

311-EMD-101

EOSDIS Maintenance and Development Project

Release 7.20 Science Data Server Database Design and Schema Specifications for the EMD Project

July 2007

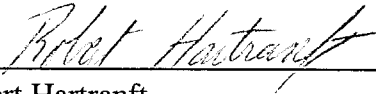
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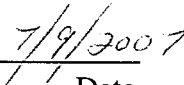
Release 7.20 Science Data Server Database Design and Schema Specifications for the EMD Project

July 2007

RESPONSIBLE ENGINEER

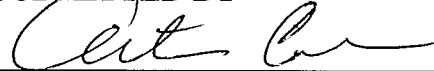


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Preface

This document is a formal contract deliverable. It requires Government review and approval within 45 business days. Changes to this document will be made by document change notice (DCN) or by complete revision.

Any questions should be addressed to:

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Revision History

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311-EMD-101	Original	July 2007	07-0337

This document describes the data design and database specification for the Subscription Server subsystem. It is one of eleven documents comprising the detailed database design specifications for each of the EMD subsystems.

The subsystem database design specifications for the as delivered system include:

311-EMD-100	Release 7.20 INGEST (INS) Subsystem Database Design and Schema Specifications for the EMD Project
311-EMD-101	Release 7.20 Science Data Server Database Design and Schema Specifications for the EMD Project
311-EMD-102	Release 7.20 Storage Management and Data Distribution Subsystems Database Design and Schema Specifications for the EMD Project
311-EMD-103	Release 7.20 Systems Management Subsystem Database Design and Schema Specifications for the EMD Project
311-EMD-104	Release 7.20 Order Manager Database Design and Schema Specifications for the EMD Project
311-EMD-105	Release 7.20 Spatial Subscription Server (SSS) Database Design and Schema Specifications for the EMD Project
311-EMD-106	Release 7.20 Data Pool Database Design and Schema Specifications for the EMD Project

Entity Relationship Diagrams (ERDs) presented in this document have been exported directly from tools and some cases contain too much detail to be easily readable within hard copy page constraints. The reader is encouraged to view these drawings on-line using the Portable Document Format (PDF) electronic copy available via the ECS Data Handling System (EDHS) on the world-wide web at <http://edhs1.gsfc.nasa.gov>.

Abstract

This document outlines Release 7.20 “as-built” database design and database schema of the Science Data Server Subsystem database including the physical layout of the database and initial installation parameters.

Keywords: data, database, design, configuration, database installation, scripts, security, data model, data dictionary, replication, performance tuning, SQL server, database security, replication, database scripts

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Appendix A. Science Data Server ERDs

Abbreviations and Acronyms

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1. Introduction

1.1 Identification

This Science Data Server Subsystem (SDPS) Database Design and Database Schema Specification document, Contract Data Requirement List (CDRL) Item 23, whose requirements are specified in under the Earth Observing System Data and Information System (EOSDIS) Maintenance and Development (EMD) Project, Contract NAS5-03098.

1.2 Scope

The SDSRV Database Design and Database Schema Specification document describes the data design and database specifications to support the data requirements of Release 6B SDSRV software.

1.3 Purpose

The purpose of the SDSRV Database Design and Database Schema Specification document is to support the maintenance of SDSRV data and databases throughout the life cycle of ECS. This document communicates the database implementation in sufficient detail to support ongoing configuration management.

1.4 Audience

This document is intended to be used by ECS maintenance and operations staff. The document is organized as follows:

Section 1 provides information regarding the identification, scope, purpose and audience of this document.

Section 2 provides a listing of the related documents, which were used as a source of information for this document.

Section 3 contains the SDSRV data design which is the database tables, triggers, stored procedures, and flat file usage.

Section 4 provides a description of database performance and tuning features such as indexes, caches, and segments.

Section 5 provides a description of the database security infrastructure used and list of the users, groups, and permissions available upon initial installation.

Section 6 provides a description of database and database related scripts used for installation, de-installation, backup/recovery, and other miscellaneous functions.

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2. Related Documents

2.1 Applicable Documents

The following documents, including Internet links, are referenced in this document, or are directly applicable, or contain policies or other directive matters that are binding upon the content of this volume.

305-EMD-100	Release 7.20 Segment Design Specifications for the EMD Project
920-TDN-009	DAAC Hardware Database Mapping/NSIDC
920-TDE-009	DAAC Hardware Database Mapping/EDC
920-TDL-009	DAAC Hardware Database Mapping/LARC
920-TDS-009	DAAC Hardware Database Mapping/SMC
920-TDN-010	DAAC Database Configuration/NSIDC
920-TDE-010	DAAC Database Configuration/EDC
920-TDL-010	DAAC Database Configuration/LARC
920-TDS-010	DAAC Database Configuration/SMC
920-TDN-011	DAAC Sybase Log Mapping/NSIDC
920-TDE-011	DAAC Sybase Log Mapping/EDC
920-TDL-011	DAAC Sybase Log Mapping/LARC
920-TDS-011	DAAC Sybase Log Mapping/SMC
922-TDN-013	Disk Partitions/NSIDC
922-TDL-013	Disk Partitions/LARC
922-TDS-013	Disk Partitions/SMC

These documents are maintained as part of the EMD baseline and available on the World Wide Web at the URL: <http://cmdm.east.hitc.com/baseline>. Please note that this is a partial mirror site in that some items are not available (they are identified) since this is OPEN to all. This site may also be reached through the EDHS homepage. Scroll page to the connections line and click on the EMD Baseline Information System link.

2.2 Information Documents

The following documents, although not directly applicable, amplify or clarify the information presented in this document. These documents are not binding on this document.

609-EMD-100 Release 7.20 Operations Tools Manual for the EMD Project

611-EMD-100 Release 7.20 Mission Operation Procedures for the EMD Project

These documents are accessible via the EDHS homepage.

3. Data Design

3.1 Database Overview

The SDSRV database implements the large majority of the persistent data requirements for the SDSRV subsystem. The database is designed in such a manner as to satisfy business policy while maintaining data integrity and consistency. Database tables are implemented using the Sybase Relational Database Management system (DBMS). All components of the SDSRV database are described in the sections that follow in sufficient detail to support maintenance needs.

3.1.1 Physical Data Model Entity Relationship Diagram

The Entity Relationship Diagram (ERD) presents a schematic depiction of the SDSRV physical data model. The ERDs presented here for the SDSRV database were produced using the S-Designor Data Architect Computer Aided Software Engineering (CASE) tool. ERDs represent the relationship between entities or database tables. On ERDs, tables are represented as shown in Figure 3-1.

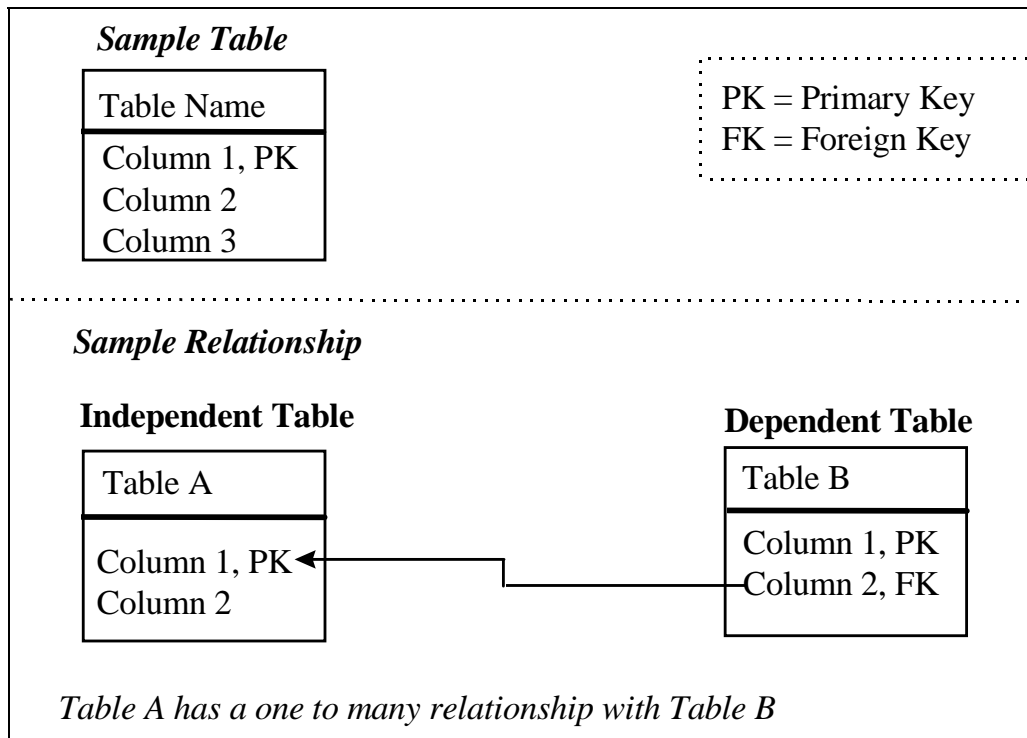


Figure 3-1. ERD Key

Data in the SDSRV database falls into categories:

1. Metadata (Md) – information used to describe the contents of a Earth Science Data Collections housed in the SDSRV. Including:
2. Delivered Algorithm Package metadata – descriptive information about the science algorithm software components used to generate or produce the contents of an Earth Science Data Collection.
3. Collection metadata – information describing all data elements comprising an Earth Science Data Collection.
4. Contact metadata – information describing the persons and organization associated with an Earth Science Data Collection.
5. Granule metadata – information describing a select data element in an Earth Science Data Collection.
6. Data Originator metadata – information describing the source from which an Earth Science Data Collection and/or comprising data elements were obtained.
7. Spatial metadata – information describing the locations pertinent to an Earth Science Data Collection and/or comprising data elements.
8. Temporal metadata – information describing the time periods pertinent to an Earth Science Data Collection and/or comprising data elements.
9. SQS Data – Information used by the Spatial Query Server COTS product to provide spatial query functionality.
10. System Management Data – Information used by the SDSRV to manage its functionality and operations.

ERDs for each of these data categories are found in Appendix A.

3.1.2 Tables

Table 3-1 provides a listing of each database table in the SDSRV database. A brief definition and column list for each database table follows. The Column List indicates the column name, the column code used in Sybase, if the column is part of the primary key for the table. That is if the columns can be used alone or in combination with other primary key columns to uniquely identify a single row in the table. The column list also indicates whether the column is a mandatory attribute that must be included in every row.

Table 3-1. DataTable List (1 of 5)

Data Table Name	Data Category
DsBtNotifierQueue	System Management Data
DsDeDictionaryAttribute	System Management Data
DsDeDictionaryContent	System Management Data
DsDeDictionaryRule	System Management Data
DsDeECSKeywordValid	System Management Data
DsDeEvent	System Management Data
DsDeEventNextId	System Management Data
DsGeESDTConfiguredType	System Management Data
DsMdAdditionalAttributes	Collection and Granule Metadata
DsMdAlgorithmPackage	Delivered Algorithm Package Metadata
DsMdAlgorithmPkgFileStorage	Delivered Algorithm Package Metadata
DsMdAltitudeResolution	Spatial Metadata
DsMdAnalysisSource	Data Originator Metadata
DsMdAncillaryInput	Granule Metadata
DsMdApContactXref	Contact Metadata
DsMdAPSAPComponentXref	Delivered Algorithm Package Metadata
DsMdAttributeConversion	System Management Data
DsMdAttributeList	System Management Data
DsMdAttributeTableXref	System Management Data
DsMdBaseDependent	System Management Data
DsMdBrowse	Granule Metadata
DsMdBrowseFileStorage	Granule Metadata
DsMdBrowseGranuleXref	Granule Metadata
DsMdCampaign	Data Originator Metadata
DsMdChecksumOrigins	System Management Data
DsMdChecksumTypes	System Management Data
DsMdCksumMigration	System Management Data
DsMdCIBoundingRectangle	Collection Metadata
DsMdCICircle	Collection Metadata
DsMdCIGPolygon	Collection Metadata
DsMdTemporalSize	Collection Metadata
DsMdCIPoint	Collection Metadata
DsMdCollBrowseXref	Collection Metadata
DsMdCollDisciplineKeywordXref	Collection Metadata
DsMdCollectionAddnlAttribsXref	Collection Metadata
DsMdCollectionAnalysisXref	Collection Metadata
DsMdCollectionAPXref	Collection Metadata
DsMdCollectionAssociation	Collection Metadata

Table 3-1. DataTable List (2 of 5)

Data Table Name	Data Category
DsMdCollectionCampaignXref	Collection Metadata
DsMdCollectionContactXref	Collection Metadata
DsMdCollectionDocumentXref	Collection Metadata
DsMdCollectionGranuleXref	Collection Metadata
DsMdCollectionInstrumentXref	Collection Metadata
DsMdCollectionPlatformXref	Collection Metadata
DsMdCollections	Collection Metadata
DsMdCollectionSensorXref	Collection Metadata
DsMdCollFloatInfoContent	Collection Metadata
DsMdCollIntegerInfoContent	Collection Metadata
DsMdCollReview	Collection Metadata
DsMdCollStorageMedium	Collection Metadata
DsMdCollStringInfoContent	Collection Metadata
DsMdCollURLInfo	Collection Metadata
DsMdCollVerticalSpatialDomain	Collection Metadata
DsMdCollZoneIdentifier	Collection Metadata
DsMdCommandConversion	System Management Data
DsMdContact	Contact Metadata
DsMdContactAddress	Contact Metadata
DsMdContactOrganizations	Contact Metadata
DsMdContactPersons	Contact Metadata
DsMdCSDTDescription	Collection Metadata
DsMdDAP	Delivered Algorithm Package Metadata
DsMdDAPFileStorage	Delivered Algorithm Package Metadata
DsMdDeletedGranules	System Management Data
DsMdDepthResolution	Collection Metadata
DsMdDisciplineKeywords	Collection Metadata
DsMdECSPParameterKeywords	Collection Metadata
DsMdEmailAddress	Contact Metadata
DsMdFileStorage	Granule Metadata
DsMdGranuleAnalysisXref	Granule Metadata
DsMdGranuleCampaignXref	Granule Metadata
DsMdGranuleInstrumentXref	Granule Metadata
DsMdGranuleLocality	Granule Metadata
DsMdGranulePlatformXref	Granule Metadata
DsMdGranuleReview	Granule Metadata
DsMdGranules	Granule Metadata
DsMdGranuleSensorXref	Granule Metadata

Table 3-1. DataTable List (3 of 5)

Data Table Name	Data Category
DsMdGranuleVersions	Granule Metadata
DsMdGrBoundingRectangle	Granule Metadata
DsMdGrCircle	Granule Metadata
DsMdGrEventDomain	Granule Metadata
DsMdGrEventHistory	Granule Metadata
DsMdGrFloatInfoContent	Granule Metadata
DsMdGrGPolygon	Granule Metadata
DsMdGrIntegerInfoContent	Granule Metadata
DsMdGrParamUpdHistory	Granule Metadata
DsMdGrPoint	Granule Metadata
DsMdGrSensorCharacteristics	Granule Metadata
DsMdGrStorageMedium	Granule Metadata
DsMdGrStringInfoContent	Granule Metadata
DsMdGrVerticalSpatialDomain	Granule Metadata
DsMdIdentifier	System Management Data
DsMdInputGranule_1	Granule Metadata
DsMdInputGranule_2	Granule Metadata
DsMdInputGranule_3	Granule Metadata
DsMdInputGranule_4	Granule Metadata
DsMdInputGranule_5	Granule Metadata
DsMdInputGranule_6	Granule Metadata
DsMdInputGranule_7	Granule Metadata
DsMdInputGranule_8	Granule Metadata
DsMdInputGranule_9	Granule Metadata
DsMdInputGranule_10	Granule Metadata
DsMdInputGranule_11	Granule Metadata
DsMdInputGranule_12	Granule Metadata
DsMdInputGranule_13	Granule Metadata
DsMdInputGranule_14	Granule Metadata
DsMdInputGranule_15	Granule Metadata
DsMdInputPointerLocation	Granule Metadata
DsMdInsertSequence	System Management Data
DsMdInstrument	Data Originator Metadata
DsMdInstrumentCharacteristic	System Management Data
DsMdJoins	System Management Data
DsMdKeyDependency	System Management Data
DsMdLocality	Collection Metadata
DsMdMeasuredParameter	Granule Metadata

Table 3-1. DataTable List (4 of 5)

Data Table Name	Data Category
DsMdMultipleDateTimePeriod	Temporal Metadata
DsMdMultipleTypeCollection	Collection Metadata
DsMdOperationMode	Data Originator Metadata
DsMdOperatorConversion	System Management Data
DsMdOrbitCalcSpatialDomain	Granule Metadata
DsMdOrbitCalculatedSpatial	Granule Metadata
DsMdOrbitPolygons	Granule Metadata
DsMdParmToTableVector	System Management Data
DsMdPersonOrganizationXref	Contact Metadata
DsMdPGEGroup	Delivered Algorithm Package Metadata
DsMdPlanarCoordinateSystems	Spatial Metadata
DsMdPlatform	Data Originator Metadata
DsMdPlatformCharacteristic	Data Originator Metadata
DsMdPlatInstrCode	Data Originator Metadata
DsMdProcessingHistory	Granule Metadata
DsMdProcessHistFileStorage	Granule Metadata
DsMdProcessingQA	Granule Metadata
DsMdProductDbXref	System Management Data
DsMdQaGranule	Granule Metadata
DsMdQaGranuleFileStorage	Granule Metadata
DsMdQaGranuleXref	Granule Metadata
DsMdQualityTextComment	Collection Metadata
DsMdRangeDateTime	Temporal Metadata
DsMdRegularPeriodic	Temporal Metadata
DsMdSDSRVLookup	System Management Metadata
DsMdSensor	Data Originator Metadata
DsMdSensorCharacteristic	Data Originator Metadata
DsMdSingleDateTime	Temporal Metadata
DsMdSpatial	Spatial Metadata
DsMdSpatialKeyword	Collection Metadata
DsMdSSAPComponent	Delivered Algorithm Package Metadata
DsMdSSAPComponentAPVersion	Delivered Algorithm Package Metadata
DsMdSSAPComponentFileStorage	Delivered Algorithm Package Metadata
DsMdStagingTable	System Management Data
DsMdTelephoneNumbers	Contact Metadata
DsMdTemporal	Temporal Metadata
DsMdTemporalKeyword	Collection Metadata
DsMdUninterpretedData	Granule Metadata

Table 3-1. DataTable List (5 of 5)

Data Table Name	Data Category
DsMdUnloadList	System Management Data
DsMdUpdateSequence	System Management Data
DsMdUserCommentDocument	Collection Metadata
DsMdValidationDocument	Collection Metadata
DsMdXAR	Granule Metadata
DsSiAcqBand	System Management Data
DsSiAcqPolygon	System Management Data
DsSiAcquireCmd	System Management Data
DsSiAcquireCmdFileInfo	System Management Data
DsSiReqDomain	System Management Data
DsSiRequest	System Management Data
DsSiURs	System Management Data
DsSiRequestDetails	System Management Data
DsSiParameters	System Management Data
DsQAMUTESDTSite	System Management Data
EcDbDatabaseVersions	Database Versioning
DsMdBmgtControlEsdts	BMGT data
DsMdBmgtOwsAddlAttrs	BMGT data
DsMdBmgtSpatialEsdts	BMGT data
DsMdBmgtWrkTable	BMGT data
DsMdGrPathRow	Granule Metadata
DsMdUnDeletedGranules	System Management Data
EMSArch	EMS
EMSArchUpdData	EMS
EMSArchData	EMS
EMSShortNameTemp	EMS

Table 3-2 maintains a queue of requests for backup threads relative to fault recovery.

Table 3-2. DsBtNotifierQueue

Column Name	Code	Type	PK	Mandatory
granUR	GRANUR	varchar(255)	No	Yes
insdate	INSDATE	DsTMdModDate	No	Yes
rpcid	RPCID	varchar(100)	Yes	Yes
servicename	SERVICENAME	varchar(30)	No	Yes
status	STATUS	tinyint	No	Yes
triggerTime	TRIGGERTIME	DsTMdModDate	No	No

Table 3-3 maintains the system level data dictionary and provides a mechanism for processing validation rules used by the Science Data Server.

Table 3-3. DsDeDictionaryAttribute

Column Name	Code	Type	PK	Mandatory
attributeID	ATTRIBUTEID	ID	Yes	Yes
contentID	CONTENTID	ID	No	Yes
glType	GLTYPE	char(10)	No	No
length	LENGTH	int	No	No
maxOccurrences	MAXOCCURANCES	smallint	No	No
operator	OPERATOR	varchar(255)	No	No
optionalIndicator	OPTIONALINDICATOR	tinyint	No	No
psaIndicator	PSAINDICATOR	tinyint	No	No
qualifiedAttrName	QUALIFIEDATTRNAME	varchar(255)	No	No
seqNum	SEQNUM	int	No	No
seqType	SEQTYPE	int	No	No
type	TYPE	varchar(15)	No	No

Table 3-4 maintains the system level metadata for the data dictionary. It facilitates the data dictionary level processing within Science Data Server.

Table 3-4. DsDeDictionaryContent

Column Name	Code	Type	PK	Mandatory
containerIndicator	CONTAINERINDICATOR	tinyint	No	No
contentID	CONTENTID	ID	Yes	Yes
numAttrs	NUMATTRIBS	smallint	No	No
numLevels	NUMLEVELS	smallint	No	No
numMultiples	NUMMULTIPLES	smallint	No	No
optionalIndicator	OPTIONALINDICATOR	tinyint	No	No
qualifiedGroupName	QUALIFIEDGROUPNAME	varchar(255)	No	No
skips	SKIPS	tinyint	No	No

Table 3-5 maintains the system level data dictionary and provides a mechanism for storing validation rules for each attribute used by the Science Data Server.

Table 3-5. DsDeDictionaryRule

Column Name	Code	Type	PK	Mandatory
attributeID	ATTRIBUTEID	ID	Yes	Yes
sequenceNo	SEQUENCENO	int	yes	Yes
ruleText	RULETEXT	varchar(255)	No	Yes

Table 3-6 maintains the stores the validation rules for the hierarchical relationship among the ECS Keyword stack. Each row in this table corresponds to a valid combination of the values in the ECS attributes: ECSDisciplineKeyword, ECSTopicKeyword, ECSTermKeyword, ECSVariableKeyword, ECSParameterKeyword.

Table 3-6. DsDeECSKeywordValid

Column Name	Code	Type	PK	Mandatory
disciplineKeyword	DISCIPLINEKEYWORD	varchar(80)	No	Yes
disciplineKeywordId	DISCIPLINEKEYWORDID	ID	Yes	Yes
parameterKeyword	PARAMETERKEYWORD	varchar(80)	No	No
termKeyword	TERMKEYWORD	varchar(80)	No	Yes
topicKeyword	TOPICKEYWORD	varchar(80)	No	Yes
variableKeyword	VARIABLEKEYWORD	varchar(80)	No	No

Table 3-7 maintains the subscribable events for a given ESDT Version.

Table 3-7. DsDeEvent

Column Name	Code	Type	PK	Mandatory
ShortName	SHORTNAME	char(8)	Yes	Yes
VersionID	VERSIONID	tinyint	Yes	Yes
eventName	EVENTNAME	varchar(80)	Yes	Yes
eventID	EVENTID	int	No	No

Table 3-8 maintains the next event ID.

Table 3-8. DsDeEventNextId

Column Name	Code	Type	PK	Mandatory
nextId	NEXTID	int	No	Yes

Table 3-9 maintains the ESDT level installation data, one row per ESDT Version.

Table 3-9. DsGeESDTConfiguredType (1 of 2)

Column Name	Code	Type	PK	Mandatory
configuredName	CONFIGUREDNAME	varchar(20)	Yes	Yes
description	DESCRIPTION	varchar(255)	No	No
descriptorFileName	DESCRIPTORFILENAME	varchar(80)	No	No

Table 3-9. DsGeESDTConfiguredType (2 of 2)

Column Name	Code	Type	PK	Mandatory
dllFileName	DLLFILENAME	varchar(80)	No	No
esdtState	ESDTSTATE	tinyint	No	Yes
spatialSearchType	SPATIALSEARCHTYPE	varchar(40)	No	Yes
versionID	VERSIONID	tinyint	Yes	Yes

Table 3-10 identifies the product specific attributes (i.e. attributes used to describe the unique characteristics of the collection which extend beyond those defined in this model).

Table 3-10. DsMdAdditionalAttributes

Column Name	Code	Type	PK	Mandatory
AdditionalAttributeDataType	ADDITIONALATTRIBUTE DATATYPE	char(10)	No	Yes
AdditionalAttributeDescription	ADDITIONALATTRIBUTE DESCRIPTION	varchar(255)	No	Yes
AdditionalAttributeName	ADDITIONALATTRIBUTENAME	varchar(40)	No	Yes
attributeId	ATTRIBUTEID	int	Yes	Yes
MeasurementResolution	MEASUREMENTRESOLUTION	varchar(30)	No	No
ParameterRangeBegin	PARAMETERRANGEBEGIN	varchar(40)	No	No
ParameterRangeEnd	PARAMETERRANGEEND	varchar(40)	No	No
ParameterUnitsOfMeasure	PARAMETERUNITSOFMEASURE	varchar(20)	No	No
ParameterValueAccuracy	PARAMETERVALUEACCURACY	varchar(30)	No	No
ValueAccuracyExplanation	VALUEACCURACYEXPLANATION	varchar(255)	No	No

Table 3-11 provides the common characteristics of the algorithms used in product generation. These characteristics include the algorithm package name, date, version, maturity code and generating system characteristics for the package.

Table 3-11. DsMdAlgorithmPackage (1 of 2)

Column Name	Code	Type	PK	Mandatory
AlgorithmPackageAcceptDate	ALGORITHMPACKAGEACCEPTDATE	datetime	No	Yes
AlgorithmPackageMaturityCode	ALGORITHMPACKAGEMATURITYCODE	char(10)	No	Yes
AlgorithmPackageName	ALGORITHMPACKAGENAME	varchar(80)	No	Yes
AlgorithmPackageVersion	ALGORITHMPACKAGEVERSION	varchar(20)	No	Yes
dbID	DBID	ID	Yes	Yes
deleteEffectiveDate	DELETEEFFECTIVEDATE	smalldatetime	No	No

Table 3-11. DsMdAlgorithmPackage (2 of 2)

Column Name	Code	Type	PK	Mandatory
DeliveryPurpose	DELIVERYPURPOSE	varchar(20)	No	Yes
insertTime	INSERTTIME	datetime	No	Yes
lastUpdate	LASTUPDATE	DsTMdModDate	No	No
PGEDateLastModified	PGEDATELASTMODIFIED	datetime	No	Yes
PGEFunction	PGEFUNCTION	varchar(80)	No	Yes
PGEIdentifier	PGEIDENTIFIER	char(10)	No	Yes
PGEName	PGENAME	varchar(20)	No	Yes
PGEVersion	PGEVERSION	char(10)	No	Yes
SWDateLastModified	SWDATELASTMODIFIED	datetime	No	Yes
SWVersion	SWVERSION	varchar(12)	No	Yes

Table 3-12 contains file storage information on Algorithm Package Products.

Table 3-12. DsMdAlgorithmPkgFileStorage

Column Name	Code	Type	PK	Mandatory
checkSum	CHECKSUM	int	No	No
creationDate	CREATIONDATE	DsTMdModDate	No	No
filePath	FILEPATH	varchar(80)	No	No
fileSize	FILESIZE	int	No	No
granuleId	GRANULEID	ID	Yes	Yes
internalFileName	INTERNALFILENAME	varchar(80)	Yes	Yes
userDataFile	USERDATAFILE	varchar(255)	No	No

Table 3-13 stores the reference frame or system from which altitudes (elevations) are measured. The term altitude is used instead of the common term elevation to conform to the terminology in Federal Information Processing Standards 70-1 and 173.

Table 3-13. DsMdAltitudeResolution

Column Name	Code	Type	PK	Mandatory
AltitudeResolution	ALTITUDERESOLUTION	float	Yes	Yes
collectionId	COLLECTIONID	ID	Yes	Yes

Table 3-14 is used to describe the data acquisition or data processing processes which characterize a collection. Collections can have both data acquisition and data processing processes associated with them. An example would be a weather analysis collection which included data collected using the NWS ASOS network (PlatformType=Network, PlatformShortName=ASOS) which was processed using an NMC analysis model (e.g.

AnalysisType=Model, AnalysisShortName=RAFS, AnalysisDescription=Regional Area Forecast System, AnalysisTechnique= Regional Optimal Interpolation).

Table 3-14. DsMdAnalysisSource

Column Name	Code	Type	PK	Mandatory
AnalysisLongName	ANALYSISLONGNAME	varchar(80)	No	No
AnalysisShortName	ANALYISSHORTNAME	varchar(20)	No	Yes
AnalysisTechnique	ANALYSISTECHNIQUE	varchar(80)	No	No
AnalysisType	ANALYSISTYPE	varchar(20)	No	Yes
dbID	DBID	ID	Yes	Yes
insertTime	INSERTTIME	datetime	No	Yes
lastUpdate	LASTUPDATE	DsTMdModDate	No	Yes

Table 3-15 contains logical pointer references to ancillary data used to generate ECS science data granules.

Table 3-15. DsMdAncillaryInput

Column Name	Code	Type	PK	Mandatory
AncillaryInputPointer	ANCILLARYINPUTPOINTER	varchar(255)	No	Yes
AncillaryInputType	ANCILLARYINPUTTYPE	varchar(20)	No	Yes
granuleId	GRANULEID	ID	Yes	Yes
lastUpdate	LASTUPDATE	DsTMdModDate	No	No
sequenceNumber	SEQUENCENUMBER	smallint	Yes	Yes

Table 3-16 contains the cross-reference between Contact and AlgorithmPackage.

Table 3-16. DsMdApContactXref

Column Name	Code	Type	PK	Mandatory
contactId	CONTACTID	ID	Yes	Yes
dapId	DAPID	ID	Yes	Yes

Table 3-17 contains the cross-reference between SAPComponent and AlgorithmPackage.

Table 3-17. DsMdAPSAPComponentXref

Column Name	Code	Type	PK	Mandatory
apId	APID	ID	Yes	Yes
ssapId	SSAPID	ID	Yes	Yes

Table 3-18 is used to convert ECS Metadata attributes into database calls.

Table 3-18. DsMdAttributeConversion

Column Name	Code	Type	PK	Mandatory
DBString	DBSTRING	varchar(40)	No	Yes
DynamicSQLFlag	DYNAMICSQLFLAG	char	Yes	Yes
GLType	GLTYPE	varchar(40)	Yes	Yes

Table 3-19 is used to store lists used for processing insert, select, update, and delete operations by the Science Data Server.

Table 3-19. DsMdAttributeList

Column Name	Code	Type	PK	Mandatory
attributeName	ATTRIBUTENAME	varchar(255)	No	No
glType	GLTYPE	varchar(30)	No	No
listName	LISTNAME	varchar(30)	Yes	Yes
sequenceNumber	SEQUENCENUMBER	smallint	Yes	Yes

Table 3-20 is used to map ECS Metadata attributes to their physical tables.

Table 3-20. DsMdAttributeTableXref

Column Name	Code	Type	PK	Mandatory
attributeName	ATTRIBUTENAME	varchar(80)	Yes	Yes
columnName	COLUMNNAME	varchar(32)	No	No
productName	PRODUCTNAME	varchar(80)	Yes	Yes
tableName	TABLERNAME	varchar(32)	No	No

Table 3-21 is used to relate granule level metadata base tables and their dependent cross-reference tables grouped by the type of granule for processing by the Science Data Server.

Table 3-21. DsMdBaseDependent (1 of 2)

Column Name	Code	Type	PK	Mandatory
BaseTableName	BASETABLENAME	varchar(40)	No	Yes
BaseType	BASETYPE	varchar(40)	Yes	Yes
DependentTableIDName	DEPENDENTTABLEIDNAME	varchar(40)	No	Yes

Table 3-21 DsMdBaseDependent (2 of 2)

Column Name	Code	Type	PK	Mandatory
DependentTableName	DEPENDENTTABLENAME	varchar(40)	No	Yes
SequenceNo	SEQUENCENO	int	Yes	Yes
SubType	SUBTYPE	varchar(30)	Yes	Yes

Table 3-22 contains the description and size of a Browse product. The logical pointer to the actual Browse product instance is also included in this class. Its association with the collection indicates that it can apply to a collection as a whole while its association with a granule indicates that browse products may also occur one or more per granule.

Table 3-22. DsMdBrowse

Column Name	Code	Type	PK	Mandatory
BrowseDescription	BROWSEDESCRIPTION	varchar(255)	No	No
BrowsePointer	BROWSEPOINTER	varchar(255)	No	No
BrowseProductionDateTime	BROWSEPRODUCTIONDATETIME	datetime	No	No
BrowseSize	BROWSESIZE	float	No	No
dbID	DBID	ID	Yes	Yes
deleteEffectiveDate	DELETEEFFECTIVEDATE	smalldatetime	No	No
insertTime	INSERTTIME	datetime	No	Yes
lastUpdate	LASTUPDATE	DsTMdModDate	No	No
subType	SUBTYPE	varchar(30)	No	No

Table 3-23 contains the file storage details for Browse products

Table 3-23. DsMdBrowseFileStorage

Column Name	Code	Type	PK	Mandatory
checkSum	CHECKSUM	int	No	No
creationDate	CREATIONDATE	DsTMdModDate	No	No
filePath	FILEPATH	varchar(80)	No	No
fileSize	FILESIZE	int	No	No
granuleId	GRANULEID	ID	Yes	Yes
internalFileName	INTERNALFILENAME	varchar(80)	Yes	Yes
userDataFile	USERDATAFILE	varchar(255)	No	No

Table 3-24 contains the cross-reference between browse and granule.

Table 3-24. DsMdBrowseGranuleXref

Column Name	Code	Type	PK	Mandatory
browseId	BROWSEID	ID	Yes	Yes
granuleId	GRANULEID	ID	Yes	Yes

Table 3-25 contains field campaign data.

Table 3-25. DsMdCampaign

Column Name	Code	Type	PK	Mandatory
CampaignEndDate	CAMPAIGNENDDATE	datetime	No	No
CampaignLongName	CAMPAIGNLONGNAME	varchar(80)	No	No
CampaignShortName	CAMPAIGNSHORTNAME	varchar(20)	No	Yes
CampaignStartDate	CAMPAIGNSTARTDATE	datetime	No	No
dbID	DBID	ID	Yes	Yes
insertTime	INSERTTIME	datetime	No	Yes
lastUpdate	LASTUPDATE	DsTMdModDate	No	Yes

Table 3-26 contains area coverage as an LLBOX for ECS collections. This area coverage is expressed by latitude and longitude values in the order western, eastern, northern, and southern - most.

Table 3-26. DsMdCIBoundingRectangle

Column Name	Code	Type	PK	Mandatory
BoundingRectangle	BOUNDINGRECTANGLE	llbox	No	Yes
collectionId	COLLECTIONID	ID	Yes	Yes

Table 3-27 identifies the characteristics required to specify the area coverage for a collection as a circle consisting of latitude center, longitude center, radius units, and radius value.

Table 3-27. DsMdCICircle

Column Name	Code	Type	PK	Mandatory
BoundingCircle	BOUNDINGCIRCLE	circle	No	Yes
collectionId	COLLECTIONID	ID	Yes	Yes
RadiusUnits	RADIUSUNITS	char(10)	No	No

Table 3-28 identifies the characteristics required to specify the area coverage for a collection as a polygon consisting of multiple points expressed by latitude and longitude values in clockwise order.

Table 3-28. DsMdCIGPolygon

Column Name	Code	Type	PK	Mandatory
collectionId	COLLECTIONID	ID	Yes	Yes
GPolygonContainer	GPOLYGONCONTAINER	gpolygon	No	Yes

Table 3-29 identifies the characteristics required to specify the area coverage for a collection as a single point expressed by latitude and longitude.

Table 3-29. DsMdCIPoint

Column Name	Code	Type	PK	Mandatory
collectionId	COLLECTIONID	ID	Yes	Yes
PointLocation	POINTLOCATION	point	No	Yes

Table 3-30 contains the cross-reference between collection and browse.

Table 3-30. DsMdCollBrowseXref

Column Name	Code	Type	PK	Mandatory
browseId	BROWSEID	ID	Yes	Yes
collectionId	COLLECTIONID	ID	Yes	Yes

Table 3-31 contains the cross-reference between collection and discipline keyword.

