monitoring, Event Detection, and Response service shall disable alerts for all servers that are being shut down automatically, and re-enable them during start up. [See NCR 8049101.]	Completed
ECS-L4-16631	C-MSS-06720 The System Monitoring, Event Detection, and Response service shall verify its configuration against an expected mode-specific setup. [See NCR 8049167.]	Completed
ECS-L4-16632	C-MSS-06730 The System Monitoring, Event Detection, and Response service shall allow DAAC staff to define a generic setup and mode-specific variations to that setup. [See NCR 8049167.]	Completed
ECS-L4-16633	C-MSS-06740 The System Monitoring, Event Detection, and Response service shall allow DAAC staff to view only resources associated with a business process for which a problem was detected. [See NCR 8049205.]	Completed
ECS-L4-16634	C-MSS-06741 The SDPS System Monitoring, Event Detection, and Response Service shall allow DAAC staff to monitor the capacity demands for internal resources that are used to process web access requests submitted via the SDPS Web API.	Completed
ECS-L4-16635	C-MSS-06742 The SDPS System Monitoring, Event Detection, and Response Service shall allow DAAC staff to monitor the status (e.g., availability) of internal resources that are required to process web access requests submitted via the SDPS Web API.	Completed
ECS-L4-16636	C-MSS-06743 The SDPS System Monitoring, Event Detection, and Response Service shall be able to alert DAAC staff when internal resources that are required to process web access requests submitted via the SDPS Web API have become unavailable and clear such alerts when the availability of such resources has been restored.	Completed
ECS-L4-16637	C-MSS-06744 The System Monitoring, Event Detection, and Response service shall provide the ability to monitor performance parameters of the HTTP service, including: session statistics (e.g., number of active sessions), flow rates, compression types, and checksumming workload.	Completed
ECS-L4-16642	C-MSS-12020 The MSS MUI Service shall have the capability to respond to keyboard and mouse input devices	Completed

ID	Title	Status
ECS-L4-16643	C-MSS-12030 The MSS MUI Service shall provide a capability for the M&O Staff to add/delete a symbol and to modify a symbol's shape, color and position	Completed
ECS-L4-16644	C-MSS-12040 The MSS MUI Service shall provide a capability for an application to add/delete a symbol and to modify a symbol's shape, color and position	Completed
ECS-L4-16645	C-MSS-12050 The MSS MUI Service shall provide a capability for the M&O Staff to add, delete, and modify text strings	Completed
ECS-L4-16646	C-MSS-12060 The MSS MUI Service shall provide a capability for an application to add, delete, and modify text strings	Completed
ECS-L4-16647	C-MSS-12070 The MSS MUI Service shall have the capability to provide options and methods to the M&O Staff for screen configuration changes (color, symbol placement, etc) and for retaining the changes from session to session	Completed
ECS-L4-16648	C-MSS-12080 The MSS MUI Service shall provide a capability for applications to alert the M&O Staff	Completed
ECS-L4-16649	C-MSS-12090 The MSS MUI Service shall provide a capability for applications to establish a dialog session with the M&O Staff	Completed
ECS-L4-16650	C-MSS-12100 The MSS MUI Service shall provide a capability for the M&O Staff to load and unload vendor or ECS defined MIB.	Completed
ECS-L4-16651	C-MSS-12110 The MSS MUI Service shall provide a capability for applications to load and unload vendor or ECS defined MIB.	Completed
ECS-L4-16652	C-MSS-12120 The MSS MUI Service shall provide a capability for the operator to browse MIB values.	Completed
ECS-L4-16653	C-MSS-12130 The MSS MUI Service shall provide the capability for the M&O Staff to register and unregister managed objects.	Completed
ECS-L4-16654	C-MSS-12140 The MSS MUI Service shall provide the capability for an application to register and unregister managed objects.	Completed
ECS-L4-16656	C-MSS-12180 The MSS MUI Service shall provide the capability for an application to display on-line help windows	Completed
ECS-L4-16661	C-MSS-16005 The ECS management protocol shall be the SNMP standard as specified in RFC 1157.	Completed
ECS-L4-16662	C-MSS-16010 MSS Monitor/Control Service shall communicate via ECS management protocol with the Management Agent Service in test or operational mode.	Completed
ECS-L4-16663	C-MSS-16020 The MSS Monitor/Control Service shall communicate via ECS management protocol with the MSS Management Agent Service to request management data on a managed object.	Completed
ECS-L4-16664	C-MSS-16030 The MSS Monitor/Control Service shall be able to communicate via ECS management protocol with the MSS Management Agent Service to send ECS management set messages to configure and control the processing performed by the ECS management agent.	Completed
ECS-L4-16665	C-MSS-16040 The MSS Monitor/Control Service shall communicate via ECS management protocol with the MSS Management Agent Service to receive ECS management traps/events.	Completed
ECS-L4-16666	C-MSS-16050 The MSS Monitor/Control Service shall allow customized M&O staff-event notifications and automatic actions.	Completed
ECS-L4-16667	C-MSS-16060 The MSS Monitor/Control Service shall allow the capability to set thresholds on managed resources that are monitored	Completed
ECS-L4-16668	C-MSS-16070 The MSS Monitor/Control Service shall automatically report when a threshold has been exceeded by generating a ECS management event	Completed

ID	Title	Status
ECS-L4-16669	C-MSS-16100 The MSS Monitor/Control Service shall perform the following protocol test on managed network nodes: a. IP test b. TCP test c. SNMP test d. UDP test e. ICMP test	Completed
ECS-L4-16670	C-MSS-16110 The MSS monitor/control service shall provide an interface for the management agent status information (executing, failed, not executing) for managed applications.	Completed
ECS-L4-16671	C-MSS-18042 The MSS MDA shall have the capability to distinguish MSS log file records according to mode identifier.	Completed
ECS-L4-16672	C-MSS-18044 The MSS MDA shall support a separate management database for each active mode.	Completed
ECS-L4-16673	C-MSS-18046 The MSS MDA shall transfer MSS log file records to the appropriate management database based on the event's mode.	Completed
ECS-L4-16674	C-MSS-18048 The MSS MDA shall transfer non-mode specific MSS log file records to all mode specific management databases.	Completed
ECS-L4-16675	C-MSS-18050 The MSS Management Data Access Service's shall utilize CSS Services to access/transfer management data.	Completed
ECS-L4-16676	C-MSS-18060 The Management Data Access Service shall provide the capability for an operator to access management data via a log browser.	Completed
ECS-L4-16677	C-MSS-18070 The MSS Management Data Access Service shall provide the capability to selectively access management data.	Completed
ECS-L4-16680	C-MSS-18200 The MSS shall provide the capability for an application via APIs to log event information.	Completed
ECS-L4-16681	C-MSS-18220 MSS shall provide the capability for an application via APIs to alter tables and fields in the management database.	Completed
ECS-L4-16685	C-MSS-18330 MSS shall provide the capability for an applications to append records to a log file.	Completed
ECS-L4-16699	C-MSS-36014 The MSS MACI shall incorporate the mode identifier into all metrics collected.	Completed
ECS-L4-16700	C-MSS-36016 The MSS MACI shall be able to distinguish managed applications based on mode.	Completed
ECS-L4-16701	C-MSS-36020 The MSS Management Agent Service shall communicate via ECS management protocol with the MSS Monitor/Control Service to respond to requests for managed object MIB attributes	Completed
ECS-L4-16702	C-MSS-36040 The MSS Management Agent Service shall communicate via ECS management protocol with the MSS Monitor/Control Service to send ECS management traps/events to the Monitor/Control Service.	Completed
ECS-L4-16705	C-MSS-36050 The MSS Management Agent Service shall communicate via ECS management protocol with the MSS Monitor/Control Service to receive ECS management set message from the Monitor/Control Service.	Completed
ECS-L4-16714	C-MSS-36215 The Management Agent Service shall have the capability to receive event notification from the CLS.	Completed
ECS-L4-16715	C-MSS-36305 The Management Agent Service shall have the capability to receive current mode from the IOS.	Completed
ECS-L4-16716	C-MSS-36310 The Management Agent Service shall have the capability to receive detected hardware and software fault information from the IOS.	Completed
ECS-L4-16717	C-MSS-36320 The Management Agent Service shall have the capability to receive event notification from the IOS.	Completed
ECS-L4-16718	C-MSS-36330 The Management Agent Service shall have the capability to send life cycle commands to the IOS.	Completed
ECS-L4-16719	C-MSS-36335 The Management Agent Service shall have the capability to send mode requests to the IOS.	Completed
ECS-L4-16720	C-MSS-36355 The Management Agent Service shall have the capability to receive current mode from the DMS.	Completed

