Task 42 – ECS Requirements Volume 9 Specification

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RESPONSIBLE OFFICE

Homi Arabshahi, Task Lead EED-2 Task 42 — Date 7/14/19
EOSDIS Evolution and Development - 2 Contract

RESPONSIBLE AUTHOR

Skip Linehan, — Date 7/12/19
EOSDIS Evolution and Development - 2 Contract

Raytheon Company
Riverdale, Maryland

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ECS Requirements Volume 9 Specification

Goddard Space Flight Center
Greenbelt, Maryland

National Aeronautics and
Space Administration

ECS Requirements Volume 9 Specification
Signature/Approval Page

Prepared by:

Name
Title/Role
Organization

Date

Reviewed by:

Name
Title/Role
Organization

Date

Approved by:

Name
Title/Role
Organization

Date

Concurred by:

Name
Title/Role
Organization

Date

[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

Abstract

This document provides the completed Level 4 Science Data Processing Segment (SDPS) Requirements for the Spatial Subscription Service (SSS) subsystem.

***Keywords**: SDPS*, SSS

Change History Log

Revision	Effective Date	Description of Changes (Reference the CCR & CCB Approval Date)
		CCR 423-ESDIS-XXX; CCB Approved mm/dd/yyyy Pages:

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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.

Document Number	Document Title
423-46-01	Functional and Performance Requirements Specification for the ECS Science Data Processing System

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.

Document Number	Document Title
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

Document Number	Document Title
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

Document Number	Document Title
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 SSS

These are the completed ECS requirements for the SSS subsystem (Spatial Subscription Server). SSS enables users to establish standing orders for data. A subscription may be qualified by specifying one or more constraints on the metadata of matching granules. This includes the capability of qualifying the subscription spatially by specifying a geographic area (rectangle) over which the data was collected.

ID	Title	Status
ECS-L4-18601	S-SSS-11050 The NSBRV CI shall allow an operator to list the subscriptions having insert actions associated with a particular theme.	Completed
ECS-L4-18602	S-SSS-00010 The Spatial Subscription Server (NSBRV) CI shall allow an operator to generate a standing order (hereinafter called 'subscription') for ECS standard products in the ECS archive holdings.	Completed
ECS-L4-18603	S-SSS-00015 The NSBRV CI shall store subscription information persistently.	Completed
ECS-L4-18607	S-SSS-00050 The NSBRV CI shall allow an operator to associate an expiration date with a subscription.	Completed
ECS-L4-18608	S-SSS-00065 The NSBRV CI shall assign a unique identification to each subscription.	Completed
ECS-L4-18609	S-SSS-00066 The NSBRV CI shall not evaluate subscriptions against ECS events which occur after the expiration date of the subscription.	Completed
ECS-L4-18610	S-SSS-00070 The NSBRV CI shall allow the operator to qualify a subscription spatially by specifying one of the following criteria: a. LLBOX	Completed
ECS-L4-18611	S-SSS-00072 The NSBRV CI shall consider a granule to qualify spatially for a subscription if the granule's spatial coverage overlaps with the spatial qualification criterion.	Completed
ECS-L4-18612	S-SSS-00074 The NSBRV CI shall allow spatial qualification of a subscription where the underlying ESDT has a gpolygon spatial search type.	Completed
ECS-L4-18613	S-SSS-00076 The NSBRV CI shall allow spatial qualification of a subscription where the underlying ESDT has a bounding rectangle spatial search type.	Completed