Table 3-31. DsMdCollDisciplineKeywordXref

Column Name	Code	Type	PK	Mandatory
collectionId	COLLECTIONID	ID	Yes	Yes
disciplineKeywordId	DISCIPLINEKEYWORDID	ID	Yes	Yes

Table 3-32 contains the cross-reference between collection and additional attributes.

Table 3-32. DsMdCollectionAddnlAttribsXref

Column Name	Code	Type	PK	Mandatory
attributeld	ATTRIBUTEID	int	Yes	Yes
collectionId	COLLECTIONID	ID	Yes	Yes

Table 3-33 contains the cross-reference between collection and analysis source.

Table 3-33. DsMdCollectionAnalysisXref

Column Name	Code	Type	PK	Mandatory
analysisSourceId	ANALYSSOURCEID	ID	Yes	Yes
collectionId	COLLECTIONID	ID	Yes	Yes

Table 3-34 contains the cross-reference between collection and algorithm package.

Table 3-34. DsMdCollectionAPXref

Column Name	Code	Type	PK	Mandatory
apId	APID	ID	Yes	Yes
collectionId	COLLECTIONID	ID	Yes	Yes

Table 3-35 is used to describe collections associated with the instance of a collection; i.e., the name and other details of input collections, collections associated (in science data terms) with the instance and/or collections dependent on the collection in some way.

Table 3-35. DsMdCollectionAssociation

Column Name	Code	Type	PK	Mandatory
AssociatedShortName	ASSOCIATEDSHORTNAME	char(8)	Yes	Yes
AssociatedVersionId	ASSOCIATEDVERSIONID	tinyint	Yes	Yes
collectionId	COLLECTIONID	ID	Yes	Yes
CollectionType	COLLECTIONTYPE	varchar(20)	Yes	Yes
CollectionUse1	COLLECTIONUSE1	varchar(255)	No	No
CollectionUse2	COLLECTIONUSE2	varchar(255)	No	No

Table 3-36 contains the cross-reference between collection and campaign.

Table 3-36. DsMdCollectionCampaignXref

Column Name	Code	Type	PK	Mandatory
campaignId	CAMPAIGNID	ID	Yes	Yes
collectionId	COLLECTIONID	ID	Yes	Yes

Table 3-37 contains the cross -reference between collection and contact.

Table 3-37. DsMdCollectionContactXref

Column Name	Code	Type	PK	Mandatory
collectionId	COLLECTIONID	ID	Yes	Yes
contactId	CONTACTID	ID	Yes	Yes

Table 3-38 contains the cross -reference between collection and granule.

Table 3-38. DsMdCollectionDocumentXref

Column Name	Code	Type	PK	Mandatory
collectionId	COLLECTIONID	ID	Yes	Yes
granuleId	GRANULEID	ID	Yes	Yes

Table 3-39 contains the cross-reference between collection and granule.

Table 3-39. DsMdCollectionGranuleXref

Column Name	Code	Type	PK	Mandatory
CollectionId	COLLECTIONID	ID	Yes	Yes
GranuleId	GRANULEID	ID	Yes	Yes

Table 3-40 contains the cross-reference between collection and instrument.

Table 3-40. DsMdCollectionInstrumentXref

Column Name	Code	Type	PK	Mandatory
collectionId	COLLECTIONID	ID	Yes	Yes
instrumentId	INSTRUMENTID	ID	Yes	Yes

Table 3-41 contains the cross-reference between collection and platform.

Table 3-41. DsMdCollectionPlatformXref

Column Name	Code	Type	PK	Mandatory
collectionId	COLLECTIONID	ID	Yes	Yes
platformId	PLATFORMID	ID	Yes	Yes

Table 3-42 contains brief description of all collections, also includes the short and long names and the version of the collection.

Table 3-42. DsMdCollections

Column Name	Code	Type	PK	Mandatory
AccessConstraints	ACCESSCONSTRAINTS	varchar(255)	No	No
accessPermissions	ACCESSPERMISSIONS	varchar(10)	No	No
ArchiveCenter	ARCHIVECENTER	varchar(20)	No	Yes
CitationForExternalPublication	CITATIONFOREXTERNALPUBLICATION	varchar(255)	No	No
CollectionDescription	COLLECTIONDESCRIPTION	varchar(255)	No	Yes
CollectionState	COLLECTIONSTATE	char(10)	No	No
dbID	DBID	ID	Yes	Yes
insertTime	INSERTTIME	datetime	No	Yes
lastUpdate	LASTUPDATE	DsTMdModDate	No	No
LongName	LONGNAME	varchar(80)	No	Yes
MaintenanceUpdateFrequency	MAINTENANCEUPDATEFREQUENCY	varchar(80)	No	Yes
primaryCollectionFlag	PRIMARYCOLLECTIONFLAG	char(1)	No	No
ProcessingCenter	PROCESSINGCENTER	varchar(20)	No	No
ProcessingLevelDescription	PROCESSINGLEVELDESCRIPTION	varchar(80)	No	No
ProcessingLevelID	PROCESSINGLEVELID	char(6)	No	No
RevisionDate	REVISIONDATE	datetime	No	No
ShortName	SHORTNAME	char(8)	No	Yes
subType	SUBTYPE	varchar(30)	No	No
SuggestedUsage1	SUGGESTEDUSAGE1	varchar(255)	No	No
SuggestedUsage2	SUGGESTEDUSAGE2	varchar(245)	No	No
temporalRestriction	TEMPORALRESTRICTION	smallint	No	No
type	TYPE	varchar(30)	No	Yes
VersionDescription	VERSIONDESCRIPTION	varchar(255)	No	Yes
VersionID	VERSIONID	tinyint	No	Yes

Table 3-43 contains the cross-reference between collection and sensor.

Table 3-43. DsMdCollectionSensorXref

Column Name	Code	Type	PK	Mandatory
collectionId	COLLECTIONID	ID	Yes	Yes
sensorId	SENSORID	ID	Yes	Yes

Table 3-44 contains collection level float additional attribute values.

Table 3-44. DsMdCollFloatInfoContent

Column Name	Code	Type	PK	Mandatory
attributeId	attributeId	int	Yes	Yes
clFloatValue	clFloatValue	float	Yes	Yes
collectionId	collectionId	ID	Yes	Yes

Table 3-45 contains collection level integer additional attribute values.

Table 3-45. DsMdCollIntegerInfoContent

Column Name	Code	Type	PK	Mandatory
attributeId	ATTRIBUTEID	int	Yes	Yes
clIntValue	CLINTVALUE	int	Yes	Yes
collectionId	COLLECTIONID	ID	Yes	Yes

Table 3-46 contains information related to a collection review.

Table 3-46. DsMdCollReview

Column Name	Code	Type	PK	Mandatory
collectionId	COLLECTIONID	ID	Yes	Yes
FutureReviewDate	FUTUREREVIEWDATE	datetime	No	No
ScienceReviewDate	SCIENCEREVIEWDATE	datetime	Yes	Yes
ScienceReviewStatus	SCIENCEREVIEWSTATUS	varchar(20)	No	Yes

Table 3-47 holds information about the storage medium for a collection.

Table 3-47. DsMdCollStorageMedium

Column Name	Code	Type	PK	Mandatory
collectionId	COLLECTIONID	ID	Yes	Yes
StorageMedium	STORAGEMEDIUM	varchar(30)	Yes	Yes

Table 3-48 contains collection level string additional attribute values.

Table 3-48. DsMdCollStringInfoContent

Column Name	Code	Type	PK	Mandatory
attributeId	ATTRIBUTEID	int	Yes	Yes
clStringValue	CLSTRINGVALUE	varchar(255)	No	Yes
collectionId	COLLECTIONID	ID	Yes	Yes

Table 3-49 contains collection level URL information.

Table 3-49. DsMdCollURLInfo

Column Name	Code	Type	PK	Mandatory
collectionId	COLLECTIONID	ID	Yes	Yes
DatasetDisclaimerPtr	DATASETDISCLAIMERPTR	varchar(200)	No	No
ECSCollGuidePtr	ECSCOLLGUIDEPTR	varchar(200)	No	No
ECSCollGuidePtrComment	ECSCOLLGUIDEPTRCOMMENT	varchar(255)	No	No
MiscInformationPtr	MISCINFORMATIONPTR	varchar(200)	No	No
MiscInformationPtrComment	MISCINFORMATIONPTRCOMMENT	varchar(255)	No	No

Table 3-50 has information about the vertical spatial domain represented by a collection.

Table 3-50. DsMdCollVerticalSpatialDomain

Column Name	Code	Type	PK	Mandatory
collectionId	collectionId	ID	Yes	Yes
VerticalSpatialDomainType	VerticalSpatialDomainType	varchar(20)	Yes	Yes
VerticalSpatialDomainValue	VerticalSpatialDomainValue	varchar(20)	Yes	Yes

Table 3-51 holds information about the various zones for a collection.

Table 3-51. DsMdCollZoneIdentifier

Column Name	Code	Type	PK	Mandatory
collectionId	COLLECTIONID	ID	Yes	Yes
ZoneIdentifier	ZONEIDENTIFIER	varchar(64)	Yes	Yes

Table 3-52 translates ECS Metadata operations into database commands.

Table 3-52. DsMdCommandConversion

Column Name	Code	Type	PK	Mandatory
BaseTable	BASETABLE	varchar(40)	Yes	Yes
DBCommand	DBCCommand	varchar(255)	No	Yes
GroupName	GROUPNAME	varchar(40)	Yes	Yes
Operator	OPERATOR	varchar(40)	Yes	Yes
SequenceNo	SEQUENCENO	int	Yes	Yes

Table 3-53 describes the basic characteristics for a person or an organization type of contact. These contacts may provide information about a Collection, Delivered Algorithm Package, PGE or Data Originator. The role attribute specifies the type of contact and serves to differentiate the use of the module for the various classes associated with it from other modules. System and user profile contact information is held elsewhere.

Table 3-53. DsMdContact

Column Name	Code	Type	PK	Mandatory
ContactInstructions	CONTACTINSTRUCTIONS	varchar(255)	No	No
ContactRole	CONTACTROLE	varchar(20)	No	Yes
dbID	DBID	ID	Yes	Yes
HoursOfService	HOURSOFSERVICE	varchar(255)	No	No
insertTime	INSERTTIME	datetime	No	Yes
lastUpdate	LASTUPDATE	DsTMdModDate	No	Yes

Table 3-54 contains the address details for each contact.

Table 3-54. DsMdContactAddress

Column Name	Code	Type	PK	Mandatory
City	CITY	varchar(30)	No	Yes
contactId	CONTACTID	ID	Yes	Yes
Country	COUNTRY	varchar(10)	No	Yes
PostalCode	POSTALCODE	varchar(20)	No	Yes
StateProvince	STATEPROVINCE	varchar(30)	No	Yes
StreetAddress	STREETADDRESS	varchar(80)	Yes	Yes

Table 3-55 contains the name of the contact organization. This table is used optionally with ContactPerson. In some instances, ContactOrganization is the primary point of contact.

Table 3-55. DsMdContactOrganizations

Column Name	Code	Type	PK	Mandatory
contactId	CONTACTID	ID	Yes	Yes
ContactOrganizationName	CONTACTORGANIZATIO NNAME	varchar(255)	No	Yes

Table 3-56 contains the contact person's name and position. This table is used optionally with ContactOrganization. In some instances, ContactPerson is the primary point of contact.

Table 3-56. DsMdContactPersons

Column Name	Code	Type	PK	Mandatory
ContactFirstName	CONTACTFIRSTNAM E	varchar(255)	No	Yes
contactId	CONTACTID	ID	Yes	Yes
ContactJobPosition	CONTACTJOBPOSITI ON	varchar(255)	No	No
ContactLastName	CONTACTLASTNAM E	varchar(255)	No	Yes
ContactMiddleName	CONTACTMIDDLENA ME	varchar(255)	No	No

Table 3-57 provides a description of the data organization for the product (i.e. a generalized granule description in terms of internal structure). There are many possible structures., all describable by one of the PrimaryCSDTs (fixed domain), but the specific implementation has an unbounded domain indicating the range at the lower structured level. While many CSDTs may

exist in a granule, only the primary or dominant CSDT is described (e.g. PrimaryCSDT = swath, Implementation = HDF-EOS). The indirect reference is used for collection of specific data organization labels. A comment field is provided for further explanation.

Table 3-57. DsMdCSDTDescription

Column Name	Code	Type	PK	Mandatory
collectionId	COLLECTIONID	ID	Yes	Yes
CSDTComments	CSDTCOMMENTS	varchar(255)	No	No
Implementation	IMPLEMENTATION	varchar(100)	No	No
IndirectReference	INDIRECTREFEREN CE	varchar(100)	No	No
PrimaryCSDT	PRIMARYCSDT	varchar(30)	Yes	Yes

Table 3-58 provides a Delivered Algorithm Package association for one or more PGE Groups.

Table 3-58. DsMdDAP

Column Name	Code	Type	PK	Mandatory
DAPID	DAPID	varchar(12)	No	Yes
DAPInsertDate	DAPINSERTDATE	datetime	No	Yes
dbID	DBID	ID	Yes	Yes
insertTime	INSERTTIME	datetime	No	Yes
deleteEffectiveDate	DELETEEFFECTIVE DATE	smalldatetime	No	No
lastUpdate	LASTUPDATE	DsTMdModDate	No	No

Table 3-59 contains the file storage details for the Delivered Algorithm Package.

Table 3-59. DsMdDAPFileStorage

Column Name	Code	Type	PK	Mandatory
checkSum	CHECKSUM	int	No	No
creationDate	CREATIONDATE	DsTMdModDate	No	No
filePath	FILEPATH	varchar(80)	No	No
fileSize	FILESIZE	int	No	No
granuleId	GRANULEID	ID	Yes	Yes
internalFileName	INTERNALFILENAME	varchar(80)	Yes	Yes
userDataFile	USERDATAFILE	varchar(255)	No	No

Table 3-60 holds the information of the granules that have been requested to be marked as deleted or DFAed.

Table 3-60. DsMdDeletedGranules

Column Name	Code	Type	PK	Mandatory
BeginningDateTime	BEGINNINGDATETIME	datetime	No	No
DFAFlag	DFAFLAG	tinyint	No	No
GranuleID	GRANULEID	ID	Yes	Yes
insertTime	INSERTTIME	datetime	No	No
ShortName	SHORTNAME	char(8)	No	Yes
Status	STATUS	tinyint	No	No
transactionTime	TRANSACTIONTIME	datetime	No	No
VersionID	VERSIONID	tinyint	No	Yes

Table 3-61 holds the depth resolution measurements for collection level spatial coverage.

Table 3-61. DsMdDepthResolution

Column Name	Code	Type	PK	Mandatory
collectionId	COLLECTIONID	ID	Yes	Yes
DepthResolution	DEPTHRESOLUTION	float	Yes	Yes

Table 3-62 provides the discipline keyword(s) associated with a collection.

Table 3-62. DsMdDisciplineKeywords

Column Name	Code	Type	PK	Mandatory
dbID	DBID	ID	Yes	Yes
ECSDisciplineKeyword	ECSDISCIPLINEKEYWORD	varchar(80)	No	Yes
ECSTermKeyword	ECSTERMKEYWORD	varchar(80)	No	Yes
ECSTopicKeyword	ECSTOPICKEYWORD	varchar(80)	No	Yes
ECSVariableKeyword	ECSVARIABLEKEYWORD	varchar(80)	No	No
insertTime	INSERTTIME	datetime	No	Yes
lastUpdate	LASTUPDATE	DsTMdModDate	No	Yes

Table 3-63 contains keywords, associated with the collection.

Table 3-63. DsMdECSPParameterKeywords

Column Name	Code	Type	PK	Mandatory
ECSPParameterKeyword	ECSPARAMETERKEYWORD	varchar(80)	Yes	Yes
parameterKeywordId	PARAMETERKEYWORDID	ID	Yes	Yes

Table 3-64 contains the electronic mail address of the contact or document author.

Table 3-64. DsMdEmailAddress

Column Name	Code	Type	PK	Mandatory
contactId	CONTACTID	ID	Yes	Yes
ElectronicMailAddress	ELECTRONICMAILADDRESS	varchar(255)	No	Yes
emailAddressId	EMAILADDRESSID	int	Yes	Yes

Table 3-65 contains the file storage details for granules.

Table 3-65. DsMdFileStorage

Column Name	Code	Type	PK	Mandatory
Checksum	CHECKSUM	varchar(128)	No	No
creationDate	CREATIONDATE	DsTMdModDate	No	No
deleteEffectiveDate	DELETEEFFECTIVEDATE	smalldatetime	No	No
filePath	FILEPATH	varchar(80)	No	No
fileSize	FILESIZE	int	No	No
granuleId	GRANULEID	ID	Yes	Yes
internalFileName	INTERNALFILENAME	varchar(80)	Yes	Yes
userDataFile	USERDATAFILE	varchar(255)	No	No
ChecksumTypeId	CHECKSUMTYPEID	tinyint	No	No
ChecksumOriginID	CHECKSUMORIGINID	tinyint	No	No
ChecksumVerified	CHECKSUMVERIFIED	datetime	No	No

Table 3-66 contains the cross-reference between granules and source analysis.

Table 3-66. DsMdGranuleAnalysisXref

Column Name	Code	Type	PK	Mandatory
analysisSourceId	ANALYSSOURCEID	ID	Yes	Yes
granuleId	GRANULEID	ID	Yes	Yes

Table 3-67 contains the cross-reference between granules and field campaigns.

Table 3-67. DsMdGranuleCampaignXref

Column Name	Code	Type	PK	Mandatory
campaignId	CAMPAIGNID	ID	Yes	Yes
granuleId	GRANULEID	ID	Yes	Yes

Table 3-68 contains the cross-reference between granules and instruments.

Table 3-68. DsMdGranuleInstrumentXref

Column Name	Code	Type	PK	Mandatory
granuleId	GRANULEID	ID	Yes	Yes
instrumentId	INSTRUMENTID	ID	Yes	Yes
OperationMode	OPERATIONMODE	varchar(20)	No	No

Table 3-69 contains the value for the granule's locality.

Table 3-69. DsMdGranuleLocality

Column Name	Code	Type	PK	Mandatory
granuleId	GRANULEID	ID	Yes	Yes
LocalityValue	LOCALITYVALUE	varchar(80)	Yes	Yes

Table 3-70 contains the cross-reference between granules and platforms.

Table 3-70. DsMdGranulePlatformXref

Column Name	Code	Type	PK	Mandatory
granuleId	GRANULEID	ID	Yes	Yes
platformId	PLATFORMID	ID	Yes	Yes

Table 3-71 provides review status details for each granule.

Table 3-71. DsMdGranuleReview

Column Name	Code	Type	PK	Mandatory
FutureReviewDate	FUTUREREVIEWDATE	datetime	No	No
granuleId	GRANULEID	ID	Yes	Yes
ScienceReviewDate	SCIENCEREVIEWDATE	datetime	Yes	Yes
ScienceReviewStatus	SCIENCEREVIEWSTATUS	varchar(20)	No	Yes

Table 3-72 provides the core attributes for all science granules associated with ESDTs. It also includes the range date and time attributes for each granule.

Table 3-72. DsMdGranules (1 of 2)

Column Name	Code	Type	PK	Mandatory
BeginningDateTime	BEGINNINGDATETIME	datetime	No	No
CalendarDate	CALENDARDATE	datetime	No	No
DayNightFlag	DAYNIGHTFLAG	char(5)	No	No
dbID	DBID	ID	Yes	Yes
deleteEffectiveDate	DELETEEFFECTIVEDATE	smalldatetime	No	No
DeleteFromArchive	DELETEFROMARCHIVE	char(1)	No	No
EndingDateTime	ENDINGDATETIME	datetime	No	No
insertTime	INSERTTIME	datetime	No	Yes
lastUpdate	LASTUPDATE	DsTMdModDate	No	No
LocalGranuleID	LOCALGRANULEID	varchar(80)	No	No
LocalVersionID	LOCALVERSIONID	varchar(60)	No	No
PGEVersion	PGEVERSION	char(10)	No	No
primaryCollectionId	PRIMARYCOLLECTIONID	ID	No	Yes
processingHistoryId	PROCESSINGHISTORYID	ID	No	No
processingHistoryTypeCode	PROCESSINGHISTORYTYPECODE	int	No	No
ProductionDateTime	PRODUCTIONDATETIME	datetime	No	No
RangeBeginningDate	RANGETIMEBEGINNINGDATE	datetime	No	No
RangeBeginningTime	RANGETIMEBEGINNINGTIME	DsTMdTime	No	No
RangeEndingDate	RANGETIMEENDINGDATE	datetime	No	No
RangeEndingTime	RANGETIMEENDINGTIME	DsTMdTime	No	No
ReprocessingActual	REPROCESSINGACTUAL	varchar(20)	No	No
ReprocessingPlanned	REPROCESSINGPLANNED	varchar(45)	No	No
ShortName	SHORTNAME	char(8)	No	Yes

Table 3-72. DsMdGranules (1 of 2)

Column Name	Code	Type	PK	Mandatory
SizeMBECSDDataGranule	SIZEMBECSDATAGRANULE	float	No	No
TimeOfDay	TIMEOFDAY	DsTMdTime	No	No
VersionID	VERSIONID	tinyint	No	Yes
Zonelfentifier	ZONEIDENTIFIER	varchar(64)	No	No

Table 3-73 contains the cross-reference between granules and sensor.

Table 3-73. DsMdGranuleSensorXref

Column Name	Code	Type	PK	Mandatory
granuleId	GRANULEID	ID	Yes	Yes
sensorId	SENSORID	ID	Yes	Yes

Table 3-74 provides version details for each granule. Multiple versions of the same granule may exist and each version of a granule may be associated with one of more collection.

Table 3-74. DsMdGranuleVersions

Column Name	Code	Type	PK	Mandatory
currentGranuleId	CURRENTGRANULEID	ID	Yes	Yes
currentVersion	CURRENTVERSION	char(16)	No	No
previousGranuleId	PREVIOUSGRANULEID	ID	No	No
previousVersion	PREVIOUSVERSION	char(16)	No	No

Table 3-75 contains area coverage as an LL_BOX for a granule. This area coverage is expressed as an llbox.

Table 3-75. DsMdGrBoundingRectangle

Column Name	Code	Type	PK	Mandatory
BoundingRectangle	BOUNDINGRECTANGLE	llbox	No	Yes
granuleId	GRANULEID	ID	Yes	Yes
primaryCollectionId	PRIMARYCOLLECTIONID	ID	No	No

Table 3-76 identifies the characteristics required to specify the area coverage for a granule as a circle consisting of latitude center, longitude center, radius units, and radius value.

Table 3-76. DsMdGrCircle

Column Name	Code	Type	PK	Mandatory
BoundingCircle	BOUNDINGCIRCLE	circle	No	Yes
granuleId	GRANULEID	ID	Yes	Yes
RadiusUnits	RADIUSUNITS	char(10)	No	No
primaryCollectionId	PRIMARYCOLLECTIONID	ID	No	No

Table 3-77 contains granule level float additional attribute values.

Table 3-77. DsMdGrFloatInfoContent

Column Name	Code	Type	PK	Mandatory
attributeId	ATTRIBUTEID	int	Yes	Yes
granuleId	GRANULEID	ID	Yes	Yes
grFloatValue	GRFLOATVALUE	float	Yes	Yes

Table 3-78 identifies the characteristics required to specify the area coverage for a collection as a polygon consisting of multiple points expressed by latitude and longitude values in clockwise order.

Table 3-78. DsMdGrGPolygon

Column Name	Code	Type	PK	Mandatory
GPolygonContainer	GPOLYGONCONTAINER	gpolygon	No	Yes
granuleId	GRANULEID	ID	Yes	Yes
primaryCollectionId	PRIMARYCOLLECTIONID	ID	No	No

Table 3-79 contains granule level integer additional attribute values.

Table 3-79. DsMdGrIntegerInfoContent

Column Name	Code	Type	PK	Mandatory
attributeId	ATTRIBUTEID	int	Yes	Yes
granuleId	GRANULEID	ID	Yes	Yes
grIntValue	GRINTVALUE	int	Yes	Yes

Table 3-80 identifies the characteristics required to specify the area coverage for a collection as a single point expressed by latitude and longitude.

Table 3-80. DsMdGrPoint

Column Name	Code	Type	PK	Mandatory
granuleId	GRANULEID	ID	Yes	Yes
PointLocation	POINTLOCATION	point	No	Yes
primaryCollectionId	PRIMARYCOLLECTIONID	ID	No	No

Table 3-81 holds the specific characteristics for each type of sensor used to produce the granule.

Table 3-81. DsMdGrSensorCharacteristics

Column Name	Code	Type	PK	Mandatory
granuleId	GRANULEID	ID	Yes	Yes
SensorCharacteristicName	SENSORCHARACTERISTICNAME	varchar(40)	Yes	Yes
SensorCharacteristicValue	SENSORCHARACTERISTICVALUE	varchar(80)	No	No

Table 3-82 holds the quantity and or type of storage medium on which the granules are distributed.

Table 3-82. DsMdGrStorageMedium

Column Name	Code	Type	PK	Mandatory
granuleId	GRANULEID	ID	Yes	Yes
StorageMedium	STORAGEMEDIUM	varchar(30)	Yes	Yes

Table 3-83 contains granule level string additional attribute values.

Table 3-83. DsMdGrStringInfoContent

Column Name	Code	Type	PK	Mandatory
attributeId	ATTRIBUTEID	int	Yes	Yes
granuleId	GRANULEID	ID	Yes	Yes
grStringValue	GRSTRINGVALUE	varchar(255)	No	Yes
sequenceNumber	SEQUENCENUMBER	smallint	Yes	Yes

Table 3-84 contains the vertical spatial locality coverage for the granule.

Table 3-84. DsMdGrVerticalSpatialDomain

Column Name	Code	Type	PK	Mandatory
granuleId	GRANULEID	ID	Yes	Yes
VerticalSpatialDomainType	VERTICALSPATIALDOMAINTYPE	varchar(20)	Yes	Yes
VerticalSpatialDomainValue	VERTICALSPATIALDOMAINVALUE	varchar(20)	Yes	Yes

Table 3-85 contains the next available system generated unique identifier. There is a separate row in this table to generate identifiers for the DsMdAnalysisSource, DsMdCampaign, DsDeDictionaryAttribute, DsMdAdditionalAttributesm DsMdPlanarCoordinateSystems tables. There is also another row used to generate identifiers for DsMdCollections and DsMdGranules tables.

Each row in this table is padded out to the 2K page size to minimize locking contention on a per row basis.

Table 3-85. DsMdIdentifier

Column Name	Code	Type	PK	Mandatory
identifierObjectType	IDENTIFIEROBJECTTYPE	char(30)	Yes	Yes
identifierPad1	IDENTIFIERPAD1	char(255)	No	Yes
identifierPad2	IDENTIFIERPAD2	char(255)	No	Yes
identifierPad3	IDENTIFIERPAD3	char(255)	No	Yes
identifierPad4	IDENTIFIERPAD4	char(255)	No	Yes
identifierPad5	IDENTIFIERPAD5	char(255)	No	Yes
identifierPad6	IDENTIFIERPAD6	char(255)	No	Yes
identifierPad7	IDENTIFIERPAD7	char(255)	No	Yes
identifierType	IDENTIFIERTYPE	char(30)	Yes	Yes
lastIdentifier	LASTIDENTIFIER	ID	No	Yes
lastIntIdentifier	LASTINTIDENTIFIER	int	No	Yes
lastSmallIntIdentifier	LASTSMALLINTIDENTIFIER	smallint	No	Yes

Table 3-86 contains a description of the tables that store the inputs used to create a granule. There are a total of 15 tables used to store this information. The tables share the same basic name but each has a numeric suffix to make it unique. Data is partitioned among the 15 tables by granuleId sequence. This partitioning information is stored in the DsMdInputPointerLocation table. The actual table names are DsMdInputGranule_1 through DsMdInputGranule_15.

Table 3-86. DsMdInputGranule

Column Name	Code	Type	PK	Mandatory
granuleId	GRANULEID	ID	Yes	Yes
inputGranule	INPUTGRANULE	ID	Yes	Yes
inputGranuleFileCount	INPUTGRANULEFILECOUNT	smallint	No	No
InputPointer	INPUTPOINTER	varchar(255)	No	Yes
insertDatetime	INSERTDATETIME	datetime	Yes	Yes

Table 3-87 contains a lookup table that is used to determine the name of the table that contains input pointer information for a specific granule.

Table 3-87. DsMdInputPointerLocation

Column Name	Code	Type	PK	Mandatory
startId	STARTID	ID	Yes	Yes
endId	ENDID	ID	No	Yes
insertFlag	INSERTFLAG	tinyint	No	No
timeOfEntry	INPUTPOINTER	datetime	No	Yes
tableName	TABLERNAME	varchar(32)	No	Yes

Table 3-88 holds system level metadata necessary for the Science Data Server to process ECS metadata. It tracks the various list sequences that are needed to properly insert each type of Earth Science Data Type (ESDT).

Table 3-88. DsMdInsertSequence

Column Name	Code	Type	PK	Mandatory
BaseType	BASETYPE	varchar(40)	Yes	Yes
CommandType	COMMANDTYPE	char	No	Yes
Data Type	DATATYPE	char	No	Yes
ListName	LISTNAME	varchar(40)	No	Yes
SequenceNo	SEQUENCENO	int	Yes	Yes
StoredProcName	STOREDPROCNAME	varchar(40)	No	Yes

Table 3-89 defines the devices used to measure or record data, including direct human observation. Included in this table are defined EOS Instruments. In cases where instruments have a single sensor or the instrument and sensor are used synonymously (e.g. AVHRR) the both Instrument and sensor should be recorded.

Table 3-89. DsMdInstrument

Column Name	Code	Type	PK	Mandatory
dbID	DBID	ID	Yes	Yes
InstrumentLongName	INSTRUMENTLONGNAME	varchar(80)	No	No
InstrumentShortName	INSTRUMENTSHORTNAME	varchar(20)	No	Yes
InstrumentTechnique	INSTRUMENTTECHNIQUE	varchar(80)	No	No
NumberOfSensors	NUMBEROFSENSORS	int	No	No
insertTime	INSERTTIME	datetime	No	Yes
lastUpdate	LASTUPDATE	DsTMdModDate	No	Yes
platformId	PLATFORMID	ID	No	Yes

Table 3-90 is used to define the characteristics of instrument specific attributes. It should not be used to define attributes of new objects.

Table 3-90. DsMdInstrumentCharacteristic

Column Name	Code	Type	PK	Mandatory
InstrumentCharacteristicDesc	INSTRUMENTCHARACTERISTI CDESC	varchar(80)	No	No
InstrumentCharacteristicName	INSTRUMENTCHARACTERISTI CNAME	varchar(40)	Yes	Yes
InstrumentCharacteristicUnit	INSTRUMENTCHARACTERISTI CUNIT	varchar(20)	No	No
InstrumentCharacteristicValue	INSTRUMENTCHARACTERISTI CVALUE	varchar(15)	Yes	Yes
InstrumentCharDataType	INSTRUMENTCHARDATATYPE	char(8)	No	No
instrumentId	INSTRUMENTID	ID	Yes	Yes

Table 3-91 is used for functionality to be delivered in the future. This table holds the joinable pairs or tables and columns for SDSRV metadata tables.

Table 3-91. DsMdJoins

Column Name	Code	Type	PK	Mandatory
column1	COLUMN1	varchar(60)	Yes	Yes
column2	COLUMN2	varchar(60)	Yes	Yes
table1	TABLE1	varchar(60)	Yes	Yes
table2	TABLE2	varchar(60)	Yes	Yes

Table 3-92 is used by the Science Data Server to define relationships between tables that are needed when constructing SQL calls or joins to retrieve data.

Table 3-92. DsMdKeyDependency

Column Name	Code	Type	PK	Mandatory
DependentTableKeyName	DEPENDENTTABLEKEYNAME	varchar(40)	No	No
DependentTableName	DEPENDENTTABLENAME	varchar(40)	No	Yes
SequenceNo	SEQUENCENO	int	Yes	Yes
TableKeyName	TABLEKEYNAME	varchar(40)	No	Yes
TableName	TABLENAME	varchar(40)	Yes	Yes
XrefFlag	XREFFLAG	char	No	Yes

Table 3-93 is used at the collection level to describe the labeling of granules with compounded time/space text values and which are subsequently used to define more phenomenologically-based collections, thus the locality type and description are contained in this table.

Table 3-93. DsMdLocality

Column Name	Code	Type	PK	Mandatory
collectionId	COLLECTIONID	ID	Yes	Yes
LocalityDescription	LOCALITYDESCRIPTION	varchar(255)	No	No
LocalityType	LOCALITYTYPE	varchar(20)	Yes	Yes

Table 3-94 contains the name of the geophysical parameter expressed in the data.

Table 3-94. DsMdMeasuredParameter (1 of 2)

Column Name	Code	Type	PK	Mandatory
AutomaticQualityFlag	AUTOMATICQUALITYFLAG	varchar(64)	No	No
AutomaticQualityFlagExplan	AUTOMATICQUALITYFLAGEXPLAN	varchar(255)	No	No
granuleId	GRANULEID	ID	Yes	Yes
OperationalQualityFlag	OPERATIONALQUALITYFLAG	varchar(20)	No	No
OperationalQualityFlagExplan	OPERATIONALQUALITYFLAGEXPLAN	varchar(255)	No	No
ParameterName	PARAMETERNAME	varchar(40)	Yes	Yes
QAPercentCloudCover	QAPERCENTCLOUDCOVER	int	No	No
QAPercentInterpolatedData	QAPERCENTINTERPOLATEDDATA	int	No	No

Table 3-94. DsMdMeasuredParameter (2 of 2)

Column Name	Code	Type	PK	Mandatory
QAPercentMissingData	QAPERCENTMISSINGDATA	int	No	No
QAPercentOutOfBoundsData	QAPERCENTOUTOFBOUNDS DATA	int	No	No
ScienceQualityFlag	SCIENCEQUALITYFLAG	varchar(25)	No	No
ScienceQualityFlagExplan	SCIENCEQUALITYFLAGEXPL AN	varchar(255)	No	No

Table 3-95 contains the name of the multiple date period. Multiple version of SingleDateTime are generally used at the collection level.

Table 3-95. DsMdMultipleDateTimePeriod

Column Name	Code	Type	PK	Mandatory
collectionId	COLLECTIONID	ID	Yes	Yes
MultipleDateName	MULTIPLDATENAME	varchar(30)	Yes	Yes

Table 3-96 contains the value, relationship and type for the multiple type collection. This table is used only when the collection has been developed by aggregating single type or other multiple type collections and/or granules using criteria which is recorded using the aggregation attributes.

Table 3-96. DsMdMultipleTypeCollection

Column Name	Code	Type	PK	Mandatory
AggregationRelationship	AGGREGATIONRELATIO NSHIP	varchar(2)	Yes	Yes
AggregationType	AGGREGATIONTYPE	varchar(20)	Yes	Yes
AggregationValue	AGGREGATIONVALUE	varchar(80)	Yes	Yes
collectionId	COLLECTIONID	ID	Yes	Yes

Table 3-97 identifies the instrument's operational modes associated with the channel, wavelength, and FOV (e.g., launch, survival, initialization, safe, diagnostic, standby, crosstrack, biaxial, solar calibration).

Table 3-97. DsMdOperationMode

Column Name	Code	Type	PK	Mandatory
instrumentId	INSTRUMENTID	ID	Yes	Yes
OperationMode	OPERATIONMODE	varchar(20)	Yes	Yes

Table 3-98 holds database specific operators and associated string templates used to formulate advanced SQL queries as part of the Science Data Server processing.

Table 3-98. DsMdOperatorConversion

Column Name	Code	Type	PK	Mandatory
DBString	DBSTRING	varchar(40)	No	Yes
Operator	OPERATOR	varchar(40)	Yes	Yes

Table 3-99 is used to describe the characteristics of the orbit calculated spatial domain to include the model name, orbit number, start and stop orbit number, equator crossing date and time, and equator crossing longitude.

Table 3-99. DsMdOrbitCalcSpatialDomain

Column Name	Code	Type	PK	Mandatory
EquatorCrossingDate	EQUATORCROSSINGDATE	datetime	No	No
EquatorCrossingLongitude	EQUATORCROSSINGLONGITUDE	float	Yes	Yes
EquatorCrossingTime	EQUATORCROSSINGTIME	DsTMdTime	No	No
granuleId	GRANULEID	ID	Yes	Yes
OrbitModelName	ORBITMODELNAME	varchar(80)	No	No
OrbitNumber	ORBITNUMBER	int	No	No
StartOrbitNumber	STARTORBITNUMBER	int	No	No
StopOrbitNumber	STOPORBITNUMBER	int	No	No

Table 3-100 is used to store the MISR orbit granule data for a platform and instrument combination for the orbit calculated spatial domain.