ID	Title	Status
ECS-L4-16721	C-MSS-36360 The Management Agent Service shall have the capability to receive detected hardware and software fault information from the DMS.	Completed
ECS-L4-16722	C-MSS-36365 The Management Agent Service shall have the capability to receive event notification from the DMS.	Completed
ECS-L4-16723	C-MSS-36375 The Management Agent Service shall have the capability to send life cycle commands to the DMS.	Completed
ECS-L4-16724	C-MSS-36380 The Management Agent Service shall have the capability to send mode requests to the DMS.	Completed
ECS-L4-16725	C-MSS-36405 The Management Agent Service shall have the capability to receive current mode from the PLS.	Completed
ECS-L4-16726	C-MSS-36410 The Management Agent Service shall have the capability to receive detected hardware and software fault information from the PLS.	Completed
ECS-L4-16727	C-MSS-36415 The Management Agent Service shall have the capability to receive event notification from the PLS.	Completed
ECS-L4-16728	C-MSS-36435 The Management Agent Service shall have the capability to send life cycle commands to the PLS.	Completed
ECS-L4-16729	C-MSS-36440 The Management Agent Service shall have the capability to send mode requests to the PLS.	Completed
ECS-L4-16730	C-MSS-36455 The Management Agent Service shall have the capability to receive current mode from the DPS.	Completed
ECS-L4-16731	C-MSS-36460 The Management Agent Service shall have the capability to receive detected hardware and software fault information from the DPS.	Completed
ECS-L4-16732	C-MSS-36480 The Management Agent Service shall have the capability to send life cycle commands to the DPS.	Completed
ECS-L4-16733	C-MSS-36485 The Management Agent Service shall have the capability to send mode requests to the DPS.	Completed
ECS-L4-16734	C-MSS-36490 The Management Agent Service shall have the capability to send resource availability information to the DPS.	Completed
ECS-L4-16735	C-MSS-36505 The Management Agent Service shall have the capability to receive current mode from the INS.	Completed
ECS-L4-16736	C-MSS-36510 The Management Agent Service shall have the capability to receive detected hardware and software fault information from the INS.	Completed
ECS-L4-16737	C-MSS-36515 The Management Agent Service shall have the capability to receive event notification from the INS.	Completed
ECS-L4-16738	C-MSS-36540 The Management Agent Service shall have the capability to send life cycle commands to the INS.	Completed
ECS-L4-16739	C-MSS-36545 The Management Agent Service shall have the capability to send mode requests to the INS.	Completed
ECS-L4-16740	C-MSS-36555 The Management Agent Service shall have the capability to receive current mode from the DSS.	Completed
ECS-L4-16741	C-MSS-36560 The Management Agent Service shall have the capability to receive detected hardware and software fault information from the DSS.	Completed
ECS-L4-16742	C-MSS-36565 The Management Agent Service shall have the capability to receive event notification from the DSS.	Completed
ECS-L4-16743	C-MSS-36575 The Management Agent Service shall have the capability to receive status of data distribution from the DSS.	Completed
ECS-L4-16744	C-MSS-36600 The Management Agent Service shall have the capability to send life cycle commands to the DSS.	Completed
ECS-L4-16745	C-MSS-36605 The Management Agent Service shall have the capability to send mode requests to the DSS.	Completed
ECS-L4-16746	C-MSS-36705 The Management Agent Service shall have the capability to receive current mode from the CSS.	Completed

ID	Title	Status
ECS-L4-16747	C-MSS-36710 The Management Agent Service shall have the capability to receive detected hardware and software fault information from the CSS.	Completed
ECS-L4-16748	C-MSS-36715 The Management Agent Service shall have the capability to receive event notification from the CSS.	Completed
ECS-L4-16749	C-MSS-36750 The Management Agent Service shall have the capability to send life cycle commands to the CSS.	Completed
ECS-L4-16750	C-MSS-36755 The Management Agent Service shall have the capability to send mode requests to the CSS.	Completed
ECS-L4-16752	C-MSS-40000 The MSS configuration management application service at each site shall track the following items at the site by name and identifier: a. ECS subsystems, networks, and configured system and network devices such as workstations, servers, and routers b. ECS releases and site baselines c. ECS hardware and software resources designated as configuration items d. specifications associated with configuration items e. technical documentation and test materials f. scientific algorithms, including software, data and test materials (DAACs only)	Completed
ECS-L4-16753	C-MSS-40010 The MSS configuration management application service shall identify versions and variants of configuration controlled resources that comprise the site's operational baseline.	Completed
ECS-L4-16754	C-MSS-40030 The MSS configuration management application service at each site shall make available to the SMC records that identify the site's operational baseline and the versions and implementation status of configuration controlled resources that comprise it.	Completed
ECS-L4-16755	C-MSS-40040 The MSS configuration management application service at each site shall make available to the SMC, "level of assembly" records that describe the composition of configuration items at the site.	Completed
ECS-L4-16756	C-MSS-40060 The MSS configuration management application service at each site shall maintain historical status records about ECS configuration items at the site, identifying each item's: a. current version; b. current version's specifications and technical, operations, and maintenance documentation; c. specification and technical documentation history; d. "level of assembly" representation of the components comprising the items current and release configurations e. version history	Completed
ECS-L4-16757	C-MSS-40070 The MSS configuration management application service at the SMC and the sites shall maintain records that establish traceability among operational baselines and releases.	Completed
ECS-L4-16758	C-MSS-40080 The MSS configuration management application service at the SMC and the sites shall maintain records describing dependencies among baseline objects.	Completed
ECS-L4-16759	C-MSS-40100 The MSS configuration management application service at the SMC and the DAACs shall maintain SCF-provided configuration data for individual algorithms, including: a. algorithm development version numbers, identification codes, and reference numbers; b. SCF point of contact's name and organization; c. associated files' names, formats, sizes, and descriptions; d. number of files by category and type.	Completed
ECS-L4-16760	C-MSS-40110 The MSS configuration management application service shall maintain lists of configuration-controlled resources that comprise configuration items and their components.	Completed

ID	Title	Status
ECS-L4-16761	C-MSS-40120 The MSS configuration management application service shall track the names and identifiers for: a. ECS functional assemblies such as subsystems, and configuration items; b. Configured system and network device assemblies such as workstations, servers, and firmware c. ECS releases and baselines d. Hardware and software resources deployed to sites.	Completed
ECS-L4-16762	C-MSS-40140 The MSS configuration management application service shall maintain, and make available system-wide, information identifying sites at which each configuration controlled resource is deployed.	Completed
ECS-L4-16763	C-MSS-40150 The MSS configuration management application service shall maintain, and make available system-wide, records that identify the current and previous versions of ECS hardware and software resources deployed to the sites.	Completed
ECS-L4-16764	C-MSS-40160 The MSS configuration management application service at the SMC shall maintain records that identify the current and previous versions of ECS documents associated with deployed ECS resources.	Completed
ECS-L4-16765	C-MSS-40170 The MSS configuration management application service at the SMC shall maintain, and distribute to each site, records that identify the baseline changes included in each release of ECS hardware and software deployed to the site.	Completed
ECS-L4-16766	C-MSS-40180 The MSS configuration management application service at the SMC shall maintain, and distribute to each site, records that identify the specifications and technical, operations, and maintenance documents associated with versions of ECS hardware and software configuration items deployed to the site.	Completed
ECS-L4-16767	C-MSS-40190 MSS configuration management application service shall identify the change request that authorize each baseline change.	Completed
ECS-L4-16768	C-MSS-40200 The MSS configuration management application service shall maintain historical status records of the configuration changes to ECS hosts, subsystems, configuration items, and baselines, identifying for each: a. current version; b. component history c. version history d. effectivity period	Completed
ECS-L4-16769	C-MSS-40210 The MSS configuration management application service at the SMC shall maintain historical status records about ECS system releases, to include each release's: a. latest baseline plus approved changes. b. baseline history. c. latest release documentation. d. "level of assembly" representation of the subsystem and configuration item versions that comprise the release configuration e. history of changes, including changes to subordinate units/components. f. effectivity and installation status at operational sites. g. release configuration	Completed
ECS-L4-16770	C-MSS-40220 The MSS configuration management application service shall maintain historical status records about ECS baseline changes to include: a. sites affected; b. hosts affected	Completed
ECS-L4-16771	C-MSS-40240 The MSS configuration management application service shall identify critical software items.	Completed
ECS-L4-16772	C-MSS-40250 The MSS configuration management application service at the SMC shall produce, and make available system-wide, reports containing the identity and change status of documents associated with deployed ECS resources.	Completed
ECS-L4-16773	C-MSS-40260 The MSS configuration management application service at the SMC shall produce, and make available system-wide, reports, containing the identity and change status of individual ECS resources deployed to the sites.	Completed

ID	Title	Status
ECS-L4-16774	C-MSS-40270 The MSS configuration management application service shall produce configuration reports identify the resources baselined for deployment to sites.	Completed
ECS-L4-16775	C-MSS-40280 The MSS configuration management application service shall characterize ECS-controlled resources as system-wide or site-specific.	Completed
ECS-L4-16776	C-MSS-40290 The MSS configuration management application service shall accept and store baseline management data records provided via interactive user interface and formatted data files.	Completed
ECS-L4-16778	C-MSS-40400 The MSS configuration management application service at the sites and the SMC shall maintain software libraries to store files containing versions and platform variants of: a. source code; b. binaries and executables; c. patches; d. calibration coefficients and control data; e. scripts; f. designs and design specifications; g. databases; h. technical documentation (both text and graphics); i. test data; j. test reports; k. interface specifications; l. configuration data. (IR-1)	Completed
ECS-L4-16779	C-MSS-40410 The MSS configuration management application service at each DAAC shall maintain user-definable software configuration status information for each algorithm. (IR-1)	Completed
ECS-L4-16780	C-MSS-40420 The MSS configuration management application service at each site shall maintain M&O staff-definable software configuration status information for each version of every software library file.	Completed
ECS-L4-16781	C-MSS-40470 The MSS configuration management application service shall regulate operations on software library files through use of individual and group permissions.	Completed
ECS-L4-16782	C-MSS-40480 The MSS configuration management application service shall use a checkout/edit/checkin paradigm to govern changing of software library files.	Completed
ECS-L4-16783	C-MSS-40490 The MSS configuration management application service shall track each software library file that has been changed as a new version of the original file.	Completed
ECS-L4-16784	C-MSS-40500 The MSS configuration management application service shall merge versions of software library files and identify version conflicts, if any.	Completed
ECS-L4-16785	C-MSS-40510 The MSS configuration management application service shall maintain records of actual changes made to ECS software library files in implementing system enhancement requests.	Completed
ECS-L4-16786	C-MSS-40520 The MSS configuration management application service shall request, verify, and log a change request number for a software library file before allowing the file to be checked out for modification.	Completed
ECS-L4-16787	C-MSS-40530 The MSS configuration management application service shall identify implementation status for each version of every software library file, reflecting the lifecycle stage to which it has been promoted.	Completed
ECS-L4-16788	C-MSS-40540 The MSS configuration management application service shall perform builds of baseline systems for ECS platforms and audit the builds such that they can be repeated.	Completed
ECS-L4-16789	C-MSS-40550 The MSS configuration management application service shall reconstruct previous versions of software library files.	Completed
ECS-L4-16790	C-MSS-40560 The MSS configuration management application service shall allow concurrent user access to software library files.	Completed
ECS-L4-16791	C-MSS-40570 The MSS configuration management application service shall maintain an audit trail of all changes made to software library files.	Completed