ID	Title	Status
ECS-L4-18614	S-SSS-00078 The NSBRV CI shall allow spatial qualification of a subscription where the underlying ESDT has an orbit spatial search type.	Completed
ECS-L4-18615	S-SSS-00079 The NSBRV CI shall not permit an operator to enter a spatial qualification criterion for an ESDT that does not have spatial coverage metadata.	Completed
ECS-L4-18616	S-SSS-00080 The NSBRV CI shall allow the operator to qualify a subscription temporally by specifying one of the following criteria: a. date range b. date and time range.	Completed
ECS-L4-18617	S-SSS-00082 The NSBRV CI shall consider a granule to qualify temporally for a subscription if the granule's temporal coverage overlaps with the temporal qualification criterion.	Completed
ECS-L4-18618	S-SSS-00084 The NSBRV CI shall not permit an operator to enter a temporal qualification criterion for an ESDT that does not have temporal coverage metadata.	Completed
ECS-L4-18620	S-SSS-00100 The NSBRV CI shall allow the operator to qualify a subscription by all product specific attribute values which correspond to the ESDT associated with the subscription event.	Completed
ECS-L4-18622	S-SSS-00112 The NSBRV CI shall accept a string value as a qualifier for core, product specific, or measured parameter attributes of type string.	Completed
ECS-L4-18623	S-SSS-00113 The NSBRV CI shall consider a granule to qualify by string attribute value for a subscription if the granule's metadata value for the string attribute is equal to the value of the string qualifier.	Completed
ECS-L4-18624	S-SSS-00114 The NSBRV CI shall accept a minimum and a maximum integer value as qualifiers for core, product specific, or measured parameter attributes of type integer.	Completed
ECS-L4-18625	S-SSS-00115 The NSBRV CI shall consider a granule to qualify by integer attribute value for a subscription if the granule's metadata value for the integer attribute is greater than or equal to the minimum integer qualifier and less than or equal to the maximum integer qualifier.	Completed
ECS-L4-18626	S-SSS-00116 The NSBRV CI shall accept a minimum and a maximum floating point value as qualifiers for core, product specific, or measured parameter attributes of type floating point.	Completed
ECS-L4-18627	S-SSS-00117 The NSBRV CI shall consider a granule to qualify by floating point attribute value for a subscription if the granule's metadata value for the floating point attribute is greater than or equal to the minimum floating point qualifier and less than or equal to the maximum floating point qualifier.	Completed
ECS-L4-18628	S-SSS-00120 The NSBRV CI shall not permit an operator to enter a qualification criterion for a product specific attribute that is not supported by the ESDT that is the target of the subscription.	Completed
ECS-L4-18629	S-SSS-00122 The NSBRV CI shall not permit an operator to enter a qualification criterion for a measured parameter attribute that is not supported by the ESDT that is the target of the subscription.	Completed
ECS-L4-18630	S-SSS-00124 The NSBRV CI shall permit an operator to enter up to 5 subscription qualifiers for core, product specific and measured parameter attributes of type string.	Completed
ECS-L4-18631	S-SSS-00126 The NSBRV CI shall permit an operator to enter up to 5 subscription qualifiers for core, product specific and measured parameter attributes of type integer, floating point, or datetime.	Completed
ECS-L4-18633	S-SSS-00160 The NSBRV CI shall allow an email notification action to be associated with a subscription.	Completed
ECS-L4-18634	S-SSS-00162 The NSBRV CI shall require the operator to enter one 'to' address for the email notification action.	Completed