Table 3-100. DsMdOrbitCalculatedSpatial

Column Name	Code	Type	PK	Mandatory
EndBlock	ENDBLOCK	smallint	No	Yes
granuleId	GRANULEID	ID	Yes	Yes
PathNo	PATHNO	smallint	Yes	Yes
platInstCode	PLATINSTCODE	tinyint	Yes	Yes
StartBlock	STARTBLOCK	smallint	Yes	Yes

Table 3-101 contains a series of orbit polygons for a platform and instrument combination.

Table 3-101. DsMdOrbitPolygons

Column Name	Code	Type	PK	Mandatory
Orbit	ORBIT	polygon	No	Yes
PathNo	PATHNO	smallint	Yes	Yes
platInstCode	PLATINSTCODE	tinyint	Yes	Yes
SequenceNo	SEQUENCENO	smallint	Yes	Yes

Table 3-102 maps additional attributes (PSAs) the storage data types available within the database to the names of the tables for collection and granule levels where values will be stored. The values are stored based on data type (e.g. string values are stored in a separate table from float or integer values).

Table 3-102. DsMdParmToTableVector

Column Name	Code	Type	PK	Mandatory
clTableName	CLTABLENAME	varchar(32)	No	No
Data Type	DATATYPE	char(10)	Yes	Yes
grTableName	GRTABLENAME	varchar(32)	No	No

Table 3-103 contains the cross-reference between person and organization.

Table 3-103. DsMdPersonOrganizationXref

Column Name	Code	Type	PK	Mandatory
organizationId	ORGANIZATIONID	ID	Yes	Yes
personId	PERSONID	ID	Yes	Yes

Table 3-104 contains the delivered algorithm package PGE group information.

Table 3-104. DsMdPGEGroup

Column Name	Code	Type	PK	Mandatory
dapDBId	DAPDBID	ID	Yes	Yes
DAPPGEName	DAPPGENAME	varchar(20)	Yes	Yes
DAPPGVersion	DAPPGEVERSION	char(10)	Yes	Yes
DAPSWVersion	DAPSWVERSION	varchar(12)	Yes	Yes

Table 3-105 contains information about the coordinate system developed on the planar surface to include the distance units and encoding method.

Table 3-105. DsMdPlanarCoordinateSystems

Column Name	Code	Type	PK	Mandatory
AbscissaResolution	ABSCISSARESOLUTION	float	No	No
BearingReferenceDirection	BEARINGREFERENCEDIRECTION	varchar(20)	No	No
BearingReferenceMeridian	BEARINGREFERENCEMERIDIAN	varchar(255)	No	No
BearingResolution	BEARINGRESOLUTION	float	No	No
BearingUnits	BEARINGUNITS	varchar(255)	No	No
collectionId	COLLECTIONID	ID	Yes	Yes
DistanceResolution	DISTANCERESOLUTION	float	No	No
GridCoordinateSystemName	GRIDCOORDINATESYSTEMNAME	varchar(255)	No	No
LocalPlanarCoordinateSystemDes	LOCALPLANARCOORDINATESYSTEMDES	varchar(255)	No	No
LocalPlanarGeoreferenceInforma	LOCALPLANARGEOREFERENCIEINFORMA	varchar(255)	No	No
MapProjectionName	MAPPROJECTIONNAME	varchar(80)	No	No
MapProjectionPointer	MAPPROJECTIONPOINTER	varchar(255)	No	No
OrdinateResolution	ORDINATERESOLUTION	float	No	No
PlanarCoordinateEncodingMeth	PLANARCOORDINATEENCODINGMETH	varchar(80)	No	No
planarCoordinateSystemsID	PLANARCOORDINATESYSTEMSID	int	Yes	Yes
PlanarDistanceUnits	PLANARDISTANCEUNITS	varchar(80)	No	No

Table 3-106 describes the relevant platforms associated with the acquisition of the collection or granule. Platform types include Spacecraft, Aircraft, Vessel, Buoy, Platform, Station, Network or Human. In cases where Human is the platform type it should be of scientific relevancy to the collection. If an instrument is hand held and is relevant to the collection of the data then PlatformType=Human. In cases where an instrument is hand-held but the human is associated with another platform then all relevant platforms should be associated with the collection. Humans can be both Platforms and Instruments (e.g. if a human is standing on the ground and makes a visual observation then: PlatformType=Human, Instrument=HumanObservation, SensorShortName=HumanVisual).

Table 3-106. DsMdPlatform

Column Name	Code	Type	PK	Mandatory
dbID	DBID	ID	Yes	Yes
insertTime	INSERTTIME	datetime	No	Yes
lastUpdate	LASTUPDATE	DsTMdModDate	No	Yes
PlatformLongName	PLATFORMLONGNAME	varchar(80)	No	Yes
PlatformShortName	PLATFORMSHORTNAME	varchar(20)	No	Yes
PlatformType	PLATFORMTYPE	varchar(20)	No	Yes

Table 3-107 is used to define the characteristics of platform specific attributes. It should not be used to define attributes of new objects.

Table 3-107. DsMdPlatformCharacteristic

Column Name	Code	Type	PK	Mandatory
PlatformCharacteristicDataType	PLATFORMCHARACTERISTICDATATYPE	char(8)	No	Yes
PlatformCharacteristicDesc	PLATFORMCHARACTERISTICDESC	varchar(80)	No	Yes
PlatformCharacteristicName	PLATFORMCHARACTERISTICNAME	varchar(40)	Yes	Yes
PlatformCharacteristicUnit	PLATFORMCHARACTERISTICUNIT	varchar(20)	No	Yes
PlatformCharacteristicValue	PLATFORMCHARACTERISTICVALUE	varchar(20)	Yes	Yes
platformId	PLATFORMID	ID	Yes	Yes

Table 3-108 contains resolution information for platform and instrument combination.

Table 3-108. DsMdPlatInstrCode

Column Name	Code	Type	PK	Mandatory
instrumentName	INSTRUMENTNAME	varchar(80)	No	Yes
platformInstrumentCode	PLATFORMINSTRUMENTCODE	tinyint	Yes	Yes
platformShortName	PLATFORMSHORTNAME	varchar(20)	No	Yes

Table 3-109 contains the file storage details on each granule processed that is related to the granule database.

Table 3-109. DsMdProcessHistFileStorage

Column Name	Code	Type	PK	Mandatory
checkSum	CHECKSUM	int	No	No
creationDate	CREATIONDATE	DsTMdModDate	No	No
filePath	FILEPATH	varchar(80)	No	No
fileSize	FILESIZE	int	No	No
granuleId	GRANULEID	ID	Yes	Yes
internalFileName	INTERNALFILENAME	varchar(80)	Yes	Yes
userDataFile	USERDATAFILE	varchar(255)	No	No

Table 3-110 contains a logical pointer to the processing history which provides information about the processing of each granule associated with the granule database. This includes the input products and granules used to generate the product.

Table 3-110. DsMdProcessingHistory

Column Name	Code	Type	PK	Mandatory
dbID	DBID	ID	Yes	Yes
deleteEffectiveDate	DELETEEFFECTIVEDATE	smalldatetime	No	No
insertTime	INSERTTIME	datetime	No	Yes
lastUpdate	LASTUPDATE	DsTMdModDate	No	No
ProductionHistoryPointer	PROCESSINGHISTORYPOINTER	varchar(255)	No	No
subType	SUBTYPE	varchar(30)	No	No

Table 3-111 contains the name of the attribute in error in addition to a brief description of the error that occurred during processing.

Table 3-111. DsMdProcessingQA

Column Name	Code	Type	PK	Mandatory
granuleId	GRANULEID	ID	Yes	Yes
ProcessingQAAttribute	PROCESSINGQAATTRIBUTE	varchar(80)	Yes	Yes
ProcessingQADescription	PROCESSINGQADESCRIPTION	varchar(255)	No	No

Table 3-112 allows the Science Data Server to process product metadata across multiple databases. This methodology is not currently implemented within ECS SDSRV.

Table 3-112. DsMdProductDbXref

Column Name	Code	Type	PK	Mandatory
dbName	DBNAME	varchar(60)	Yes	Yes
endDate	ENDDATE	datetime	No	No
productName	PRODUCTNAME	varchar(60)	Yes	Yes
startDate	STARTDATE	datetime	No	No

Table 3-113 specifies the logical pointer to the QA granule. This table contains material for a separate file or files containing user specified QA information about the granule.

Table 3-113. DsMdQaGranule

Column Name	Code	Type	PK	Mandatory
dbID	DBID	ID	Yes	Yes
deleteEffectiveDate	DELETEEFFECTIVE DATE	smalldatetime	No	No
insertTime	INSERTTIME	datetime	No	Yes
lastUpdate	LASTUPDATE	DsTMdModDate	No	No
QAGranulePointer	QAGRANULEPOINTE R	varchar(255)	No	No
subType	SUBTYPE	varchar(30)	No	No

Table 3-114 contains the file storage details about user specified QA information about granules.

Table 3-114. DsMdQaGranuleFileStorage

Column Name	Code	Type	PK	Mandatory
checkSum	CHECKSUM	int	No	No
creationDate	CREATIONDATE	DsTMdModDate	No	No
filePath	FILEPATH	varchar(80)	No	No
fileSize	FILESIZE	int	No	No
granuleId	GRANULEID	ID	Yes	Yes
internalFileName	INTERNALFILENAME	varchar(80)	Yes	Yes
userDataFile	USERDATAFILE	varchar(255)	No	No

Table 3-115 contains cross reference information about QA and granules.

Table 3-115. DsMdQaGranuleXref

Column Name	Code	Type	PK	Mandatory
granuleId	GRANULEID	ID	Yes	Yes
qald	QAID	ID	Yes	Yes

Table 3-116 contains a logical pointer to documents which record details of quality measurement and other comments concerning the collection.

Table 3-116. DsMdQualityTextComment

Column Name	Code	Type	PK	Mandatory
collectionId	COLLECTIONID	ID	Yes	Yes
QualityTextCommentPointer	QUALITYTEXTCOMMENTPOINTER	varchar(255)	No	Yes

Table 3-117 specifies the start and end date/time of a granule or collection.

Table 3-117. DsMdRangeDateTime

Column Name	Code	Type	PK	Mandatory
collectionId	COLLECTIONID	ID	Yes	Yes
RangeBeginningDate	RANGEBEGINNINGDATE	datetime	Yes	Yes
RangeBeginningTime	RANGEBEGINNINGTIME	DsTMdTime	No	Yes
RangeEndingDate	RANGEENDINGDATE	datetime	No	Yes
RangeEndingTime	RANGEENDINGTIME	DsTMdTime	No	Yes

Table 3-118 contains the name of the temporal period in addition to the date, time, duration unit, and value, and cycle duration unit and value. It is used at the collection level to describe a collection having granules that cover a regularly occurring period.

Table 3-118. DsMdRegularPeriodic (1 of 2)

Column Name	Code	Type	PK	Mandatory
collectionId	COLLECTIONID	ID	Yes	Yes
Period1stDate	PERIOD1STDATE	datetime	No	Yes
Period1stTime	PERIOD1STTIME	DsTMdTime	No	Yes
PeriodCycleDurationUnit	PERIODCYCLEDURATIONUNIT	varchar(15)	No	Yes

Table 3-118. DsMdRegularPeriodic (2 of 2)

Column Name	Code	Type	PK	Mandatory
PeriodCycleDurationValue	PERIODCYCLEDURATIONVALUE	float	No	Yes
PeriodDurationUnit	PERIODDURATIONUNIT	varchar(15)	No	Yes
PeriodDurationValue	PERIODDURATIONVALUE	float	No	Yes
PeriodName	PERIODNAME	varchar(30)	Yes	Yes

Table 3-119 is a generic lookup table for SDSRV internal processing. It is used to reduce the number hardcoded values within the SDSRV database code to encourage a table driven design.

Table 3-119. DsMdSDSRVLookup

Column Name	Code	Type	PK	Mandatory
lookupDatetime	LOOKUPDATETIME	datetime	No	No
lookupFloat	LOOKUPFLOAT	float	No	No
lookupInt	LOOKUPINT	int	No	No
lookupString	LOOKUPSTRING	varchar(255)	No	No
lookupType	LOOKUPTYPE	varchar(40)	Yes	Yes
lookupValue	LOOKUPVALUE	varchar(40)	Yes	Yes

Table 3-120 is used to describe sensory subcomponents of an instrument. In cases where instruments have a single sensor or the Instrument and Sensor are used synonymously (e.g. AVHRR) both the Instrument and Sensor should be recorded.

Table 3-120. DsMdSensor

Column Name	Code	Type	PK	Mandatory
dbID	DBID	ID	Yes	Yes
insertTime	INSERTTIME	datetime	No	Yes
instrumentId	INSTRUMENTID	ID	No	Yes
lastUpdate	LASTUPDATE	DsTMdModDate	No	Yes
SensorLongName	SENSORLONGNAME	varchar(80)	No	No
SensorShortName	SENSORSHORTNAME	varchar(20)	No	Yes
SensorTechnique	SensorTechnique	varchar(80)	No	No

Table 3-121 is used to define the characteristics of sensor specific attributes. It should not be used to define attributes of new objects.

Table 3-121. DsMdSensorCharacteristic

Column Name	Code	Type	PK	Mandatory
SensorCharacteristicDataType	SENSORCHARACTERISTICDATATYPE	char(8)	No	Yes
SensorCharacteristicDesc	SENSORCHARACTERISTICDESC	varchar(80)	No	Yes
SensorCharacteristicName	SENSORCHARACTERISTICNAME	varchar(40)	Yes	Yes
SensorCharacteristicUnit	SENSORCHARACTERISTICUNIT	varchar(20)	No	No
SensorCharacteristicValue	SENSORCHARACTERISTICVALUE	varchar(80)	Yes	Yes
sensorId	SENSORID	ID	Yes	Yes

Table 3-122 contains the time of day and calendar date for an ECS granule. It provides a means of encoding a single date and time for a granule occurring at that time or during the period covered by the time (e.g. one day for a single date excluding the time within the day).

Table 3-122. DsMdSingleDateTime

Column Name	Code	Type	PK	Mandatory
CalendarDate	CALENDARDATE	datetime	Yes	Yes
collectionId	COLLECTIONID	ID	Yes	Yes
MultipleDateName	MULTIPLEDATENAME	varchar(30)	No	No
TimeOfDay	TIMEOFDAY	DsTMdTime	Yes	Yes

Table 3-123 is used as indicating the general type of coverage for collections.

Table 3-123. DsMdSpatial (1 of 2)

Column Name	Code	Type	PK	Mandatory
AltitudeDatumName	ALTITUDEDATUMNAME	varchar(40)	No	No
AltitudeDistanceUnits	ALTITUDEDISTANCEUNITS	varchar(20)	No	No
AltitudeEncodingMethod	ALTITUDEENCODINGMETHOD	varchar(255)	No	No
collectionId	COLLECTIONID	ID	Yes	Yes
DenominatorOfFlatteningRatio	DENOMINATOROFFLATTENINGRATIO	float	No	No
DepthDatumName	DEPTHDATUMNAME	varchar(80)	No	No
DepthDistanceUnits	DEPTHDISTANCEUNITS	varchar(20)	No	No

Table 3-123. DsMdSpatial (2 of 2)

Column Name	Code	Type	PK	Mandatory
DepthEncodingMethod	DEPTHENCODINGMETHOD	varchar(255)	No	No
EllipsoidName	ELLIPSOIDNAME	varchar(255)	No	No
GeographicCoordinateUnits	GEOGRAPHICCOORDINATE UNITS	varchar(80)	No	No
HorizontalDatumName	HORIZONTALDATUMNAME	varchar(30)	No	No
LatitudeResolution	LATITUDERESOLUTION	float	No	No
LocalCoordinateSystemDesc	LOCALCOORDINATESYSTE MDESC	varchar(255)	No	No
LocalGeoreferenceInformation	LOCALGEOREFERENCEINF ORMATION	varchar(255)	No	No
LongitudeResolution	LONGITUDERESOLUTION	float	No	No
SpatialCoverageType	SPATIALCOVERAGETYPE	char(10)	No	No
SemiMajorAxis	SEMIMAJORAXIS	float	No	No

Table 3-124 contains the spatial keywords associated with the ECS collection.

Table 3-124. DsMdSpatialKeyword

Column Name	Code	Type	PK	Mandatory
collectionId	COLLECTIONID	ID	Yes	Yes
SpatialKeyword	SPATIALKEYWORD	varchar(40)	Yes	Yes

Table 3-125 defines a component of an SSAP (Science Software Algorithm Package). Components include Algorithm Theoretical Basis Documents (ATBD), Calibration Files, Change logs, Context Diagrams, Compile information, Delivery Contents Lists, Detailed Design Document, External Data Pointer, Journal Articles, Operational Manuals, Science Software Scripts, Science Software Source code, Software Development Standards, Test Plans, Test Scripts, Test Site Configuration Plan, Test Source Code, and Metadata Configuration Files.

Table 3-125. DsMdSSAPComponent (1 of 2)

Column Name	Code	Type	PK	Mandatory
ComponentName	COMPONENTNAME	varchar(80)	No	Yes
ComponentType	COMPONENTTYPE	varchar(40)	No	Yes
dbID	DBID	ID	Yes	Yes
insertTime	INSERTTIME	datetime	No	Yes
deleteEffectiveDate	DELETEEFFECTIVEDATE	smalldatetime	No	No
lastUpdate	LASTUPDATE	DsTMdModDate	No	No

Table 3-125. DsMdSSAPComponent (2 of 2)

Column Name	Code	Type	PK	Mandatory
SSAPAlgorithmPackageName	SSAPALGORITHMPACKAGE NAME	varchar(80)	No	Yes
SSAPInsertDate	SSAPINSERTDATE	datetime	No	Yes

Table 3-126 defines the versions (of the Algorithm Package) associated with a software component.

Table 3-126. DsMdSSAPComponentAPVersion

Column Name	Code	Type	PK	Mandatory
SSAPAlgPackageVersion	SSAPALGPACKAGEVERSION	varchar(20)	Yes	Yes
ssapId	SSAPID	ID	Yes	Yes

Table 3-127 contains the file storage details on the components of an SSAP (Science Software Algorithm Package)

Table 3-127. DsMdSSAPComponentFileStorage

Column Name	Code	Type	PK	Mandatory
checksum	CHECKSUM	int	No	No
creationDate	CREATIONDATE	DsTMdModDate	No	No
filePath	FILEPATH	varchar(80)	No	No
fileSize	FILESIZE	int	No	No
granuleId	GRANULEID	ID	Yes	Yes
internalFileName	INTERNALFILENAME	varchar(80)	Yes	Yes
userDataFile	USERDATAFILE	varchar(255)	No	No

Table 3-128 is used to store the information of the deleted/DFAed granules that need to be migrated to the storage management table.

Table 3-128. DsMdStagingTable (1 of 2)

Column Name	Code	Type	PK	Mandatory
insertTime	INSERTTIME	datetime	No	No
internalFileName	INTERNALFILENAME	varchar(80)	Yes	Yes
ShortName	SHORTNAME	char(8)	No	Yes

Table 3-128. DsMdStagingTable (2 of 2)

Column Name	Code	Type	PK	Mandatory
VersionID	VERSIONID	tinyint	No	Yes
DFAFlag	DFAFLAG	tinyint	No	No
dbID	DBID	ID	Yes	Yes
BeginningDateTime	BEGINNINGDATETIME	datetime	No	No

Table 3-129 contains the telephone details associated with the contact.

Table 3-129. DsMdTelephoneNumbers

Column Name	Code	Type	PK	Mandatory
contactId	CONTACTID	ID	Yes	Yes
TelephoneNumber	TELEPHONENUMBER	varchar(23)	Yes	Yes
TelephoneNumberType	TELEPHONENUMBERTYPE	char(10)	Yes	Yes

Table 3-130 contains attributes that describe the basis of the time system used for the collection.

Table 3-130. DsMdTemporal

Column Name	Code	Type	PK	Mandatory
collectionId	COLLECTIONID	ID	Yes	Yes
DateType	DATETYPE	char(10)	No	Yes
EndsatPresentFlag	ENDSATPRESENTFLAG	char(1)	No	No
PrecisionOfSeconds	PRECISIONOFSECONDS	int	No	Yes
TemporalRangeType	TEMPORALRANGETYPE	varchar(30)	No	Yes
TimeType	TIMETYPE	char(10)	No	Yes

Table 3-131 identifies the type of temporal characterization for a granule or collection.

Table 3-131. DsMdTemporalKeyword

Column Name	Code	Type	PK	Mandatory
collectionId	COLLECTIONID	ID	Yes	Yes
TemporalKeyword	TEMPORALKEYWORD	varchar(40)	Yes	Yes

Table 3-132 contains the large polygon data to support MISR and other generic repeating data item.

Table 3-132. DsMdUninterpretedData

Column Name	Code	Type	PK	Mandatory
component	COMPONENT	varchar(255)	No	Yes
granuleId	GRANULEID	ID	Yes	Yes
seqNumber	SEQNUMBER	smallint	Yes	Yes

Table 3-133 defines how ECS Metadata should be unloaded from the database.

Table 3-133. DsMdUnloadList

Column Name	Code	Type	PK	Mandatory
BaseType	BASETYPE	varchar(40)	Yes	Yes
CommandType	COMMANDTYPE	char	No	Yes
ContainerGroupName	CONTAINERGROUPNAME	varchar(60)	No	No
DataType	DATATYPE	char	No	Yes
GroupName	GROUPNAME	varchar(60)	Yes	Yes
ListName	LISTNAME	varchar(40)	Yes	Yes
SequenceNo	SEQUENCENO	int	Yes	Yes
SubType	SUBTYPE	varchar(30)	Yes	Yes

Table 3-134 defines how ECS Metadata is updated in the database.

Table 3-134. DsMdUpdateSequence

Column Name	Code	Type	PK	Mandatory
BaseType	BASETYPE	varchar(60)	Yes	Yes
CommandType	COMMANDTYPE	char	No	Yes
DataType	DATATYPE	char	No	Yes
DBCommand	DBCOMMAND	varchar(120)	No	Yes
GroupName	GROUPNAME	varchar(60)	Yes	Yes
ListName	LISTNAME	varchar(60)	No	Yes
SequenceNo	SEQUENCENO	int	Yes	Yes

Table 3-135 contains a logical pointer to documents used to record user comments on the collection.

Table 3-135. DsMdUserCommentDocument

Column Name	Code	Type	PK	Mandatory
collectionId	COLLECTIONID	ID	Yes	Yes
UserCommentDocumentPointer	USERCOMMENTDOCUMENTPOINTER	varchar(255)	No	Yes

Table 3-136 contains a logical pointer to a document used to record details of validation steps used for the assessment of granules and collections.

Table 3-136. DsMdValidationDocument

Column Name	Code	Type	PK	Mandatory
collectionId	COLLECTIONID	ID	Yes	Yes
ValidationDocumentPointer	VALIDATIONDOCUMENTPOINTER	varchar(255)	No	Yes

Table 3-137 tracks the XAR id and types.

Table 3-137. DsMdXAR

Column Name	Code	Type	PK	Mandatory
granuleId	GRANULEID	ID	Yes	Yes
XARid	XARID	int	Yes	Yes
XARtype	XARTYPE	varchar(8)	No	Yes

Table 3-138 allows the Science Data Server to recover all the acquires request when the server starts warm.

Table 3-138. DsSiAcquireCmd (1 of 2)

Column Name	Code	Type	PK	Mandatory
category	CATEGORY	tinyint	No	Yes
commandID	COMMANDID	int	Yes	Yes
ddistMediaFmt	DDISTMEDIAFMT	varchar(40)	No	No
ddistMediaType	DDISTMEDIATYPE	varchar(40)	No	No
ddistNotifyType	DDISTNOTIFYTYPE	varchar(40)	No	No
ecsUserProfile	ECSUSERPROFILE	varchar(80)	No	No

Table 3-138. DsSiAcquireCmd (2 of 2)

Column Name	Code	Type	PK	Mandatory
ftpHost	FTPHOST	varchar(60)	No	No
ftpPassword	FTPPASSWORD	varchar(60)	No	No
ftpPushDest	FTPPUSHDEST	varchar(60)	No	No
ftpUser	FTPUSER	varchar(60)	No	No
lastUpdate	LASTUPDATE	datetime	No	Yes
notify	NOTIFY	varchar(60)	No	No
orderID	ORDERID	varchar(20)	No	No
orderTrackingReqID	ORDERTRACKINGREQID	varchar(20)	No	No
requestID	REQUESTID	int	No	Yes
site	SITE	varchar(60)	No	No
userString	USERSTRING	varchar(60)	No	No

Table 3-139 contains all the file names and the sequence of the file for an acquire command.

Table 3-139. DsSiAcquireCmdFileInfo

Column Name	Code	Type	PK	Mandatory
commandID	COMMANDID	int	Yes	Yes
seqNumber	SEQNUMBER	smallint	Yes	Yes
userFileName	USERFILENAME	varchar(80)	No	Yes

Table 3-140 contains all the LANDSAT band information for a LANDSAT acquire command.

Table 3-140. DsSiAcqBand

Column Name	Code	Type	PK	Mandatory
commandID	COMMANDID	int	Yes	Yes
Band	BAND	varchar(100)	Yes	Yes

Table 3-141 contains all the latitude and longitude information for a LANDSAT acquire command.

Table 3-141. DsSiAcqPolygon

Column Name	Code	Type	PK	Mandatory
commandID	COMMANDID	int	Yes	Yes
seqNumber	SEQNUMBER	smallint	Yes	Yes
Latitude	LATITUDE	double precision	No	Yes
Longitude	LONGITUDE	double precision	No	Yes

Table 3-142 allows the Science Data Server to make persistent requests so processing can continue once the system comes online after failure.

Table 3-142. DsSiReqDomain

Column Name	Code	Type	PK	Mandatory
domainEntryUR	DOMAINENTRY	varchar(200)	Yes	Yes
reqDomainID	REQDOMAINID	int	Yes	Yes

Table 3-143 tracks the request session and priority information and allows the Science Data Server to make persistent requests so processing can continue once the system comes online after failure.

Table 3-143. DsSiRequest

Column Name	Code	Type	PK	Mandatory
asyncFlag	ASYNCFLAG	tinyint	No	Yes
clientCDSEntry	CLIENTCDSEnTRY	char(255)	No	Yes
createTime	CREATETIME	datetime	No	Yes
priority	PRIORITY	smallint	No	Yes
sessionID	SESSIONID	char(40)	No	Yes
userID	USERID	char(40)	No	Yes
dbIDint	DBIDINT	int	Yes	Yes
rpcID	RPCID	char(200)	No	Yes
state	STATE	tinyint	No	Yes

Table 3-144 identifies the current version of the Science Data Server Database.

Table 3-144. EcDbDatabaseVersions

Column Name	Code	Type	PK	Mandatory
EcDbComments	ECDBCComments	varchar(255)	No	No
EcDbCurrentVersionFlag	ECDBCURRENTVERSIONFLAG	char(1)	No	No
EcDbDatabaseName	ECDBDATABASENAME	varchar(255)	No	No
EcDbDropDescription	ECDBDROPDESCRIPTION	varchar(255)	No	No
EcDbDropInstallDate	ECDBDROPINSTALLDATE	datetime	No	No
EcDbDropVersion	ECDBDROPVERSION	char(64)	Yes	Yes
EcDbSchemaVersionId	ECDBSCHEMAVERSIONID	smallint	Yes	Yes
EcDbSybaseServer	ECDBSYBASESERVER	varchar(255)	No	No
EcDbSybaseVersion	ECDBSYBASEVERSION	varchar(255)	No	No
EcDbUpdateProcess	ECDBUPDATEPROCESS	varchar(255)	No	No

Table 3-145 provides the maximum date range for each ESDT.

Table 3-145. DsMdTemporalSize

Column Name	Code	Type	PK	Mandatory
ShortName	SHORTNAME	char(8)	Yes	Yes
VersionID	VERSIONID	tinyint	Yes	Yes
TemporalSizeInSeconds	TEMPORALSIZEINSECONDS	int	No	Yes

Table 3-146 allows the Science Data Server to make persistent requests so processing can continue once the system comes online after failure.

Table 3-146. DsSiURs

Column Name	Code	Type	PK	Mandatory
requestID	REQUESTID	int	Yes	Yes
seq	SEQ	smallint	Yes	Yes
ur	UR	varchar(200)	No	Yes

Table 3-147 tracks the request session and priority information and allows the Science Data Server to make persistent requests so processing can continue once the system comes online after failure.

Table 3-147. DsSiRequestDetails

Column Name	Code	Type	PK	Mandatory
dbID	DBID	int	Yes	Yes
rpcID	RPCID	char(200)	No	Yes
createTime	CREATETIME	datetime	No	Yes
client	CLIENT	char(40)	No	Yes
state	STATE	tinyint	No	Yes
priority	PRIORITY	smallint	No	Yes

Table 3-148 allows the Science Data Server to recover all the acquires request when the server starts warm.

Table 3-148. DsSiParameters

Column Name	Code	Type	PK	Mandatory
requestID	REQUESTED	int	Yes	Yes
seq	SEQ	smallint	Yes	Yes
parameters	PARAMETERS	varchar(255)	No	Yes

Table 3-149 allows the system to determine which science site can update the QA flags of which ESDT.

Table 3-149. DsQAMUTESDTSite

Column Name	Code	Type	PK	Mandatory
ShortName	SHORTNAME	char(8)	Yes	Yes
Site	SITE	varchar(25)	Yes	Yes

Table 3-150 contains a list of the known providers of checksum information.

Table 3-150. DsMdChecksumOrigins

Column Name	Code	Type	PK	Mandatory
ChecksumOriginID	CHECKSUMORIGINID	tinyint	Yes	Yes
ChecksumOrigin	CHECKSUMORIGIN	varchar(64)	No	Yes

Table 3-151 contains a list of the checksum algorithms supported by ECS.

Table 3-151. DsMdChecksumTypes

Column Name	Code	Type	PK	Mandatory
ChecksumTypeID	CHECKSUMTYPEID	tinyint	Yes	Yes
ChecksumType	CHECKSUMTYPE	varchar(64)	No	Yes

Table 3-152 contains a list of the checksum migration supported by ECS.

Table 3-152. DsMdCksumMigration

Column Name	Code	Type	PK	Mandatory
maxdbID	MAXDBID	ID	Yes	Yes
currentdbID	CURRENTDBID	ID	No	Yes

Table 3-153 is prepopulated with fixed number of update events.

Table 3-153. DsMdGrEventDomain

Column Name	Code	Type	PK	Mandatory
eventId	EVENTID	smallint	Yes	Yes
eventName	EVENTNAME	varchar(50)	No	Yes

Table 3-154 keeps history on the time a particular update event happened on a particular granule.

Table 3-154. DsMdGrEventHistory

Column Name	Code	Type	PK	Mandatory
eventId	EVENTID	smallint	No	Yes
dbID	DBID	ID	No	Yes
eventTime	EVENTTIME	datetime	No	Yes

Table 3-155 keeps a record of the update history on a particular ParameterName, QaFlag for a specific granule.

Table 3-155. DsMdGrParamUpdHistory

Column Name	Code	Type	PK	Mandatory
dbID	DBID	ID	No	Yes
lastUpdate	LASTUPDATE	datetime	No	Yes
ParameterName	PARAMETERNAME	varchar(40)	No	Yes
QaFlagName	QAFLAGNAME	varchar(30)	No	No
QaFlagValue	QAFLAGVALUE	varchar(255)	No	No

Table 3-156 identifies the BMGT product specific attributes (i.e. attributes used to describe the unique characteristics of the collection which extend beyond those defined in this model).

Table 3-156. DsMdBmgtOwsAddlAttrs

Column Name	Code	Type	PK	Mandatory
AdditionalAttributeDataType	ADDITIONALATTRIBUTE DATATYPE	varchar(10)	No	No
AdditionalAttributeDescription	ADDITIONALATTRIBUTE DESCRIPTION	text	No	No
AdditionalAttributeName	ADDITIONALATTRIBUTE NAME	varchar(40)	No	No
CfgFileLastUpdate	CfgFileLastUpdate	datetime	Yes	Yes
ParameterValue	ParameterValue	text	No	No
ShortName	ShortName	char(8)	No	Yes
VersionID	VersionID	tinyint	No	Yes

Table 3-157 BMGT when it runs is inserting these two columns into the table read them and deletes everything at the end of each run.

Table 3-157. DsMdBmgtWrkTable

Column Name	Code	Type	PK	Mandatory
clientId	CLIENTID	ID	Yes	Yes
granuleId	GRANULEID	ID	Yes	Yes

Table 3-158 This table contains all the granules that qualify for undelete during the run of SDSRV Granule Deletion Utility.

Table 3-158. DsMdUnDeletedGranules

Column Name	Code	Type	PK	Mandatory
transactionTime	TRANSATIONTIME	datetime	No	No
GranuleID	GRANULEID	ID	Yes	Yes
Status	STATUS	tinyint	No	No
ShortName	SHORTNAME	char(8)	No	Yes
VersionID	VERSIONID	tinyint	No	Yes
insertTime	INSERTTIME	datetime	NO	No
DFAFlag	DFAFLAG	tinyint	No	No

Table 3-159 This table uses to store SP_STARTING_PATH, SP_STARTING_ROW, and SP_ENDING_ROW PSA.

Table 3-159. DsMdGrPathRow

Column Name	Code	Type	PK	Mandatory
granuleId	GRANULEID	ID	Yes	Yes
startingPath	STARTINGPATH	int	No	No
startingRow	STARTINGROW	int	No	No
endingRow	ENDINGROW	int	No	No

Table 3-160 This table uses to capture the configured ESDTs for BMGT.

Table 3-160. DsMdBmgtControlEsdt

Column Name	Code	Type	PK	Mandatory
ShortName	SHORTNAME	char(8)	Yes	Yes
VersionID	VERSIONID	tinyint	No	No
ProcessingLevelID	PROCESSINGLEVELID	tinyint	No	No

Table 3-161 This table uses to capture the configured Spatial representation for the collection level metadata to enable ECHO ingest.

Table 3-161. DsMdBmgtSpatialEsdt

Column Name	Code	Type	PK	Mandatory
ShortName	SHORTNAME	char(8)	Yes	Yes
SpatialRep	SPATIALREP	char(20)	No	Yes

Table 3-162 This table uses to store the EMS archive information.

Table 3-162. EMSArch

Column Name	Code	Type	PK	Mandatory
dbID	dbID	numeric(16,0)	No	No
ShortName	ShortName	varchar(8)	No	No
sizeDataGranule	sizeDataGranule	float	No	No
totalFiles	totalFiles	int	No	No
insertTime	insertTime	varchar(18)	No	No
BeginningDateTime	BeginningDateTime	varchar(18)	No	No
EndingDateTime	EndingDateTime	varchar(18)	No	No
ProductionDateTime	ProductionDateTime	varchar(18)	No	No
LocalGranuleID	LocalGranuleID	varchar(80)	No	No
VersionID	VersionID	tinyint	No	No
DeleteFromArchive	DeleteFromArchive	char(1)	No	No
deleteEffectiveDate	deleteEffectiveDate	varchar(18)	No	No
lastUpdate	lastUpdate	varchar(18)	No	No

Table 3-163 This table uses to store the EMS archive related data.

Table 3-163. EMSArchData

Column Name	Code	Type	PK	Mandatory
dbID	dbID	numeric(16,0)	No	No
ShortName	ShortName	varchar(8)	No	No
sizeDataGranule	sizeDataGranule	float	No	No
totalFiles	totalFiles	int	No	No
insertTime	insertTime	varchar(18)	No	No
BeginningDateTime	BeginningDateTime	varchar(18)	No	No
EndingDateTime	EndingDateTime	varchar(18)	No	No
ProductionDateTime	ProductionDateTime	varchar(18)	No	No
LocalGranuleID	LocalGranuleID	varchar(80)	No	No
VersionID	VersionID	tinyint	No	No
DeleteFromArchive	DeleteFromArchive	char(1)	No	No
deleteEffectiveDate	deleteEffectiveDate	varchar(18)	No	No
lastUpdate	lastUpdate	varchar(18)	No	No

Table 3-164 This table uses to store the EMS archive related data to update.