ID	Title	Status
ECS-L4-16792	C-MSS-40600 The MSS configuration management application service shall provide a capability with which to specify a need for ECS system changes, for enhancing system capabilities and for correcting non-conformance with system requirements.	Completed
ECS-L4-16793	C-MSS-40610 The MSS configuration management application service shall store copies of non-conformance reports and requests to modify ECS components and configurations.	Completed
ECS-L4-16794	C-MSS-40620 The MSS configuration management application service at the sites shall provide a capability with which to forward non-conformance reports and requests for ECS configuration changes to the SMC.	Completed
ECS-L4-16795	C-MSS-40650 The MSS configuration management application service at the SMC shall receive configuration change requests and non-conformance reports in electronic form from the sites.	Completed
ECS-L4-16796	C-MSS-40660 The MSS configuration management application service at the SMC shall distribute change evaluation requests to designated organizations system-wide and record evaluation assignments and distribution status.	Completed
ECS-L4-16797	C-MSS-40670 The MSS configuration management application service at the SMC shall receive and store impact assessments in response to change evaluation requests.	Completed
ECS-L4-16798	C-MSS-40680 The MSS configuration management service at the SMC shall electronically link impact assessments to their associated change requests.	Completed
ECS-L4-16799	C-MSS-40690 The MSS configuration management application service at the SMC shall maintain the status of responses to change evaluation requests.	Completed
ECS-L4-16800	C-MSS-40700 The MSS configuration management application service at the SMC shall record summaries of impact assessments received.	Completed
ECS-L4-16801	C-MSS-40720 The MSS configuration management application service at the SMC shall make non-conformance reports, configuration change requests, assessments, and status available for system-wide viewing.	Completed
ECS-L4-16802	C-MSS-40730 The MSS configuration management application service at the SMC shall maintain historical records of ECS configuration change requests, non-conformance reports, and system impact assessments.	Completed
ECS-L4-16803	C-MSS-40750 The MSS configuration management application service at the SMC shall track approval and closure status of configuration change requests and non-conformance reports.	Completed
ECS-L4-16804	C-MSS-40760 The MSS configuration management application service at the SMC shall report, and make available system-wide lists of the identity and disposition of configuration change requests and non-conformance reports against ECS baselines.	Completed
ECS-L4-16805	C-MSS-40770 The MSS configuration management application service at the SMC shall collect, and make available system-wide, the allocations, schedules and status of tasks for implementing CCB-approved changes to ECS hardware and software and for correcting non-conformance with system requirements.	Completed
ECS-L4-16806	C-MSS-40990 The MSS configuration management application service shall log the following information for configuration management events: a. operation type; b. userid of initiator; c. date-time stamp; d. host name. (IR-1, at the sites only)	Completed

ID	Title	Status
ECS-L4-16807	C-MSS-40995 The MSS configuration management application service shall generate chronological reports of logged CM events associated with M&O staff-selectable: a. time frames; b. operation types; c. userids; d. hosts.	Completed
ECS-L4-16808	C-MSS-42000 The MSS Software Distribution Service shall use version-controlled repositories for software packages.	Completed
ECS-L4-16809	C-MSS-42010 The MSS Software Distribution Service shall have the capability to retrieve the contents for each repository from the MSS Baseline Manager Service.	Completed
ECS-L4-16810	C-MSS-42030 The MSS Software Distribution Service shall package software, databases, and documentation for delivery to destinations at both ECS and ECS-connected sites.	Completed
ECS-L4-16811	C-MSS-42035 The MSS Software Distribution Service shall receive version-controlled software packages from the Baseline Manager Service for distribution.	Completed
ECS-L4-16812	C-MSS-42050 The MSS Software Distribution Service shall make toolkit software and documentation available for automated downloading.	Completed
ECS-L4-16813	C-MSS-42070 The MSS Software Distribution Service shall determine destinations from stored lists as well as via interactive input.	Completed
ECS-L4-16814	C-MSS-42080 The MSS Software Distribution Service shall have the capability to push software packages from a central distribution point/depot to remote target platforms (servers and workstations).	Completed
ECS-L4-16815	C-MSS-42090 The MSS Software Distribution Service at the site shall have the capability to pull distribution packages from central distribution points/depots onto individual target destinations.	Completed
ECS-L4-16816	C-MSS-42100 The MSS Software Distribution Service shall initiate electronic transfer of distribution packages either automatically according to schedule or upon direct command.	Completed
ECS-L4-16817	C-MSS-42110 The MSS Software Distribution Service shall maintain a record of successful package transfers as well as of each target that fails to receive a package intended for it.	Completed
ECS-L4-16826	C-MSS-45010 The MSS Inventory/Logistics Management Service at the SMC shall maintain an on-line, system-wide catalog of non-expendable and consumable ECS resources.	Completed
ECS-L4-16827	C-MSS-45020 The MSS Inventory/Logistics Management Service at the SMC shall provide consolidated, system-wide views of ECS sites' inventory data.	Completed
ECS-L4-16828	C-MSS-45030 The MSS Inventory/Logistics Management at the SMC shall track excess resources designated for reutilization or disposal.	Completed
ECS-L4-16829	C-MSS-45040 The MSS Inventory/Logistics Management Service at the SMC shall generate site and multi-site inventory reports for printout and display.	Completed
ECS-L4-16830	C-MSS-45050 The MSS Inventory/Logistics Management Service shall maintain inventory records of individual non-expendable ECS resources.	Completed
ECS-L4-16831	C-MSS-45060 The MSS Inventory/Logistics Management Service shall have the capability to update and track ECS resources status.	Completed
ECS-L4-16832	C-MSS-45070 The MSS Inventory/Logistics Management Service shall record attributes of inventoried resources.	Completed
ECS-L4-16833	C-MSS-45080 The MSS Inventory/Logistics Management Service shall distinguish between ECS resources and non-ECS resources in the inventory.	Completed
ECS-L4-16834	C-MSS-45090 The MSS Inventory/Logistics Management Service shall generate site inventory reports for printout and display.	Completed

ID	Title	Status
ECS-L4-16836	C-MSS-45110 The MSS Inventory/Logistics Management Service shall provide a field to indicate the last audit date for resources in the inventory.	Completed
ECS-L4-16838	C-MSS-45210 The MSS Inventory/Logistics Management Service at the SMC shall provide the capability to produce individual site or consolidated sites spare related reports based on operator entered criteria.	Completed
ECS-L4-16839	C-MSS-45220 The MSS Inventory/Logistics Management Service shall provide the capability to input, store, update, and view/print information concerning site spare parts order information.	Completed
ECS-L4-16840	C-MSS-45230 The MSS Inventory/Logistics Management Service shall provide the capability to keep track of spares on-hand quantities, and quantity used.	Completed
ECS-L4-16843	C-MSS-45260 The MSS Inventory/Logistics Management Service shall have the capability to identify those items whose on-hand quantity has reached the established reorder point.	Completed
ECS-L4-16845	C-MSS-45280 The MSS Inventory/Logistics Management Service at the SMC shall provide the capability to generate individual site or consolidated sites consumable items reports based on operator entered criteria.	Completed
ECS-L4-16846	C-MSS-45290 The MSS Inventory/Logistics Management Service shall provide the capability to input, store, update, and view/print site consumable item information.	Completed
ECS-L4-16847	C-MSS-45300 The MSS Inventory/Logistics Management Service shall provide the capability to generate site consumable items related reports based on operator entered criteria.	Completed
ECS-L4-16848	C-MSS-45310 The MSS Inventory/Logistics Management Service shall provide the capability to input, store, maintain, and view/print sites' consumable items orders information.	Completed
ECS-L4-16849	C-MSS-45320 The MSS Inventory/Logistics Management Service at the SMC shall provide the capability to generate individual site or consolidated sites consumable items on-order reports based on operator entered criteria.	Completed
ECS-L4-16850	C-MSS-45330 The MSS-MLCI shall ensure that the following calendar transitions are handled completely and accurately: a. New Year b. New Decade c. New Century d. Leap Year.	Completed
ECS-L4-16851	C-MSS-45350 The MSS Inventory/Logistics Management Service shall log at least the following information for transactions performed: operation type, userid of initiator, and date time stamp.	Completed
ECS-L4-16852	C-MSS-45360 The MSS Inventory/Logistics Management Service shall generate chronological reports of logged transactions associated with user selectable: time frames; operation types; and userids.	Completed
ECS-L4-16853	C-MSS-50000 The MSS Maintenance Management Service shall provide the capability to view specified site's PM information .	Completed
ECS-L4-16855	C-MSS-50020 The MSS Maintenance Management Service shall provide the M&O staff the capability to produce corrective maintenance reports based on operator entered criteria.	Completed
ECS-L4-16856	C-MSS-50030 The MSS Maintenance Management Service at the SMC shall have the capability to receive specified site maintenance data for use in maintenance trends analysis.	Completed
ECS-L4-16857	C-MSS-50040 The MSS Maintenance Management Service shall provide the capability to input, store, maintain, and view/print Preventive Maintenance (PM) information for site equipment.	Completed