ID	Title	Status
ECS-L4-18636	S-SSS-00180 The NSBRV CI shall construct the subject text for each email notification per the ICD between ECS and the Science Investigator-Led Processing Systems (SIPS) (423-41-57).	Completed
ECS-L4-18637	S-SSS-00185 The NSBRV CI shall construct the message text of each email notification per the ICD between ECS and the Science Investigator-Led Processing Systems (SIPS) (423-41-57).	Completed
ECS-L4-18638	S-SSS-00190 The NSBRV CI shall allow the operator to specify a userstring to be included in the message text for each email notification.	Completed
ECS-L4-18640	S-SSS-00220 The NSBRV CI shall allow operators to only include names and values for the metadata attributes associated with the subscription qualifiers in the email notification text.	Completed
ECS-L4-18641	S-SSS-00230 The NSBRV CI shall embed all selected inventory metadata information in the email text, in parameter=value format, one parameter per line.	Completed
ECS-L4-18642	S-SSS-00235 The NSBRV CI shall not include the name or value of an operator-selected metadata attribute in email.notification text if the associated ESDT does not contain that attribute.	Completed
ECS-L4-18643	S-SSS-00260 The NSBRV CI shall allow a distribution action to be associated with a subscription.	Completed
ECS-L4-18646	S-SSS-00280 The NSBRV CI shall allow the operator to associate an email address with a distribution action.	Completed
ECS-L4-18648	S-SSS-00290 The NSBRV CI shall allow the operator to associate a userstring with a distribution action. (The userstring will be included in the Distribution Notice associated with the order.)	Completed
ECS-L4-18651	S-SSS-00310 The NSBRV CI shall allow the operator to select FtpPush distribution.	Completed
ECS-L4-18652	S-SSS-00311 The NBSRV CI shall support a secure copy service for distribution of data.	Completed
ECS-L4-18653	S-SSS-00312 The NBSRV CI shall allow the operator to select secure copy distribution as a distribution action for a subscription.	Completed
ECS-L4-18655	S-SSS-00321 If secure copy distribution is selected, the NBSRV CI shall require the operator to enter or select values for the following secure copy parameters: (a) userid (b) password (c) host name (d) destination directory name	Completed
ECS-L4-18656	S-SSS-00330 The NSBRV CI shall allow the operator to select FtpPull distribution.	Completed
ECS-L4-18660	S-SSS-00390 The NSBRV CI shall allow the operator to determine the number of pending email and distribution actions in the action queue, and the subscription id, status, userid, collection, version id, enqueue time, dequeue time, and action type (e.g.., email,distribution) associated with each.	Completed
ECS-L4-18661	S-SSS-00395 The NSBRV CI shall process the action queue in first-in, first-out order.	Completed
ECS-L4-18662	S-SSS-00440 The NSBRV CI shall retain information about completed actions, and the completion times associated with each, for an operator-configurable amount of time.	Completed
ECS-L4-18663	S-SSS-00443 The NSBRV CI shall process the event queue in first-in first-out order.	Completed
ECS-L4-18664	S-SSS-00444 The NSBRV CI shall retain information about processed events, and the time at which each finished subscription matching, for an operator-configurable amount of time.	Completed
ECS-L4-18665	S-SSS-00450 The NSBRV CI shall allow the operator to update the userid associated with a subscription.	Completed