Table 3-164. EMSArchUpdData

Column Name	Code	Type	PK	Mandatory
dbID	dbID	numeric(16,0)	No	No
ShortName	ShortName	varchar(8)	No	No
sizeDataGranule	sizeDataGranule	float	No	No
totalFiles	totalFiles	int	No	No
insertTime	insertTime	varchar(18)	No	No
BeginningDateTime	BeginningDateTime	varchar(18)	No	No
EndingDateTime	EndingDateTime	varchar(18)	No	No
ProductionDateTime	ProductionDateTime	varchar(18)	No	No
LocalGranuleID	LocalGranuleID	varchar(80)	No	No
VersionID	VersionID	tinyint	No	No
DeleteFromArchive	DeleteFromArchive	char(1)	No	No
deleteEffectiveDate	deleteEffectiveDate	varchar(18)	No	No
lastUpdate	lastUpdate	varchar(18)	No	No

Table 3-165 This table uses to store the EMS related temporary data.

Table 3-165. EMSShortNameTemp

Column Name	Code	Type	PK	Mandatory
ShortName	SHORTNAME	char(8)	No	Yes
LongName	LongName	varchar(80)	No	No
Missions	Missions	varchar(255)	No	No
Instruments	Instruments	varchar(500)	No	No
TopicKeywords	TopicKeywords	varchar(1000)	No	No
Provider	Provider	varchar(50)	No	No

3.1.3 Columns

Brief definitions of each of the columns present in the database tables defined above are contained herein. Many of the columns in the SDSRV database have a set of approved data values that are checked againsts during data validation. This approved set of data values is found in 910-TDA-015.

Table 3-166. Column Descriptions (1 of 34)

Column Name	Table	Description
AbscissaResolution	DsMdPlanarCoordinateSystems	Refer to technical paper 420-EMD-001
AccessConstraints	DsMdCollections	Refer to technical paper 420-EMD-001
accessPermissions	DsMdCollections	The access permission of an ESDT data type.
AdditionalAttributeDataType	DsMdAdditionalAttributes	Refer to technical paper 420-EMD-001
AdditionalAttributeDescription	DsMdAdditionalAttributes	Refer to technical paper 420-EMD-001
AdditionalAttributeName	DsMdAdditionalAttributes	Refer to technical paper 420-EMD-001
AggregationRelationship	DsMdMultipleTypeCollection	Refer to technical paper 420-EMD-001
AggregationType	DsMdMultipleTypeCollection	Refer to technical paper 420-EMD-001
AggregationValue	DsMdMultipleTypeCollection	Refer to technical paper 420-EMD-001
AlgorithmPackageAcceptDate	DsMdAlgorithmPackage	Refer to technical paper 420-EMD-001
AlgorithmPackageMaturityCode	DsMdAlgorithmPackage	Refer to technical paper 420-EMD-001
AlgorithmPackageName	DsMdAlgorithmPackage	Refer to technical paper 420-EMD-001
AlgorithmPackageVersion	DsMdAlgorithmPackage	Refer to technical paper 420-EMD-001
AltitudeDatumName	DsMdSpatial	Refer to technical paper 420-EMD-001
AltitudeDistanceUnits	DsMdSpatial	Refer to technical paper 420-EMD-001
AltitudeEncodingMethod	DsMdSpatial	Refer to technical paper 420-EMD-001
AltitudeResolution	DsMdAltitudeResolution	Refer to technical paper 420-EMD-001
AnalysisLongName	DsMdAnalysisSource	Refer to technical paper 420-EMD-001
AnalysisShortName	DsMdAnalysisSource	Refer to technical paper 420-EMD-001

Table 3-166. Column Descriptions (2 of 34)

Column Name	Table	Description
analysisSourceId	DsMdCollectionAnalysisXref DsMdGranuleAnalysisXref	The unique ID which identifies the analysis source.
AnalysisTechnique	DsMdAnalysisSource	Refer to technical paper 420-EMD-001
AnalysisType	DsMdAnalysisSource	Refer to technical paper 420-EMD-001
AncillaryInputPointer	DsMdAncillaryInput	Refer to technical paper 420-EMD-001
AncillaryInputType	DsMdAncillaryInput	Refer to technical paper 420-EMD-001
apId	DsMdAPSAPComponentXref DsMdCollectionAPXref	The unique identifier of an algorithm package.
ArchiveCenter	DsMdCollections	Refer to technical paper 420-EMD-001
AssociatedShortName	DsMdCollectionAssociation	The Shortname of a collection that is in some way related to the collection in question.
AssociatedVersionId	DsMdCollectionAssociation	The version ID of the ESDT which is associated to another ESDT. This is used together with the AssociatedShortName.
asyncFlag	DsSiRequest	Determines if a processing request is asynchronous or synchronous.
attributeID	DsDeDictionaryAttribute DsDeDictionaryRule	The unique ID which identifies a dictionary attribute used to validate a metadata attribute during ESDT insertion.
attributeId	DsMsAdditionalAttributes DsMdCollectionAddnlAttribsXref DsMdCollFloatInfoContent DsMdCollIntegerInfoContent DsMdCollStringInfoContent DsMdGrIntegerInfoContent DsMdGrFloatInfoContent DsMdGrStringInfoContent	The unique ID which identifies an additional attribute (product specific attribute supplied by a data provider).
attributeName	DsMdAttributeList	This holds the name (255 character or less) of the attribute.
attributeName	DsMdAttributeTableXref	This holds the name (80 character or less) of the attribute.

Table 3-166. Column Descriptions (3 of 34)

Column Name	Table	Description
AutomaticQualityFlag	DsMdMeasuredParameter	Refer to technical paper 420-EMD-001
AutomaticQualityFlagExplan	DsMdMeasuredParameter	Refer to technical paper 420-EMD-001
Band	DsSiAcqBand	Holds the band information of a lansat floating science acquire command
BaseTable	DsMdCommandConversion	The table name associated with a metadata group, operator and SQL string used to process a SDSRV internal command. See table DsMdCommandConversion.
BaseTableName	DsMdBaseDependent	The name of a base (parent) table.
BaseType	DsMdBaseDependent DsMdInsertSequence DsMdUnloadList DsMdUpdateSequence	Type of ESDT which is being processed (i.e. Browse, Science, QA, PH, ORBIT).
BearingReferenceDirection	DsMdPlanarCoodinateSystems	Refer to technical paper 420-EMD-001
BearingReferenceMeridian	DsMdPlanarCoodinateSystems	Refer to technical paper 420-EMD-001
BearingResolution	DsMdPlanarCoodinateSystems	Refer to technical paper 420-EMD-001
BearingUnits	DsMdPlanarCoodinateSystems	Refer to technical paper 420-EMD-001
BeginningDateTime	DsMdGranules DsMdStagingTable DsMdDeletedGranules EMSArch EMSArchData EMSArchUpdData	The attribute within SDSRV that allows both the SingleDateTime (TimeofDay) and RangeDateTime(RangeBeginningDate) to be efficiently indexed and searched.
BoundingCircle	DsMdCICircle DsmdGrCircle	The geographic extent of circular region included in granule or collection.
BoundingRectangle	DsMdCIBoundingRectangle DsMdGrBoundingRectangle	The geographic extent of rectangular region included in granule or collection.
BrowseDescription	DsMdBrowse	Refer to technical paper 420-EMD-001
browseld	DsMdCollBrowseXref DsMdBrowseGranuleXref	The unique ID which identifies the browse.

Table 3-166. Column Descriptions (4 of 34)

Column Name	Table	Description
BrowsePointer	DsMdBrowse	Refer to technical paper 420-EMD-001
BrowseProductionDateTime	DsMdBrowse	Refer to technical paper 420-EMD-001
BrowseSize	DsMdBrowse	Refer to technical paper 420-EMD-001
CalendarDate	DsMdGranules DsMdSingleDateTime	Refer to technical paper 420-EMD-001
CampaignEndDate	DsMdCampaign	Refer to technical paper 420-EMD-001
campaignId	DsMdCollectionCampaignXref DsMdGranuleCampaignXref	The unique ID which identifies a campaign.
CampaignLongName	DsMdCampaign	Refer to technical paper 420-EMD-001
CampaignShortName	DsMdCampaign	Refer to technical paper 420-EMD-001
CampaignStartDate	DsMdCampaign	Refer to technical paper 420-EMD-001
category	DsSiAcquireCmd	The category for an acquire request.
CfgFileLastUpdate	DsMdBmgtOwsAddlAttrs	Timestamp of the cfg file updated last time
Checksum	DsMdFileStorage	Holds a string containing the checksum value of the associated science file.
checkSum	DsMdAlgorithmPkgFileStorage DsMdSSAPComponentFileStorage DsMdProcessHistFileStorage DsMdBrowseFileStorage DsMdQaGranuleFileStorage DsMdDAPFileStorage	This column is not used by the system. It will always have a value of 0.
ChecksumType	DsMdChecksumTypes	This string contains the name of a ECS supported checksum algorithm.
ChecksumTypeID	DsMdFileStorage DsMdChecksumTypes	Foreign key to DsMdChecksumTypes table. Associates a checksum algorithm with the file.
ChecksumOrigin	DsMdChecksumOrigins	This string contains the name of a valid ECS checksum provider.

Table 3-166. Column Descriptions (5 of 34)

Column Name	Table	Description
ChecksumOriginID	DsMdFileStorage DsMdChecksumOrigins	Foreign key to DsMdChecksumOrigins table. Identifies where the checksum value was obtained.
ChecksumVerified	DsMdFileStorage	This datetime column captures the time when a file checksum was verified by the DAAC Operations staff.
CitationForExternalPublication	DsMdCollections	Refer to technical paper 420-EMD-001
City	DsMdContactAddress	Refer to technical paper 420-EMD-001
clFloatValue	DsMdCollFloatInfoContent	Refer to technical paper 420-EMD-001
clientCDSEntry	DsSiRequest	The DCE CDS entry saved for persistence of processing requests.
client	DsSiRequestDetails	The DCE CDS entry saved for persistence of processing requests.
clientId	DsMdBmgtWrkTable	This ID column is unique for each run so that it will enable BMGT to pick up the granules (granuleId) for that particular run only. ClientId and granuleId are of datatype long.
clIntValue	DsMdCollIntegerInfoContent	The ESDT level column used to hold AdditionalAttribute values of type integer.
clStringValue	DSMdCollStringInfoContent	The ESDT level column used to hold AdditionalAttribute values of type varchar. This includes strings and dates in string format.
clTableName	DsMdParmToTableVector	The name of the ESDT level table holding the specific datatype specific Additional Attribute Value.
CollectionDescription	DsMdCollections	Refer to technical paper 420-EMD-001

Table 3-166. Column Descriptions (6 of 34)

Column Name	Table	Description
collectionId	DsMdAltitudeResolution DsMdCollectionAddnlAttribsXref DsMdCollBrowseXref DsMdCollDisciplineKeywordXref DsMdCollectionAnalysisXref DsMdCollectionAPXref DsMdCollectionAssociation DsMdCollectionCampaignXref DsMdCollectionContactXref DsMdCollectionGranuleXref DsMdCIBoundingRectangle DsMdCICircle DsMdCIGPolygon DsMdCIPoint DsMdCollectionInstrumentXref DsMdCollStringInfoContent DsMdCollectionSensorXref DsMdCollFloatInfoContent DsMdCollIntegerInfoContent DsMdCollectionPlatformXref DsMdCollReview DsMdCollStorageMedium DsMdCollURLInfo DsMdCollZoneIdentifier DsMdCSDTDescription DsMdDepthResolution DsMdLocality DsMdMultipleDateTimePeriod DsMdMultipleTypeCollection DsMdPlanarCoordinateSystems DsMdQualityTextComment DsMdRangeDateTime DsMdRegularPeriodic DsMdSingleDateTime DsMdSpatial DsMdSpatialKeyword DsMdTemporal DsMdTemporalKeyword DsMdUserCommentDocument DsMdValidationDocument DsMdCollVerticalSpatialDomain	The unique ID which identifies the collection.

Table 3-166. Column Descriptions (7 of 34)

Column Name	Table	Description
CollectionState	DsMdCollections	Refer to technical paper 420-EMD-001
CollectionType	DsMdCollectionAssociation	Refer to technical paper 420-EMD-001
CollectionUse1	DsMdCollectionAssociation	Refer to definition on Collection Use in technical paper 420-EMD-001
CollectionUse2	DsMdCollectionAssociation	Refer to definition of Collectionuse in technical paper 420-EMD-001
column1	DsMdJoins	The first column of a pair used within a SQL statement to join two SDSRV tables together.
column2	DsMdJoins	The second column of a pair used within a SQL statement to join two SDSRV tables together.
columnName	DsMsAttributeTableXref	The name of a database table column.
commandID	DsSiAcquireCmd DsSiAcquireCmdFileInfo DsSiAcqBand DsSiAcqPolygon	The unique identifier of an SDSRV acquire command request.
CommandType	DsMdInsertSequence DsMdUnloadList DsMdUpdateSequence	The type of command to be performed.
component	DsMdUninterpretedData	The string of a large polygon data.
ComponentName	DsMdSSAPComponent	Refer to technical paper 420-EMD-001
ComponentType	DsMdSSAPComponent	Refer to technical paper 420-EMD-001
ContactFirstName	DsMdContactPersons	Refer to technical paper 420-EMD-001
configuredName	DsGeESDTCconfiguredType	The name identifying a installable object within the SDSRV. This is usually the ShortName of ESDT.
contactId	DsMdApContactXref DsMdCollectionContactXref DsMdContactAddress DsMdContactOrganizations DsMdContactPersons DsMdEmailAddress DsMdTelephoneNumbers	The unique ID which identifies the contact information.

Table 3-166. Column Descriptions (8 of 34)

Column Name	Table	Description
ContactInstructions	DsMdContact	Refer to technical paper 420-EMD-001
ContactJobPosition	DsMdContactPersons	Refer to technical paper 420-EMD-001
ContactLastName	DsMdContactPersons	Refer to technical paper 420-EMD-001
ContactMiddleName	DsMdContactPersons	Refer to technical paper 420-EMD-001
ContactOrganizationName	DsMdContactOrganizations	Refer to technical paper 420-EMD-001
ContactRole	DsMdContact	Refer to technical paper 420-EMD-001
ContainerGroupName	DsMdUnloadList	The name of the metadata container group that holds specific attributes. Used for internal SDSRV processing.
containerIndicator	DsDeDictionaryContent	Indicates whether the qualified group name in the same table is a container group. A container group is a meta data attribute that contains other groups or attributes.
contentID	DsDeDictionaryContent DsDeDictionaryAttribute	The unique ID which identifies the dictionary content.
Country	DsMdContactAddress	Refer to technical paper 420-EMD-001
createTime	DsSiRequest DsSiRequestDetails	The date and time that the request was created.
creationDate	DsMdFileStorage DsMdAlgorithmPkgFileStorage DsMdBrowseFileStorage DsMdSSAPComponentFileStorage DsMdDAPFileStorage DsMdQaGranuleFileStorage DsMdProcessHistFileStorage	The date of the granule creation passed to SDSRV from the data provider.
CSDTComments	DsMdCSDTDescription	Refer to technical paper 420-EMD-001
currentdbID	DsMdCksumMigration	The unique granule identifier of the current DB.

Table 3-166. Column Descriptions (9 of 34)

Column Name	Table	Description
currentGranuleId	DsMdGranuleVersions	The unique granule identifier of the current granule that associates two granule version together. Contrast with previousGranuleId.
currentVersion	DsMdGranuleVersions	The name of the current granule version granule that associates two granule version together. Contrast with previousVersion.
dapDBId	DsMdPGEGroup	One of the columns in the unique identifier for the DsMdPGEGroup table.
DAPID	DsMdDAP	The unique identifier for the DsMdDAP table.
dapId	DsMdApContactXref	Is a foreign key to the unique identifier for the Delivered Algorithm Package table (DsMdDAP).
DAPInsertDate	DsMdDAP	The insert date given to SDSRV by the data provider for the Delivered Algorithm Package (DsMdDAP) table. The PGEName associated with the Delivered Algorithm Package.
DAPPGEName	DsMdPGEGroup	Refer to definition of PGEName in technical paper 420-EMD-001
DAPPGEVersion	DsMdPGEGroup	Refer to definition of PGEVersion in technical paper 420-EMD-001
DAPSWVersion	DsMdPGEGroup	Refer to definition of SWVersion in technical paper 420-EMD-001
DatasetDisclaimerPtr	DsMdCollURLInfo	The URL of the dataset disclaimer page.
Data Type	DsMdInsertSequence DsMdParmToTableVector DsMdUnloadList DsMdUpdateSequence	The type of data.
Date Type	DsMdTemporal	Refer to technical paper 420-EMD-001
DayNightFlag	DsMdGranules	Refer to technical paper 420-EMD-001

Table 3-166. Column Descriptions (10 of 34)

Column Name	Table	Description
DBCommand	DsMdCommandConversion DsMdUpdateSequence	The database command to be performed.
dbID	DsMdAlgorithmPackage DsMdAnalysisSource DsMdBrowse DsMdCampaign DsMdCollections DsMdContact DsMdDAP DsMdDisciplineKeywords DsMdGranules DsMdGrEventHistory DsMdGrParamUpdHistory DsMdInstrument DsMdPlatform DsMdProcessingHistory DsMdQaGranule DsMdSensor DsMdSSAPComponent DsMdStagingTable DsSiRequestDetails EMSArch EMSArchData EMSArchUpdData	The unique ID which identifies a database tuple.
dbIDint	DsSiRequest	The unique request ID
dbName	DsMdProductDbXref	Holds the database name.
DBString	DsMdAttributeConversion DsMdOperatorConversion	The database map to an attribute of ECS metadata.
ddistMediaFmt	DsSiAcquireCmd	The media format for an acquire request.
ddistMediaType	DsSiAcquireCmd	The media type for an acquire request.
ddistNotifyType	DsSiAcquireCmd	The notify type for an acquire request.

Table 3-166. Column Descriptions (11 of 34)

Column Name	Table	Description
deleteEffectiveDate	DsMdAlgorithmPackage DsMdDAP DsMdBrowse DsMdFileStorage DsMdGranules DsMdSSAPComponent DsMdProcessingHistory DsMdQaGranule EMSArch EMSArchData EMSArchUpdData	Date on which the entry may be deleted.
DeleteFromArchive	DsMdGranules EMSArch EMSArchData EMSArchUpdData	Granules deleted from the archives.
DeliveryPurpose	DsMdAlgorithmPackage	Refer to technical paper 420-EMD-001
DenominatorOfFlatteningRatio	DsMdSpatial	Refer to technical paper 420-EMD-001
DependentTableName	DsMdBaseDependent	The unique identifier of a dependent (child) table.
DependentTableKeyName	DsMdKeyDependency	The name of the primary key attribute of a dependent table.
DependentTableName	DsMdBaseDependent DsMdKeyDependency	The name of a dependent (child) table.
DepthDatumName	DsMdSpatial	Refer to technical paper 420-EMD-001
DepthDistanceUnits	DsMdSpatial	Refer to technical paper 420-EMD-001
DepthEncodingMethod	DsMdSpatial	Refer to technical paper 420-EMD-001
DepthResolution	DsMdDepthResolution	Refer to technical paper 420-EMD-001
description	DsGeESDTConfiguredType	The ESDT description
descriptorFileName	DsGeESDTConfiguredType	The ESDT description from the Descriptor file given by the data provider.
DFAFlag	DsMdDeletedGranules DsMdStagingTable DsMdUnDeletedGranule	Refer to technical paper 420-EMD-001

Table 3-166. Column Descriptions (12 of 34)

Column Name	Table	Description
disciplineKeyword	DsDeECSKeywordValid	The specific attribute valid value corresponding to the ECSDisciplineKeyword attribute for a given ECS keyword stack entry.
disciplineKeywordId	DsDeECSKeywordValid DsMdCollDisciplineKeywordXref	The unique identifier for a discipline keyword.
DistanceResolution	DsMdPlanarCoordinateSystems	Refer to technical paper 420-EMD-001
dllFileName	DsGeESDTConfiguredType	The file name of the ESDTs dynamic link library file.
domainEntryUR	DsSiReqDomain	The domain number for a specific persisted request.
DynamicSQLFlag	DsMdAttributeConversion	A flag indicating whether dynamic SQL is used.
EcDbComments	EcDbDatabaseVersions	Notes or comments on the database version level.
EcDbCurrentVersionFlag	EcDbDatabaseVersions	Flag indicating if this row represents the current database version entry.
EcDbDatabaseName	EcDbDatabaseVersions	The name of the database for which this database versions level is applied.
EcDbDropDescription	EcDbDatabaseVersions	The official name of the ECS software drops for this database version level.
EcDbDropInstallDate	EcDbDatabaseVersions	The date and time that the database versions level was installed.
EcDbDropVersion	EcDbDatabaseVersions	The official description of the ECS software drops for this database version level.
EcDbSchemaVersionId	EcDbDatabaseVersions	The subsystem-specific identifier for this database schema version.
EcDbSybaseServer	EcDbDatabaseVersions	The name of the baseline Sybase SQL server controlling this database.
EcDbSybaseVersion	EcDbDatabaseVersions	The software release version of the Sybase SQL server in place when this database version level was initially installed.
EcDbUpdateProcess	EcDbDatabaseVersions	The installation method by which this database version level was installed.

Table 3-166. Column Descriptions (13 of 34)

Column Name	Table	Description
ECSCollGuidePtr	DsMdCollURLInfo	The URL address of ECS Collection Guide.
ECSCollGuidePtrComment	DsMdCollURLInfo	The comment of the ECS Collection Guide page.
ECSDisciplineKeyword	DsMdDisciplineKeywords	Refer to technical paper 420-EMD-001
ECSParameterKeyword	DsMdECSParameterKeywords	Refer to technical paper 420-EMD-001
ECSTermKeyword	DsMdDisciplineKeywords	Refer to technical paper 420-EMD-001
ECSTopicKeyword	DsMdDisciplineKeywords	Refer to technical paper 420-EMD-001
ecsUserProfile	DsSiAcquireCmd	The user profile ID for an acquire request.
ECSVariableKeyword	DsMdDisciplineKeywords	Refer to technical paper 420-EMD-001
ElectronicMailAddress	DsMdEmailAddress	Refer to technical paper 420-EMD-001
EllipsoidName	DsMdSpatial	Refer to technical paper 420-EMD-001
emailAddressId	DsMdEmailAddress	The column used with contactId for the unique identifier of the DsMdEmailAddress table. This is an artificially derived column used because of a 255 length limit for an index within Sybase. ElectronicMailAddress is 255 character long by itself.
EndBlock	DsMdOrbitCalculatedSpatial	The value of the PSA SP_AM_MISR_EndBlock.
endDate	DsMdProductDbXref	The date on which this product will no longer be stored in the referenced database.
endId	DsMdInputPointerLocation	The ending granule Id of the input granule table.
EndingDateTime	DsMdGranules EMSArch EMSArchData EMSArchUpdData	The attribute within SDSRV that allows both the SingleDateTime (TimeOfDay) and RangeDateTime (RangeEndingDate) to be efficiently indexed and searched.
EndsatPresentFlag	DsMdTemporal	Refer to technical paper 420-EMD-001

Table 3-166. Column Descriptions (14 of 34)

Column Name	Table	Description
EquatorCrossingDate	DsMdOrbitCalcSpatialDomain	Refer to technical paper 420-EMD-001
EquatorCrossingLongitude	DsMdOrbitCalcSpatialDomain	Refer to technical paper 420-EMD-001
EquatorCrossingTime	DsMdOrbitCalcSpatialDomain	Refer to technical paper 420-EMD-001
esdtState	DsGeESDTConfiguredType	Refer to technical paper 420-EMD-001
eventID	DsDeEvent	The unique identifier of and event.
eventId	DsMdGrEventDomain DsMdGrEventHistory	The unique identifier of an event.
eventName	DsDeEvent DsMdGrEventDomain	The name of an event for which a subscriptions may be made.
eventTime	DsMdGrEventHistory	The datetime of an event
endingRow	DsMdGrPathRow	ending row PSA
filePath	DsMdFileStorage DsMdAlgorithmPkgFileStorage DsMdDAPFileStorage DsMdBrowseFileStorage DsMdProcessHistFileStorage DsMdSSAPComponentFileStorage DsMdQaGranuleFileStorage	The file path name of a granules file stored within STMGT.
fileSize	DsMdFileStorage DsMdAlgorithmPkgFileStorage DsMdDAPFileStorage DsMdBrowseFileStorage DsMdProcessHistFileStorage DsMdSSAPComponentFileStorage DsMdQaGranuleFileStorage	The size in bytes of a granules file stored within STMGT.
ftpHost	DsSiAcquireCmd	The host name for a ftp acquire request.
ftpPassword	DsSiAcquireCmd	Password for ftp
ftpPushDest	DsSiAcquireCmd	The location of the ftp push area for an acquire request.
ftpUser	DsSiAcquireCmd	The user that the acquire request uses for ftppush.
FutureReviewDate	DsMdCollReview DsMdGranuleReview	Refer to technical paper 420-EMD-001
GeographicCoordinateUnits	DsMdSpatial	Refer to technical paper 420-EMD-001

Table 3-166. Column Descriptions (15 of 34)

Column Name	Table	Description
glType	DsDeDictionaryAttribute DsMdAttributeList	The internal ECS GIParameter Data Classname. Values: GIDateP, GILongP, GITimeP, GIPointP, GICircleP, GIDoubleP, GIStringP, GIGPolygonP, GIRectangleP.
GIType	DsMdAttributeConversion	The internal ECS GIParameter Data Classname. Values: GIDateP, GILongP, GITimeP, GIPointP, GICircleP, GIDoubleP, GIStringP, GIGPolygonP, GIRectangleP.
GPolygonContainer	DsMdCIGpolygon DsMdGrGPolygon	The column name of type Gpolygon with the DsMdGrGPolygon and DsMdCIGPolygon.

Table 3-166. Column Descriptions (16 of 34)

Column Name	Table	Description
granuleId	DsMdAlgorithmPkgFileStorage DsMdAncillaryInput DsMdBmgtWrkTable DsMdBrowseFileStorage DsMdBrowseGranuleXref DsMdDeletedGranules DsMdCollectionGranuleXref DsMdDAPFileStorage DsMdFileStorage DsMdGranuleAnalysisXref DsMdGranuleCampaignXref DsMdGranuleInstrumentXref DsMdGranuleLocality DsMdGranulePlatformXref DsMdGranuleReview DsMdGranuleSensorXref DsMdGrBoundingRectangle DsMdGrCircle DsMdGrFloatInfoContent DsMdInputGranule_1 through DsMdInputGranule_15 DsMdGrIntegerInfoContent DsMdGrPoint DsMdGrGPolygon DsMdGrSensorCharacteristics DsMdGrStorageMedium DsMdGrStringInfoContent DsMdMeasuredParameter DsMdOrbitCalcSpatialDomain DsMdOrbitCalculatedSpatial DsMdProcessHistFileStorage DsMdProcessingQA DsMdQaGranuleFileStorage DsMdSSAPComponentFileStorage DsMdQaGranuleXref DsMdUninterpretedData DsMdGrVerticalSpatialDomain DsMdXAR DsMdGrPathRow DsMdCollectionDocumentXref DsMdAlgorithmPkgFileStorage	The unique ID which identifies the granule.
GranuleID	DsMdDeletedGranules DsMdUnDeletedGranules	The unique ID which identifies the granule
granUR	DsBtNotifierQueue	The universal reference used to locate a given granule

Table 3-166. Column Descriptions (17 of 34)

Column Name	Table	Description
grFloatValue	DsMdGrFloatInfoContent	The column containing the granule level AdditionalAttribute value of type float.
GridCoordinateSystemName	DsMdPlanarCoordinateSystems	Refer to technical paper 420-EMD-001
grIntValue	DsMdGrIntegerInfoContent	The granule level AdditionalAttribute column of type integer.
GroupName	DsMdUnloadList DsMdUpdateSequence DsMdCommandConversion	This attribute is used to tie a <i>i</i> kind ⁱ of metadata to physical processing in the DBWrappers. For example <i>i</i> QAGranule ⁱ relates the DsMdQaGranules table for a function (Physical Delete) and sequence of SQL code (EXEC DsDbProcDeleteQaGranule) to process the data.
grStringValue	DsMdGrStringInfoContent	The granule level AdditionalAttribute column of type varchar.
grTableName	DsMdParmToTableVector	The table name of the granule level AdditionalAttribute for a given data type.
HorizontalDatumName	DsMdSpatial	Refer to technical paper 420-EMD-001
HoursOfService	DsMdContact	Refer to technical paper 420-EMD-001
identifierObjectType	DsMdIdentifier	The name or type of the SDSRV database object for which the DsMdIdentifier row exists.
identifierPad1	DsMdIdentifier	One of seven column (identifierPad1 through identifierPad7) of type char(255) used to pad each in the DsMdIdentifier table to the 2K page size.
identifierPad2	DsMdIdentifier	One of seven column (identifierPad1 through identifierPad7) of type char(255) used to pad each in the DsMdIdentifier table to the 2K page size.

Table 3-166. Column Descriptions (18 of 34)

Column Name	Table	Description
identifierPad3	DsMdIdentifier	One of seven column (identifierPad1 through identifierPad7) of type char(255) used to pad each in the DsMdIdentifier table to the 2K page size.
identifierPad4	DsMdIdentifier	One of seven column (identifierPad1 through identifierPad7) of type char(255) used to pad each in the DsMdIdentifier table to the 2K page size.
identifierPad5	DsMdIdentifier	One of seven column (identifierPad1 through identifierPad7) of type char(255) used to pad each in the DsMdIdentifier table to the 2K page size.
identifierPad6	DsMdIdentifier	One of seven column (identifierPad1 through identifierPad7) of type char(255) used to pad each in the DsMdIdentifier table to the 2K page size.
identifierPad7	DsMdIdentifier	One of seven column (identifierPad1 through identifierPad7) of type char(255) used to pad each in the DsMdIdentifier table to the 2K page size.
identifierType	DsMdIdentifier	The data type of the identifier for which the DsMdIdentifier row exists.
Implementation	DsMdCSDTDescription	The name of the implemented form of the CSDT (standard formats, industry standards etc.), including lowest level object description.
IndirectReference	DsMdCSDTDescription	Refer to technical paper 420-EMD-001
inputGranule	DsMdInputGranule_1 through DsMdInputGranule_15	The unique identifier of a granule that is input to another granule. This relationship is captured in the DsMdInputGranule table.

Table 3-166. Column Descriptions (19 of 34)

Column Name	Table	Description
inputGranuleFileCount	DsMdInputGranule_1 through DsMdInputGranule_15	The number of times that a particular granules filename (based on InputGranule) is used as input to another granule. This is greater than one when an input granules is a multi-file granule.
InputPointer	DsMdInputGranule_1 through DsMdInputGranule_15	Refer to technical paper 420-EMD-001
insdate	DsBtNotifierQueue	The date and time that an rpc notifier entry was placed in the queue.
insertDatetime	DsMdInputGranule_1 through DsMdInputGranule_15	The Sybase datetime that a specific Input Granule row is inserted. This is used to maintain the insert order of Input Granule rows for a specific granule.
insertFlag	DsMdInputPointerLocation	The flag whether Input Granule row is inserted.
insertTime	DsMdAlgorithmPackage DsMdAnalysisSource DsMdBrowse DsMdCampaign DsMdCollections DsMdContact DsMdDeletedGranules DsMdDAP DsMdDisciplineKeywords DsMdGranules DsMdInstrument DsMdPlatform DsMdSensor DsMdSSAPComponent DsMdStagingTable DsMdProcessingHistory DsMdQaGranule DsMdUnDeletedGranules EMSArch EMSArchData EMSArchUpdData	The time of original insertion.
InstrumentCharacteristicDesc	DsMdInstrumentCharacteristic	Refer to technical paper 420-EMD-001
InstrumentCharacteristicName	DsMdInstrumentCharacteristic	Refer to technical paper 420-EMD-001

Table 3-166. Column Descriptions (20 of 34)

Column Name	Table	Description
InstrumentCharacteristicUnit	DsMdInstrumentCharacteristic	Refer to technical paper 420-EMD-001
InstrumentCharacteristicValue	DsMdInstrumentCharacteristic	Refer to technical paper 420-EMD-001
InstrumentCharDataType	DsMdInstrumentCharacteristic	Refer to definition of InstrumentCharacteristicDataType in technical paper 420-EMD-001
instrumentId	DsMdCollectionInstrumentXref DsMdGranuleInstrumentXref DsMdInstrumentCharacteristic DsMdOperationMode DsMdSensor	The unique ID which identifies the instrument.
InstrumentLongName	DsMdInstrument	Refer to technical paper 420-EMD-001
instrumentName	DsMdPlatInstrCode	The InstrumentShortName used to determine platform/instrument specific Orbit Polygon.
Instruments	EMSShortNameTemp	Instruments
InstrumentShortName	DsMdInstrument	Refer to technical paper 420-EMD-001
InstrumentTechnique	DsMdInstrument	Refer to technical paper 420-EMD-001
internalFileName	DsMdFileStorage DsMdAlgorithmPkgFileStorage DsMdDAPFileStorage DsMdBrowseFileStorage DsMdProcessHistFileStorage DsMdSSAPComponentFileStorage DsMdStagingTable DsMdQaGranuleFileStorage	The ECS generated internal file for granule files within the STMGT archive.
lastIdentifier	DsMdIdentifier	The next available unique identifier available of type ID for a specific IdentifierObjectType.
lastIntIdentifier	DsMdIdentifier	The next available unique identifier available of type integer for a specific IdentifierObjectType.
lastSmallIntIdentifier	DsMdIdentifier	The next available unique identifier available of type smallint for a specific IdentifierObjectType.

Table 3-166. Column Descriptions (21 of 34)

Column Name	Table	Description
lastUpdate	DsMdAnalysisSource DsMdAncillaryInput DsMdAlgorithmPackage DsMdBrowse DsMdCampaign DsMdCollections DsMdContact DsMdDAP DsMdDisciplineKeywords DsMdGranules DsMdGrParamUpdHistory DsMdInstrument DsMdPlatform DsMdProcessingHistory DsMdSensor DsMdSSAPComponent DsMdQaGranule DsSiAcquireCmd EMSArch EMSArchData EMSArchUpdData	The time of the last update.
Latitude	DsSiAcqPolygon	Latitude value of a point in a lansat floating scene acquire request.
LatitudeResolution	DsMdSpatial	Refer to technical paper 420-EMD-001
length	DsDeDictionaryAttribute	The maximum character length (digits) of an attribute. Used in attribute valids processing.
ListName	DsMdUnloadList DsMdUpdateSequence DsMdInsertSequence	The name of a specific GIPParameter list format within the SDSRV. Used for internal processing.
listName	DsMdAttributeList	The name of a specific GIPParameter list format within the SDSRV. Used for internal processing.
LocalCoordinateSystemDesc	DsMdSpatial	Refer to technical paper 420-EMD-001
LocalGeoreferenceInformation	DsMdSpatial	Refer to technical paper 420-EMD-001
LocalGranuleID	DsMdGranules EMSArch EMSArchData EMSArchUpdData	Unique identifier for locally produced granule that ECS ingests and is required to capture.