ID	Title	Status
ECS-L4-16858	C-MSS-50050 The MSS Maintenance Management Service shall provide the capability to input, store, maintain, and view/print key information concerning PM performed.	Completed
ECS-L4-16859	C-MSS-50060 The MSS Maintenance Management Service shall provide the capability to input, store, maintain, and view/print corrective maintenance performed (CMP) information.	Completed
ECS-L4-16860	C-MSS-50070 The MSS Maintenance Management Service shall have the capability, via M&O Staff entered criteria, to retrieve and display information relevant to corrective maintenance services previously performed.	Completed
ECS-L4-16861	C-MSS-50090 The MSS Maintenance Management Service shall have the capability to update repaired/replaced equipment component information in the database.	Completed
ECS-L4-16862	C-MSS-50100 The MSS Maintenance Management Service shall log at least the following information for transactions performed : operation type, userid of initiator, and date time stamp.	Completed
ECS-L4-16863	C-MSS-50110 The MSS Maintenance Management Service shall generate chronological reports of logged transactions associated with user selectable: time frames; operation types; and userids.	Completed
ECS-L4-16864	C-MSS-50120 The MSS Maintenance Management Service shall provide the capability to maintain sites' off-site maintenance information.	Completed
ECS-L4-16865	C-MSS-50140 The MSS Maintenance Management Service shall record off-site maintenance information: identification of component; description of problem; and corrective action taken.	Completed
ECS-L4-16866	C-MSS-50160 The MSS Maintenance Management Service shall provide the capabilities to input, store, and update off-site corrective hardware and software information.	Completed
ECS-L4-16867	C-MSS-50190 The MSS Maintenance Management Service shall provide the capability to view off-site corrective hardware and software information.	Completed
ECS-L4-16868	C-MSS-50200 The MSS Maintenance Management Service shall provide the capability to generate off-site maintenance reports based on operator entered criteria.	Completed
ECS-L4-16869	C-MSS-50210 The MSS Maintenance Management Service shall provide the capability to access a specified site's off-site maintenance repair information.	Completed
ECS-L4-16870	C-MSS-50230 The MSS Maintenance Management Service shall provide the capability to produce maintenance status reports.	Completed
ECS-L4-16874	C-MSS-56010 The MSS Mode Management Service shall support a operational mode capability	Completed
ECS-L4-16875	C-MSS-56020 The MSS Mode Management Service shall support a test mode capability	Completed
ECS-L4-16876	C-MSS-56030 The MSS Mode Management Service shall support a training mode capability	Completed
ECS-L4-16877	C-MSS-56040 The MSS Mode Management Service shall have the capability to monitor each independently executing mode for performance statistics.	Completed
ECS-L4-16878	C-MSS-56050 The MSS Mode Management Service shall provide fault detection and isolation capabilities for each independently executing mode.	Completed
ECS-L4-16879	C-MSS-56060 The MSS Mode Management Service shall maintain a collection of management statistics for each mode supported.	Completed

ID	Title	Status
ECS-L4-16880	C-MSS-56070 The MSS Mode Management Service shall be capable of executing a test mode simultaneously with the production mode.	Completed
ECS-L4-16881	C-MSS-56080 The MSS Mode Management Service shall be capable of executing a training mode simultaneously with the production mode.	Completed
ECS-L4-16882	C-MSS-56082 The MSS Mode Management Service shall provide the capability to initiate a new mode of execution.	Completed
ECS-L4-16883	C-MSS-56084 The MSS Mode Management Service shall provide the capability to control life cycle activities within each given mode.	Completed
ECS-L4-16884	C-MSS-56086 The MSS Mode Management Service shall have the capability to provide a mode identifier to initialize ECS applications.	Completed
ECS-L4-16885	C-MSS-56088 The MSS Mode Management Service shall provide a GUI for mode initiation.	Completed
ECS-L4-16886	C-MSS-56090 The MSS Mode Management Service shall have the capability to identify components which have been taken off-line for maintenance	Completed
ECS-L4-16887	C-MSS-56092 The MSS Mode Management Service shall provide provide a GUI for mode monitoring.	Completed
ECS-L4-16888	C-MSS-56094 The MSS Mode Management Service shall provide a GUI for mode control.	Completed
ECS-L4-16889	C-MSS-56096 The MSS Mode Management Service shall support concurrently executing non-production modes.	Completed
ECS-L4-16890	C-MSS-56098 The MSS Mode Management Service shall support no more than one production mode.	Completed
ECS-L4-16891	C-MSS-56100 The MSS Mode Management Service shall have the capability to provide a simulated time value.	Completed
ECS-L4-16892	C-MSS-56102 The MSS Management Framework shall provide a mode specific view of ECS applications for any active mode.	Completed
ECS-L4-16893	C-MSS-57500 The Trouble Ticketing Service shall have a graphical user interface to support the entry and editing of trouble tickets.	Completed
ECS-L4-16894	C-MSS-57510 The Trouble Ticketing Service shall provide the ability to automatically notify the originator of the trouble ticket of changes in status.	Completed
ECS-L4-16895	C-MSS-57520 The Trouble Ticketing Service shall provide an Application Program Interface which supports integration of entry of trouble tickets by other packages.	Completed
ECS-L4-16896	C-MSS-57530 The Trouble Ticketing Service shall provide the ability to search historical and current trouble tickets by various criteria including keyword, user id, and trouble ticket ID.	Completed
ECS-L4-16897	C-MSS-57540 The Trouble Ticketing Service shall provide the ability to forward trouble tickets from one organization to another to facilitate the escalation of trouble tickets (e.g. from DAAC to SMC).	Completed
ECS-L4-16898	C-MSS-57550 The Trouble Ticketing Service shall be capable of indicating whether a trouble ticket is open, in progress, closed, or archived.	Completed
ECS-L4-16899	C-MSS-57560 The Trouble Ticketing Service shall provide the ability to search for trouble tickets relating to the same resource (equipment).	Completed
ECS-L4-16900	C-MSS-57580 The Trouble Ticketing Service shall provide the ability to store the following minimum set of information : unique trouble ticket ID, status, description, associated resources, problem solution, originator, keywords.	Completed
ECS-L4-16901	C-MSS-57590 The Trouble Ticketing Service shall integrate with the MSS framework to allow management and monitoring of its services.	Completed
ECS-L4-16902	C-MSS-57600 The Trouble Ticketing Service shall allow entry of a trouble ticket by any registered user of the system.	Completed

ID	Title	Status
ECS-L4-16903	C-MSS-57610 The Trouble Ticketing Service shall provide the capability to generate reports from the its data.	Completed
ECS-L4-16904	C-MSS-57620 The Trouble Ticketing Service shall allow output of reports to either the screen or printer.	Completed
ECS-L4-16905	C-MSS-57630 The Trouble Ticketing Service shall provide customization features to allow sites to specify notification and escalation rules.	Completed
ECS-L4-16906	C-MSS-57640 The Trouble Ticketing Service at each site shall be capable of forwarding closed trouble ticket information to a consolidated ECS-wide trouble ticket database.	Completed
ECS-L4-16927	C-MSS-60070 MSS shall provide the capability to log fault specific information based on fault category, when the fault is detected.	Completed
ECS-L4-16930	C-MSS-60110 The MSS Fault Management Application Service shall be capable of receiving fault notifications.	Completed
ECS-L4-16939	C-MSS-60200 The MSS Fault Management Application Service shall have the capability to generate the following types of notifications for detected faults : a. a change in the color of an icon on a display b. a message in a pop-up notification window c. logging the following fault information to a disk log file: 1. fault type 2. date and time of occurrence of the fault 3. identification of the source of the notification (e.g. IP address, process name, etc.) 4. fault data received with the notification 5. operator-defined descriptive text d. audible alert	Completed
ECS-L4-16940	C-MSS-60210 The MSS Fault Management Application Service shall maintain a list of external service providers, M&O operators, and applications to be notified in the event that a specified fault is detected.	Completed
ECS-L4-16941	C-MSS-60220 The MSS Fault Management Application Service shall have the capability to send the notification of a fault to registered recipients.	Completed
ECS-L4-16942	C-MSS-60230 The MSS Fault Management Application Service shall have the capability of generating a notification within a maximum of five minutes of fault detection.	Completed
ECS-L4-16953	C-MSS-60300 The MSS Fault Management Application Service shall provide the capability to verify connectivity between selected pairs of hosts on the ESN.	Completed
ECS-L4-16954	C-MSS-60301 The MSS Fault Management Application Service shall provide the capability to identify routes between selected pairs of hosts on the EBnet.	Completed
ECS-L4-16959	C-MSS-60330 The MSS Fault Management Application Service at each site shall have the capability to perform periodic testing of all ECS communication links at that site to verify that they are operational.	Completed
ECS-L4-16960	C-MSS-60340 The MSS Fault Management Application Service shall be capable of verifying the operational status of a host.	Completed
ECS-L4-16961	C-MSS-60350 The MSS Fault Management Application Service shall have the capability to periodically execute diagnostic tests in order to isolate, characterize and identify a fault.	Completed
ECS-L4-16962	C-MSS-60360 The MSS Fault Management Application Service shall provide the capability to execute vendor diagnostics in order to diagnose faults traced to hardware equipment.	Completed
ECS-L4-16965	C-MSS-60380 The MSS Fault Management Application Service at the sites shall isolate, locate, and identify faults, identify subsystem, equipment and software faults, and identify the nature of the faults detected within its site.	Completed