ID	Title	Status
ECS-L4-18666	S-SSS-00455 The NSBRV CI shall allow the operator to update the expiration date associated with a subscription.	Completed
ECS-L4-18667	S-SSS-00460 The NSBRV CI shall allow the operator to add, modify,or delete qualifications associated with a subscription.	Completed
ECS-L4-18668	S-SSS-00470 The NSBRV CI shall allow the operator to add, modify, or delete actions associated with an existing subscription.	Completed
ECS-L4-18669	S-SSS-00480 The NSBRV CI shall preserve the subscription id when a subscription is updated.	Completed
ECS-L4-18670	S-SSS-00490 The NSBRV CI shall allow the operator to suspend an individual subscription.	Completed
ECS-L4-18671	S-SSS-00520 The NSBRV CI shall not evaluate a suspended subscription against ECS events which occur after the subscription is suspended.	Completed
ECS-L4-18672	S-SSS-00530 The NSBRV CI shall process normally any actions associated with a suspended subscription which were already queued at the time the subscription was suspended.	Completed
ECS-L4-18673	S-SSS-00540 The NSBRV CI shall allow the operator to resume a subscription which has been suspended.	Completed
ECS-L4-18674	S-SSS-00545 The NSBRV CI shall preserve the subscription id when a subscription is suspended or resumed.	Completed
ECS-L4-18675	S-SSS-00550 The NSBRV CI shall allow the operator to cancel an individual subscription.	Completed
ECS-L4-18676	S-SSS-00560 The NSBRV CI shall not evaluate a cancelled subscription against ECS events which occur after the subscription is cancelled.	Completed
ECS-L4-18677	S-SSS-00570 The NSBRV CI shall process normally any actions associated with a cancelled subscription which were already queued at the time the subscription was cancelled.	Completed
ECS-L4-18678	S-SSS-00590 The NSBRV CI shall allow the operator to display a list of subscriptions. For each subscription in the list, the NSBRV CI shall display the subcription id, collection name, version id, event type, user id, expiration date, and current status.	Completed
ECS-L4-18679	S-SSS-00600 The NSBRV CI shall allow the operator to filter the subscription list by user id, collection name, and current status.	Completed
ECS-L4-18680	S-SSS-00610 The NSBRV CI shall allow the operator to sort the subscription list by subscription id, user id, collection name, expiration date, and current status.	Completed
ECS-L4-18681	S-SSS-00620 The NSBRV CI shall allow the operator to view all information about an individual subscription, including qualifier and action information, by selecting the subscription from the subscription list.	Completed
ECS-L4-18682	S-SSS-00630 The NSBRV CI shall provide the capability to persistently store information regarding which ECS events are valid for placing subscriptions.	Completed
ECS-L4-18683	S-SSS-00640 The NSBRV CI shall allow the operator to display the list of valid ECS events upon which subscriptions may be placed.	Completed
ECS-L4-18684	S-SSS-00650 The NSBRV CI shall allow the operator to filter the event list by collection name, version id, and event type.	Completed
ECS-L4-18685	S-SSS-00660 The NSBRV CI shall allow the operator to sort the event list by collection name, version id, and event type.	Completed
ECS-L4-18689	S-SSS-00710 At startup time, the NSBRV CI shall allow the operator to specify the number of concurrently operating event handling processes to run.	Completed
ECS-L4-18690	S-SSS-00715 The NSBRV CI shall allow the operator to start additional event handling processes as needed.	Completed

ID	Title	Status
ECS-L4-18691	S-SSS-00720 The NSBRV CI shall allow the operator to determine the number of event handling processes running, and the unix process id and the status of each.	Completed
ECS-L4-18692	S-SSS-00730 The NSBRV CI shall allow the graceful shutdown of an event handling process.	Completed
ECS-L4-18693	S-SSS-00740 The NSBRV CI shall allow the operator to list the following statistical information for each event in the event queue log: a. collection name b. version id c. event type (e.g, INSERT, DELETE, UPDATEMETADATA) d. total number of occurrences of the event e. maximum time to insert metadata in the NSBRV database for these occurrences of the event f. average time to insert metadata in the NSBRV database for these occurrences of the event g. maximum time to evaluate all subscriptions associated with an occurrence of the event h. average time to evaluate all subscriptions associated with an occurrence of the event	Completed
ECS-L4-18694	S-SSS-00750 At startup time, the NSBRV CI shall allow the operator to specify the number of concurrently operating action handling processes to run.	Completed
ECS-L4-18695	S-SSS-00755 The NSBRV CI shall allow the operator to start additional action handling processes as needed.	Completed
ECS-L4-18696	S-SSS-00760 The NSBRV CI shall allow the operator to determine the number of action handling processes running, and the unix process id and the status of each.	Completed
ECS-L4-18697	S-SSS-00770 The NSBRV CI shall allow the graceful shutdown of an action handling process.	Completed
ECS-L4-18698	S-SSS-00780 The NSBRV CI shall allow the operator to list the following statistical information for email notification actions in the action queue: a. total number of email notification actions b. maximum notification time (i.e., time from when the action was placed on the queue until the email was sent) for all email notification actions c. average notification time for an email notification action	Completed
ECS-L4-18699	S-SSS-00785 The NSBRV CI shall allow the operator to list the following statistical information for distribution actions in the action queue: a. total number of distribution actions b. average processing time (i.e., time from when the distribution action was placed on the queue until the distribution request was submitted to the SCLI) c. maximum processing time	Completed
ECS-L4-18700	S-SSS-00810 The NSBRV CI shall provide an interface such that externally-developed software can be substituted for the NSBRV GUI to insert subscriptions.	Completed
ECS-L4-18701	S-SSS-00830 The NSBRV CI shall support warm start after a fault such that no event, subscription, triggered event, or action is lost.	Completed
ECS-L4-18702	S-SSS-00835 The NSBRV CI shall retry an operation if it encounters a retriable error (such as database deadlock).	Completed
ECS-L4-18703	S-SSS-00840 The NSBRV CI shall log the following information: a. Receipt of event notification from SDSRV b. Start of event processing c. Completion of event processing d. Start of action processing e. Completion of action processing f. Completion of metadata extraction	Completed
ECS-L4-18704	S-SSS-00850 The NSBRV CI shall include the following information in each log entry, as applicable: a. type of entry b. date and time when logged (at least to the millisecond) c. subscription id d. action Id e. Event Id f. Userid associated with the subscription g. Type of error and error details (for logged errors)	Completed
ECS-L4-18705	S-SSS-00860 The NSBRV CI event queue handling processes shall generate a default name for the event handling log file.	Completed