Table 3-166. Column Descriptions (22 of 34)

Column Name	Table	Description
LocalityDescription	DsMdLocality	Refer to technical paper 420-EMD-001
LocalityType	DsMdLocality	Refer to technical paper 420-EMD-001
LocalityValue	DsMdGranuleLocality	Refer to technical paper 420-EMD-001
LocalPlanarCoordinateSystemDescriptions	DsMdPlanarCoordinateSystems	Refer to definition of LocalPlanarCoordinateSystemDescription in technical paper 420-EMD-001
LocalPlanarGeoreferenceInformation	DsMdPlanarCoordinateSystems	Refer to definition of LocalPlanarGeoreferenceInformation in technical paper 420-EMD-001)
LocalVersionID	DsMdGranules	Local version identifier for PGE defined granule versions.
Longitude	DsSiAcqPolygon	Longitude value of a point in a Lansat floating scene acquire request.
LongitudeResolution	DsMdSpatial	Refer to technical paper 420-EMD-001
LongName	DsMdCollections EMSShortNameTemp	Refer to technical paper 420-EMD-001
lookupDatetime	DsMdSDSRVLookup	The lookup value of type datetime in the DsMdSDSRVLookup table.
lookupFloat	DsMdSDSRVLookup	The lookup value of type float in the DsMdSDSRVLookup table.
lookupInt	DsMdSDSRVLookup	The lookup value of integer datetime in the DsMdSDSRVLookup table.
lookupString	DsMdSDSRVLookup	The lookup value of type varchar in the DsMdSDSRVLookup table.
lookupType	DsMdSDSRVLookup	The name of the lookup operation that the specific DsMdSDSRVLookup table row is used for. Example: lookupType - subType when looking up a valid ESDT subtype value.
lookupValue	DsMdSDSRVLookup	The value used to lookup another value in the DsMdSDSRVLookup table.
MaintenanceUpdateFrequency	DsMdCollections	Refer to technical paper 420-EMD-001
MapProjectionName	DsMdPlanarCoordinateSystems	Refer to technical paper 420-EMD-001

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Column Name	Table	Description
MapProjectionPointer	DsMdPlanarCoordinateSystems	Refer to technical paper 420-EMD-001
maxdbID	DsMdCksumMlgration	The max unique identifier of the current DB.
maxOccurances	DsDeDictionaryAttribute	Reserved for future use.
MeasurementResolution	DsMdAdditionalAttributes	Refer to definition of ParameterMeasurementresolution in technical paper 420-EMD-001
MiscInformationPtr	DsMdCollURLInfo	The URL address of the Miscellaneous Information page.
MiscInformationPtrComment	DsMdCollURLInfo	The comment of the Miscellaneous Information page.
Missions	EMSShortNameTemp	Related missions, Aqua, Aura, etc.
MultipleDateName	DsMdMultipleDateTimePeriod DsMdSingleDateTime	Refer to technical paper 420-EMD-001
nextId	DsDeEventNextId	The next event ID
notify	DsSiAcquireCmd	Refer to technical paper 420-EMD-001
numAttribs	DsDeDictionaryContent	The number of attributes within a specific GIParameter group name in the DsDeDictionaryContent table.
NumberOfSensors	DsMdInstrument	Refer to technical paper 420-EMD-001
numLevels	DsDeDictionaryContent	The number of levels within a specific DsDeDictionaryContent qualifiedGroupName.
numMultiples	DsDeDictionaryContent	This column is not implemented within the SDSRV implementation.
OperationalQualityFlag	DsMdMeasuredParameter	Refer to technical paper 420-EMD-001
OperationalQualityFlagExplan	DsMdMeasuredParameter	Refer to definition of OperationalQualityFlagExplanation in technical paper 420-EMD-001
OperationMode	DsMdOperationMode DsMdGranuleInstrumentXref	Refer to technical paper 420-EMD-001
Operator	DsMdCommandConversion DsMdOperatorConversion	The operation to be performed on ECS Metadata.

Table 3-166. Column Descriptions (24 of 34)

Column Name	Table	Description
operator	DsDeDictionaryAttribute	The type of attribute validation operation to be applied when checking input attribute checking. Values are NONE, Range, Match, and Expression.
optionalIndicator	DsDeDictionaryAttribute DsDeDictionaryContent	Used to indicate whether an specific qualifiedGroupName or qualifiedAttrName is optional or not. Optional = 0, required = 1.
Orbit	DsMdOrbitPolygons	The specific orbit number of a Orbit Polygon.
OrbitModelName	DsMdOrbitCalcSpatialDomain	Refer to technical paper 420-EMD-001
OrbitNumber	DsMdOrbitCalcSpatialDomain	Refer to technical paper 420-EMD-001
OrdinateResolution	DsMdPlanarCoordinateSystems	Refer to technical paper 420-EMD-001
orderID	DsSiAcquireCmd	The order ID for an acquire request.
orderTrackingReqID	DsSiAcquireCmd	The order tracking request ID for an acquire request.
organizationId	DsMdPersonOrganizationXref	The unique ID which identifies the organization.
parameterKeyword	DsDeECSKeywordValid	Refer to technical paper 420-EMD-001
parameterKeywordId	DsMdECSPParameterKeywords	The unique ID which identifies the parameter keyword.
ParameterName	DsMdGrParamUpdHistory DsMdMeasuredParameter	The name of the parameter.
ParameterRangeBegin	DsMdAdditionalAttributes	This attribute provides the minimum value of parameter over whole collection
ParameterRangeEnd	DsMdAdditionalAttributes	This attribute provides the maximum value of parameter over whole collection.
parameters	DsSiParameters	
ParameterUnitsOfMeasure	DsMdAdditionalAttributes	Refer to definition of ParameterUnitsofMeasurement in technical paper 420-EMD-001
ParameterValue	DsMdBmgtOwsAddlAttrs	Parameter values in text
ParameterValueAccuracy	DsMdAdditionalAttributes	Refer to technical paper 420-EMD-001

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Column Name	Table	Description
PathNo	DsMdOrbitCalculatedSpatial DsMdOrbitPolygons	Refer to technical paper 420-EMD-001
Period1stDate	DsMdRegularPeriodic	Refer to technical paper 420-EMD-001
Period1stTime	DsMdRegularPeriodic	Refer to technical paper 420-EMD-001
PeriodCycleDurationUnit	DsMdRegularPeriodic	Refer to technical paper 420-EMD-001
PeriodCycleDurationValue	DsMdRegularPeriodic	Refer to technical paper 420-EMD-001
PeriodDurationUnit	DsMdRegularPeriodic	Refer to technical paper 420-EMD-001
PeriodDurationValue	DsMdRegularPeriodic	Refer to technical paper 420-EMD-001
PeriodName	DsMdRegularPeriodic	Refer to technical paper 420-EMD-001
personId	DsMdPersonOrganizationXref	The unique ID which identifies the person.
PGEDateLastModified	DsMdAlgorithmPackage	Refer to technical paper 420-EMD-001
PGEFunction	DsMdAlgorithmPackage	Refer to technical paper 420-EMD-001
PGEIdentifier	DsMdAlgorithmPackage	Refer to technical paper 420-EMD-001
PGEName	DsMdAlgorithmPackage	Refer to technical paper 420-EMD-001
PGEVersion	DsMdAlgorithmPackage DsMdGranules	Refer to technical paper 420-EMD-001
PlanarCoordinateEncodingMeth	DsMdPlanarCoordinateSystems	Refer to definition of PlanarCoordinateEncodingMethod in technical paper 420-EMD-001
planarCoordinateSystemsID	DsMdPlanarCoordinateSystems	An artificially derived column used with the collectionId to uniquely identify an row in the DsMdPlanarCoordinateSystems table.
PlanarDistanceUnits	DsMdPlanarCoordinateSystems	Refer to technical paper 420-EMD-001
PlatformCharacteristicDataType	DsMdPlatformCharacteristic	Refer to technical paper 420-EMD-001
PlatformCharacteristicDesc	DsMdPlatformCharacteristic	Refer to technical paper 420-EMD-001

Table 3-166. Column Descriptions (26 of 34)

Column Name	Table	Description
PlatformCharacteristicName	DsMdPlatformCharacteristic	Refer to technical paper 420-EMD-001
PlatformCharacteristicUnit	DsMdPlatformCharacteristic	Refer to technical paper 420-EMD-001
PlatformCharacteristicValue	DsMdPlatformCharacteristic	Refer to technical paper 420-EMD-001
platformId	DsMdGranulePlatformXref DsMdInstrument DsMdPlatformCharacteristic DsMdCollectionPlatformXref	The unique ID which identifies the platform.
platformInstrumentCode	DsMdPlatInstrCode	An artificially derived unique identifier in the DsMdPlatInstrCode table.
PlatformLongName	DsMdPlatform	Refer to technical paper 420-EMD-001
PlatformShortName	DsMdPlatform	Refer to technical paper 420-EMD-001
platformShortName	DsMdPlatInstrCode	Refer to technical paper 420-EMD-001
PlatformType	DsMdPlatform	Refer to technical paper 420-EMD-001
platInstCode	DsMdOrbitCalculatedSpatial DsMdOrbitPolygons	The ID of an entry in the DsMdPlatInstrCode table applicable to an orbit polygon.
PointLocation	DsMdCIPoint DsMdGrPoint	An artificially derived column used with the equator Crossing Longitude to uniquely identify a row in the DsMdOrbitPolygons table.
PostalCode	DsMdContactAddress	Refer to technical paper 420-EMD-001
PrecisionOfSeconds	DsMdTemporal	Refer to technical paper 420-EMD-001
previousGranuleId	DsMdGranuleVersions	The granuleId of the previous granule version used to maintain the relationship between granule versions.
previousVersion	DsMdGranuleVersions	The version of the previous granuleId associated with a currentGranuleId and version.
primaryCollectionFlag	DsMdCollections	A flag indicating whether this is a single type collection.

Table 3-166. Column Descriptions (27 of 34)

Column Name	Table	Description
primaryCollectionId	DsMdGranules DsMdGrBoundingRectangle DsMdGrCircle DsMdGrGPolygon DsMdGrPoint	The collectionId of primary collection for a group of granules.
PrimaryCSDT	DsMdCSDTDescription	Refer to technical paper 420-EMD-001
priority	DsSiRequest DsSiRequestDetails	The relative processing priority associated with a request.
ProcessingCenter	DsMdCollections	Refer to technical paper 420-EMD-001
processingHistoryId	DsMdGranules	The column used to associate a specific Processing History granules with a specific Science Granule.
processingHistoryTypeCode	DsMdGranules	Determines whether a granule has an associated Processing History granule.
ProcessingLevelDescription	DsMdCollections	Refer to technical paper 420-EMD-001
ProcessingLevelID	DsMdCollections DsMdBmgtControlEsds	Refer to technical paper 420-EMD-001
ProcessingQAAttribute	DsMdProcessingQA	Refer to technical paper 420-EMD-001
ProcessingQADescription	DsMdProcessingQA	Refer to technical paper 420-EMD-001
ProductionDateTime	DsMdGranules EMSArch EMSArchData EMSArchUpdData	Refer to technical paper 420-EMD-001
ProductionHistoryPointer	DsMdProcessingHistory	Refer to technical paper 420-EMD-001
productName	DsMdAttributeTableXref DsMdProductDbXref	The name of an ECS product.
Provider	EMSShortNameTemp	The provider of the data
psaIndicator	DsDeDictionaryAttribute	Flag indicating if attribute is a Product Specific Attribute.
qald	DsMdQaGranuleXref	A unique ID for QA.
QaFlagName	DsMdGrParamUpdHistory	Name of the QA Flag
QaFlagValue	DsMdGrParamUpdHistory	Value of the QA Flag
QAGranulePointer	DsMdQaGranule	Refer to technical paper 420-EMD-001

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Column Name	Table	Description
QAPercentCloudCover	DsMdMeasuredParameter	Refer to technical paper 420-EMD-001
QAPercentInterpolatedData	DsMdMeasuredParameter	Refer to technical paper 420-EMD-001
QAPercentMissingData	DsMdMeasuredParameter	Refer to technical paper 420-EMD-001
QAPercentOutOfBoundsData	DsMdMeasuredParameter	Refer to technical paper 420-EMD-001
qualifiedAttrName	DsDeDictionaryAttribute	The fully qualified ECS attribute name, including all of the GIPparameter list components.
qualifiedGroupName	DsDeDictionaryContent	The fully qualified ECS metadata group name, including all of the GIPparameter list components.
QualityTextCommentPointer	DsMdQualityTextComment	Refer to technical paper 420-EMD-001
RadiusUnits	DsMdCICircle DsMdGrCircle	Refer to technical paper 420-EMD-001
RangeBeginningDate	DsMdGranules DsMdRangeDateTime	Refer to technical paper 420-EMD-001
RangeBeginningTime	DsMdGranules DsMdRangeDateTime	Refer to technical paper 420-EMD-001
RangeEndingDate	DsMdGranules DsMdRangeDateTime	Refer to technical paper 420-EMD-001
RangeEndingTime	DsMdGranules DsMdRangeDateTime	Refer to technical paper 420-EMD-001
ReprocessingActual	DsMdGranules	Refer to technical paper 420-EMD-001
ReprocessingPlanned	DsMdGranules	Refer to technical paper 420-EMD-001
reqDomainID	DsSiReqDomain	Refer to technical paper 420-EMD-001
requestID	DsSiAcquireCmd DsSiParameters DsSiURs	The unique identifier for a persisted SDSRV request.
RevisionDate	DsMdCollections	Represents the date and possibly the time that this directory entry was created or the latest date and time of its modification or update.
rpcid	DsBtNotifierQueue	A unique identifier of a remote procedure call instance.

Table 3-166. Column Descriptions (29 of 34)

Column Name	Table	Description
rpclID	DsSiRequest DsSiRequestDetails	A unique identifier of a remote procedure call instance.
ruleText	DsDeDictionaryRule	The actual attribute valid value used in conjunction with a given operator to validate the value of an input attribute value. Example: DayNightFlag - Match(D), where D is the ruleText.
ScienceQualityFlag	DsMdMeasuredParameter	Refer to technical paper 420-EMD-001
ScienceQualityFlagExplan	DsMdMeasuredParameter	Refer to definition of ScienceQualityFlagExplanation in technical paper 420-EMD-001
ScienceReviewDate	DsMdCollReview DsMdGranuleReview	Refer to technical paper 420-EMD-001
ScienceReviewStatus	DsMdCollReview DsMdGranuleReview	Refer to technical paper 420-EMD-001
SemiMajorAxis	DsMdSpatial	Refer to technical paper 420-EMD-001
SensorCharacteristicDataType	DsMdSensorCharacteristic	Refer to technical paper 420-EMD-001
SensorCharacteristicDesc	DsMdSensorCharacteristic	Refer to technical paper 420-EMD-001
SensorCharacteristicName	DsMdGrSensorCharacteristics DsMdSensorCharacteristic	Refer to technical paper 420-EMD-001
SensorCharacteristicUnit	DsMdSensorCharacteristic	Refer to technical paper 420-EMD-001
SensorCharacteristicValue	DsMdGrSensorCharacteristics DsMdSensorCharacteristic	Refer to technical paper 420-EMD-001
sensorId	DsMdCollectionSensorXref DsMdGranuleSensorXref DsMdSensorCharacteristic	The unique ID which identifies the sensor.
SensorLongName	DsMdSensor	Refer to technical paper 420-EMD-001
SensorShortName	DsMdSensor	Refer to technical paper 420-EMD-001
SensorTechnique	DsMdSensor	Refer to technical paper 420-EMD-001
seq	DsSiURs DsSiParameters	The sequence Number of a particular request
seqNum	DsDeDictionaryAttribute	The sequence number of the dictionary attribute.

Table 3-166. Column Descriptions (30 of 34)

Column Name	Table	Description
seqNumber	DsSiAcquireCmdFileInfo DsSiAcqPolygon DsMdUninterpretedData	The sequence that the file in the acquire request.
SequenceNo	DsMdOrbitPolygons	The sequence of the polygon for a MISR orbit granule.
SequenceNo	DsMdBaseDependent DsMdCommandConversion DsMdInsertSequence DsMdKeyDependency DsMdUnloadList DsMdUpdateSequence	The sequence of this action relative to other actions.
sequenceNo	DsDeDictionaryRule	The sequence of this attribute rule relative to other rules for that attribute.
sequenceNumber	DsMdAttributeList	The sequence that an attribute appears in an attribute list.
sequenceNumber	DsMdAncillaryInput	Used to ensure unique identity of row in the case of duplicate entries.
sequenceNumber	DsMdGrStringInfoContent	Enforces unique identity of row in case of multi-valued PSAs
seqType	DsDeDictionaryAttribute	The type of sequence.
servicename	DsBtNotifierQueue	The service name of an request.
sessionID	DsSiRequest	The session identifier of a particular persisted SDSRV request.
ShortName	DsMdCollections DsDeEvent DsMdDeletedGranules DsMdGranules DsMdStagingTable DsQAMUTESDTSite DsMdTemporalSize DsMdBmgtControlEsdts DsMdBmgtSpatialEsdts DsMdUnDeletedGranules EMSArch EMSArchData EMSArchUpdData EMSShortNameTemp	Refer to technical paper 420-EMD-001
site	DsSiAcquireCmd	The site of the acquire request.
Site	DsQAMUTESDTSite	The site of SC team that does the QA update.

Table 3-166. Column Descriptions (31 of 34)

Column Name	Table	Description
sizeDataGranule	EMSArch EMSArchData EMSArchUpdData	Size of the data granule
SizeMBECSDataGranule	DsMdGranules	Refer to technical paper 420-EMD-001
skips	DsDeDictionaryContent	This column is reserved for future functionality.
SpatialCoverageType	DsMdSpatial	Refer to technical paper 420-EMD-001
SpatialKeyword	DsMdSpatialKeyword	Refer to technical paper 420-EMD-001
spatialSearchType	DsGeESDTConfiguredType	Refer to technical paper 420-EMD-001
SSAPAlgorithmPackageName	DsMdSSAPComponent	Refer to technical paper 420-EMD-001
SSAPAlgPackageVersion	DsMdSSAPComponentAPVersion	Refer to technical paper 420-EMD-001
ssapId	DsMdAPSAPComponentXref DsMdSSAPComponentAPVersion	The unique ID which identifies a Science Algorithm Package Component.
SpatialRep	DsMdBmgtSpatialEsdts	Spatial representation for an ESDT.
startingPath	DsMdGrPathRow	Stores value of SP_STARTING_PATH PSA
startingRow	DsMdGrPathRow	Stores value of SP_STARTING_ROW PSA
SSAPInsertDate	DsMdSSAPComponent	Date of insertion to the Data Server.
StartBlock	DsMdOrbitCalculatedSpatial	The value of the PSA, SP_AM_MISR_StartBlock.
startDate	DsMdProductDbXref	This column is reserved for future functionality.
startId	DsMdInputPointerLocation	The starting granule id of the corresponding input granule table.
StartOrbitNumber	DsMdOrbitCalcSpatialDomain	Refer to technical paper 420-EMD-001
state	DsSiRequest DsSiRequestDetails	Define the state of the request.
StateProvince	DsMdContactAddress	Refer to technical paper 420-EMD-001
status	DsBtNotifierQueue DsMdDeletedGranules DsMdUnDeletedGranules	The status of a particular Notifier Queue entry/The status of delete/undelete granule.

Table 3-166. Column Descriptions (32 of 34)

Column Name	Table	Description
StopOrbitNumber	DsMdOrbitCalcSpatialDomain	Refer to technical paper 420-EMD-001
StorageMedium	DsMdCollStorageMedium DsMdGrStorageMedium	Refer to technical paper 420-EMD-001
StoredProcName	DsMdInsertSequence	The name of the insert GIPParameter listname in the DsMdInsertSequence table.
StreetAddress	DsMdContactAddress	Refer to technical paper 420-EMD-001
SubType	DsMdBaseDependent DsMdUnloadList	The internally created column used to hold the ShortName.
subType	DsMdBrowse DsMdCollections DsMdProcessingHistory DsMdQaGranule	The internally created column used to hold the ShortName.
SuggestedUsage1	DsMdCollections	Refer to definition of SuggestedUsage in technical paper 420-EMD-001
SuggestedUsage2	DsMdCollections	Refer to definition of SuggestedUsage in technical paper 420-EMD-001
SWDateLastModified	DsMdAlgorithmPackage	Refer to technical paper 420-EMD-001
SWVersion	DsMdAlgorithmPackage	Refer to technical paper 420-EMD-001
table1	DsMdJoins	A table that is included in a database join.
table2	DsMdJoins	A table that is included in a database join.
TableKeyName	DsMdKeyDependency	The name of the primary key attribute of an independent table.
TableName	DsMdKeyDependency	The name of the independent table.
tableName	DsMsAttributeTableXref DsMdInputPointerLocation	The name of the independent table.
TelephoneNumber	DsMdTelephoneNumbers	Refer to technical paper 420-EMD-001
TelephoneNumberType	DsMdTelephoneNumbers	Refer to technical paper 420-EMD-001
TemporalKeyword	DsMdTemporalKeyword	Refer to technical paper 420-EMD-001
TemporalRangeType	DsMdTemporal	Refer to technical paper 420-EMD-001

Table 3-166. Column Descriptions (33 of 34)

Column Name	Table	Description
temporalRestriction	DsMdCollections	The temporal restriction for accessing the ESDT.
TemporalSizeInSeconds	DsMdTemporalSize	The maximum date range for a given ESDT
termKeyword	DsDeECSKeywordValid	The column used to check the ECSKeyword stack hierarchy that corresponds to the ECSTermKeyword column.
TimeOfDay	DsMdGranules DsMdSingleDateTime	Refer to technical paper 420-EMD-001
timeOfEntry	DsMdInputPointerLocation	Date/Time the granule is entered
TimeType	DsMdTemporal	Refer to technical paper 420-EMD-001
topicKeyword	DsDeECSKeywordValid	The column used to validate the ECSKeyword stack hierarchy corresponding to the ECSKeywordTopic attribute.
TopicKeywords	EMSShortNameTemp	
totalFiles	EMSArch EMSArchData EMSArchUpdData	Total number of files
transactionTime	DsMdDeletedGranules DsMdUnDeletedGranules	Defines a transaction. Each request is a transaction which can involve multiple granules to be marked deleted/DFAed.
triggerTime	DsBtNotifierQueue	The time of a request gets triggered.
type	DsMdCollections DsDeDictionaryAttribute	The encoded value used to depict the basetype of a particular ESDT. Example SC corresponds to Science.
UserCommentDocumentPointer	DsMdUserCommentDocument	Refer to technical paper 420-EMD-001
userDataFile	DsMdFileStorage DsMdAlgorithmPkgFileStorage DsMdDAPFileStorage DsMdBrowseFileStorage DsMdProcessHistFileStorage DsMdSSAPComponentFileStorage DsMdQaGranuleFileStorage	The name of a granules file in the STMGT archive.
userFileName	DsSiAcquireCmdFileInfo	The data file name for an acquire request.

Table 3-166. Column Descriptions (34 of 34)

Column Name	Table	Description
userID	DsSiRequest	The unique identifier of a user.
userString	DsSiAcquireCmd	The user string for an acquire request.
ur	DsSiURs	The domain number for a specific persisted request.
ValidationDocumentPointer	DsMdValidationDocument	Refer to technical paper 420-EMD-001
ValueAccuracyExplanation	DsMdAdditionalAttributes	Refer to definition of ParameterValueAccuracy in technical paper 420-EMD-001
variableKeyword	DsDeECSKeywordValid	The column used to validate the ECSKeyword stack hierarchy that corresponds to the ECSVariableKeyword attribute.
VersionDescription	DsMdCollections	Refer to technical paper 420-EMD-001
VersionID	DsMdCollections DsMdDeletedGranules DsDeEvent DsMdGranules DsMdStagingTable DsMdTemporalSize DsMdUnDeletedGranules DsMdBmgtControlEsds EMSArch EMSArchData EMSArchUpdData EMSShortNameTemp	Refer to technical paper 420-EMD-001
versionID	DsGeESTDConfiguredType	Refer to technical paper 420-EMD-001
VerticalSpatialDomainType	DsMdCollVerticalSpatialDomain DsMdGrVerticalSpatialDomain	Refer to technical paper 420-EMD-001
VerticalSpatialDomainValue	DsMdCollVerticalSpatialDomain DsMdGrVerticalSpatialDomain	Refer to technical paper 420-EMD-001
XARId	DsMdXAR	The numeric identifier for a given ASTER XAR. Also known as DAR ID.
XARType	DsMdXAR	The text describing the type of a given XARId.
XrefFlag	DsMdKeyDependency	A flag indicating if the dependency is a cross-reference.
ZonIdentifier	DsMdCollZonIdentifier DsMdGranules	Refer to technical paper 420-EMD-001

3.1.4 Column Domains

The user-defined datatypes defined in the SDSRV database are given here as well as an indication of the columns to which they apply.

Domain: DsTMdModDate

Reference List

Table Name	Column Name
DsMdFileStorage	creationDate
DsMdAlgorithmPkgFileStorage	creationDate
DsMdBrowseFileStorage	creationDate
DsMdSSAPComponentFileStorage	creationDate
DsMdDAPFileStorage	creationDate
DsMdQaGranuleFileStorage	creationDate
DsMdProcessHistFileStorage	creationDate
DsMdAlgorithmPackage	lastUpdate
DsMdDisciplineKeywords	lastUpdate
DsMdBrowse	lastUpdate
DsMdCollections	lastUpdate
DsMdContact	lastUpdate
DsMdDAP	lastUpdate
DsMdAncillaryInput	lastUpdate
DsMdGranules	lastUpdate
DsMdProcessingHistory	lastUpdate
DsMdQaGranule	lastUpdate
DsMdSSAPComponent	lastUpdate
DsMdCampaign	lastUpdate
DsMdAnalysisSource	lastUpdate
DsMdPlatform	lastUpdate
DsMdInstrument	lastUpdate
DsMdSensor	lastUpdate

Domain: DsTMdTime

Reference List

Table Name	Column Name
DsMdOrbitCalcSpatialDomain	EquatorCrossingTime
DsMdRegularPeriodic	Period1stTime
DsMdGranules	RangeBeginningTime
DsMdRangeDateTime	RangeBeginningTime
DsMdRangeDateTime	RangeEndingTime
DsMdGranules	RangeEndingTime
DsMdGranules	TimeOfDay
DsMdSingleDateTime	TimeOfDay

Domain: ID**Reference List**

Table Name	Column Name
DsMdGranuleAnalysisXref	analysisSourceId
DsMdCollectionAnalysisXref	analysisSourceId
DsMdAPSAPComponentXref	apId
DsMdCollectionAPXref	apId
DsDeDictionaryRule	attributeId
DsDeDictionaryAttribute	attributeId
DsMdBrowseGranuleXref	browseId
DsMdCollBrowseXref	browseId
DsMdCollectionCampaignXref	campaignId
DsMdGranuleCampaignXref	campaignId
DsMdCICircle	collectionId
DsMdCollectionSensorXref	collectionId
DsMdAltitudeResolution	collectionId
DsMdCollectionGranuleXref	collectionId
DsMdCollDisciplineKeywordXref	collectionId
DsMdCollectionInstrumentXref	collectionId
DsMdCIBoundingRectangle	collectionId
DsMdQualityTextComment	collectionId
DsMdCollIntegerInfoContent	collectionId
DsMdCIPoint	collectionId
DsMdCollStorageMedium	collectionId
DsMdCollectionPlatformXref	collectionId
DsMdSpatial	collectionId
DsMdCollVerticalSpatialDomain	collectionId
DsMdCollectionAddnlAttribsXref	collectionId
DsMdCollectionAnalysisXref	collectionId
DsMdCIGPolygon	collectionId
DsMdCollectionAPXref	collectionId
DsMdCollBrowseXref	collectionId
DsMdCollectionAssociation	collectionId
DsMdDepthResolution	collectionId
DsMdSingleDateTime	collectionId
DsMdCollectionContactXref	collectionId
DsMdSpatialKeyword	collectionId
DsMdMultipleDateTimePeriod	collectionId
DsMdMultipleTypeCollection	collectionId
DsMdRegularPeriodic	collectionId
DsMdCSDTDescription	collectionId

Reference List (Cont'd)

Table Name	Column Name
DsMdTemporalKeyword	collectionId
DsMdCollStringInfoContent	collectionId
DsMdCollURLInfo	collectionId
DsMdValidationDocument	collectionId
DsMdCollZoneIdentifier	collectionId
DsMdLocality	collectionId
DsMdCollFloatInfoContent	collectionId
DsMdPlanarCoordinateSystems	collectionId
DsMdCollReview	collectionId
DsMdTemporal	collectionId
DsMdRangeDateTime	collectionId
DsMdCollectionCampaignXref	collectionId
DsMdUserCommentDocument	collectionId
DsMdApContactXref	contactId
DsMdEmailAddress	contactId
DsMdContactPersons	contactId
DsMdContactOrganizations	contactId
DsMdTelephoneNumbers	contactId
DsMdCollectionContactXref	contactId
DsMdContactAddress	contactId
DsDeDictionaryContent	contentID
DsDeDictionaryAttribute	contentID
DsMdGranuleVersions	currentGranuleId
DsMdPGEGroup	dapDBId
DsMdApContactXref	dapId
DsMdDAP	dbID
DsMdProcessingHistory	dbID
DsMdDisciplineKeywords	dbID
DsMdAnalysisSource	dbID
DsMdContact	dbID
DsMdCollections	dbID
DsMdAlgorithmPackage	dbID
DsMdGranules	dbID
DsMdBrowse	dbID
DsMdCampaign	dbID
DsMdSensor	dbID
DsMdPlatform	dbID
DsMdInstrument	dbID
DsMdSSAPComponent	dbID
DsMdQaGranule	dbID

Reference List (Cont'd)

Table Name	Column Name
DsMdGrEventDomain	dblD
DsMdGrEventHistory	dblD
DsMdGrParamUpdHistory	dblD
DsMdCollDisciplineKeywordXref	disciplineKeywordId
DsMdAlgorithmPkgFileStorage	granuleId
DsMdBrowseFileStorage	granuleId
DsMdSSAPComponentFileStorage	granuleId
DsMdQaGranuleFileStorage	granuleId
DsMdProcessHistFileStorage	granuleId
DsMdDAPFileStorage	granuleId
DsMdOrbitCalcSpatialDomain	granuleId
DsMdOrbitCalculatedSpatial	granuleId
DsMdGrBoundingRectangle	granuleId
DsMdGranuleLocality	granuleId
DsMdAncillaryInput	granuleId
DsMdInputGranule	granuleId
DsMdGranuleReview	granuleId
DsMdGrIntegerInfoContent	granuleId
DsMdGrPoint	granuleId
DsMdCollectionGranuleXref	granuleId
DsMdGrStorageMedium	granuleId
DsMdGrStringInfoContent	granuleId
DsMdFileStorage	granuleId
DsMdGranuleSensorXref	granuleId
DsMdGranuleAnalysisXref	granuleId
DsMdBrowseGranuleXref	granuleId
DsMdGrSensorCharacteristics	granuleId
DsMdGranuleInstrumentXref	granuleId
DsMdXAR	granuleId
DsMdMeasuredParameter	granuleId
DsMdGranulePlatformXref	granuleId
DsMdGrGPolygon	granuleId
DsMdQaGranuleXref	granuleId
DsMdGranuleCampaignXref	granuleId
DsMdProcessingQA	granuleId
DsMdGrVerticalSpatialDomain	granuleId
DsMdGrFloatInfoContent	granuleId
DsMdGrCircle	granuleId
DsMdBmgtWrkTable	granuleId
DsMdGrStringInfoContent	granuleId

Reference List (Cont'd)

Table Name	Column Name
DsMdUninterpretedData	granuleId
DsMdGrPathRow	granuleId
DsMdCollectionDocumentXref	granuleId
DsMdDeletedGranules	GranuleId
DsMdUnDeletedGranules	GranuleId
DsMdInputGranule	inputGranule
DsMdInstrumentCharacteristic	instrumentId
DsMdCollectionInstrumentXref	instrumentId
DsMdSensor	instrumentId
DsMdOperationMode	instrumentId
DsMdGranuleInstrumentXref	instrumentId
DsMdIdentifier	lastIdentifier
DsMdPersonOrganizationXref	organizationId
DsMdECSPParameterKeywords	parameterKeywordId
DsMdPersonOrganizationXref	personId
DsMdGranulePlatformXref	platformId
DsMdCollectionPlatformXref	platformId
DsMdInstrument	platformId
DsMdPlatformCharacteristic	platformId
DsMdGranuleVersions	previousGranuleId
DsMdGranules	primaryCollectionId
DsMdGrBoundingRectangle	primaryCollectionId
DsMdGrCircle	primaryCollectionId
DsMdGrGPolygon	primaryCollectionId
DsMdGrPoint	primaryCollectionId
DsMdGranules	processingHistoryId
DsMdQaGranuleXref	qald
DsMdCollectionSensorXref	sensorId
DsMdSensorCharacteristic	sensorId
DsMdGranuleSensorXref	sensorId
DsMdAPSAPComponentXref	ssapId
DsMdSSAPComponentAPVersion	ssapId

3.1.5 Rules

Sybase supports the definitions of rules. Rules provide a means for enforcing domain constraints on a given column. Multiple rules may be defined for a given column. Multiple rules are not always uniquely named. All rules defined in Sybase for the SDSRV database are described herein.

Rule	Description
RuleSpatialType	@spatial IN ('Orbit', 'Rectangle', 'GPolygon', 'Point', 'Circle', 'NotSupported', 'Unknown')
RuleDeleteFromArchive	@DeleteFromArhcive in ('Y','N', 'G', 'H')
accessPermission_RULE	@accessPermission like ('[PRN]')or @accessPermission like ('[PRN][PRN]') or @accessPermission like ('[PRN][PRN][PRN]')
UpdateQATimeRange_RULE	@UpdateQATimeRange >= 0 AND @UpdateQATimeRange <= 32767
DsSiRequest_RULE	@state in (1, 2, 3, 4, 5, 6, 7)

3.1.6 Defaults

Defaults are used to supply a value for a column when one is not defined at insert time. All defaults defined in Sybase in the SDSRV database are described herein.

3.1.7 Views

Sybase allows the definition of views as a means of limiting an application or users access to data in a table or tables. Views create a logical table from columns found in one or more tables. There are no views defined in the SDSRV database.

3.1.8 Integrity Constraints

Sybase allows the enforcement of referential integrity via the use of declarative integrity constraints. Integrity constraints allow the SQL server to enforce primary and foreign key integrity checks without automatically without requiring programming. Sybase 11 is only ANSI-92 compliant, however, therefore its constraints support "restrict-only" operations. This means that a row can not be deleted or updated if there are rows in other tables having a foreign key dependency on that row. Cascade delete and update operations can not be performed if a declarative constraint has been used. All declarative integrity constraints defined in the SDSRV database are described herein.