ID	Title	Status
ECS-L4-16966	C-MSS-60390 The MSS Fault Management Application Service at the sites shall, for faults detected within its site, isolate, locate, and identify faults to the level of: a. subsystem b. equipment c. software	Completed
ECS-L4-16967	C-MSS-60395 The MSS Fault Management Application Service shall be capable of retrieving records of detected fault.	Completed
ECS-L4-16968	C-MSS-60400 The MSS Fault Management Application Service shall support, maintain, and update system fault management policies and procedures, to include: a. Fault Identification b. Fault priorities c. Recovery or corrective actions	Completed
ECS-L4-16973	C-MSS-60520 The MSS Fault Management Application Service shall provide the capability to allow the specification and execution of action routines in response to the notification of a fault.	Completed
ECS-L4-16975	C-MSS-60600 The MSS Fault Management Application Service shall have the capability to generate, on an interactive and on a scheduled basis, reports on performance/error data that it has been configured to collect.	Completed
ECS-L4-16976	C-MSS-60610 The MSS Fault Management Application Service shall have the capability to build histories for different types of errors and events detected, for the purpose of analysis.	Completed
ECS-L4-16977	C-MSS-66000 The MSS performance management application service shall be capable of monitoring the performance of the following ECS components a. network components 1. routers 2. links 3. bridges 4. gateways	Completed
ECS-L4-16978	C-MSS-66001 The MSS performance management application service shall be capable of monitoring the performance of the following ECS components a. network components 1. routers 2. links 3. bridges 4. gateways b. hosts c. operating systems d. peripherals e. databases f. ECS applications.	Completed
ECS-L4-16979	C-MSS-66002 The MSS Performance Management Applications Service shall have the capability to monitor each mode for performance statistics.	Completed
ECS-L4-16980	C-MSS-66004 The MSS Performance Management Application Service shall provide the capability to distinguish performance metrics between different modes.	Completed
ECS-L4-16981	C-MSS-66006 The MSS Performance Management Application Service shall maintain performance statistics for a given mode.	Completed
ECS-L4-16982	C-MSS-66010 The MSS performance management application service shall be capable of monitoring ECS component protocol stack performance parameters defined in IETF RFC 1213.	Completed
ECS-L4-16983	C-MSS-66020 The MSS Performance Management Application Service shall be capable of monitoring ethernet-like device performance parameters as specified in IETF RFC 1623.	Completed
ECS-L4-16984	C-MSS-66030 The MSS performance management application service shall be capable of receiving managed object definitions for each managed object.	Completed
ECS-L4-16985	C-MSS-66040 The MSS performance management application service shall be capable of specifying which available performance metrics are to be gathered from each individual managed object.	Completed
ECS-L4-16986	C-MSS-66050 The MSS performance management application service shall be capable of requesting performance data from each individual managed object: a. at configurable intervals b. on demand.	Completed
ECS-L4-16987	C-MSS-66060 The MSS performance management application service shall be capable of receiving requested performance data from ECS components.	Completed

ID	Title	Status
ECS-L4-16988	C-MSS-66070 The MSS Performance Management Application Service shall be capable of receiving unrequested performance data from ECS managed objects.	Completed
ECS-L4-16989	C-MSS-66080 The MSS performance management application service shall be capable of retrieving the following data for all network component interfaces: a. operational status b. type c. speed d. octets in/out e. packets in/out f. discards in/out g. errors in/out	Completed
ECS-L4-16990	C-MSS-66090 The MSS Performance Management Application Service shall have the capability to collect the following performance information about communication protocol stacks on managed devices: a. number of transport layer messages received with errors b. number of transport layer messages requiring retransmission c. number of transport layer messages received that could not be delivered d. number of network layer messages received with errors e. number of network layer messages received that could not be delivered f. number of network layer messages that were discarded	Completed
ECS-L4-16991	C-MSS-66100 The MSS performance management application service shall be capable of retrieving the following data for all hosts: a. total CPU utilization b. memory utilization c. physical disk i/o's d. disk storage size e. disk storage used f. number of active processes g. length of run queue h. network i/o's (packets) i. network errors	Completed
ECS-L4-16992	C-MSS-66120 The MSS performance management application service shall be capable of determining the operational state of all network components, hosts, and peripherals to be: a. on-line b. off-line c. in test mode	Completed
ECS-L4-16993	C-MSS-66121 The MSS performance management application service shall be capable of determining the operational state of all network components, hosts, and peripherals to be: a. on-line b. off-line c. in test mode d. In maintenance, e. in simulation mode.	Completed
ECS-L4-16994	C-MSS-66130 The MSS performance management application service shall be capable of receiving operational state change notifications from network components, hosts, applications, and peripherals.	Completed
ECS-L4-16995	C-MSS-66135 The MSS Performance Management Application Service shall have the capability to calculate the following statistics for the purpose of supporting RMA analysis for managed objects: a. Mean Down time (MDT) b. Mean Time Between Maintenance (MTBM) 1. Mean Time Between Preventive Maintenance (MTBPM) 2. Mean Time Between Corrective Maintenance (MTBCM) c. Mean Time to Repair (MTTR)	Completed
ECS-L4-16996	C-MSS-66137 The MSS Performance Management Application Service shall retain the calculated RMA statistics in a repository accessible for further analysis by the M&O Staff.	Completed
ECS-L4-16997	C-MSS-66170 The MSS performance management application service shall log ECS performance data pertaining to ECS network components and operating system resources.	Completed
ECS-L4-16998	C-MSS-66171 The MSS performance management application service shall log ECS performance data pertaining to ECS network components, ECS applications and operating system resources.	Completed
ECS-L4-16999	C-MSS-66180 The MSS performance management application service shall have the capability to generate the following types of statistics for a configurable period of time for performance data stored in the Management Database: a. average b. median c. maximum d. minimum e. ratios f. rates g. standard deviations.	Completed

ID	Title	Status
ECS-L4-17000	C-MSS-66181 The MSS Performance Management Application Service shall have the capability to capture and save histories of system errors and events for system analysis and trending.	Completed
ECS-L4-17001	C-MSS-66182 The MSS Performance Management Application Service shall have the capability to capture and save histories of operational status, performance of resources and maintenance activities for system analysis and trending.	Completed
ECS-L4-17002	C-MSS-66183 The MSS Performance Management Application Service shall have the capability to monitor the performance of ECS relational and object oriented database servers.	Completed
ECS-L4-17003	C-MSS-66190 The MSS performance management application service shall provide a configurable number of thresholds for each performance metric.	Completed
ECS-L4-17005	C-MSS-66230 The MSS performance management application service shall allow each performance metric threshold to be configurable.	Completed
ECS-L4-17006	C-MSS-66240 The MSS performance management application service shall be capable of evaluating each performance metric against defined thresholds.	Completed
ECS-L4-17007	C-MSS-66250 The MSS performance management application service shall record an event in the local History Log whenever a threshold is crossed.	Completed
ECS-L4-17008	C-MSS-66260 The MSS performance management application service shall provide queries that generate performance statistics from performance data stored in the Management Database.	Completed
ECS-L4-17009	C-MSS-66270 The MSS performance management application service shall store generated performance statistics.	Completed
ECS-L4-17013	C-MSS-66305 The MSS Performance Management Application Service shall be capable of collecting the following performance data for all ECS-managed processes: a. start time b. stop time c. CPU utilization d. memory utilization e. disk i/o	Completed
ECS-L4-17014	C-MSS-66310 The MSS performance management application service shall be capable of retrieving the following science algorithm performance data via the Management Data Access Service: a. algorithm name b. algorithm version c. start time d. stop time e. CPU utilization f. memory utilization g. disk reads h. disk writes	Completed
ECS-L4-17015	C-MSS-66320 MSS shall be capable of receiving the following performance data from the Data Server: a. total order volume b. elapsed time of Data Server events	Completed
ECS-L4-17017	C-MSS-66340 MSS shall be capable of receiving the following performance data from Ingest: a. ingest volumes b. processing times c. no. of completed requests d. no. of unsuccessful requests	Completed
ECS-L4-17018	C-MSS-66500 The MSS Performance Management Application Service shall have the capability to send ECS system management information to ASTER GDS.	Completed
ECS-L4-17019	C-MSS-66505 The MSS Performance Management Application Service shall have the capability to receive ASTER GDS system management information from ASTER GDS.	Completed
ECS-L4-17020	C-MSS-66510 The MSS Performance Management Application Service shall have the capability to send ECS network management information to ASTER GDS.	Completed
ECS-L4-17021	C-MSS-66515 The MSS Performance Management Application Service shall have the capability to receive ASTER GDS network management information from ASTER GDS.	Completed