ID	Title	Status
ECS-L4-18706	S-SSS-00865 he NSBRV CI action queue handling processes shall generate a default name for the action handling log file.	Completed
ECS-L4-18707	S-SSS-00870 The NSBRV CI shall append output to a log file if the log file already exists.	Completed
ECS-L4-18708	S-SSS-00880 The NSBRV CI shall create the log file if the log file does not already exist.	Completed
ECS-L4-18709	S-SSS-00890 The NSBRV CI shall be able to operate in multiple modes concurrently.	Completed
ECS-L4-18712	S-SSS-08510 The NSBRV CI shall allow a Data Pool Insert action to be associated with any subscription placed on an ECS Insert event.	Completed
ECS-L4-18713	S-SSS-08515 The NSBRV CI shall not allow a Data Pool Insert action to be associated with a subscription placed on ECS UpdateMetadata or Delete events.	Completed
ECS-L4-18718	S-SSS-08600 The NSBRV CI shall require that the InsertMetadataOnly option be associated with all actions for Data Pool insert where the shortname/versionid of the qualifying event has been configured as eligible only for metadata insert into the Data Pool.	Completed
ECS-L4-18720	S-SSS-10010 The NSBRV CI shall allow operators to enter bundling orders.	Completed
ECS-L4-18721	S-SSS-10020 The NSBRV CI shall store bundling order information persistently.	Completed
ECS-L4-18722	S-SSS-10030 The NSBRV CI shall assign a unique identification to each bundling order and display the ID to the operator.	Completed
ECS-L4-18723	S-SSS-10040 The NSBRV CI shall require the operator to associate the userid of a registered ECS user with a bundling order.	Completed
ECS-L4-18724	S-SSS-10050 The NSBRV CI shall allow the operator to enter an expiration date for a bundling order.	Completed
ECS-L4-18725	S-SSS-10055 The NSBRV CI shall allow the operator to configure a default expiration period that shall be used to set the expiration date for a bundling order if the operator does not provide one.	Completed
ECS-L4-18726	S-SSS-10060 The NSBRV CI shall not evaluate a subscription against ECS events which occur after the expiration date of the bundling order referenced by that subscription. [Note: I.e., the subscription is considered expired when the Bundling Order expires.]	Completed
ECS-L4-18727	S-SSS-10070 The NSBRV CI shall allow the operator to associate a mandatory email address of a maximum length of 255 characters with a bundling order. (The email will be used for distribution notifications).	Completed
ECS-L4-18729	S-SSS-10090 The NSBRV CI shall allow the operator to associate a userstring of a maximum length of 255 characters with a bundling order. (The userstring will be included in the Distribution Notice associated with the order.)	Completed
ECS-L4-18733	S-SSS-10125 The NSBRV CI shall allow the operator to select ftp push or ftp pull as media types for a bundling order.	Completed
ECS-L4-18734	S-SSS-10126 The NBSRV CI shall allow the operator to select secure copy as a media type for bundling order.	Completed
ECS-L4-18735	S-SSS-10130 The NSBRV CI shall allow the operator to enter the distribution options that are valid for the selected media type into a bundling order.	Completed
ECS-L4-18736	S-SSS-10140 The NSBRV CI shall require the operator to enter all distribution options into a bundling order that are mandatory for the selected media type.	Completed