3.1.8.1 Dependencies on Table: DsDeDictionaryAttribute

Referenced by	Primary Key	Foreign Key
DsDeDictionaryRule	attributeID	attributeID

3.1.8.2 Dependencies on Table: DsMdAdditionalAttributes

Referenced by	Primary Key	Foreign Key
DsMdCollIntegerInfoContent	attributeID	attributeID
DsMdCollFloatInfoContent	attributeID	attributeID
DsMdCollStringInfoContent	attributeID	attributeID

(Cont'd)

Referenced by	Primary Key	Foreign Key
DsMdGrFloatInfoContent	attributeld	attributeld
DsMdGrIntegerInfoContent	attributeld	attributeld
DsMdGrStringInfoContent	attributeld	attributeld

3.1.8.3 Dependencies on Table: DsMdAlgorithmPackage

Referenced by	Primary Key	Foreign Key
DsMdApContactXref	dbID	dapld
DsMdAPSAPComponentXref	dbID	apld
DsMdAlgorithmPkgFileStorage	dbID	granuleld
DsMdCollectionAPXref	dbID	apld

3.1.8.4 Dependencies on Table: DsMdAnalysisSource

Referenced by	Primary Key	Foreign Key
DsMdGranuleAnalysisXref	dbID	analysisSourceId

3.1.8.5 Dependencies on Table: DsMdBrowse

Referenced by	Primary Key	Foreign Key
DsMdBrowseGranuleXref	dbID	browseId
DsMdBrowseFileStorage	dbID	granuleld
DsMdCollBrowseXref	dbID	browseId

3.1.8.6 Dependencies on Table: DsMdCampaign

Referenced by	Primary Key	Foreign Key
DsMdGranuleCampaignXref	dbID	campaignId

3.1.8.7 Dependencies on Table: DsMdCollections

Referenced by	Primary Key	Foreign Key
DsMdCIBoundingRectangle	dbID	collectionId
DsMdCICircle	dbID	collectionId
DsMdCIGPolygon	dbID	collectionId
DsMdCIPoint	dbID	collectionId
DsMdCollectionGranuleXref	dbID	collectionId
DsMdCollectionAPXref	dbID	collectionId

(Cont'd)

Referenced by	Primary Key	Foreign Key
DsMdCollDisciplineKeywordXref	dbID	collectionId
DsMdCollIntegerInfoContent	dbID	collectionId
DsMdCollFloatInfoContent	dbID	collectionId
DsMdCollStringInfoContent	dbID	collectionId
DsMdCollURLInfo	dbID	collectionId
DsMdSpatialKeyword	dbID	collectionId
DsMdTemporalKeyword	dbID	collectionId
DsMdLocality	dbID	collectionId
DsMdTemporal	dbID	collectionId
DsMdCollReview	dbID	collectionId
DsMdSpatial	dbID	collectionId
DsMdCSDTDescription	dbID	collectionId
DsMdCollStorageMedium	dbID	collectionId
DsMdCollZoneIdentifier	dbID	collectionId
DsMdQualityTextComment	dbID	collectionId
DsMdCollectionContactXref	dbID	collectionId
DsMdValidationDocument	dbID	collectionId
DsMdCollectionCampaignXref	dbID	collectionId
DsMdUserCommentDocument	dbID	collectionId
DsMdCollectionSensorXref	dbID	collectionId
DsMdCollectionAssociation	dbID	collectionId
DsMdCollectionPlatformXref	dbID	collectionId
DsMdCollectionAnalysisXref	dbID	collectionId
DsMdMultipleTypeCollection	dbID	collectionId
DsMdCollectionAddnlAttribsXref	dbID	collectionId
DsMdCollectionInstrumentXref	dbID	collectionId
DsMdCollVerticalSpatialDomain	dbID	collectionId

3.1.8.8 Dependencies on Table: DsMdContact

Referenced by	Primary Key	Foreign Key
DsMdApContactXref	dbID	contactId
DsMdCollectionContactXref	dbID	contactId
DsMdContactPersons	dbID	contactId
DsMdContactAddress	dbID	contactId
DsMdContactOrganizations	dbID	contactId
DsMdEmailAddress	dbID	contactId
DsMdTelephoneNumbers	dbID	contactId

3.1.8.9 Dependencies on Table: DsMdContactOrganizations

Referenced by	Primary Key	Foreign Key
DsMdPersonOrganizationXref	contactId	organizationId

3.1.8.10 Dependencies on Table: DsMdContactPersons

Referenced by	Primary Key	Foreign Key
DsMdPersonOrganizationXref	contactId	personId

3.1.8.11 Dependencies on Table: DsMdDAP

Referenced by	Primary Key	Foreign Key
DsMdDAPFileStorage	dbID	granuleId
DsMdPGEGroup	dbID	dapDBId

3.1.8.12 Dependencies on Table: DsMdDisciplineKeywords

Referenced by	Primary Key	Foreign Key
DsMdCollDisciplineKeywordXref	dbID	disciplineKeywordId
DsMdECSPParameterKeywords	dbID	parameterKeywordId

3.1.8.13 Dependencies on Table: DsMdGranules

Referenced by	Primary Key	Foreign Key
DsMdCollectionGranuleXref	dbID	granuleId
DsMdGranuleInstrumentXref	dbID	granuleId
DsMdGranuleSensorXref	dbID	granuleId
DsMdGranulePlatformXref	dbID	granuleId
DsMdGrFloatInfoContent	dbID	granuleId
DsMdGrIntegerInfoContent	dbID	granuleId
DsMdGrStringInfoContent	dbID	granuleId
DsMdMeasuredParameter	dbID	granuleId
DsMdProcessingQA	dbID	granuleId
DsMdXAR	dbID	granuleId
DsMdFileStorage	dbID	granuleId
DsMdInputGranule_1 through DsMdInputGranule_15	dbID	granuleId
DsMdGranuleLocality	dbID	granuleId
DsMdGrStorageMedium	dbID	granuleId

(Cont'd)

Referenced by	Primary Key	Foreign Key
DsMdGranuleReview	dbID	granuleId
DsMdQaGranuleXref	dbID	granuleId
DsMdAncillaryInput	dbID	granuleId
DsMdUninterpretedData	dbID	granuleId
DsMdBrowseGranuleXref	dbID	granuleId
DsMdGranuleAnalysisXref	dbID	granuleId
DsMdGranuleCampaignXref	dbID	granuleId
DsMdOrbitCalculatedSpatial	dbID	granuleId
DsMdGrSensorCharacteristics	dbID	granuleId
DsMdOrbitCalcSpatialDomain	dbID	granuleId
DsMdGrVerticalSpatialDomain	dbID	granuleId
DsMdGranuleVersions	dbID	currentGranuleId
DsMdGrPathRow	dbID	granuleId

3.1.8.14 Dependencies on Table: DsMdInstrument

Referenced by	Primary Key	Foreign Key
DsMdGranuleInstrumentXref	dbID	instrumentId
DsMdInstrumentCharacteristic	dbID	instrumentId
DsMdOperationMode	dbID	instrumentId
DsMdSensor	dbID	instrumentId

3.1.8.15 Dependencies on Table: DsMdParmToTableVector

Referenced by	Primary Key	Foreign Key
DsMdAdditionalAttributes	DataType	AdditionalAttributeDataType

3.1.8.16 Dependencies on Table: DsMdPlatform

Referenced by	Primary Key	Foreign Key
DsMdGranulePlatformXref	dbID	platformId
DsMdInstrument	dbID	platformId
DsMdPlatformCharacteristic	dbID	platformId

3.1.8.17 Dependencies on Table: DsMdPlatInstrCode

Referenced by	Primary Key	Foreign Key
DsMdOrbitPolygons	platformInstrumentCode	platInstCode

3.1.8.18 Dependencies on Table: DsMdProcessingHistory

Referenced by	Primary Key	Foreign Key
DsMdProcessHistFileStorage	dbID	granuleId

3.1.8.19 Dependencies on Table: DsMdSensor

Referenced by	Primary Key	Foreign Key
DsMdGranuleSensorXref	dbID	sensorId
DsMdSensorCharacteristic	dbID	sensorId

3.1.8.20 Dependencies on Table: DsMdSpatial

Referenced by	Primary Key	Foreign Key
DsMdAltitudeResolution	collectionId	collectionId
DsMdDepthResolution	collectionId	collectionId
DsMdPlanarCoordinateSystems	collectionId	collectionId

3.1.8.21 Dependencies on Table: DsMdSSAPComponent

Referenced by	Primary Key	Foreign Key
DsMdAPSAPComponentXref	dbID	ssapId
DsMdSSAPComponentFileStorage	dbID	granuleId
DsMdSSAPComponentAPVersion	dbID	ssapId

3.1.8.22 Dependencies on Table: DsMdTemporal

Referenced by	Primary Key	Foreign Key
DsMdMultipleDateTimePeriod	collectionId	collectionId
DsMdRangeDateTime	collectionId	collectionId
DsMdRegularPeriodic	collectionId	collectionId
DsMdSingleDateTime	collectionId	collectionId

3.1.8.23 Dependencies on Table: DsSiRequest

Referenced by	Primary Key	Foreign Key
DsSiReqDomain	dbIDint	reqDomainID
DsSiAcquireCmd	dbIDint	requestID

3.1.8.24 Dependencies on Table: DsSiAcquireCmd

Referenced by	Primary Key	Foreign Key
DsSiAcqBand	commandID	commandID
DsSiAcqPolygon	commandID	commandID
DsSiAcquireCmdFileInfo	commandID	commandID

3.1.8.25 Dependencies on Table: DsDeDictionaryContent

Referenced by	Primary Key	Foreign Key
DsDeDictionaryAttribute	contentID	contentID

3.1.8.26 Dependencies on Table: DsMdQaGranule

Referenced by	Primary Key	Foreign Key
DsMdQaGranuleXref	dbID	qald
DsMdQaGranuleFileStorage	dbID	granuleId

3.1.8.27 Dependencies on Table: DsSiRequestDetails

Referenced by	Primary Key	Foreign Key
DsSiURs	dbID	requestID
DsSiParameters	dbID	requestID

3.1.8.28 Dependencies on Table: DsMdGrEventDomain

Referenced by	Primary Key	Foreign Key
DsMdGrEventHistory	eventId	eventId

3.1.9 Triggers

Sybase supports the enforcement of business policy via the use of triggers. A trigger is best defined as set of activities or checks that should be performed automatically when ever a row is inserted, updated, or deleted from a given table. Sybase allows the definition of one insert, update, and delete trigger per table. A listing of each the triggers in the SDSRV database is given here.

Trigger List

Table	Trigger
DsBtNotifierQueue	TrigInsDsBtNotifierQueue
DsDeEvent	TrigInsDsDeEvent
DsDeEvent	TrigDelDsDeEvent
DsDeDictionaryAttribute	TrigInsDictionaryAttribute
DsDeDictionaryAttribute	TrigUpdDictionaryAttribute
DsDeDictionaryContent	TrigDelDictionaryContent
DsDeDictionaryContent	TrigUpdDictionaryContent
DsGeESDTConfiguredType	TrigDelESDTConfiguredType
DsGeESDTConfiguredType	TrigInsESDTConfiguredType
DsGeESDTConfiguredType	TrigUpdESDTConfiguredType
DsMdAdditionalAttributes	TrigDelAdditionalAttributes
DsMdAlgorithmPackage	TrigUpdAlgPkg
DsMdAncillaryInput	TrigUpdAncillaryInput
DsMdBrowse	TrigUpdBrowse
DsMdBrowseGranuleXref	TrigUpdBrowseGranuleXref
DsMdCollBrowseXref	TrigInsCollBrowseXref
DsMdCollBrowseXref	TrigUpdCollBrowseXref
DsMdCollectionAddnlAttrbsXref	TrigUpdCollectionAddnlAttrXref
DsMdCollectionAnalysisXref	TrigUpdCollectionAnalysisXref
DsMdCollectionCampaignXref	TrigUpdCollectionCampaignXref
DsMdCollectionContactXref	TrigUpdCollectionContactXref
DsMdCollectionInstrumentXref	TrigUpdCollectionInstrumentXref
DsMdCollectionPlatformXref	TrigUpdCollectionPlatformXref
DsMdCollections	TrigDelCollections
DsMdCollections	TrigInsCollections
DsMdCollections	TrigUpdCollections
DsMdCollectionSensorXref	TrigUpdCollectionSensorXref
DsMdCollFloatInfoContent	TrigDelCollFloatInfoContent
DsMdCollIntegerInfoContent	TrigDelCollIntegerInfoContent
DsMdCollReview	TrigUpdCollReview
DsMdCollStringInfoContent	TrigDelCollStringInfoContent
DsMdCollVerticalSpatialDomain	TrigUpdCollVerticalSpatialDomn
DsMdCollZoneIdentifier	TrigUpdCollZoneIdentifier
DsMdCSDTDescription	TrigUpdCSDTDescription
DsMdDAP	TrigUpdDAP
DsMdFileStorage	TrigUpdFileStorage
DsMdGranuleAnalysisXref	TrigUpdGranuleAnalysisXref
DsMdGranuleCampaignXref	TrigUpdGranuleCampaignXref
DsMdGranuleLocality	TrigUpdGranuleLocality

Trigger List (Cont'd)

Table	Trigger
DsMdGranuleReview	TrigUpdGranuleReview
DsMdGranules	TrigInsGranules
DsMdGranules	TrigUpdGranules
DsMdGranuleVersions	TrigUpdGranuleVersions
DsMdGrFloatInfoContent	TrigDelGrFloatInfoContent
DsMdGrIntegerInfoContent	TrigDelGrIntInfoContent
DsMdGrSensorCharacteristics	TrigUpdGrSensorCharacteristics
DsMdGrStorageMedium	TrigUpdGrStorageMedium
DsMdGrStringInfoContent	TrigDelGrStringInfoContent
DsMdGrVerticalSpatialDomain	TrigUpdGrVerticalSpatialDomain
DsMdInputGranule_1	TrigUpdInputGranule_1
DsMdInputGranule_10	TrigUpdInputGranule_10
DsMdInputGranule_11	TrigUpdInputGranule_11
DsMdInputGranule_12	TrigUpdInputGranule_12
DsMdInputGranule_13	TrigUpdInputGranule_13
DsMdInputGranule_14	TrigUpdInputGranule_14
DsMdInputGranule_15	TrigUpdInputGranule_15
DsMdInputGranule_2	TrigUpdInputGranule_2
DsMdInputGranule_3	TrigUpdInputGranule_3
DsMdInputGranule_4	TrigUpdInputGranule_4
DsMdInputGranule_5	TrigUpdInputGranule_5
DsMdInputGranule_6	TrigUpdInputGranule_6
DsMdInputGranule_7	TrigUpdInputGranule_7
DsMdInputGranule_8	TrigUpdInputGranule_8
DsMdInputGranule_9	TrigUpdInputGranule_9
DsMdLocality	TrigUpdLocality
DsMdMeasuredParameter	TrigUpdMeasuredParameter
DsMdMultipleTypeCollection	TrigUpdMultipleTypeCollection
DsMdOrbitCalcSpatialDomain	TrigUpdOrbitCalcSpatialDomain
DsMdOrbitCalculatedSpatial	TrigInsOrbitCalculatedSpatial
DsMdOrbitCalculatedSpatial	TrigUpdOrbitCalculatedSpatial
DsMdOrbitPolygons	TrigDelOrbitPolygons
DsMdProcessingHistory	TrigDelProcessingHistory
DsMdProcessingHistory	TrigUpdProcessingHistory
DsMdQaGranule	TrigUpdQaGranule
DsMdQaGranuleXref	TrigUpdQaGranuleXref
DsMdQualityTextComment	TrigUpdQualityTextComment
DsMdSpatial	TrigUpdSpatial
DsMdSSAPComponent	TrigUpdSSAPComp

Trigger List (Cont'd)

Table	Trigger
DsMdSSAPComponentAPVersion	TrigInsAPVersion
DsMdTemporal	TrigUpdTemporal
DsMdUninterpretedData	TrigUpdUninterpretedData
DsMdValidationDocument	TrigUpdValidationDocument
DsMdXAR	TrigUpdXAR
EcDbDatabaseVersions	TrigInsEcDbDatabaseVersions

3.1.10 Stored Procedures

Sybase also includes support for business policy via the use of stored procedures. Stored procedures are typically used to capture a set of activities or checks that will be performed on the database repeatedly to enforce business policy and maintain data integrity. Stored procedures are parsed and compiled SQL code that reside in the database and may be called by name by an application, trigger or another stored procedure. A listing of each the stored procedures in the SDSRV database follows.

Procedure Name
EMSProcArchExtract
EMSProcArchUpdExtract
EMSProcGetMetaDataExtract
EMSProcPrepareArchExtract
ProcAttributeConv
ProcAttributeConvCount
ProcBaseDependent
ProcBaseDependentCount
ProcBmgtCallGetOneGranMeta
ProcBmgtGetBrowMetadata
ProcBmgtGetCollCoordinateRep
ProcBmgtGetCollSpatialRep
ProcBmgtGetCollSpatialType
ProcBmgtGetContactInfo
ProcBmgtGetContactOrgInfo
ProcBmgtGetContactPersonInfo
ProcBmgtGetCoorSystemContainer
ProcBmgtGetDictionaryAttr
ProcBmgtGetEsdAlgPkg
ProcBmgtGetEsdAsscPlatInstSens
ProcBmgtGetEsdBrowGranXref
ProcBmgtGetEsdBrowMetadata
ProcBmgtGetEsdCollAddAttr

(Cont'd)

Procedure Name
ProcBmgtGetEsdCollBrowseXref
ProcBmgtGetEsdCollDocURL
ProcBmgtGetEsdCollMetadata
ProcBmgtGetEsdCollPlatInstSens
ProcBmgtGetEsdCollVertSpatDomn
ProcBmgtGetEsdDiscKeywords
ProcBmgtGetEsdGranAddAttr
ProcBmgtGetEsdGranMetadata
ProcBmgtGetEsdQaGranuleXref
ProcBmgtGetEsdQaUpdates
ProcBmgtGetEsdSSapComponent
ProcBmgtGetEsdTemporal
ProcBmgtGetGranSensChar
ProcBmgtGetKeywordValid
ProcBmgtGetListBrowMetadata
ProcBmgtGetOneAIRSBrowMetadata
ProcBmgtGetOneBrowMetadata
ProcBmgtGetOneCollMetadata
ProcBmgtGetOneGranMetadata
ProcBmgtGetOneMIL1BrowMetadata
ProcBmgtGetOneMIL2BrowMetadata
ProcBmgtGetOneMISRBrowMetadata
ProcBmgtGetOWSAddlAttributes
ProcBmgtGetRangeDateTime
ProcBmgtGetSingleDateTime
ProcBmgtGetUninterpretedData
ProcBmgtGetValdMetadata
ProcCheckDeleteStatus
ProcCheckDeleteStatusBrowse
ProcCheckDeleteStatusPh
ProcCheckDeleteStatusQa
ProcCheckDeleteStatusScience
ProcCheckDeleted
ProcCheckDsTMdTime
ProcCheckDupeRpcID
ProcCheckECSKeywordValid
ProcCheckGranuleStatus
ProcCheckReferences
ProcCheckReferencesBrowse
ProcCheckReferencesPh

(Cont'd)

Procedure Name
ProcCheckReferencesQa
ProcCheckReferencesScience
ProcCleanAPGranules
ProcCleanBRGranules
ProcCleanCollection
ProcCleanDAPGranules
ProcCleanGranules
ProcCleanGrEventHistory
ProcCleanPHGranules
ProcCleanQAGranules
ProcCleanSSAPCGranules
ProcCleanSingleGranule
ProcCleanUnDeletedGranules
ProcClientGranuleDelete
ProcClientGranuleUndelete
ProcColdStart
ProcCommandConv
ProcCommandConvCount
ProcConvertDEM
ProcConvertL1B
ProcConvertLagTime
ProcConvertTime
ProcDeleteAssociatedGranules
ProcDelAcqBand
ProcDelAcqPolygon
ProcDelAcquireCmd
ProcDelAcquireCmdFileInfo
ProcDelCollGranuleXref
ProcDelESDTConfiguredType
ProcDelNotifierQueue
ProcDelReqDomain
ProcDelRequest
ProcDeleteAcqBand
ProcDeleteAcqCmd
ProcDeleteAcqCmdFile
ProcDeleteAcqPolygon
ProcDeleteAlgorithmPackage
ProcDeleteAncillaryInput
ProcDeleteBoundingRectangle
ProcDeleteBrowse

(Cont'd)

Procedure Name
ProcDeleteBrowseGranuleXref
ProcDeleteCircle
ProcDeleteDsSiRequest
ProcDeleteEvent
ProcDeleteFileStorage
ProcDeleteFloatInfoContent
ProcDeleteGranuleAnalysisXref
ProcDeleteGranuleCampaignXref
ProcDeleteGranuleInstrXref
ProcDeleteGranuleLocality
ProcDeleteGranulePlatformXref
ProcDeleteGranuleReview
ProcDeleteGranuleSensorXref
ProcDeleteGranules
ProcDeleteInputGranule
ProcDeleteIntegerInfoContent
ProcDeleteMeasuredParameter
ProcDeleteNotifierQEntry
ProcDeleteOrbitCalcSpatDomain
ProcDeleteOrbitCalcSpatial
ProcDeletePathRow
ProcDeletePhysicalFileStorage
ProcDeletePoint
ProcDeletePolygon
ProcDeleteProcHistory
ProcDeleteProcessingQA
ProcDeleteQaGranule
ProcDeleteQaGranuleXref
ProcDeleteReqDomain
ProcDeleteRequest
ProcDeleteRequests
ProcDeleteSensorCharacter
ProcDeleteStorageMedium
ProcDeleteStringInfoContent
ProcDeleteUninterpretedData
ProcDeleteVertSpatialDomain
ProcDeleteXAR
ProcECSKeywordValidInstalled
ProcEventNotifierQCleanUp
ProcGetAPAssocColl

(Cont'd)

Procedure Name
ProcGetAPContactXref
ProcGetAPFileStorage
ProcGetAPSAPComponentXref
ProcGetAccessPrivilege
ProcGetAcqBand
ProcGetAcqPolygon
ProcGetAcquireCmd
ProcGetAcquireCmdFileInfo
ProcGetAdditionalAttributes
ProcGetAlgorithmPackage
ProcGetAlghmPackage
ProcGetAllCmdIDs
ProcGetAllRequestIDs
ProcGetAllTableNames
ProcGetAltSysDef
ProcGetAltitudeResolution
ProcGetAnalysisSource
ProcGetAnalysisSourceID
ProcGetAncillaryInput
ProcGetAssocGranules
ProcGetAssocPlatInstrSensor
ProcGetAttrTable
ProcGetAttrTableCnt
ProcGetAttributeList
ProcGetBtNotQueueStatus
ProcGetBrowseFileStorage
ProcGetBrowseGranuleXref
ProcGetBrowseMetadata
ProcGetCSDTDescription
ProcGetCampaign
ProcGetCampaignID
ProcGetCollAPXref
ProcGetCollAddnlAttribsXref
ProcGetCollAnalysisXref
ProcGetCollAssociation
ProcGetCollBrowseXref
ProcGetCollCampaignXref
ProcGetCollContactXref
ProcGetCollDiscXref
ProcGetCollFloatInfoContent

(Cont'd)

Procedure Name
ProcGetCollGranuleXref
ProcGetCollInstrXref
ProcGetCollIntInfoContent
ProcGetCollPlatformXref
ProcGetCollReview
ProcGetCollSensorXref
ProcGetCollStorageMedium
ProcGetCollStrngInfoContent
ProcGetCollVertSpatialDomn
ProcGetCollZoneIdentifier
ProcGetCollectionContact
ProcGetCollectionID
ProcGetCollectionMetadata
ProcGetContact
ProcGetContactAddress
ProcGetContactIDs
ProcGetContactOrganizationID
ProcGetContactOrgInfo
ProcGetContactPersonID
ProcGetContactPersonInfo
ProcGetCoorSystemContainer
ProcGetDataFileName
ProcGetDAP
ProcGetDAPFileStorage
ProcGetDBID
ProcGetDepthResolution
ProcGetDepthSysDef
ProcGetDFADeletedGranules
ProcGetDFALogicalDeleteCounts
ProcGetDictionaryAttribute
ProcGetDictionaryContent
ProcGetDictionaryRule
ProcGetDisciplineKeywords
ProcGetDisciTopParaID
ProcGetDisconMulti
ProcGetECSCollectionGuide
ProcGetECSPParameterKeywords
ProcGetEmailAddress
ProcGetESDTConfiguredType
ProcGetEvent

(Cont'd)

Procedure Name
ProcGetEventName
ProcGetFileLocMetadata
ProcGetFileStorage
ProcGetChecksumTypes
ProcGetGrAnalysisShortName
ProcGetGranPHMetadata
ProcGetGranReview
ProcGetGranuleAnalysisXref
ProcGetGranuleCampaignXref
ProcGetGranuleLocality
ProcGetGranuleMetadata
ProcGetGranulesMinFive
ProcGetGranulesMinHour
ProcGetGranuleVersions
ProcGetGrCampaignShortName
ProcGetGrFloatInfoContent
ProcGetGrInstrumentXref
ProcGetGrIntInfoContent
ProcGetGrLastUpdate
ProcGetGrPlatformXref
ProcGetGrQaRef
ProcGetGrSensorCharacteristic
ProcGetGrSensorXref
ProcGetGrStorageMedium
ProcGetGrStringInfoContent
ProcGetGrVerticalSpatialDom
ProcGetInputGranule
ProcGetInsertSequence
ProcGetInstrument
ProcGetInstrumentChar
ProcGetInstrumentID
ProcGetJoins
ProcGetLimitedMetadata
ProcGetLocality
ProcGetMeasuredParameter
ProcGetMiscInformation
ProcGetMultiDate Time
ProcGetNextCmdID
ProcGetNextEventId
ProcGetNotifierQEntry

(Cont'd)

Procedure Name
ProcGetMultTypeCollection
ProcGetOneESDTConfiguredType
ProcGetOperationMode
ProcGetOrbitCalcSpatialDom
ProcGetOrbitCalculatedSpatial
ProcGetParmToTableVector
ProcGetPersonOrgXref
ProcGetPGEGroup
ProcGetPHFileStorage
ProcGetPlanCoor
ProcGetPlatform
ProcGetPlatformChar
ProcGetPlatformID
ProcGetPlatInstCode
ProcGetProcessingHistory
ProcGetProcessingQA
ProcGetProdSpecType
ProcGetProductDbXref
ProcGetQaGranule
ProcGetQAFileStorage
ProcGetQaGranuleXref
ProcGetQualityTextComment
ProcGetRangeDateTime
ProcGetRegPeriodic
ProcGetReqDetailsByState
ProcGetReqDomain
ProcGetRequest
ProcGetSDSRVLookup
ProcGetSensor
ProcGetSensorCharacteristic
ProcGetSensorID
ProcGetSingleDateTime
ProcGetSingleDateTimeInMultPd
ProcGetSpatial
ProcGetSpatialKeyword
ProcGetSSAPComponent
ProcGetSSAPComponentAPVersion
ProcGetSSAPFileStorage
ProcGetStagingGranules
ProcGetTelephoneNumbers

(Cont'd)

Procedure Name
ProcGetTemporal
ProcGetTemporalKeyword
ProcGetTemporalSize
ProcGetUnDFAUnDeleted
ProcGetUninterpretedData
ProcGetUniqueID
ProcGetUniqueIDOutput
ProcGetUniqueIDString
ProcGetUserCommentDocument
ProcGetValidationDocument
ProcGetXAR
ProchDeleteAlgorithmPackage
ProchDeleteAltitudeResolution
ProchDeleteAnalysisSource
ProchDeleteAncillaryInput
ProchDeleteAPFileStorage
ProchDeleteBrBrowseGranuleXref
ProchDeleteBrowse
ProchDeleteBRFileStorage
ProchDeleteBrowseGranuleXref
ProchDeleteCSDTDescription
ProchDeleteCampaign
ProchDeleteCollFloatInfoCont
ProchDeleteCollectionAPXref
ProchDeleteCollIntegerInfoCont
ProchDeleteCollReview
ProchDeleteCollStorageMedium
ProchDeleteCollStringInfoCont
ProchDeleteCollGranuleXref
ProchDeleteCollVertSpatIDomn
ProchDeleteCollZoneIdentifier
ProchDeleteCollectionAssn
ProchDeleteContact
ProchDeleteContactAddress
ProchDeleteContactOrg
ProchDeleteContactPersons
ProchDeleteDAP
ProchDeleteDAPFileStorage
ProchDeleteDepthResolution
ProchDeleteDisciplineKeywords

(Cont'd)

Procedure Name
ProchDeleteEmailAddress
ProchDeleteECSParmKeywords
ProchDeleteESDTConfiguredType
ProchDeleteFileStorage
ProchDeleteGranuleAnalsisXref
ProchDeleteGranuleCampgnXref
ProchDeleteGranuleInstrXref
ProchDeleteGranuleLocality
ProchDeleteGranulePlatfrmXref
ProchDeleteGranuleReview
ProchDeleteGranules
ProchDeleteGranuleSensorXref
ProchDeleteGranuleVersions
ProchDeleteGrFloatInfoContent
ProchDeleteGrIntInfoContent
ProchDeleteGrPathRow
ProchDeleteGrSensorCharistics
ProchDeleteGrStorageMedium
ProchDeleteGrStringInfoContent
ProchDeleteGrVertSpatlDomn
ProchDeleteInputGranule
ProchDeleteInstrument
ProchDeleteInstrumentChar
ProchDeleteLocality
ProchDeleteMeasuredParameter
ProchDeleteMultiDateTimePd
ProchDeleteOperationMode
ProchDeleteOrbitCalcSpatial
ProchDeleteOrbitCalcSpatlDomn
ProchDeleteOrbitPolygons
ProchDeletePersonOrgXref
ProchDeletePGEGroup
ProchDeletePHFileStorage
ProchDeletePlanarCoordSys
ProchDeletePlatform
ProchDeletePlatformChar
ProchDeletePlatInstrCode
ProchDeleteProcessingHistory
ProchDeleteProcessingQA
ProchDeleteProdSpecific

(Cont'd)

Procedure Name
ProchDeleteQAFileStorage
ProchDeleteQaGranule
ProchDeleteQaGranuleXref
ProchDeleteQaQualityGranuleXref
ProchDeleteQualityTextComment
ProchDeleteRangeDateTime
ProchDeleteRegularPeriodic
ProchDeleteSensor
ProchDeleteSensorChar
ProchDeleteSingleDateTime
ProchDeleteSpatial
ProchDeleteSpatialKeyword
ProchDeleteSpatialMetadata
ProchDeleteSSAPComponent
ProchDeleteSSAPComponentAPVer
ProchDeleteSSAPFileStorage
ProchDeleteTelephoneNumber
ProchDeleteTemporal
ProchDeleteTemporalKeyword
ProchDeleteTemporalMetadata
ProchDeleteUninterpretedData
ProchDeleteUserCommentDocument
ProchDeleteValidationDocument
ProchDeleteXAR
ProchDeleteSSAPCompAPVersion
ProInputPointerLocation
ProInsertAdditionalAttributes
ProInsertAlgorithmPackage
ProInsertAltitudeResolution
ProInsertAnalysisSource
ProInsertAncillaryInput
ProInsertAPAssocColl
ProInsertAPContactXref
ProInsertAPFileStorage
ProInsertAPSAPComponentXref
ProInsertAcqBand
ProInsertAssocPlatInstrSensor
ProInsertBRFileStorage
ProInsertBrBrowseGranuleXref
ProInsertBrowse

(Cont'd)

Procedure Name
ProclInsertBrowseGranuleXref
ProclInsertCampaign
ProclInsertCIDiscplnKeywrdXref
ProclInsertCIProdSpecific
ProclInsertAcqPolygon
ProclInsertAcquireCmd
ProclInsertAcquireCmdFileInfo
ProclInsertChecksum
ProclInsertChecksumInternalFile
ProclInsertChecksumTypes
ProclInsertCollAddnlAttribs
ProclInsertCollAddnlAttribsXref
ProclInsertCollAnalysisXref
ProclInsertCollAPXref
ProclInsertCollAssociation
ProclInsertCollBrowseXref
ProclInsertCollCampaignXref
ProclInsertCollContactXref
ProclInsertCollections
ProclInsertCollFloatInfoContent
ProclInsertCollGranuleXref
ProclInsertCollInstrXref
ProclInsertCollIntInfoContent
ProclInsertCollPlatformXref
ProclInsertCollReview
ProclInsertCollSensorXref
ProclInsertCollStorageMedium
ProclInsertCollStrngInfoContent
ProclInsertCollVertSpatialDomn
ProclInsertCollURLInfo
ProclInsertCollZoneIdentifier
ProclInsertContact
ProclInsertContactAddress
ProclInsertContactOrganizations
ProclInsertContactPersons
ProclInsertCSDTDescription
ProclInsertDAP
ProclInsertDAPFileStorage
ProclInsertDepthResolution
ProclInsertDictionaryAttribute

(Cont'd)

Procedure Name
ProclInsertDictionaryContent
ProclInsertDictionaryRule
ProclInsertDisciplineKeywords
ProclInsertDiscontMulti
ProclInsertECSPParameterKeywords
ProclInsertEmailAddress
ProclInsertESDTConfiguredType
ProclInsertEvent
ProclInsertFileStorage
ProclInsertGranuleAnalysisXref
ProclInsertGranuleCampaignXref
ProclInsertGranuleInstrmntXref
ProclInsertGranuleLocality
ProclInsertGranulePlatformXref
ProclInsertGranuleReview
ProclInsertGranules
ProclInsertGranuleSensorXref
ProclInsertGranuleVersions
ProclInsertGrFloatInfoContent
ProclInsertGrIntInfoContent
ProclInsertGrPathRow
ProclInsertGrProdSpecific
ProclInsertGrSensCharacteristic
ProclInsertGrStorageMedium
ProclInsertGrStringInfoContent
ProclInsertInputGranule
ProclInsertInstrument
ProclInsertInstrumentChar
ProclInsertLocality
ProclInsertMeasuredParameter
ProclInsertMultiDateTime
ProclInsertMultTypeCollection
ProclInsertNotifierQEntry
ProclInsertOperationMode
ProclInsertOrbitCalcSpatial
ProclInsertOrbitCalcSpatialDom
ProclInsertParmToTableVector
ProclInsertPersonOrgXref
ProclInsertPGEGroup
ProclInsertPHFileStorage

(Cont'd)

Procedure Name
ProclInsertPhysicalParameters
ProclInsertPlanarCoordSys
ProclInsertPlatform
ProclInsertPlatformChar
ProclInsertPlatInstCode
ProclInsertProcessingHistory
ProclInsertProcessingQA
ProclInsertQAFileStorage
ProclInsertQaGranule
ProclInsertQaGranuleXref
ProclInsertQaQualityGranuleXref
ProclInsertQualityTextComment
ProclInsertRangeDateTime
ProclInsertRegPeriodic
ProclInsertReqDomain
ProclInsertRequest
ProclInsertSensor
ProclInsertSensorCharacteristic
ProclInsertSequenceCount
ProclInsertSingleDateTime
ProclInsertSingleDateTimeInMPd
ProclInsertSpatial
ProclInsertSpatialCoord
ProclInsertSpatialKeyword
ProclInsertSSAPComponent
ProclInsertSSAPComponentAPVer
ProclInsertSSAPFileStorage
ProclInsertTelephoneNumbers
ProclInsertTemporal
ProclInsertTemporalKeyword
ProclInsertTemporalSize
ProclInsertUninterpretedData
ProclInsertUserCommentDocument
ProclInsertValidationDocument
ProclInsertVertSpatialDomain
ProclInsertXAR
ProcKeyDependency
ProcKeyDependencyCount
ProcLock
ProcLogDeleteNotifierQEntry

(Cont'd)

Procedure Name
ProcMoveESDTGranules
ProcNullInputPointerCleanUp
ProcNumOfObjects
ProcOperatorConv
ProcOperatorConvCount
ProcPhysicalDelete
ProcPhysicalDeleteAlgorithmPkg
ProcPhysicalDeleteBrowse
ProcPhysicalDeleteDAP
ProcPhysicalDeleteGranules
ProcPhysicalDeleteFmStaging
ProcPhysicalDeleteLock
ProcPhysicalDeletePH
ProcPhysicalDeleteQA
ProcPhysicalDeleteSSAPC
ProcProcessACDFALogicalDelete
ProcProcessACLogicalUnDelete
ProcProcessAPDFALogicalDelete
ProcProcessAPLogicalUnDelete
ProcProcessAssociateLDDetail
ProcProcessAssociateLDelete
ProcProcessAssociateLUnDDetail
ProcProcessAssociateLUnDelete
ProcProcessBRDFALogicalDelete
ProcProcessBRLogicalUnDelete
ProcProcessDPDFALogicalDelete
ProcProcessDPLLogicalUnDelete
ProcProcessPHDFALogicalDelete
ProcProcessPHLogicalUnDelete
ProcProcessQADFALogicalDelete
ProcProcessQALogicalUnDelete
ProcProcessSCDFA
ProcProcessSCDFALogicalDelete
ProcProcessSCLogicalDelete
ProcProcessSCLogicalUnDelete
ProcProcessSCUnDFA
ProcProcessSCUnDFALUnDelete
ProcRemoveRequestBetweenTime
ProcRemoveRequestByTime
ProcRmStagingFmDeleted

(Cont'd)

Procedure Name
ProcSetESDTState
ProcSiRequestCleanUp
ProcUnloadList
ProcUnloadListCount
ProcUnlock
ProcUnDeleteAssociatedGranules
ProcUpdateAdditionalAttr
ProcUpdateAlgorithmPackage
ProcUpdateAnalysisSource
ProcUpdateBrowse
ProcUpdateCampaign
ProcUpdateChecksum
ProcUpdateCollections
ProcUpdateContactOrg
ProcUpdateContactPersons
ProcUpdateDAP
ProcUpdateDLLFileName
ProcUpdateDisciplineKeywords
ProcUpdateESDTConfiguredType
ProcUpdateGranules
ProcUpdateInstrument
ProcUpdatePlatform
ProcUpdateProcHistLink
ProcUpdateProcessingHistory
ProcUpdateQAGranules
ProcUpdateReqState
ProcUpdateSSAPComponent
ProcUpdateSensor
ProcUpdateSequence
ProcUpdateSequenceCount
ProcUpdateSpatialSearchType
ProcUpdateTemporalSize
ProcUpdateUnlinkProcHistLink
ProcUpdLgIDelAlgorithmPackage
ProcUpdLgIDelBrowseMetadata
ProcUpdLgIDelFileStorage
ProcUpdLgIDelDAP
ProcUpdLgIDelGranuleMetadata
ProcUpdLgIDelProcHistory
ProcUpdLgIDelQaGranule

(Cont'd)

Procedure Name
ProcUpdLglDelSSAPC
ProcUpdUndelAlgorithmPackage
ProcUpdUndelBrowseMetadata
ProcUpdUndelFileStorage
ProcUpdUndelGranuleMetadata
ProcUpdUndelProcHistory
ProcUpdUndelQaGranule
datawarning
logdump
logwarning

3.2 Flat File Usage

A flat file is an operating system file that is written and subsequently read, generally independent of other files that exist, and usually static in nature. There are cases when the implementation of persistent data is better suited to a flat file than to a database (e.g., system configuration data, external interface data). SDSRV Subsystem file usage is detailed in this section via file, block, field, and domain definitions.

3.2.1 Files Descriptions

A summary listing of the files in the SDSRV Subsystem is given in Table 3-167 together with a brief description of the file usage. Many different record formats are used in ECS including ODL, HDF, HDF EOS, block, fixed length, variable length, etc.