ID	Title	Status
ECS-L4-17022	C-MSS-66520 The MSS Performance Management Application Service shall have the capability to send requests for ASTER GDS network management information to ASTER GDS.	Completed
ECS-L4-17023	C-MSS-66525 The MSS Performance Management Application Service shall have the capability to receive requests for ECS network management information from ASTER GDS.	Completed
ECS-L4-17024	C-MSS-67000 The MSS performance management application service shall be capable of extracting values of performance metrics gathered for a specified managed objects over a configurable period of time from the Management Database.	Completed
ECS-L4-17025	C-MSS-67010 The MSS performance management application service shall be capable of generating a graph of the extracted performance metric values.	Completed
ECS-L4-17026	C-MSS-68000 The MSS performance management application service shall be capable of graphically displaying the operational state of managed objects through the MUI service.	Completed
ECS-L4-17027	C-MSS-68010 The MSS performance management application service shall be capable of displaying M&O staff-selected performance statistics through the MUI in tabular and graphical formats.	Completed
ECS-L4-17028	C-MSS-68020 The MSS performance management application service shall be capable of printing M&O staff-selected performance statistics.	Completed
ECS-L4-17029	C-MSS-68090 The MSS Performance Management Application Service shall have the capability to generate reports from collected management data.	Completed
ECS-L4-17030	C-MSS-68100 The MSS Performance Management Application Service shall have the capability to redirect reports to: a. console b. disk file c. printer	Completed
ECS-L4-17031	C-MSS-69020 The MSS performance management application service shall be capable of performing operational benchmark tests.	Completed
ECS-L4-17032	C-MSS-69030 The MSS performance management application service shall be capable of providing results of benchmark tests and results of predefined tests to the M&O staff for validation.	Completed
ECS-L4-17033	C-MSS-69100 The MSS Performance Trending Service shall have the capability to save and retrieve data from the management database for long and short term trending.	Completed
ECS-L4-17034	C-MSS-69105 The MSS Performance Trending Service shall have the capability to generate the following types of trend analysis: a. time series analysis b. analysis of variance including multiple analysis of variance c. correlation analysis d. regression analysis including non-linear and multiple regression	Completed
ECS-L4-17035	C-MSS-69110 The MSS Performance Trending Service shall provide the capability to select parameters for trend analysis.	Completed
ECS-L4-17036	C-MSS-69120 The MSS Performance Trending Service shall have the capability to output trend data in textual and graphical formats.	Completed
ECS-L4-17037	C-MSS-69150 The MSS Performance Trending Service shall have the capability to perform short and long term trending by system, site and element.	Completed
ECS-L4-17038	C-MSS-70010 The MSS Security Management Application Service shall provide the capability to create, modify and delete user accounts with the following attributes: a. username b. password c. group identification code d. user identification code e. login directory f. command line interpreter	Completed

ID	Title	Status
ECS-L4-17039	C-MSS-70020 The MSS Security Management Application Service shall enable the assignment of user accounts to groups based on the group identification code.	Completed
ECS-L4-17040	C-MSS-70100 The MSS site Security Management Application Service shall provide the capability to set, maintain, and update access control information for ECS resources.	Completed
ECS-L4-17041	C-MSS-70110 The MSS site Security Management Application Service shall provide the capability to specify privileges for authorized users and user groups for access to ECS resources.	Completed
ECS-L4-17042	C-MSS-70120 The MSS site Security Management Application service shall provide the mechanism, for each ECS host, to allow or deny incoming requests from specific hosts to services.	Completed
ECS-L4-17043	C-MSS-70130 The MSS site Security Management Application Service shall provide a command line interface and a GUI for the management of the following security databases: a. Authentication Database b. Authorization Database c. Network Database	Completed
ECS-L4-17044	C-MSS-70300 The MSS site Security Management Application Service shall have the capability to perform the following types of security tests: a. password auditing b. file system integrity checking c. auditing of user privileges d. auditing of resource access control information	Completed
ECS-L4-17045	C-MSS-70310 The MSS site Security Management Application Service shall have the capability to perform security testing on a periodic and on an interactive basis.	Completed
ECS-L4-17046	C-MSS-70320 The MSS site Security Management Application Service shall have the capability to send the results of the tests to the EMC Security Management Application Service.	Completed
ECS-L4-17053	C-MSS-70430 The MSS site Security Management Application Service shall provide the capability to designate a user or a group of users to receive a notification upon the detection of an intrusion.	Completed
ECS-L4-17054	C-MSS-70440 The MSS site Security Management Application Service shall provide the capability to notify designated M&O staff(s) upon the detection of an intrusion.	Completed
ECS-L4-17055	C-MSS-70450 The MSS site Security Management Application Service shall have the capability to detect the following types of intrusions: a. Login failures b. Unauthorized access to ECS resources	Completed
ECS-L4-17148	C-MSS-76040 The MSS Accountability Management Service shall be capable of reporting audit information to M&O staff via the MUI service.	Completed
ECS-L4-17165	C-MSS-90020 The DBMS shall support a client-server design paradigm with distributed data allocation.	Completed
ECS-L4-17166	C-MSS-90030 The DBMS shall provide security access control based upon userid, role and privileges for the following: a. database b. database object c. database operations	Completed
ECS-L4-17167	C-MSS-90060 The DBMS shall provide an SQL interface with query, update, and administrative functions capabilities.	Completed
ECS-L4-17168	C-MSS-90070 The DBMS shall be in compliance with the SQL-2 of Federal Information Processing System Publication (FIPS PUB) 127-1.	Completed
ECS-L4-17169	C-MSS-90080 The DBMS shall support mathematical operations to generate statistics from management data to include: a. average b. maximum c. minimum d. sum e. count	Completed
ECS-L4-17170	C-MSS-90120 The DBMS shall be compatible with the ECS Fault and Performance Management Application Services to support the transfer of management events and data.	Completed

ID	Title	Status
ECS-L4-17171	C-MSS-90170 The DBMS shall provide the following bulk data load capabilities: a. direct writes from data files to database b. loading of files containing fixed and variable length records c. incremental bulk load d. Maintain indexes during data loads	Completed
ECS-L4-17172	C-MSS-90180 The DBMS shall provide the following database backup capabilities: a. Entire database b. Incremental data c. User specified database items.	Completed
ECS-L4-17173	C-MSS-90190 The DBMS shall provide capabilities for specifying frequency, time, and type of backups.	Completed
ECS-L4-17174	C-MSS-90200 The DBMS shall perform on-line disk management functions to include: a. Relocation of database files to different disks b. Expansion of database size by adding new physical data files to it on-line c. Dynamic pre-allocation of contiguous space for tables d. Database objects and indexes can span physical files e. Database objects and indexes can exist on different disks	Completed
ECS-L4-17175	C-MSS-90210 The DBMS shall support the following features: a. Data compression of nulls and variable length character strings, and indexes b. Space reclaimed from deleted records automatically c. Variable-length column storage	Completed
ECS-L4-17176	C-MSS-90230 The DBMS shall provide a transaction roll backward capability to a specified time or state: a. Restore a database b. Restore all or operator selected database objects of any database	Completed
ECS-L4-17177	C-MSS-90240 The DBMS shall provide for automatic database recovery including a means to: a. automatically restore undamaged portions of a database and recover work in progress after a system or component failure b. achieve dynamic backout of database modifications, performed by a failing transaction, that does not affect separate, concurrent tasks	Completed
ECS-L4-17178	C-MSS-90260 The DBMS shall provide a capability to export, archival, and restore a database.	Completed
ECS-L4-17179	C-MSS-90280 The DBMS shall provide the capability to issue and record a database checkpoint.	Completed
ECS-L4-17180	C-MSS-90290 The DBMS shall provide an audit trail of chronological activities in the database.	Completed
ECS-L4-17181	C-MSS-90500 The Report Generator shall be compatible with the DBMS.	Completed
ECS-L4-17182	C-MSS-90510 The Report Generator shall provide a Motif based Graphical User Interface (GUI) for creating ad hoc reports.	Completed
ECS-L4-17183	C-MSS-90520 The Report Generator shall have the capability to generate ad hoc reports from management data maintained in the DBMS.	Completed
ECS-L4-17184	C-MSS-90530 The Report Generator shall provide the capability to format reports to include the report: a. title b. header c. footer d. page number e. date/time of report	Completed
ECS-L4-17185	C-MSS-90570 The Report Generator shall have the capability to generate charts and graphs (e.g., bar, pie, line, etc.) from management data maintained in the DBMS.	Completed
ECS-L4-17186	C-MSS-90600 The Report Generator shall provide the capability to redirect generated reports to: a. console b. disk file c. printer	Completed