ID	Title	Status
ECS-L4-18737	S-SSS-10150 The NSBRV CI shall allow the operator to enter bundle completion criteria for a bundling order, i.e., the conditions under which a bundle for that order will be considered complete.	Completed
ECS-L4-18738	S-SSS-10160 The NSBRV CI shall support bundle completion criteria that include a minimum bundle size, a minimum bundle granule count, and a maximum bundle age.	Completed
ECS-L4-18739	S-SSS-10170 The NSBRV CI shall allow operators to configure a default value for the maximum bundle age. [Note: the maximum bundle age normally would be between one day and one month.]	Completed
ECS-L4-18740	S-SSS-10175 The NSBRV CI shall allow operators to configure a default value for the minimum bundle granule count.	Completed
ECS-L4-18741	S-SSS-10180 The NSBRV CI shall allow operators to configure a default value for the minimum bundle size by media type. [Note: typically, minimum bundle size will be roughly equivalent to media capacity].	Completed
ECS-L4-18742	S-SSS-10190 The NSBRV CI shall warn the operator when the operator configures a default or enters a value for the minimum bundle size that exceeds the configured maximum request size for that media type. [Note: The NSBRV will not prevent the operator to exceed request size limits on purpose. Later, when the Order Manager distributes the bundle, it will be placed on hold for exceeding maximum request size and require operator intervention to be distributed unmodified. The same holds true if a distributed bundle exceeds the maximum granule count for a request.]	Completed
ECS-L4-18743	S-SSS-10195 The NSBRV CI shall warn the operator when the operator configures a default or enters a value for the minimum bundle granule count that exceeds the configured request granule count limit for non-subsetted requests. [Note: same observation as above applies].	Completed
ECS-L4-18744	S-SSS-10200 The NSBRV CI shall allow the operator to select a distribution option from a list of valid options where the distribution option has an enumerated list of valid values.	Completed
ECS-L4-18747	S-SSS-10220 The NSBRV CI shall allow an operator to list bundling orders, displaying the bundling order ID, the user ID, creation date, expiration date, media type, and current status for each.	Completed
ECS-L4-18748	S-SSS-10230 The NSBRV CI shall allow an operator to filter a list of bundling orders by user ID, media type, and current status.	Completed
ECS-L4-18749	S-SSS-10240 The NSBRV CI shall allow an operator to sort a list of bundling orders by order ID, user ID, creation date, expiration date, media type, and current status.	Completed
ECS-L4-18750	S-SSS-10250 The NSBRV CI shall allow an operator to view all information about an individual bundling order by selecting it from a displayed list of bundling orders.	Completed
ECS-L4-18751	S-SSS-10260 The NSBRV CI shall allow an operator to list the subscriptions associated with a bundling order, and select a subscription from that list for viewing and editing.	Completed
ECS-L4-18752	S-SSS-10270 The NSBRV CI shall allow an operator to select a bundling order from a displayed list of bundling orders for modification.	Completed
ECS-L4-18753	S-SSS-10280 The NSBRV CI shall allow the operator to update the userid associated with an existing bundling order.	Completed
ECS-L4-18754	S-SSS-10285 The NSBRV CI shall propagate an update to the userid of bundling order to all the subscriptions associated with that bundling order.	Completed
ECS-L4-18755	S-SSS-10290 The NSBRV CI shall allow the operator to update the expiration date associated with an existing bundling order.	Completed
ECS-L4-18756	S-SSS-10300 The NSBRV CI shall allow the operator to update the e-mail address associated with an existing bundling order.	Completed