Table 3-167. Flat File Descriptions (1 of 3)

File Name	File Type	Record Format	File Description
EcDsScienceDataServer.ALOG. CCYYMMDDHHMMSS (where CC=century, YY=year, MM=month, DD=day, HH=hour,MM=minutes, SS=seconds. All 2 digit integers).	Unix flat file	Variable length	Main Science Data Server output log file. Contains informational, warning, and error messages. Each message has a date and time stamp. Always produced
EcDsScienceDataServerDebug.log.CC YYMMDDHHMMSS	Unix flat file	Variable length	Optional debug log file. Setup in Science Data Server configuration file. Contains messages showing server activity at key points in processing. Includes executed SQL, DCE information, streamed metadata.
EcDsScienceDataServer.ACFG	Unix flat file	Variable length	Science Data Server Application Configuration Metrics file. Describes installation configuration information.
EcDsScienceDataServer.CFG	Unix flat file	Variable length	Science Data Server runtime configuration file. Contains configurable information needed at system start-up for both COTS and custom software.
EcDsScienceDataServer.PCFG	Unix flat file	Variable length	Science Data Server Program Configuration file. Contains Program configuration metrics and process performance metrics configuration data.
EcDsScienceDataServerClient.CFG	Unix flat file	Variable length	Science Data Server Client configuration file.

Table 3-167. Flat File Descriptions (2 of 3)

File Name	File Type	Record Format	File Description
EcDsSdSrvGui.CFG	Unix flat file	Variable length	Science Data Server GUI utility configuration file.
EcDsCIMuQaMetadataUpdate.CFG	Unix flat file	Variable length	Science Data Server QA metadata update utility configuration file.
EcDsGranuleDelete.CFG	Unix flat file	Variable length	Science Data Server granule delete utility configuration file.
EcDsSCLI.CFG	Unix flat file	Variable length	Science Data Server Command Line Interface configuration file.
EcDsHdfEosServer_<N>.ALOG. CCYYMMDDHHMMSS (where CC=century, YY=year, MM=month, DD=day, HH=hour,MM=minutes, SS=seconds. All 2 digit integers).	Unix flat file	Variable length	Main HDF EOS Server output log file. Contains informational, warning, and error messages. Each message has a date and time stamp. There may be multiple HDF EOS Servers configured and each one has its own log file. Always produced
EcDsHdfEosServer_<N>Debug.log.CC YYMMDDHHMMSS	Unix flat file	Variable length	Optional debug log file. Setup in Hdf Eos Server configuration file. Contains messages showing server activity at key points in processing. There may be multiple HDF EOS Servers configured and each one has its own log file.
EcDsHdfEosServer_<N>.CFG	Unix flat file	Variable length	Hdf Eos Server runtime configuration file. Contains configurable information needed at system start-up for both COTS and custom software. There may be multiple HDF EOS Servers configured and each one has its own configuration file.
EcDsHdfEosServer_<N>.PCFG	Unix flat file	Variable length	Hdf Eos Server Program Configuration file. Contains Program configuration metrics and process performance metrics configuration data. There may be multiple HDF EOS Servers configured and each one has its own program configuration file.
DsESDTCollectionTemplate.desc	Unix flat file	Variable length	Used to validate ESDTs upon installation. Descriptor Template.

Table 3-167. Flat File Descriptions (3 of 3)

File Name	File Type	Record Format	File Description
DsESDT<sub-dir name><Shortname>.<VersionID>.desc (sub-dir is name of subdirectory used to store Descriptors)	Unix flat file	Variable length	Uniquely named ESDT file descriptors. Describe collection level metadata for SDSRV installation.
LibDsESDT<sub-dir name><ShortName>.<VersionID>Sh.so	ELF 32-bit MSB dynamic lib SPARC Version 1, dynamically linked	Dynamic Link Library (DLL)	Provides generic to ESDT specific processing capability to SDSRV. These Dynamic Linked Libraries (DLLs) are dynamically linked into the Data Server on an as needed basis.

3.2.2 Block Specifications

Table 3-168 contains brief definitions of each of the flat file block descriptions.

Table 3-168. Flat File Block Descriptions (1 of 4)

File Name	Block Name	Block Description
EcDsScienceDataServer .ALOG.CCYMMDDHH MMSS	N/A	N/A
EcDsScienceDataServer Debug.log.CCYMMDD HHMMSS	N/A	N/A
EcDsScienceDataServer .ACFG	APPLICATION PROGRAM	Denotes Application level parameters. Denotes Program level parameters.

Table 3-168. Flat File Block Descriptions (2 of 4)

File Name	Block Name	Block Description
EcDsScienceDataServer .CFG	General Attributes	SDSRV general description data.
	DCE Related Attributes	Describes SDSRV's relationship to DCE.
	Security Attributes	Contains SDSRV's ACL profile
	Security Database Attributes	Contains ACL Database information
	Server Request Framework and Message Passing Attributes	Server Request Framework (SRF) and Message Passing information.
	DDIST Server Info	Data Distribution Server information
	HDF Server Info	HDF EOS Server information
	DSSSrEnv	Environment variables used by the SDSRV. Sourced at start-up
EcDsScienceDataServer .PCFG	CSS_MP	Server specific parameters for the MSS Deputy Agent.
	APPLICATION	SNMP parameters.
	PROGRAM	MSS configuration metrics.
	PROCESS	MSS performance metrics.
EcDsScienceDataServer Client.CFG	N/A	N/A
EcDsSdSrvGui.CFG	N/A	N/A
EcDsCIMuQaMetadataU pdate.CFG	N/A	N/A
EcDsGranuleDelete.CFG	N/A	N/A
EcDsSCLI.CFG	N/A	N/A

Table 3-168. Flat File Block Descriptions (3 of 4)

File Name	Block Name	Block Description
EcDsHdfEosServer_<N>.ALOG. CCYYMMDDHHMMSS (where CC=century, YY=year, MM=month, DD=day, HH=hour,MM=minutes, SS=seconds. All 2 digit integers).	N/A	N/A
EcDsHdfEosServer_<N>Debug.log.CCYYMMD DHHMMSS	N/A	N/A
EcDsHdfEosServer_<N>.CFG	General Attributes Dce Related Attributes Security Attributes Security Database Attributes Server Request Framework and Message Passing Attributes DSSHrEnv	HDFEOS Server general description data. Describes HDF EOS Server's relationship to DCE. Contains HDF EOS Server's ACL profile. Contains ACL Database information. Server Request Framework (SRF) and Message Passing information. Environment variables used by the HDF EOS Server. Sourced at start-up.
EcDsHdfEosServer_<N>.PCFG	CSS_MP APPLICATION PROGRAM PROCESS	Server specific parameters for the MSS Deputy Agent. SNMP parameters MSS configuration metrics. MSS performance metrics.
DsESDTCollectionTemp late.desc	N/A	N/A

Table 3-168. Flat File Block Descriptions (4 of 4)

File Name	Block Name	Block Description
DsESDT<sub-dir name><Shortname>.<VersionID>.desc (sub-dir is name of subdirectory used to store Descriptors)	N/A	N/A
libDsESDT<sub-dir name><ShortName>.<VersionID>Sh.so	N/A	N/A

3.2.3 Field Specifications

Brief specifications of the fields present within the SDSRV Subsystem flat files are contained in Table 3-169.

Table 3-169. Flat File Field Specifications

File Name/Block Name	Field Name	Data Type	Field Description
EcDsScienceDataServer.ALOG.CCYYMMDDHHMMSS			
EcDsScienceDataServerDebug.log.CCYYMMDDHHMMSS			
EcDsScienceDataServer.ACFG/APPLICATION	MsAg_ID	Quoted string	Application ID. Value - 4000000
	MsAg_Name	Quoted string	Application Name. Value - EcDsScienceDataServer
	MsAg_MajorVersion	Quoted string	Application Major Version. Value - 1
	MsAg_MinorVersion	Quoted string	Application Minor Version. Value - 0
	MsAg_Revision	Quoted string	Application Revision Number. Value - 0
	MsAg_MaintLevel	Quoted string	Application Maintenance Level. Value - 0
	MsAg_Type	Quoted string	Application Type. Value - custom
	MsAg_Contact	Quoted string	Application primary contact. Value - DSS lead
	MsAg_Language	Quoted string	Application language. Value - English
	MsAg_ExecPath	Quoted string	Path to script that starts application. Value - /usr/ecs/<MODE>/CUSTOM/utilities
	MsAg_ExecFile	Quoted string	Script to start application. Value - EcDsScienceDataServerAppStart <MODE>
	MsAg_LogMaxSize	Quoted string	Maximum application log file size in bytes. Value - 1000000

Table 3-169. Flat File Field Specifications (cont'd)

File Name/Block Name	Field Name	Data Type	Field Description
	MsAg_LogLevel	Quoted string	Application Log Level. Value - 0
	MsAg_SubSystem	Quoted string	Application Subsystem name. Value - DSS
	MsAg_MssEventLevel	Quoted string	Mss Event Level. Value - 2
	MsAg_RetrySleep_sec	Quoted string	Number of seconds to sleep in between retrying to connect to the EcMsAgSubAgent server. Value – 86400
	MsAg_InstallTime	Quoted string	Mode install time. Value - <Date>
	MsAg_LogPath	Quoted string	Path to log file. Value - /usr/ecs//<MODE>/CUSTOM/logs
	MsAg_LogFile	Quoted string	Log File name. Value - EcDsScienceDataServer.ALOG
	MsAg_NumOfProgs	Quoted string	Number of Programs in Application. Value - 2
EcDsScienceDataServer.ACFG/PROGRAM	Community	String	Scope of Application. Value - public
	PeerName	Quoted string	Peer Name. Value - cyclops.hitc.com
EcDsScienceDataServer.CFG/General Attributes	Name	String	Name of the SDSRV executable. Value - EcDsScienceDataServer
	ProgramID	Integer	ECS program identifier of the EcDsScienceDataServer. Value - 4000000
	ApplicationID	Integer	ECS application Identifier for the SDSRV application. Value - 4000000
	Site	String	Name of the DAAC site. Value - GSFC.

Table 3-169. Flat File Field Specifications (cont'd)

File Name/Block Name	Field Name	Data Type	Field Description
	SubSysName	String	ECS subsystem name. Value - DSS (Data Server Subsystem).
	MajorVersion	Integer	Major version number of the software release. Value – 1
	MinorVersion	Integer	Minor version number of the software release. Value – 0
	AppLogSize	Integer	Application log size in number of bytes. Value - 1000000
	AppLogLevel	Integer	Application logging level. Value is 0, 1, or 2.
	DebugLevel	Integer	Debug logging level. Value is 0, 1, 2, or 3.
	Release	string	ECS release identifier. Value – B
EcDsScienceDataServer.CFG/DCE Related Attributes	ServerShortName	String	SDSRV DCE name. Value - EcDsScienceDataServer.
	GroupName_1	String	DCE groupname 1. Value - EcDsScienceDataServerG1.
	GroupName_2	String	DCE groupname 2. Value - EcDsScienceDataServerG2.
	GroupName_3	String	DCE groupname 3. Value - EcDsScienceDataServerG3.
	GroupName_4	String	DCE groupname 4. Value – EcDsScienceDataServerG4.
	ProfileName	String	Profile Name. Value - EcDsScienceDataServer
	HostPolicy	String	Host Policy. Value - multiple.
	ServerDescription	String	Server description. Value - This is the EcDsScienceDataServer (Mode: <MODE>).
	NumOfInterfaces	Integer	Number of interfaces. Value - 4.

Table 3-169. Flat File Field Specifications (cont'd)

File Name/Block Name	Field Name	Data Type	Field Description
	oid1_EcDsScienceDataServer<MODE>	String	Value - <uuid>
	oid2_EcDsScienceDataServer<MODE>	String	Value - <uuid>
	oid3_EcDsScienceDataServer<MODE>	String	Value - <uuid>
	oid4_EcDsScienceDataServer<MODE>	String	Value - <uuid>
	oid_EcAgManagaer_<MODE>	String	Value - <uuid>
	ListenThreads	Integer	Number of listen threads. Value - 75.
	Protocol	string	Communications Protocol. Values - TCP/IP, UDP, TCP/IP UDP, Null.
EcDsScienceDataServer.CFG/Security Attributes	KeyFile	String	Unix path and filename for the EcDsScienceDataServer.Keyfile. Value - CUSTOM/security/EcDsScienceDataServer.Keyfile
	PrincipalName	String	Server Principal Name. Value - EcDsScienceDataServer.
	AclDBName	String	Sybase database name of the appropriate ACL database. Value - b_MsgPsnngDB_acl. Currently, this parameter is not being used.
	AppStrtNum	integer	Application Start Number. Value - 12345.

Table 3-169. Flat File Field Specifications (cont'd)

File Name/Block Name	Field Name	Data Type	Field Description
EcDsScienceDataServer.CFG/Security Database Attributes	DBAcIKey	String	Currently, this parameter is not being used. Value - PfaclKey.
	DBLibrary	String	Symbolic name of the database client library for RogueWave DBTools. Currently, this parameter is not being used. Value - Sybase_CT.
	DBServer	String	Sybase SQL server name for the ACL database. Currently, this parameter is not being used. Value - OTIS_SERVER.
	DBLoginName	String	Sybase login name for ACL processing. Currently, this parameter is not being used. Value - acluser.
	DBPassword	String	Sybase login password for ACL processing. Currently, this parameter is not being used.
	DBName	String	Sybase database name of the ACL database. Currently, this parameter is not being used. Value - EcsAcIStorage.
EcDsScienceDataServer.CFG/Server Request Framework And Message Passing Attributes	SRFflag	String	Turns Server Request Framework(SRF) on or off. Value - no.
	Messpassflag	String	Turns Message Passing on or off. Value - no.
	RecUuid	String	UUID needed for SRF.
	RecLogFileName	String	Name of file used to persist received message passing data. Value - b_Rec.
	SendLogFileName	String	Name of file used to persist sending message passing data. If not set there will be no persistence for

Table 3-169. Flat File Field Specifications (cont'd)

File Name/Block Name	Field Name	Data Type	Field Description
	NbrofFTPThr	Integer	message passing. Value - b_Send. Number of FTP threads used by the application. Value - Between 1 and 30.
	FTPFileName	string	Determines persistence with FTP. Value - ftpfilename.
EcDsScienceDataServer.CFG/DDIST Server Information	DDISTGroupName	string	Data Distribution Server info. Value - EcDsDistributionServer.
EcDsScienceDataServer.CFG/DSSSr Env	DSSSrEnv1		This is a group environment variable containing the following environment variables: DSSCONFIG, DSSDLLDIR, DSSSDSRV, DSSSBSRV, DSSEVSRV, DSSDESCDIR, DSSDLLINPUTDIR, DSSDESCINPUTDIR, SDSRV_TEMP_DIR.
	DSSCONFIG	Quoted string	Not Used
	DSSDLLDIR	String	Directory where Science Data Server installs the DLLs. Value - /usr/ecs/<MODE>/CUSTOM/lib/DSS
	DSSSDSRV	String	Server UR for Science Data Server. This parameter is configurable. Default Value – [MDC:DSSSDSRV]
	DSSSBSRV	String	Server UR for Subscription Server. Value – UR:12:EcUrServerUr[:CSSBSRV]
	DSSEVSRV	String	Server UR for Event Server. Value – UR:12:EcUrServerUr[:CSEVSRV]
	DSSDESCDIR	String	Directory where Science Data Server installs the descriptors. Value - /usr/ecs/<MODE>/CUSTOM/cfg/DsESDTDesc
		String	

Table 3-169. Flat File Field Specifications (cont'd)

File Name/Block Name	Field Name	Data Type	Field Description
	DSSDLLINPUTDIR		Directory where Science Data Server will get the DLLs for installation. This directory is configurable. Default Value - /usr/ecs/<MODE>/CUSTOM/lib/ESS
	DSSDESCINPUTDIR	String	Directory where Science Data Server will get the descriptors for installation. This directory is configurable. Default Value - /usr/ecs/<MODE>/CUSTOM/data/ESS
	SDSRV_TEMP_DIR	string	Directory where Science Data Server will create temporary files. Value - /usr/ecs/<MODE>/CUSTOM/temp/DSS
EcDsScienceDataServer.CFG/DSSSrEnv	DSSSrEnv2		This is a group environment variable containing the following environment variables: DSSATTRFILE, DSSCONTFILE, DSSSTMGSTAGEINGSERVERUR, SDSRV_LOCAL_STAGING_DISK, DSSHOULDADVERTISE, DSSNOSTAGINGDISK, DSSNOARCHIVE, URDDICT, SDSRV_MODEDDICT.
	DSSATTRFILE	Quoted string	Not used
	DSSCONTFILE	Quoted string	Not used
	DSSSTMGSTAGEINGSERVERUR	String	Server Key for the Staging Disk Server. This parameter is configurable. Default Value – SGI_<MODE>
	SDSRV_LOCAL_STAGING_DISK	String	Server Key for the Local Staging Disk Server. This Staging Disk Server is used for subsetting. This parameter is configurable. Default Value – SGI_<MODE>

Table 3-169. Flat File Field Specifications (cont'd)

File Name/Block Name	Field Name	Data Type	Field Description
	DSSHOUADVERSTISE	Integer	Turns the interface to the Advertising Server, Data Dictionary, and Subscription Server on and off to allow for the independent testing of ESDT Installation. It should be set to 0 to turn off. Value – 1
	DSSNOSTAGINGDISK	String	Turns the interface to the Staging Disk Server on and off. If this is set to a value, the interface to the Staging Disk will be turned off.
	DSSNOARCHIVE	String	Turns the interface to the Archive Server on and off. If this is set to a value, the interface to the Archive Server will be turned off.
	URDDICT	String	Server UR of the Data Dictionary Server. Value – UR:12:EcUrServerUr[:DMDDICT]
	SDSRV_MODEDICT	string	Mode of the Data Dictionary Server. Value - <MODE>
EcDsScienceDataServer.CFG/DSSSrEnv	DSSSrEnv3		This is a group environment variable containing the following environment variables: DSSMEMORYMONITORLOWSETPOINT, DSSMEMORYMONITORVERYLOWSETPOINT, DSSMEMORYMONITORDEADBAND, DSSMEMORYMONITORRESEVRMEMSIZE, DSSMEMORYMONITORDISABLED FLAG.
	DSSMEMORYMONITORLOWSETPOINT	Integer	Size of reserved memory in MB used by SDSRV when low and normal priority requests should be rejected. This parameter is configurable. Default value – 400
	DSSMEMORYMONITORVERYLOWSETPOINT	Integer	Size of reserved memory in MB used by SDSRV when all requests should

Table 3-169. Flat File Field Specifications (cont'd)

File Name/Block Name	Field Name	Data Type	Field Description
	DSSMEMORYMONITOR DEADBAND	Integer	be rejected. This parameter is configurable. Default value – 450
	DSSMEMORYMONITOR RESEVRMEMSIZE	Integer	Percent of memory use that must change before the memory monitoring state changes. If SDSRV is using 75% of the memory that is reserved for SDSRV, then low priority requests will be rejected. The memory usage must fall to 70% if this parameter is set to 5 before low priority requests will be accepted. This parameter is configurable. Default Value – 5%
	DSSMEMORYMONITOR DISABLEDFLAG	Integer	Size of the memory block in MB that is reserved for the SDSRV process on startup. This parameter is configurable. Default – 550 Flag to enable and disable memory monitoring. If the parameter is set to 0, memory management is enabled. If the parameter is set to 1, memory management is disabled. This parameter is configurable. Default – 0.
EcDsScienceDataServer.CFG/DSSSr Env	DSSSrEnv4		This is a group environment variable containing the following environment variables: RpcClientID, SDSRV_STAGINGDISK_TRY_COUNT, SDSRV_ARCHIVE_TRY_COUNT, SDSRV_DDIS_TRY_COUNT, SDSRV_SUBSCRIPT_SRVR_TRY_COUNT, SDSRV_RETRY_SLEEP_TIME, SDSRV_DB_TRY_COUNT, SDSRV_ACCOUNTABILITY_TRY_COUNT.
	RpcClientID	String	Science Data Server RPC ID. Value – SDSV
	SDSRV_STAGINGDISK_TRY_COUNT	Integer	Number of times to retry connecting to the Staging Disk Server if a

Table 3-169. Flat File Field Specifications (cont'd)

File Name/Block Name	Field Name	Data Type	Field Description
	SDSRV_ARCHIVE_TRY_COUNT	Integer	retryable error is encountered. 0 means to retry forever. Value - 0 Number of times to retry connecting to the Archive Server if a retryable error is encountered. 0 means to retry forever. Value - 0
	SDSRV_DDIST_TRY_COUNT	Integer	Number of times to retry connecting to the Data Distribution Server if a retryable error is encountered. 0 means to retry forever. Value - 0
	SDSRV_SUBSCRIPT_SVR_TRY_COUNT	Integer	Number of times to retry connecting to the Subscription Server. 0 means to retry forever. Value - 0
	SDSRV_RETRY_SLEEP_TIME	Integer	Number of seconds to sleep in between retrying to connect to a server. Value - 60
	SDSRV_DB_TRY_COUNT	Integer	Number of times to try to reconnect to the database. This feature is meant to recover from lost connections and deadlocks. Value - 3
	SDSRV_ACCOUNTABILITY_TRY_COUNT	Integer	Number of times to retry connecting to the User Profile Server. Value - 3
EcDsScienceDataServer.CFG/DSSSrEnv	DSSSrEnv5		This is a group environment variable containing the following environment variables: DSS_NUM_GEN_CATALOGS, SDSRV_CATALOG_CONNECT_INSTRUCTIONS, SDSRV_WAITS_HDF_TIME.
	DSS_NUM_GEN_CATALOGS	Integer	Controls how many DsMdCatalog objects get created within SDSRV on startup. This value has direct impact on the number of SYBASE connections held by SDSRV. This parameter is configurable. Default Value - 15
	SDSRV_CATALOG_CO	String	Controls how the DsMDCatalog

Table 3-169. Flat File Field Specifications (cont'd)

File Name/Block Name	Field Name	Data Type	Field Description
	<p>NECT_INSTRUCTION S</p> <p>SDSRV_WAITS_HDF_TIME</p>	Integer	<p>connects to the database. This parameter has direct impact on the total number of connections made. The value "SybaseAndSQS" causes each DsMdCatalog to create two database connections, one to SQS and one directly to the SYBASE SQL Server. This option doubles the number of connections specified in the DSS_NUM_GEN_CATALOGS, but it offers significant performance gains by using direct SYBASE SQL Server connections when possible. The value "SQSOnly" causes each DsMdCatalog object to create only one database connection. This connection is to the SQS Server. This option requires less total connections, but lacks the performance improvements gained by using the direct SQL Server connections. This parameter is configurable. Default Value – SQSOnly</p> <p>This parameter controls the amount of time to wait (in seconds) for an HDF Server before the request gives up and fails. This parameter is configurable. Default Value - 900</p>
EcDsScienceDataServer.CFG/DSSSrEnv	<p>DSSSrEnv6</p> <p>SDSRV_NUM_INT_SESSION</p>	Integer	<p>This is a group environment variable containing the following environment variables: SDSRV_NUM_INT_SESSION, SDSRV_NUM_HEAVY_SESSION, SDSRV_HEAVY_REQUEST_TYPE, SDSRV_PAUSE_INT_SESSION, SDSRV_STARTUP_SLEEP_TIME, SDSRV_EMAIL_PROFID.</p> <p>Number of concurrent sessions reserved to work off stored Persistent Asynchronous Acquire Requests. This parameter is configurable. Value – 128</p>

Table 3-169. Flat File Field Specifications (cont'd)

File Name/Block Name	Field Name	Data Type	Field Description
	SDSRV_NUM_HEAVY_SESSION	Integer	Number of concurrent sessions reserved to work off Asynchronous Subsetting requests. Value – 3
	SDSRV_HEAVY_REQUEST_TYPE	String	ESDT Short Name of acquire requests that require subsetting. Values – L70R, L70RWRS
	SDSRV_PAUSE_INT_SESSION	Integer	Number of seconds to wait before checking if there are any available sessions for Asynchronous Acquire Requests. Value – 45
	SDSRV_STARTUP_SLEEP_TIME	Integer	Number of seconds to wait before starting to process Asynchronous Acquire Request when the SDSRV is warm started. Value – 30
	SDSRV_EMAIL_PROFILE	string	Name of User that requires a Signal File instead of a Metadata file when acquiring AST_EXP data. This value should be set to the same value that is in the Email Parser Gateway Server. This parameter is configurable. Default Value - EcCsEmailPr
EcDsScienceDataServer.CFG/DSSSrEnv	DSSSrEnv7		This is a group environment variable containing the following environment variables: SDSRV_AUTO_INSPECT_SWITCH , SDSRV_AUTO_INSPECT_LIST, SDSRV_ISOLATION0_LOCATIONS , SDSRV_MD_BATCH_SIZE, SDSRV_MD_USE_BATCH, SDSRV_LOC_MEM_BUF_SIZE, SDSRV_MAX_GRANULES_PER_ACQUIRE.
	SDSRV_AUTO_INSPECT_SWITCH	Integer	Controls whether SDSRV returns commonly inspected metadata attributes as part of the search request. The intent of this feature is to eliminate the RPC associated with the INSPECT service. Turns the SDSRV Auto Inspect feature on and

Table 3-169. Flat File Field Specifications (cont'd)

File Name/Block Name	Field Name	Data Type	Field Description
	SDSRV_AUTO_INSPECT_LIST	String	off. 1 means on. This parameter is configurable. Value – 1
	SDSRV_ISOLATION0_LOCATIONS	String	List of attributes that will automatically be returned to the client on a search if Auto Inspect is activated. Value – BeginningDateTime EndingDateTime productionHistoryId browseGranules CollectionDescriptionClass ECSDDataGranule SpatialDomainContainer AdditionalAttributes
	SDSRV_MD_BATCH_SIZE	Integer	Location set for isolation level 0. Current default is “None” for no dirty reads; other possible locations include “FindIdOnly,” “GetMetadataOnly,” and “FindIdAndGetMetadata,” where dirty reads are allowed in each case
	SDSRV_MD_USE_BATCH	Integer	Size of batch SQL processing, i.e., the number of SQL statements to be executed by the DB via a single RPC call. Value – 10
	SDSRV_LOC_MEM_BUFFER_SIZE	Integer	Flag to enable or disable batch SQL processing. 1 for enabled and 0 for disabled. Value – 1
	SDSRV_MAX_GRANULES_PER_ACQUIRE	Integer	Internal attribute used to control the size of the buffers for storing GIParameters. The unit is byte. Value – 4096
EcDsScienceDataServer.CFG/DSSSrEnv	DSSSrEnv8		This is a group environment variable containing the following environment variables:

Table 3-169. Flat File Field Specifications (cont'd)

File Name/Block Name	Field Name	Data Type	Field Description
	SDSRV_NOTIFIERQ_D ATARETENTIONHOURS	Integer	SDSRV_NOTIFIERQ_DATARETENTIONHOURS SDSRV_NOTIFIERQ_CLEANUPINTERVALSECS SDSRV_REQUEST_DATARETENTIONHOURS SDSRV_REQUEST_CLEANUPINTERVALSECS The number of hours for which notifications are retained before expiring. Value – 48
	SDSRV_NOTIFIERQ_CLEANUPINTERVALSECS	Integer	The interval at which to check the notification queue for expired events to be removed. Value – 3600
	SDSRV_REQUEST_D ATARETENTIONHOURS	Integer	The number of hours for which asynchronous requests are retained before expiring. Value – 48
	SDSRV_REQUEST_CLEANUPINTERVALSECS	Integer	The interval at which to check the asynchronous requests for expired requests to be removed. Value – 3600
EcDsScienceDataServer.CFG/DSSSrEnv	DSSSrEnv_DB		This is a group environment variable containing the following environment variables: DBUSERNAME, DBPASSWDSEED, DBNAME, DBMAXRESULTS, SYBINTERFACES, SDSRV_SYBASE_SERVER, SDSRV_DB_MAX_JOINS
	DBUSERNAME	String	Sybase login of the SDSRV user.
	DBPASSWDSEED	Integer	Seed used to generate Sybase password of the SDSRV Sybase login. Value – 4000000
	DBNAME	String	Sybase database name of the SDSRV metadata database for this server.
	DBMAXRESULTS	String	

Table 3-169. Flat File Field Specifications (cont'd)

File Name/Block Name	Field Name	Data Type	Field Description
	SYBINTERFACES	String	Maximum number of results returned to client from DsDbInterface class. Value – 1500
	SDSRV_SYBASE_SERVER	String	Unix file path location of the Sybase INTERFACES file. Value - tools/sybOCv11.1.1/interfaces
	SDSRV_DB_MAX_JOINS	Integer	Name of the Sybase SQL Server instance used by the SDSRV instance. Maximum number of tables that can be joined on a query. Value – 14
EcDsScienceDataServer.CFG/DSSSrEnv	DSSSrUNIXEnv		This is a group environment variable containing the following environment variables: SYBASE, DSQUERY.
	SYBASE	String	Unix file path of the Home directory of the Sybase SQL Server software. Value - /tools/sybOCv11.1.1
	DSQUERY	string	SQS Instance.
EcDsScienceDataServer.PCFG/PROGRAM	MsAg_ID	Quoted string	Program ID. Value – 4000000
	MsAg_AppID	Quoted string	Application ID. Value - 4000000
	MsAg_ApplicationName	Quoted string	Application Name. Value – EcDsScienceDataServer
	MsAg_Name	Quoted string	Program Name. Value – EcDsScienceDataServer
	MsAg_MajorVersion	Quoted string	Program Major Version. Value – 1
	MsAg_MinorVersion	Quoted string	Program Minor Version. Value – 1
		Quoted	

Table 3-169. Flat File Field Specifications (cont'd)

File Name/Block Name	Field Name	Data Type	Field Description
	MsAg_Revision	string	Program Revision Number. Value – 0
	MsAg_MaintLevel	Quoted string	Program Maintenance Level. Value – 0
	MsAg_Type	Quoted string	Program Type. Value - custom
	MsAg_Contact	Quoted string	Program Primary Contact. Value – DSS Task Lead
	MsAg_Language	Quoted string	Program Language. Value – English
	MsAg_ExecPath	Quoted string	Path to program executable. Value - /usr/ecs/<MODE>/CUSTOM/utilities
	MsAg_ExecFile	Quoted string	Script to start program. Value – EcDsScienceDataServerStart <MODE>
	MsAg_UpdateInterval_sec	Quoted string	Value – 99
	MsAg_AppShutdown_sec	Integer	Value – 20
	MsAg_ProgShutdown_sec	Integer	Value – 15
	MsAg_ProcShutdown_sec	Integer	Value – 10
	MsAg_InstallTime	Quoted string	Program Install Time. Value - <Date>
	MsAg_TimeOut	Quoted string	Value - 0
EcDsScienceDataServer.PCFG/Process	MsAg CPU Utilitization %	Series of bracket delimited	. Value - 500, 300, 100, 400, 200, 150
	MsAg Memory Utilization %	quoted strings.	. Value - 500, 300, 100, 400, 200, 150
	MsAg In RPC counter		. Value - 500, 300, 100, 400, 200,

Table 3-169. Flat File Field Specifications (cont'd)

File Name/Block Name	Field Name	Data Type	Field Description
	MsAg Out RPC counter		150 . Value - 500, 300, 100, 400, 200, 150
	MsAg In RPC Packets counter		. Value - 500, 300, 100, 400, 200, 150
	MsAg Out RPC Packets counter		. Value - 500, 300, 100, 400, 200, 150
	MsAg Number Of Threads integer		. Value - 500, 300, 100, 400, 200, 150
	MsAg Disk IO %		. Value - 500, 300, 100, 400, 200, 150
EcDsScienceDataServerClient.CFG	EcDsScienceDataServer G1	String	Science Data Server DCE groupname 1. Value - G1
	EcDsScienceDataServer G2	String	Science Data Server DCE groupname 2. Value - G2
	EcDsScienceDataServer G3	String	ScienceDataServer DCE groupname 3. Value - G3
	EcDsScienceDataServer G4	String	Science Data Server DCE groupname 4. Value - G4
	Site	String	DAAC name. Value – GSFC
	SubSysName	String	ECS Sub System Name. Value – DSS
	Name	String	Name of the SDSRV Client application – EcDsScienceDataServerClient
	ApplicationID	Integer	ECS application identifier of the EcDsScienceDataServerClient. Value – 1234567
	ProgramID	Integer	ECS program Identifier for the SDSRV Client application. Value – 1234567
	AppLogSize	Integer	SDSRV Client log size. Value -

Table 3-169. Flat File Field Specifications (cont'd)

File Name/Block Name	Field Name	Data Type	Field Description
	AppLogLevel	Integer	1000000 Application Logging level. Value is 0, 1, or 2.
	DebugLevel	Integer	SDSRV Client logging level. Value is 0, 1, 2, or 3.
	MajorVersion	Integer	Major Version. Value - 1
	MinorVersion	Integer	Minor Version. Value – 0
	AppStrtNum	integer	Application Start Number. Value – 12345
EcDsSdSrvGui.CFG	EcDsScienceDataServer G1	String	Science Data Server DCE groupname 1. Value - G1
	EcDsScienceDataServer G2	String	Science Data Server DCE groupname 2. Value - G2
	EcDsScienceDataServer G3	String	ScienceDataServer DCE groupname 3. Value - G3
	EcDsScienceDataServer G4	String	Science Data Server DCE groupname 4. Value - G4
	Site	String	DAAC name. Value – GSFC
	SubSysName	String	ECS Sub System Name. Value – DSS
	Name	String	Name of the SDSRV Client application – EcDsSdSrvGui
	ApplicationID	Integer	ECS application identifier of the EcDsScienceDataServerClient. Value – 4000000
	ProgramID	Integer	ECS program Identifier for the SDSRV Client application. Value – 4000010
		Integer	

Table 3-169. Flat File Field Specifications (cont'd)

File Name/Block Name	Field Name	Data Type	Field Description
	AppLogSize		SDSRV Client log size. Value - 1000000
	AppLogLevel	Integer	Application Logging level. Value is 0, 1, or 2.
	DebugLevel	Integer	SDSRV Client logging level. Value is 0, 1, 2, or 3.
	MajorVersion	Integer	Major Version. Value - 1
	MinorVersion	Integer	Minor Version. Value – 0
	AppStrtNum	Integer	Application Start Number. Value – 12345
	DSSDESCDIR	String	Directory where ESDT descriptors are installed from. Value -- \${ECS_HOME}/\${MODE}/CUSTOM/data/ESS
	DSServerUR	String	Server UR of the SDSRV. Value -- [<cell_name>:DSSDSRV]
EcDsCIMuQaMetadataUpdate.CFG	EcDsScienceDataServer G1	String	Science Data Server DCE groupname 1. Value - G1
	EcDsScienceDataServer G2	String	Science Data Server DCE groupname 2. Value - G2
	EcDsScienceDataServer G3	String	ScienceDataServer DCE groupname 3. Value - G3
	EcDsScienceDataServer G4	String	Science Data Server DCE groupname 4. Value - G4
	Site	String	DAAC name. Value – GSFC
	SubSysName	String	ECS Sub System Name. Value – DSS
	Name	String	Name of the SDSRV Client

Table 3-169. Flat File Field Specifications (cont'd)

File Name/Block Name	Field Name	Data Type	Field Description
	ApplicationID	Integer	application – EcDsCIMuQaMetadataUpdate ECS application identifier of the EcDsScienceDataServerClient. Value – 4000000
	ProgramID	Integer	ECS program Identifier for the SDSRV Client application. Value – 4000013
	AppLogSize	Integer	SDSRV Client log size. Value - 1000000
	AppLogLevel	Integer	Application Logging level. Value is 0, 1, or 2.
	DebugLevel	Integer	SDSRV Client logging level. Value is 0, 1, 2, or 3.
	MajorVersion	Integer	Major Version. Value - 1
	MinorVersion	Integer	Minor Version. Value – 0
	AppStrtNum	Integer	Application Start Number. Value – 12345
	DataFileName	Integer	Obsolete
	STATUSFILEPATH	String	Path to where the QA Update log files will be saved. Value -- /usr/ecs/\$MODE/CUSTOM/temp/DS S
EcDsGranuleDelete.CFG	EcDsScienceDataServer G1	String	Science Data Server DCE groupname 1. Value - G1
	EcDsScienceDataServer G2	String	Science Data Server DCE groupname 2. Value - G2

Table 3-169. Flat File Field Specifications (cont'd)