ID	Title	Status
ECS-L4-17187	C-MSS-91010 The MSS Office Automation word processing capability shall facilitate the: a. preparation, revision, and recording of documents, messages, reports, and data b. import, transformation, and editing of documents produced by other word processing packages c. insertion of worksheet and graphic images into documents, messages, and reports d. transfer of document, message, and report information to spreadsheet and graphics applications e. printing of documents, messages, reports, and data	Completed
ECS-L4-17188	C-MSS-91012 The MSS Office Automation word processing capability shall be capable of importing from ASCII text and RTF formats.	Completed
ECS-L4-17189	C-MSS-91015 The MSS Office Automation word processing capability shall be capable of exporting to Postscript, ASCII text, and RTF formats.	Completed
ECS-L4-17190	C-MSS-91020 The MSS Office Automation shall provide a spreadsheet capability that: a. simulates and displays an accountant's worksheet b. enables revisions and calculations on the displayed worksheet's data c. enables transfer of the worksheet data to database, word processing and graphics applications d. enables printing of worksheet information.	Completed
ECS-L4-17191	C-MSS-91025 The MSS Office Automation spreadsheet capability shall be capable of importing from and exporting to ASCII text and Excel formats.	Completed
ECS-L4-17192	C-MSS-91030 The MSS Office Automation shall provide a graphics capability that enables: a. the development, modification, recording, and printing of graphic images b. the transfer of graphics images to word processing documents, messages, and reports.	Completed
ECS-L4-17193	C-MSS-91035 The MSS Office Automation graphics capability shall be capable of importing from and exporting to Postscript and GIF formats.	Completed
ECS-L4-17194	C-MSS-92010 The MSS Report Generation Service shall be capable of generating standard and ad-hoc reports and queries on all or portions of the management and related data maintained in the management database.	Completed
ECS-L4-17195	C-MSS-92015 The MSS Report Generation Service shall be able to create mode specific reports.	Completed
ECS-L4-17196	C-MSS-92020 The MSS Report Generation Service shall provide a Motif based GUI workbench for use by database specialist M&O staff in generating standard and ad-hoc reports and queries.	Completed
ECS-L4-17197	C-MSS-92030 The MSS Report Generation Service shall provide an HTML based user interface for use by non-database specialists on the M&O staff in requesting standard reports.	Completed
ECS-L4-17198	C-MSS-92040 The MSS Report Generation Service shall be capable of outputting generated reports to the user's console, a file, or a printer	Completed
ECS-L4-17199	C-MSS-92050 The MSS Report Generation Service shall be capable of outputting report query results to a file in a tabular format which can be imported by analysis tools such as spreadsheets	Completed
ECS-L4-17200	C-MSS-92060 The MSS Report Generation Service shall be capable of outputting reports to a file in an HTML compatible format.	Completed
ECS-L4-17201	C-MSS-92070 The MSS Report Generation Service shall be capable of generating an Enhancement Proposal Status Report containing the status of proposed enhancements including: a. name b. description c. rationale d. impacts e. cost to implement f. implementation milestone schedule	Completed
ECS-L4-17202	C-MSS-92180 The MSS Report Generation Service shall be capable of generating an Interface Traffic Report graphically plotting network packet statistics in real-time for the operator selected SNMP node(s).	Completed

ID	Title	Status
ECS-L4-17203	C-MSS-92190 The MSS Report Generation Service shall be capable of generating an Ethernet Traffic Report graphically plotting network packet statistics in real-time for the operator selected SNMP node(s).	Completed
ECS-L4-17204	C-MSS-92200 The MSS Report Generation Service shall be capable of generating an SNMP Traffic Report graphically plotting network packet statistics in real-time for the operator selected SNMP node(s).	Completed
ECS-L4-17205	C-MSS-92210 The MSS Report Generation Service shall be capable of generating an SNMP Operations Report graphically plotting the number of selected SNMP operations/sec requested to be performed by the SNMP agent on the selected node(s).	Completed
ECS-L4-17207	C-MSS-92320 The MSS Report Generation Service shall be capable of generating a Trouble Status Report containing statistics on the number of trouble tickets opened, closed, and in work at a site.	Completed
ECS-L4-17208	C-MSS-92330 The MSS Report Generation Service shall be capable of generating an Ethernet Errors Report graphically depicting Ethernet error statistics for a selected node in real-time.	Completed
ECS-L4-17209	C-MSS-92340 The MSS Report Generation Service shall be capable of generating an SNMP Errors report graphically depicting SNMP error statistics in real-time for the selected network nodes.	Completed
ECS-L4-17210	C-MSS-92350 The MSS Report Generation Service shall be capable of generating an SNMP Authentication Failures Report listing the management systems that caused an authentication failure on the operator selected node(s).	Completed
ECS-L4-17211	C-MSS-92360 The MSS Report Generation Service shall be capable of generating an SNMP Event Log Report containing a chronological list of SNMP events which occurred over the report interval for the selected node(s).	Completed
ECS-L4-17212	C-MSS-92370 The MSS Report Generation Service shall be capable of generating a Site Host Errors Report containing a statistical summary of the types of errors logged at each host at a site over the reporting period.	Completed
ECS-L4-17213	C-MSS-92380 The MSS Report Generation Service shall be capable of generating an SMC Host Errors Report containing a statistical summary of the types of errors logged at each site over the reporting period.	Completed
ECS-L4-17214	C-MSS-92420 The MSS Report Generation Service shall be capable of generating a User Activity Audit Report tracing a user's activity during a logon including products requested and files accessed.	Completed
ECS-L4-17215	C-MSS-92530 The MSS Report Generation Service shall be capable of generating a Planning Workload and Processing Turn-Around Report.	Completed
ECS-L4-17216	C-MSS-92630 The MSS Report Generation Service shall be capable of generating an SNMP Event Notification report identifying the IP address(es) of the management system(s) to which the selected node is configured to send SNMP events.	Completed
ECS-L4-17217	C-MSS-92640 The MSS Report Generation Service shall be capable of generating an Indentured Level of Assembly List Report for all managed configuration items (CIs).	Completed
ECS-L4-17218	C-MSS-92650 The MSS Report Generation Service shall be capable of generating a Document Configuration Status Report containing the identity and status of documents associated with ECS resources.	Completed
ECS-L4-17219	C-MSS-92660 The MSS report generation service shall be capable of generating a System Configuration Tracking Report noting the migration of upgrades into the operational environment.	Completed

ID	Title	Status
ECS-L4-17220	C-MSS-92670 The MSS Report Generation Service shall be capable of generating a Maintenance Schedule Report on H/W, system S/W and science S/W indicating the type of maintenance (i.e, routine, non-routine and upgrade)	Completed
ECS-L4-17221	C-MSS-92690 The MSS Report Generation Service shall be capable of generating an Inventory Status Report containing summary and detailed status information on H/W, system S/W and science S/W and listing spares and consumables status at sites.	Completed
ECS-L4-17224	C-MSS-92720 The MSS Report Generation Service shall be capable of generating a Virus Detection Report containing statistics on detected viruses/worms in the selected network nodes and actions taken.	Completed

2.4 EMS

These are the completed ECS requirements for the EMS Subsystem (EOSDIS Metrics System Subsystem). EMS includes utilities to provide ingest, archive, access and distribution metrics to the EOSDIS Metrics System (EMS). There are currently no Completed requirements for the EMS Subsystem.

Appendix A Abbreviations and Acronyms

These are the abbreviations and acronyms used in the SDPS requirements Volumes 1-10. This section is replicated in all volumes.

ACL	access control list
ACVU	AIM checksum verification utility
ADC	Affiliated Data Center
ADEOS	Advanced Earth Observing Satellite
AIM	Archive Inventory Management
AIRS	Atmospheric Infrared Sounder
AMFS	Archival Management and Storage System File System
AMSR	Advanced Microwave Scanning Radiometer
ANSI	American National Standards Institute
API	Application Program Interface
APIDs	Application Process Identifiers
APIs	Application Program Interfaces?
ARP	Address Resolution Protocol
ASDC	Atmospheric Science Data Center
ASF	Alaska Satellite Facility
ASTER	Advanced Spaceborne Thermal Emission and Reflection Radiometer
AST_L1A, AST_L1B	ASTER Level 1 A and Level 1 B data types
AVG	average
AVN	National Center for Environmental Prediction (NCEP) Aviation model, later renamed to Global Forecast System (GFS)
BGT	Bulk Metadata Generation Tool, also known as BMGT
BIL	Band Interleaved
BMGT	Bulk Metadata Generation Tool
BPI	Bits per inch
BRF	Browse Reference File
BRWS	Browse
BUFR	Binary Universal Form for the Representation of meteorological data
CCB	Configuration Control Board
CCR	Configuration Change Request
CCSDS	Consultative Committee for Space Data Systems
CD	Compact Disc

CFG	Configuration
CI	Configuration Item
CKSUM	refers to a particular algorithm or program to calculate a file checksum
CLS	Client Subsystem
CM	Configuration Management
CMO	Configuration Management Office
CMR	Common Metadata Repository
COTS	Commercial Off-The Shelf (hardware or software)
CPU	Central Processing Unit
CRON	A linux system utility to perform time scheduled executions
CS	Client Server
CSC	Computer Software Component
CSCI	Computer Software Configuration Item
CSDT	Computer Scient Data Type
CSH	C-Shell
CSMS	Communication and Systems Management Segment
CSS	Communications Subsystem
DAAC	Distributed Active Archive Center
DADS	Data Archive and Distribution System
DAR_ID	Data Acquisition Request Identifier
DB	Database
DBID	Database Identifier
DB	Database
DCLI	DDIST (Data Distribution) Command Line Interface
DD	Data Dictionary
DDIST	Data Distribution CSCI
DDR	Detailed Design Review
DEM	Digital Elevation Model
DESKT	Desktop (Computer Software Configuration Item)
DFA	Delete From Archive
DHWM	Data High Water Mark
DIF	Directory Interchange Format
DIPHW	Distribution and Ingest Peripheral HWCI
DMS	Data Management Subsystem
DN	Delivery Notification
DORRAN	Distributed Ordering, Researching, Reporting, and Accounting Network (at EDC)