ID	Title	Status
ECS-L4-18757	S-SSS-10310 The NSBRV CI shall allow the operator to update the userstring associated with an existing bundling order.	Completed
ECS-L4-18758	S-SSS-10320 The NSBRV CI shall allow the operator to update the distribution priority associated with an existing bundling order.	Completed
ECS-L4-18759	S-SSS-10330 The NSBRV CI shall allow the operator to modify the media type and distribution options associated with an existing bundling order.	Completed
ECS-L4-18760	S-SSS-10340 The NSBRV CI shall allow the operator to modify the bundle completion criteria associated with an existing bundling order.	Completed
ECS-L4-18761	S-SSS-10345 The NSBRV CI shall ask the operator to confirm the modifications to a bundling order before saving them.	Completed
ECS-L4-18762	S-SSS-10350 The NSBRV CI shall preserve the id of a bundling order when it is updated.	Completed
ECS-L4-18764	S-SSS-10370 The NSBRV CI shall allow the operator to cancel an individual bundling order.	Completed
ECS-L4-18766	S-SSS-10380 The NSBRV CI shall consider all subscriptions associated with a cancelled bundling order as cancelled.	Completed
ECS-L4-18767	S-SSS-10390 When entering a subscription, the NSBRV CI shall allow an operator to select one of the bundling orders for the user ID specified in the subscription as the distribution action.	Completed
ECS-L4-18768	S-SSS-10391 The NSBRV CI shall not permit a subscription to include distribution actions that reference more than one bundling order, or the same bundling order more than once, or a mix of actions that reference and do not reference bundling orders.	Completed
ECS-L4-18769	S-SSS-10392 When updating a subscription, the NSBRV CI shall allow an operator to select one of the bundling orders for the user ID specified in the subscription as the distribution action (if none exists).	Completed
ECS-L4-18770	S-SSS-10394 When updating a subscription, the NSBRV CI shall allow an operator to select one of the bundling orders for the user ID specified in the subscription as a substitution for an existing distribution action.	Completed
ECS-L4-18771	S-SSS-10395 When updating a subscription associated with a bundling order, the NSBRV CI shall not permit the operator to change the user ID specified in the subscription [Note: the user ID is considered associated with the bundling order and is changed via the bundling order - see S-SSS-10285].	Completed
ECS-L4-18773	S-SSS-10405 The NSBRV CI shall submit only one ECS data distribution request per granule and bundling order, even if more than one of the subscriptions that reference the bundling order qualify for an event.	Completed
ECS-L4-18774	S-SSS-10410 When a subscription referencing a bundling order qualifies for an event, the NSBRV CI shall submit an ECS data distribution request corresponding to the specifications in the bundling order.	Completed
ECS-L4-18777	S-SSS-10440 The NSBRV CI command line interface shall permit the viewing of media subscriptions.	Completed
ECS-L4-18778	S-SSS-10450 The NSBRV CI command line interface shall permit the editing of media subscriptions.	Completed
ECS-L4-18779	S-SSS-11010 The NSBRV CI shall allow an operator who is entering a data pool insert action for a subscription to select the name of a theme to be cross referenced with the action.	Completed
ECS-L4-18780	S-SSS-11020 The NSBRV CI shall allow an operator who is editing a subscription to disassociate the data pool insert action from the theme it currently references. [Note: this will have no impact on the granules already in the Data Pool or queued up for insert]	Completed

ID	Title	Status
ECS-L4-18781	S-SSS-11030 The NSBRV CI shall allow an operator who is editing a subscription to change the theme currently being referenced by its data pool insert action. [Note: this will have no impact on the granules already in the Data Pool or queued up for insert]	Completed
ECS-L4-18782	S-SSS-11040 The NSBRV CI shall allow an operator who is editing a data pool insert action for a subscription that is currently not cross-referenced with a theme to add such a cross reference. [Note: this will have no impact on the granules already in the Data Pool or queued up for insert]	Completed
ECS-L4-18784	S-SSS-11060 The NSBRV CI shall allow an operator to select one or all subscriptions listed for a theme and suspend them.	Completed
ECS-L4-18785	S-SSS-11070 The NSBRV CI shall allow an operator to select one or all subscriptions listed for a theme and resume them.	Completed
ECS-L4-18786	S-SSS-11080 The NSBRV CI shall allow an operator to select any one of the subscriptions listed for a theme and view it.	Completed
ECS-L4-18787	S-SSS-11090 The NSBRV CI shall allow an operator to select any one of the subscriptions listed for a theme and edit it.	Completed
ECS-L4-18790	S-SSS-12010 The NSBRV GUI shall distinguish between read-only and full capability operators in a secure fashion (e.g., using encrypted operator login protected and encrypted passwords).	Completed
ECS-L4-18791	S-SSS-12020 The NSBRV shall allow DAAC operations to maintain independently for each mode, the information that identifies which capability an individual DAAC operators has when using the NSBRV GUI, and allow DAAC operations to restrict who can maintain that information.	Completed
ECS-L4-18792	S-SSS-12030 The NSBRV GUI shall retain the capability level of an individual operator -once it has been established - for the duration of the GUI session.	Completed
ECS-L4-18794	S-SSS-12040 The NSBRV GUI shall provide the following functionality only to full capability operators: a. On the Manage Subscriptions page, the ability to add, update or delete a subscription; b. On the pages listing subscriptions, the ability to update, cancel, or suspend/resume subscriptions; c. On the Manage Bundling Orders page, the ability to add, update or cancel a bundling order or change the bundling order defaults;	Completed
ECS-L4-18795	S-SSS-12050 The NSBRV GUI shall disable all screen elements that provide only access to functions that are not available to read-only operators. For example, on pages listing subscriptions, the links providing access to the update, cancel, and suspend/resume capability shall be disabled (i.e., such that they cannot be invoked).	Completed
ECS-L4-18796	S-SSS-12060 The NSBRV GUI shall make the following pages only accessible to full capability operators: a. The pages used to enter the information for a new subscription or modify the information associated with an existing one; b. The page used to change the bundling order defaults; c. The pages used to enter bundling order information; d. The pages used to update a bundling order; and e. All pages for confirming creations, updates, cancellations, or deletions.	Completed
ECS-L4-18797	S-SSS-13000 The NSBRV CI shall create OMS standing order tracking information for each bundling order and maintain the relationship between that order and the bundling order. [Note: The initial state for a bundling order is 'Pending'. Other valid states include 'Expired' and 'Canceled'] [NOTE: This replaces S-SSS-10210. See NCR 8049131.]	Completed

ID	Title	Status
ECS-L4-18798	S-SSS-13010 The NSBRV CI shall set the order source for the OMS standing order tracking information it creates to 'SSS', and shall append to this '-' plus the subscription ID if the order is not bundled. [NOTE: This replaces S-SSS-10212. See NCR 8049131.]	Completed
ECS-L4-18799	S-SSS-13020 The NSBRV shall maintain the corresponding OMS standing order tracking information when a bundling order is modified. [NOTE: This replaces S-SSS-10360. See NCR 8049131.]	Completed
ECS-L4-18800	S-SSS-13030 When an operator cancels a bundling order, the NSBRV CI shall set the state of the order representing the bundling order to 'Canceled'. [NOTE: This replaces S-SSS-10374. See NCR 8049131.]	Completed
ECS-L4-18801	S-SSS-13040 When submitting an ECS data distribution request that corresponds to a bundling order, the NSBRV CI shall provide the order ID of the bundling order. [NOTE: This replaces S-SSS-10420. See NCR 8049131.]	Completed
ECS-L4-18802	S-SSS-13050 The NSBRV GUI shall allow operators to list the standing bundling orders. [NOTE: This replaces C-MSS-75292. See NCR 8049131.]	Completed

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
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 Identifer
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
FCAPS	Fault, Configuration, Accountability, Performance, and

	Security
F&PRS	Functional and Performance Requirements Specification
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)
INHW	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