DPAD	Data Pool Action Driver
DPCV	Data Pool Checksum Verification Utility
DPIU	Data Pool Insert Utility
DPL	Data Pool
DPLINGST	Data Pool Ingest
DPLINSERT	Data Pool Insert
DPM	Data Pool Maintenance
DRPHW	Data Repository HWCI
DSS	Data Server Subsystem
DTD	Document Type Definition (XML)
DTF	Sony Digital Tape Format Tape cartridge system
DTS	Defect Tracking Subsystem
EBNET	EOSDIS Backbone Network
ECHO	EOS Clearing House
ECI, ECR	Earth Centered Inertial, Earth Centered Rotating
ECNBDB	Spatial Subscription Server database
ECS	Earth Observing System Data and Information Core System
EDC	Earth Resource Observation System Data Center
EDOS	Earth Observing System (EOS) Data and Operations System
EDR	Expedited Data Set Request
EDS	Expedited Data Set
EED	EOSDIS Evolution and Development Project
EGS	EOSDIS Ground System
EMD	EOSDIS Maintenance and Development Project
EMOS	EOS Mission Operations System
EMS	ESDIS Metrics System
EOC	Earth Observation Center (Japan), EOS Operations Center
EOS	Earth Observing System
EOSDIS	Earth Observing System Data and Information System
EPD	External Processor Dispatcher
EPSG	European Petroleum Survey Group
ESDIS	Earth Science Data and Information System
ESDT	Earth Science Data Type
ESG	Earth Science Gateway
ESI	EOSDIS Service Interface
ETE	End to End
EWOC	ECHO WSDL Order Component

F&PRS	Functional and Performance Requirements Specification
FCAPS	Fault, Configuration, Accountability, Performance and Security
FDDI	Fiber Distributed Data Interface
FDF	Flight Dynamics Facility
FOS	Flight Operations Segment
FSMS	File and Storage Management System
FTP	File Transfer Protocol
FTPD	File Transfer Protocol Daemon
GB	Gigabyte or Gigabit
GBYTE	Gigabyte
GCMD	Global Change Master Directory
GDS	Ground Data System
GEOTIFF	Georeferenced Tagged Image File Format
GFE	Government Furnished Equipment
GIS	Geographical Information System
GLAS	Geoscience Laser Altimeter System
GPS	Global Positioning System
GRIB	Grid in Binary
GSFC	Goddard Space Flight Center
GUI	Graphical User Interface
GZIP	GNU zip
HDF	Hierarchical Data Format
HDF-EOS	an EOS proposed standard for a specialized HDF data format
HEG	HDF-EOS-To-Geotiff Conversion Tool
HIPPI	High Performance Parallel Interface
HIRDLS	High-Resolution Dynamics Limb Sounder
HTML	Hypertext Markup Language
HTTP	Hypertext Transfer Protocol
HTTPD	Hypertext Transfer Protocol Daemon
HWCI	Hardware Configuration Item
I/O	Input/Output
I&T	Integration and Test
IAS	Image Assessment System
ICD	Interface Control Document
ICLHW	Ingest Client HWCI
ICMP	Internet Control Message Protocol

IDL	Interactive Data Language
ID	Identifier
IEEE	Institute of Electrical and Electronics Engineering
IGS	International Ground Station
IIU	Inventory Insert Utility
IMS	Information Management System
INCI	Internetworking Hardware HWCI
INHCI	Ingest Hardware (Configuration Item)
INHWP	Ingest Hardware (Configuration Item)
INS	Ingest Subsystem
IP	Internet Protocol
IR-1	Initial Release 1
IRD	Interface Requirements Document
IRIX	Silicon Graphics version of Unix
ISS	Internetworking Subsystem
IV&V	Independent Verification and Validation
JDT	Java DAR (Data Acquisition Request) Tool
JPEG	Joint Photographic Experts Group image file format
JPG	JPEG file extension
JPL	Jet Propulsion Laboratory
KFTP	Kerberized File Transfer Protocol
LAN	Local Area Network
LARC	Langley Research Center
LAT/LON	Latitude and Longitude
LGID	Local Granule Identifier
LLBOX	Latitude/Longitude Box
LP-DAAC	Land Processes Distributed Active Archive Center
LPS	Landsat 7 Processing System
LSM	Local System Management (network)
LUNs	Logical Unit Numbers
M&O	Maintenance and Operations
MAN	Metropolitan Area Network
MAX	Maximum
MB	Megabyte (10 ⁶)
MB/sec	Megabytes per second
MBITS/SEC	Megabits per second
MBPS	Megabytes per second

MCF	Metadata Configuration File
MD5	Message Digest checksum algorithm number 5
MDT	Maximum Down Time
METC	refers to file containing Collection Metadata
MGS	Map Generation Subsystem
MGU	Map Generation Utility
MISBR	MISR Browse
MISR	Multi-Imaging SpectroRadiometer
MLCI	Management Logistics Configuration Item
MM	Millimeter
MM/DD/YYYY	date code representation for month, day, year
MODAPS	MODIS Adaptive Processing System
MODIS	Moderate Resolution Imaging SpectroRadiometer
MRTG	Multi Router Traffic Grapher
MSEC	Millisecond
MSM	Media Storage Manager (part of Stornext)
MSS	System Management Subsystem
MTMGW	Machine to Machine Gateway
MUTEX	Mutually Exclusive
N/A	Not Applicable/Not Available
NARA	National Archives and Records Administration
NASA	National Aeronautics and Space Administration
NBSRV	Spatial Subscription Server
NCEP	National Centers for Environmental Prediction
NCR	Non-conformance report
NESDIS	National Environmental Satellite, Data, and Information Service (NOAA)
NFS	Network File System
NIST	National Institute of Standards and Technology
NM	Name Server Subsystem
NMC	National Meteorological Center (NOAA)
NMF	Network Management Facility
NOAA	National Oceanic and Atmospheric Administration
NSBRV	Spatial Subscription Server
NSI	NASA Science Internet
NSIDC	National Snow and Ice Data Center
NTP	Network Transport Protocol

OBU	OWS Binding Utility
ODC	Other Data Center
ODL	Object Description Language
OGC	Open GIS Consortium
OLA	On-line Archive
OMS	Order Manager Subsystem
OPS	Operations
ORNL	Oak Ridge National Laboratory
OSI	Open Systems Interconnection
OSS	Operational Support Software
OWS	OGC Web Services Subsystem
PANs	Production Acceptance Notifications
PB	Petabyte (10 ¹⁵)
PC	Personal Computer
PDF	Portable Document Format
PDPS	Planning and Data Processing Subsystems
PDR	Product Delivery Record
PDRD	Product Delivery Record Discrepancy
PDSIS	Product Distribution System Information Server
PF	Process Framework
PGE	Product Generation Executable
PGEEXE	PGE executable tar file ESDT
PH	Production History
PID	Process Identifier
PO.DAAC	Physical Oceanography Distributed Active Archive Center
POSIX	Portable Operating System Interface
PREPROCERR	Preprocessing Error
PSA	Product-Specific Attribute
PTHREADS	Portable Operating System Interface (POSIX) threads
PUBERR	Publication Error
PVC	Performance Verification Center
PVL	Parameter Value Language
Q/A, QA	Quality Assurance
QAMUT	Quality Assurance Metadata Update Tool
QC	Quality Control
RARP	Reverse Address Resolution Protocol
RDBMS	Relational Database Management System

RFC	Request for Comments
RHWM	Request High Water Mark
RLWM	Request Low Water Mark
ROM	Read Only Memory
RPC	Remote Procedure Call
RPCID	Remote Procedure Call Identifier
RTR	Requirements Technical Review
SBSRV	Subscription Server
SCF	Science Computing Facility
SCI	science
SCP	Secure Copy
SDP	Science Data Processing
SDPF	Science Data Processing Facility
SDPS	Science Data Processing Segment
SDRSV	misspelled SDSRV
SDS	Scientific Dataset(HDF-EOS term), Science Data System
SDSRV, SDSVR	Science Data Server
SIPS	Science Investigator-led Processing System
SMAP	Soil Moisture Active Passive
SNAC	StorNext Archive Cache
SNFS	StorNext File System
SNMP	Simple Network Management Protocol
SOM	Space Oblique Mercator
SORCE	Solar Radiation and Climate Experiment
SQL	Structured Query Language
SRF	Server Request Framework
SS	two digit seconds field in a time string
SSH	Secure Shell (protocol)
SSI&T	Science System Integration and Test
SSM/I	Special Sensor for Microwave/Imager
SSS	Spatial Subscription Server Subsystem
STGMT	Storage Management Subsystem
TB	Terabyte
TBD	To Be Determined/To Be Defined
TBR	To Be Resolved
TCP	Transmission Control Protocol
TCP/IP	Transmission Control Protocol/Internet Protocol

TES	Trophospheric Emission Spectrometer
TKD	Toolkit for DAAC
TKS	Toolkit for Scientists
TOMS	Total Ozone Mapping Spectrometer
TSDIS	TRMM Science Data and Information System
TSM	Tertiary Storage Manager, component of StorNext
TTPro	TestTrack Pro
UDF	Universal Disk Format
UDP	User Datagram Protocol
UPS	Uninterruptible Power Supply
URL	Uniform Resource Locator
UR	Universal Reference, granule UR
UTC	Universal Time Coordinated/Universal Time Code
UTM	Universal Transverse Mercator
V0	Version 0, Refers to the Archive System and Protocols used in the predecessor to the ECS
VPN	Virtual Private Network
VS	versus (abbr)
W*S	refers to any member of the family of Open Geospatial Consortium (OGC) web services: WCS, WMS, WFS, WPS
WAN	Wide Area Network
WCS	Web Coverage Service
WGS84	World Geodetic System 1984
WKBCHCI	Workbench Configuration Item
WKSHW	Working Storage Hardware Configuration Item
WMS	Web Map Service
WRS	Worldwide Reference System, used by Landsat
WSDL	Web Service Definition Language
WU-FTP	Washington University File Transfer Protocol program
WWW	World Wide Web
XFR	Transfer (abbr)
XML	Extensible Markup Language
XSD	XML Schema Definition
XVU	XML Validation Utility