File Name/Block Name	Field Name	Data Type	Field Description
	EcDsScienceDataServer G3	String	ScienceDataServer DCE groupname 3. Value - G3
	EcDsScienceDataServer G4	String	Science Data Server DCE groupname 4. Value - G4
	Site	String	DAAC name. Value – GSFC
	SubSysName	String	ECS Sub System Name. Value – DSS
	Name	String	Name of the SDSRV Client application – EcDsGranuleDelete
	ApplicationID	Integer	ECS application identifier of the EcDsScienceDataServerClient. Value – 4000000
	ProgramID	Integer	ECS program Identifier for the SDSRV Client application. Value – 4000011
	AppLogSize	Integer	SDSRV Client log size. Value - 1000000
	AppLogLevel	Integer	Application Logging level. Value is 0, 1, or 2.
	DebugLevel	Integer	SDSRV Client logging level. Value is 0, 1, 2, or 3.
	MajorVersion	Integer	Major Version. Value - 1
	MinorVersion	Integer	Minor Version. Value – 0
	AppStrtNum	Integer	Application Start Number. Value – 12345
	MaxGeoidFileLines	Integer	Maximum number of lines (with each line corresponding to a granule) allowed for the Geoid input file. Value – 50

Table 3-169. Flat File Field Specifications (cont'd)

File Name/Block Name	Field Name	Data Type	Field Description
	MaxCollectorSize	Integer	Maximum number of granules the SDSRV CL reference collector can accept. Value – 500
	DSServerUR	String	Server UR of the SDSRV. Value -- [<cell_name>:DSSDSRV]
	EXCLUDED_GRANULES	String	Landsat granules not to be deleted by the Granule Delete utility. Value -- L70R L70RF1 L70RF2 L70RWRS L70RWRS1 L70RWRS2
EcDsSCLI.CFG	EcDsScienceDataServer G1	String	Science Data Server DCE groupname 1. Value - G1
	EcDsScienceDataServer G2	String	Science Data Server DCE groupname 2. Value - G2
	EcDsScienceDataServer G3	String	ScienceDataServer DCE groupname 3. Value - G3
	EcDsScienceDataServer G4	String	Science Data Server DCE groupname 4. Value - G4
	Site	String	DAAC name. Value – RBD, EDC, PVC, etc.
	SubSysName	String	ECS Sub System Name. Value – DSS
	Name	String	Name of the application – EcDsSCLI
	ApplicationID	Integer	ECS application identifier of the EcDsSCLI. Value – 4000000
	ProgramID	Integer	ECS program Identifier for the application. Value – 4000014
	AppLogSize	Integer	The application log size. Value -

Table 3-169. Flat File Field Specifications (cont'd)

File Name/Block Name	Field Name	Data Type	Field Description
	AppLogLevel	Integer	1000000 Application Logging level. Value is 0, 1, or 2.
	DebugLevel	Integer	EcDsSCLI logging level. Value is 0, 1, 2, or 3.
	MajorVersion	Integer	Major Version. Value - 1
	MinorVersion	Integer	Minor Version. Value - 0
	SCLISeniorTransactionID	String	UUID needed for constructing RpciID with tag for SCLI
	AqWithNoCallback	String	Turns the Call back function on and off. If this is set to a value, the Call back will be turned off. Value - 1
EcDsHdfEosServer_<N>.ALOG.CCYYMMDDHHMMSS			
EcDsHdfEosServer_<N>Debug.log.CCYYMMDDHHMMSS			
EcDsHdfEosServer_<N>.CFG/General Attributes	Name	String	Name of the Hdf Eos Server Program. Value - EcDsHdfEosServer_<N>
	ProgramID	Integer	ECS program identifier of the EcDsHdfEosServer. Value - 4000000 + <N>
	ApplicationID	Integer	ECS application Identifier for the SDSRV application. Value - 4000000
	Site	String	Name of the DAAC site. Value - GSFC.
	SubSysName	String	ECS subsystem name. Value - DSS (Data Server Subsystem).
	MajorVersion	Integer	Major version number of the

Table 3-169. Flat File Field Specifications (cont'd)

File Name/Block Name	Field Name	Data Type	Field Description
	MinorVersion	Integer	software release. Value – 1
			Minor version number of the software release. Value – 0
	AppLogSize	Integer	Application log size in number of bytes. Value - 1000000
	AppLogLevel	Integer	Application logging level. Value is 0, 1, or 2.
	DebugLevel	Integer	Debug logging level. Value is 0, 1, 2, or 3.
	Release	string	ECS release identifier. Value – B
EcDsHdfEosServer_<N>.CFG/DCE Related Attributes	ServerShortName	String	HDF EOS Server DCE name. Value – EcDsHdfEosServer_<N>
	GroupName1	String	DCE groupname 1. Value - EcDsHdfEosServer_<N>_G1
	GroupName2	String	DCE groupname 2. Value - EcDsHdfEosServer_<N>_G2
	GroupName3	String	DCE groupname 3. Value - EcDsHdfEosServer_<N>_G5
	HostPolicy	String	Host Policy. Value - multiple.
	ServerDescription	String	Server description. Value - This is the EcDsHdfEosServer_<N>
	ServerObjSerial	integer	Value - 1
	NumOfInterfaces	Integer	Number of interfaces. Value - 4.
	oid_EcDsHdfEosServer_<N>_Obj1_<MODE>	String	Value - <uuid>
	oid_EcDsHdfEosServer_<N>_Obj2_<MODE>	String	Value - <uuid>

Table 3-169. Flat File Field Specifications (cont'd)

File Name/Block Name	Field Name	Data Type	Field Description
	oid_EcDsHdfEosServer_<N>_Obj3_<MODE>	String	Value - <uuid>
	oid_EcAgManagaer_<MODE>	String	Value - <uuid>
	ListenThreads	Integer	Number of listen threads. Value - 2
	Protocol	string	Communications Protocol. Values - TCP/IP, UDP, TCP/IP UDP, Null.
EcDsHdfEosServer_<N>.CFG/Security Attributes	KeyFile	String	Unix path and filename for the EcDsHdfEosServer_<N>.Keyfile. . Value - CUSTOM/security/EcDsHdfEosServer_<N>.Keyfile
	PrincipalName	String	Server Principal Name. Value – EcDsHdfEosServer_<N>
	AcldbName	String	Sybase database name of the appropriate ACL database. Value - b_MsgPsngDB_acl.
	AppStrtNum	integer	Application Start Number. Value - 12345.
EcDsHdfEosServer_<N>.CFG/Security Attributes	DBAcKey	String	Value - PFAclKey.
	DBLibrary	String	Symbolic name of the database client library for RogueWave DBTools.This parameter is currently not used. Value - Sybase_CT.
	DBServer	String	Sybase SQL server name for the ACL database. This parameter is currently not used. Value - OTIS_SERVER.
	DBLoginName	String	Sybase login name for ACL processing. This parameter is currently not used. Value - acluser.
	DBPassword	String	Sybase login password for ACL processing. This parameter is

Table 3-169. Flat File Field Specifications (cont'd)

File Name/Block Name	Field Name	Data Type	Field Description
	DBName	String	currently not used. Sybase database name of the ACL database. This parameter is currently not used. Value - EcsAclStorage.
	UpdateAcTime	integer	How often (in seconds) updates to the ACL information are processed. Value - 3600.
EcDsHdfEosServer_<N>.CFG/Server Request Framework and Message Passing Attributes	SRFflag	String	Turns Server Request Framework(SRF) on or off. Value - no.
	Messpassflag	String	Turns Message Passing on or off. Value – no.
	RecUuid	String	UUID needed for SRF.
	RecLogFileNames	String	Name of file used to persist received message passing data. Value - b_Rec.
	SendLogFileNames	String	Name of file used to persist sending message passing data. If not set there will be no persistence for message passing. Value - b_Send.
	NbrofFTPThr	Integer	Number of FTP threads used by the application. Value - Between 1 and 30.
	FTPFileName	string	Determines persistence with FTP. Value - ftpfilename.
EcDsHdfEosServer_<N>/DSSHrEnv	DSSHrEnv		This is a group environment variable containing the following environment variables: RpcClientID, HDFEOS_RESTART_ABSOLUTE_MEMORY, HDFEOS_RESTART_RELATIVE_MEMORY, HDFEOS_RESTART_LOCAL_DIR, HDFEOS_STAGINGDISK_TRY_COUNT, HDFEOS_RETRY_SLEEP_TIME

Table 3-169. Flat File Field Specifications (cont'd)

File Name/Block Name	Field Name	Data Type	Field Description
	RpcClientID	String	HDF EOS Server RPC Client ID. Each instance of the server will have a unique value.
	HDFEOS_RESTART_ABSOLUTE_MEMORY	Integer	Sets the maximum memory that a HDF EOS Server can consume for all requests during the lifetime of the server. This parameter is configurable. Default Value - 150000000
	HDFEOS_RESTART_RELATIVE_MEMORY	Integer	Sets the maximum memory that a HDF EOS Server can consume for a single request. This parameter is configurable. Default value – 20000000
	HDFEOS_RESTART_LOCAL_DIR	String	Directory path to the HDF EOS Server executable. This parameter is configurable. Default Value - \${ECS_HOME}/<MODE>/CUSTOM/bin/DSS
	HDFEOS_STAGINGDISK_TRY_COUNT	Integer	Number of times to retry connecting to the Staging Disk Server if a retryable error is encountered. Value – 0
	HDFEOS_RETRY_SLEEP_TIME	Integer	Number of seconds to sleep in between retrying to connect to a server. Value – 60
EcDsHdfEosServer_<N>/DSSStagEnv	DSSStagEnv		This is a group environment variable containing the following environment variables: OUTPUTFILESIZERATIO, MCFFFILESIZERATIO
	OUTPUTFILESIZERATIO	Float	Value – 1.0
	MCFFFILESIZERATIO	float	Value – 0.2

Table 3-169. Flat File Field Specifications (cont'd)

File Name/Block Name	Field Name	Data Type	Field Description
EcDsHdfEosServer_<N>/DsCsEnv	DsCsEnv		This is a group environment variable containing the following environment variables: SYBASE, SYBINTERFACES.
	SYBASE		This parameter is configurable. Default Value - /tools/syb0Cv11.1.0
	SYBINTERFACES		This parameter is configurable. Default Value - /tools/sybOCv11.1.0/interfaces

3.2.4 Domain Definitions

Domain definitions specify the data type and valid content of fields within a file (e.g., specific values for a limited set of data, ranges of numeric data, units of measure for applicable data). This information is generally used by software to edit incoming data for validity prior to writing or changing data within the file. Use of domain values in updating (adding and changing) records within files preserves the integrity of the data within the file. The domain definitions for the SDSRV Subsystem are presented in Table 3-170.

Table 3-170. Flat File Domain Definitions (1 of 2)

File Name/Block Name	Field Name	Domain Description
EcDsScienceDataServer.ALOG.CCYMMDDHHMMS/ S/ N/A		5 digit integer 1 digit integer string. Value- DsSrSdsrvmainStartSrSdsrv String. 2 digit integer datetime. Format- 05/15/98 10:40:42
EcDsScienceDataServerDebug.log.CCYMMDDHHMSS/ N/A		Variable Message Text For SDSRV debug code. Describes state of Processing at key points in code. Value- Dss EcDsScienceDataServer Server Debug log on texas starting on Mon Apr 13

Table 3-170. Flat File Domain Definitions (2 of 2)

File Name/Block Name	Field Name	Domain Description
EcDsScienceDataServer.ACFG/ APPLICATION PROGRAM EcDsScienceDataServer.CFG/ General Attributes DCE RELATED ATTRIBUTES SECURITY ATTRIBUTES DATABASE ATTRIBUTES SERVER REQUEST FRAMEWORK AND MESSAGE PASSING FLAGS MESSAGE PASSING ATTRIBUTES HDF server info DSSSrEnv2 EcDsScienceDataServer.PCFG/ CSS_MP APPLICATION PROGRAM PROCESS EcDsScienceDataServerClient.CFG EcDsScienceDataServer.ACFG <ShortName>,<VersionID>.evt DsEsDTCollectionTemplate.desc DsESDT <sub-dir name><ShortName>,<VersionID>,desc LibDsEsdt<sub-dir name><ShortName>,<VersionID>Sh.so		

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4. Performance and Tuning Factors

4.1 Indexes

An index provides a means of locating a row in a database table based on the value of a specific column(s), without having to scan all data in the table. When properly implemented, indexes can significantly decrease the time it takes to retrieve data, thereby increasing performance. Sybase allows the definition of two types of indexes, clustered and non-clustered.

In a clustered index, the rows in a database table are physically stored in sequence-determined by the index. Clustered indexes are particularly useful, when the data is frequently retrieved in sequential order. Only one clustered index may be defined per table.

Non-clustered indexes differ from their clustered counterpart, in that, data is not physically stored in sorted order—newly added rows are stored at the end of the related database table.

A key of the types of indexes found in SDSRV is provided in Table 4-1 Index Type Key. A list a description of each of the defined indexes is given in Table 4-2 Index List.

Table 4-1. Index Type Key

Index Type Key	Description
PK	Primary Key
FK	Foreign Key
U	Unique - Only one for the column code combination
C	Clustered or non-clustered index
Sort	ASC (ascending) or DESC (descending) order

Table 4-2. Index List (1 of 7)

Table Name	Index Name	PK	FK	U	C
DsMdGrEventHistory	GrEH_idx1	No	No	Yes	No
DsMdGrEventDomain	PK_DSMDGREVENTDOMAIN	Yes	No	Yes	No
DsMdGrEventHistory	FK_DSMDGREVENTHISTORY	No	Yes	No	No
DsMdGrEventHistory	xDsMdGrEventHistory	No	No	No	Yes
DsMdGrParamUpdHistory	xDsMdGrParamUpdHistory	No	No	No	Yes
DsBtNotifierQueue	PK_DSBTNOTIFIERQUEUE	Yes	No	Yes	Yes
DsDeDictionaryAttribute	PK_DSDBDICTIONARYATTRIBUTE	Yes	No	Yes	Yes
DsDeDictionaryAttribute	xDsDeDictionaryAttribute	No	No	Yes	No
DsDeDictionaryContent	PK_DSDBDICTIONARYCONTENT	Yes	No	Yes	Yes
DsDeDictionaryContent	xDsDeDictionaryContent	No	No	Yes	No
DsDeDictionaryRule	PK_DSDBDICTIONARYRULE	Yes	No	Yes	Yes
DsDeECSKeywordValid	PK_DSDEECSKEYWORDVALIDS	Yes	No	Yes	Yes
DsDeEvent	PK_DSDEEVENTS	Yes	No	Yes	Yes
DsDeEvent	xDsDeEvent	No	No	Yes	No
DsGeESDTConfiguredType	PK_DSGEESDTCONFIGUREDTYPE	Yes	No	Yes	Yes
DsMdAdditionalAttributes	PK_DSMDADDITIONALATTRIBUTES	Yes	No	Yes	Yes
DsMdAdditionalAttributes	xDsMdAdditionalAttributes	No	No	Yes	No
DsMdAlgorithmPackage	PK_DSMDALGORITHMPACKAGE	Yes	No	Yes	Yes
DsMdAlgorithmPackage	xDsMdAlgorithmPackageDate	No	No	No	No
DsMdAlgorithmPackage	xDsMdAlgorithmPackageNameVers	No	No	Yes	No
DsMdAlgorithmPkgFileStorage	PK_DSMDALGORITHMPKGFILESTORAGE	No	No	Yes	Yes
DsMdAlgorithmPkgFileStorage	xDsMdAlgorithmPkgFileStorage	No	No	No	No
DsMdAltitudeResolution	PK_DSMDALTITUDERESOLUTION	Yes	No	Yes	Yes
DsMdAnalysisSource	PK_DSMDANALYSISSOURCE	Yes	No	Yes	Yes
DsMdAnalysisSource	xDsMdAnalysisSource	No	No	Yes	No
DsMdAncillaryInput	PK_DSMDANCILLARYINPUT	Yes	Yes	Yes	Yes
DsMdApContactXref	PK_DSMDAPCONTACTXREF	Yes	No	Yes	Yes
DsMdApContactXref	xDsMdApContactXref	No	Yes	No	No
DsMdAPSAPComponentXref	PK_DSMDAPSAPCOMPONENTXREF	Yes	No	Yes	Yes
DsMdAPSAPComponentXref	xDsMdAPSAPComponentXrefSsapld	No	Yes	No	No
DsMdAttributeConversion	pk_dsmdattributeconversion	Yes	No	Yes	Yes
DsMdAttributeList	PK_DSMDATTRIBUTELIST	Yes	No	Yes	Yes
DsMdAttributeTableXref	PK_DSMDATTRIBUTETABLEXREF	Yes	No	Yes	Yes
DsMdBaseDependent	pk_dsmdbasedependent	Yes	No	Yes	Yes
DsMdBmgtControlEsds	PK_DsMdBmgtControlEsds	Yes	No	Yes	Yes
DsMdBmgtSpatialEsds	PK_DsMdBmgtSpatialEsds	Yes	No	Yes	Yes
DsMdBmgtWrkTable	PK_DSMDBMGTWRKTABLE	Yes	No	Yes	Yes

Table 4-2. Index List (2 of 7)

Table Name	Index Name	PK	FK	U	C
DsMdBrowse	PK_DSMDDBROWSE	Yes	No	Yes	Yes
DsMdBrowse	xDsMdBrowseDate	No	No	No	No
DsMdBrowseFileStorage	PK_DSMDDBROWSEFILESTORAGE	No	No	Yes	Yes
DsMdBrowseFileStorage	xDsMdBrowseFileStorage	No	No	No	No
DsMdBrowseGranuleXref	PK_DSMDDBROWSEGRANULEXREF	Yes	No	Yes	Yes
DsMdBrowseGranuleXref	xDsMdBrowseGranuleXref	No	No	No	No
DsMdCampaign	PK_DSMDCAMPAIGN	Yes	No	Yes	Yes
DsMdCampaign	xDsMdCampaign	No	No	Yes	No
DsMdCksumMigration	PK_DSMDCKSUMMIGRATION	Yes	No	Yes	Yes
DsMdChecksumOrigins	PK_DSMDCHECKSUMORIGINS	Yes	No	Yes	Yes
DsMdChecksumTypes	PK_DSMDCHECKSUMTYPES	Yes	No	Yes	Yes
DsMdCksumMigration	PK_DSMDCKSUMMIGRATION	Yes	Yes	Yes	Yes
DsMdCIBoundingRectangle	PK_DSMDCLBOUNDINGRECTANGLE	Yes	Yes	Yes	Yes
DsMdCICircle	PK_DSMDCLCIRCLE	Yes	Yes	Yes	Yes
DsMdCIGPolygon	PK_DSMDCLGPOLYGON	Yes	Yes	Yes	Yes
DsMdTemporalSize	PK_DSMDTEMPORALSIZE	Yes	No	Yes	Yes
DsMdCIPoint	PK_DSMDCLPOINT	Yes	Yes	Yes	Yes
DsMdCollBrowseXref	PK_DSMDCOLLBROWSEXREF	Yes	No	Yes	Yes
DsMdCollDisciplineKeywordXref	PK_DSMDCOLLDISCIPLINEKEYWORDXR	Yes	No	Yes	Yes
DsMdCollectionAddnlAttribsXref	PK_DSMDCOLLECTIONADDNLATTRIBSX	Yes	No	Yes	Yes
DsMdCollectionAddnlAttribsXref	xDsMdCollectionAddnlAttribsXrf	No	No	No	No
DsMdCollectionAnalysisXref	PK_DSMDCOLLECTIONANALYSISXREF	Yes	No	Yes	Yes
DsMdCollectionAPXref	PK_DSMDCOLLECTIONAPXREF	Yes	Yes	Yes	Yes
DsMdCollectionAPXref	idx1_dsmdcollectionapxref	No	Yes	Yes	No
DsMdCollectionAssociation	PK_DSMDCOLLECTIONASSOCIATION	Yes	Yes	Yes	Yes
DsMdCollectionCampaignXref	PK_DSMDCOLLECTIONCAMPAIGNXREF	Yes	No	Yes	Yes
DsMdCollectionContactXref	PK_DSMDCOLLECTIONCONTACTXREF	Yes	No	Yes	Yes
DsMdCollectionDocumentXref	PK_DSMDCOLLECTIONGRANULEXREF	Yes	No	Yes	Yes
DsMdCollectionDocumentXref	xDsMdCollectionDocumentXref	No	No	No	No
DsMdCollectionGranuleXref	PK_DSMDCOLLECTIONGRANULEXREF	Yes	Yes	Yes	Yes
DsMdCollectionGranuleXref	xDsMdCollectionGranuleXref	No	Yes	No	No
DsMdCollectionInstrumentXref	PK_DSMDCOLLECTIONINSTRUMENTXRE	Yes	No	Yes	Yes
DsMdCollectionPlatformXref	PK_DSMDCOLLECTIONPLATFORMXREF	Yes	No	Yes	Yes
DsMdCollections	PK_DSMDCOLLECTIONS	Yes	No	Yes	Yes
DsMdCollections	xDsMdCollectionsSnVid	No	No	Yes	No
DsMdCollections	xDsMdCollectionssubType	No	No	Yes	No
DsMdCollectionSensorXref	PK_DSMDCOLLECTIONSENSORXREF	Yes	No	Yes	Yes
DsMdCollFloatInfoContent	PK_DSMDCOLLFLOATINFOCONTENT	Yes	No	Yes	Yes
DsMdCollFloatInfoContent	xDsMdCollFloatInfoContAttrId	No	No	No	No
DsMdCollIntegerInfoContent	PK_DSMDCOLLINTEGERINFOCONTENT	Yes	No	Yes	Yes

Table 4-2. Index List (3 of 7)

Table Name	Index Name	PK	FK	U	C
DsMdCollIntegerInfoContent	xDsMdCollIntInfoContentAttrId	No	No	No	No
DsMdCollReview	PK_DSMDCOLLREVIEW	Yes	No	Yes	Yes
DsMdCollStorageMedium	PK_DSMDCOLLSTORAGEMEDIUM	Yes	No	Yes	Yes
DsMdCollStringInfoContent	PK_DSMDCOLLSTRINGINFOCONTENT	Yes	Yes	Yes	Yes
DsMdCollStringInfoContent	xDsMdCollStringInfoContAttrId	No	Yes	No	No
DsMdCollVerticalSpatialDomain	PK_DSMDCOLLVERTICALSPATIALDOMA	Yes	No	Yes	Yes
DsMdCollURLInfo	PK_DSMDCOLLURLINFO	Yes	Yes	Yes	Yes
DsMdCollZoneIdentifier	PK_DSMDCOLLZONEIDENTIFIER	Yes	No	Yes	Yes
DsMdCommandConversion	pk_dsmdcommandconversion	Yes	No	Yes	Yes
DsMdContact	PK_DSMDCONTACT	Yes	No	Yes	Yes
DsMdContact	xDsMdContactRole	No	No	No	No
DsMdContactAddress	PK_DSMDCONTACTADDRESS	Yes	No	Yes	Yes
DsMdContactOrganizations	PK_DSMDCONTACTORGANIZATIONS	Yes	Yes	Yes	Yes
DsMdContactOrganizations	xDsMdContactOrgName	No	No	No	No
DsMdContactPersons	PK_DSMDCONTACTPERSONS	Yes	Yes	Yes	Yes
DsMdContactPersons	xDsMdContactPersonsLastName	No	No	No	No
DsMdCSDTDescription	PK_DSMDCSDTDESCRIPTION	Yes	No	Yes	Yes
DsMdDAP	PK_DSMDDAP	Yes	No	Yes	Yes
DsMdDAP	xDsMdDAPDEDate	No	No	No	No
DsMdDAPFileStorage	PK_DSMDDAPFILESTORAGE	Yes	No	Yes	Yes
DsMdDAPFileStorage	x DsMdDAPFileStorage	No	No	No	No
DsMdDeletedGranules	PK_DSMDDELETEDGRANULES	Yes	Yes	Yes	Yes
DsMdDeletedGranules	xDsMdDeletedGranulesTime	No	No	No	No
DsMdDeletedGranules	xDsMdDeletedGranulesSNmVid	No	No	No	No
DsMdDepthResolution	PK_DSMDDEPTHRESOLUTION	Yes	No	Yes	Yes
DsMdDisciplineKeywords	PK_DSMDDISCIPLINEKEYWORDS	Yes	No	Yes	Yes
DsMdDisciplineKeywords	xDsMdDisciplineKeywords	No	No	No	No
DsMdECSPParameterKeywords	PK_DSMDDECSPARAMETERKEYWORDS	Yes	No	Yes	Yes
DsMdECSPParameterKeywords	xDsMdECSPParameterKeywords	No	No	No	No
DsMdEmailAddress	PK_DSMDEMAILADDRESS	Yes	No	Yes	Yes
DsMdEmailAddress	xDsMdEmailAddress	No	No	No	No
DsMdFileStorage	PK_DSMDFILESTORAGE	Yes	No	Yes	Yes
DsMdFileStorage	xDsMdFileStorageintFileName	No	No	No	No
DsMdFileStorage	xDsMdFileStorageUserDataFile	No	No	No	No
DsMdGranuleAnalysisXref	PK_DSMDGRANULEANALYSISXREF	Yes	No	Yes	Yes
DsMdGranuleCampaignXref	PK_DSMDGRANULECAMPAIGNXREF	Yes	No	Yes	Yes
DsMdGranuleInstrumentXref	PK_DSMDGRANULEINSTRUMENTXREF	Yes	No	Yes	Yes
DsMdGranuleLocality	PK_DSMDGRANULELOCALITY	Yes	No	Yes	Yes
DsMdGranulePlatformXref	PK_DSMDGRANULEPLATFORMXREF	Yes	No	Yes	Yes
DsMdGranuleReview	PK_DSMDGRANULEREVIEW	Yes	No	Yes	Yes

Table 4-2. Index List (4 of 7)

Table Name	Index Name	PK	FK	U	C
DsMdGranules	PK_DSMDGRANULES	Yes	No	Yes	No
DsMdGranules	xDsMdGranulesDate	No	No	No	No
DsMdGranules	xDsMdGranulesInsertTime	No	No	No	No
DsMdGranules	xDsMdGranulesPHID	No	Yes	No	No
DsMdGranules	xDsMdGranulesSNmVidEndBeg	No	No	Yes	Yes
DsMdGranules	xDsMdGranulesLGID	No	No	No	No
DsMdGranuleSensorXref	PK_DSMDGRANULESENSORXREF	Yes	No	Yes	Yes
DsMdGranuleVersions	PK_DSMDGRANULEVERSIONS	Yes	No	Yes	Yes
DsMdGrBoundingRectangle	PK_DSMDGRBOUNDINGRECTANGLE	Yes	No	Yes	No
DsMdGrBoundingRectangle	xDsMdGrBoundingRectangle	No	No	Yes	Yes
DsMdGrCircle	PK_DSMDGRCIRCLE	Yes	No	Yes	No
DsMdGrCircle	xDsMdGrCircle	No	No	Yes	Yes
DsMdGrFloatInfoContent	PK_DSMDGRFLOATINFOCONTENT	Yes	No	Yes	Yes
DsMdGrFloatInfoContent	xDsMdGrFloatInfoContent	No	No	Yes	No
DsMdGrGPolygon	PK_DSMDGRGPOLYGON	Yes	No	Yes	No
DsMdGrGPolygon	xDsMdGrPolygon	No	No	Yes	Yes
DsMdGrIntegerInfoContent	PK_DSMDGRINTEGERINFOCONTENT	Yes	No	Yes	Yes
DsMdGrIntegerInfoContent	xDsMdGrIntegerInfoContent	No	No	Yes	No
DsMdGrPathRow	xDsMdGrPathRowPK	Yes	No	Yes	Yes
DsMdGrPathRow	xDsMdGrPathRow	No	No	Yes	No
DsMdGrPoint	PK_DSMDGRPOINT	Yes	No	Yes	No
DsMdGrPoint	xDsMdGrPoint	No	No	No	Yes
DsMdGrSensorCharacteristics	PK_DSMDGRSENSORCHARACTERISTICS	Yes	No	Yes	Yes
DsMdGrStorageMedium	PK_DSMDGRSTORAGEMEDIUM	Yes	No	Yes	Yes
DsMdGrStringInfoContent	PK_DSMDGRSTRINGINFOCONTENT	Yes	Yes	Yes	Yes
DsMdGrStringInfoContent	xDsMdGrStringInfoContentAttrId	No	Yes	No	No
DsMdGrVerticalSpatialDomain	PK_DSMDGRVERTICALSPATIALDOMAIN	Yes	No	Yes	Yes
DsMdIdentifier	PK_DSMDIDENTIFIER	Yes	No	Yes	Yes
DsMdInputGranule_1	PK_DSMDINPUTGRANULE_1	Yes	No	Yes	Yes
DsMdInputGranule_1	xDsMdInputGranuleinputGrgrId	No	No	No	No
DsMdInputGranule_2	PK_DSMDINPUTGRANULE_2	Yes	No	Yes	Yes
DsMdInputGranule_2	xDsMdInputGranuleinputGrgrId	No	No	No	No
DsMdInputGranule_3	PK_DSMDINPUTGRANULE_3	Yes	No	Yes	Yes
DsMdInputGranule_3	xDsMdInputGranuleinputGrgrId	No	No	No	No
DsMdInputGranule_4	PK_DSMDINPUTGRANULE_4	Yes	No	Yes	Yes
DsMdInputGranule_4	xDsMdInputGranuleinputGrgrId	No	No	No	No
DsMdInputGranule_5	PK_DSMDINPUTGRANULE_5	Yes	No	Yes	Yes
DsMdInputGranule_5	xDsMdInputGranuleinputGrgrId	No	No	No	No
DsMdInputGranule_6	PK_DSMDINPUTGRANULE_6	Yes	No	Yes	Yes
DsMdInputGranule_6	xDsMdInputGranuleinputGrgrId	No	No	No	No

Table 4-2. Index List (5 of 7)

Table Name	Index Name	PK	FK	U	C
DsMdInputGranule_7	PK_DSMDINPUTGRANULE_7	Yes	No	Yes	Yes
DsMdInputGranule_7	xDsMdInputGranuleinputGrgrId	No	No	No	No
DsMdInputGranule_8	PK_DSMDINPUTGRANULE_8	Yes	No	Yes	Yes
DsMdInputGranule_8	xDsMdInputGranuleinputGrgrId	No	No	No	No
DsMdInputGranule_9	PK_DSMDINPUTGRANULE_9	Yes	No	Yes	Yes
DsMdInputGranule_9	xDsMdInputGranuleinputGrgrId	No	No	No	No
DsMdInputGranule_10	PK_DSMDINPUTGRANULE_10	Yes	No	Yes	Yes
DsMdInputGranule_10	xDsMdInputGranuleinputGrgrId	No	No	No	No
DsMdInputGranule_11	PK_DSMDINPUTGRANULE_11	Yes	No	Yes	Yes
DsMdInputGranule_11	xDsMdInputGranuleinputGrgrId	No	No	No	No
DsMdInputGranule_12	PK_DSMDINPUTGRANULE_12	Yes	No	Yes	Yes
DsMdInputGranule_12	xDsMdInputGranuleinputGrgrId	No	No	No	No
DsMdInputGranule_13	PK_DSMDINPUTGRANULE_13	Yes	No	Yes	Yes
DsMdInputGranule_13	xDsMdInputGranuleinputGrgrId	No	No	No	No
DsMdInputGranule_14	PK_DSMDINPUTGRANULE_14	Yes	No	Yes	Yes
DsMdInputGranule_14	xDsMdInputGranuleinputGrgrId	No	No	No	No
DsMdInputGranule_15	PK_DSMDINPUTGRANULE_15	Yes	No	Yes	Yes
DsMdInputGranule_15	xDsMdInputGranuleinputGrgrId	No	No	No	No
DsMdInputPointerLocation	PK_DSMDINPUTGRANULELOC	Yes	No	Yes	Yes
DsMdInsertSequence	pk_dsmdoperatorconversion	Yes	No	Yes	Yes
DsMdInstrument	PK_DSMDINSTRUMENT	Yes	No	Yes	Yes
DsMdInstrument	xDsMdInstrument	No	No	Yes	No
DsMdInstrumentCharacteristic	PK_DSMDINSTRUMENTCHARACTERISTI	Yes	No	Yes	Yes
DsMdJoins	PK_DSMDJOINS	Yes	No	Yes	Yes
DsMdKeyDependency	pk_dsmdkeydependency	Yes	No	Yes	Yes
DsMdLocality	PK_DSMDLOCALITY	Yes	No	Yes	Yes
DsMdMeasuredParameter	PK_DSMDMEASUREDPARAMETER	Yes	No	Yes	Yes
DsMdMultipleDateTimePeriod	PK_DSMDMULTIPLDATTIMEPERIOD	Yes	No	Yes	Yes
DsMdMultipleTypeCollection	PK_DSMDMULTIPLETYPECOLLECTION	Yes	No	Yes	Yes
DsMdOperationMode	PK_DSMDOPERATIONMODE	Yes	No	Yes	Yes
DsMdOperatorConversion	pk_dsmdoperatorconversion	Yes	No	Yes	Yes

Table 4-2. Index List (6 of 7)

Table Name	Index Name	PK	FK	U	C
DsMdOrbitCalcSpatialDomain	PK_DSMDORBITCALCSPATIALDOMAIN	Yes	No	Yes	Yes
DsMdOrbitCalcSpatialDomain	xDsMdOrbit_ind	No	No	No	No
DsMdOrbitCalculatedSpatial	PK_DSMDORBITCALCULATEDSPATIAL	Yes	No	Yes	Yes
DsMdOrbitCalculatedSpatial	DsMdOrbitCalcGranuleIdIdx	No	No	No	No
DsMdOrbitPolygons	PK_DSMDORBITPOLYGONS	Yes	No	Yes	No
DsMdOrbitPolygons	xDsMdOrbitPolygons	No	No	Yes	Yes
DsMdParmToTableVector	PK_DSMDPARMTOTABLEVECTOR	Yes	No	Yes	Yes
DsMdPersonOrganizationXref	PK_DSMDPERSONORGANIZATIONXREF	Yes	No	Yes	Yes
DsMdPGEGroup	PK_DSMDPGEGROUP	Yes	No	Yes	Yes
DsMdPlanarCoordinateSystems	PK_DSMDPLANARCOORDINATESYSTEMS	Yes	No	Yes	Yes
DsMdPlatform	PK_DSMDPLATFORM	Yes	No	Yes	Yes
DsMdPlatform	xDsMdPlatform	No	No	Yes	No
DsMdPlatformCharacteristic	PK_DSMDPLATFORMCHARACTERISTIC	Yes	No	Yes	Yes
DsMdPlatInstrCode	PK_DSMDPLATINSTRCODE	Yes	No	Yes	Yes
DsMdProcessingHistory	PK_DSMDPROCESSINGHISTORY	Yes	No	Yes	Yes
DsMdProcessingHistory	xDsMdProcessingHistoryDate	No	No	No	No
DsMdProcessHistFileStorage	PK_DSMDPROCESSHISTFILESTORAGE	Yes	No	Yes	Yes
DsMdProcessHistFileStorage	x DsMdProcessHistFileStorage	No	No	No	No
DsMdProcessingQA	PK_DSMDPROCESSINGQA	Yes	No	Yes	Yes
DsMdProductDbXref	PK_DSMDPRODUCTDBXREF	Yes	No	Yes	Yes
DsMdQaGranule	PK_DSMDQAGRANULE	Yes	No	Yes	Yes
DsMdQaGranule	xDsMdGranuleDate	No	No	No	No
DsMdQaGranuleFileStorage	PK_DSMDQAGRANULEFILESTORAGE	No	No	Yes	Yes
DsMdQaGranuleFileStorage	x DsMdQaGranuleFileStorage	No	No	No	No
DsMdQaGranuleXref	PK_DSMDQAGRANULEXREF	Yes	Yes	Yes	Yes
DsMdQaGranuleXref	xDsMdQaGranuleXref	No	Yes	No	No
DsMdQualityTextComment	PK_DSMDQUALITYTEXTCOMMENT	Yes	No	Yes	Yes
DsMdRangeDateTime	PK_DSMDRANGEDATETIME	Yes	No	Yes	Yes
DsMdRegularPeriodic	PK_DSMDREGULARPERIODIC	Yes	No	Yes	Yes
DsMdSDSRVLookup	PK_DSMDLOOKUP	Yes	No	Yes	Yes
DsMdSensor	PK_DSMDSENSOR	Yes	No	Yes	Yes
DsMdSensor	xDsMdSensor	No	No	Yes	No
DsMdSensorCharacteristic	PK_DSMDSENSORCHARACTERISTIC	Yes	No	Yes	Yes
DsMdSingleDateTime	PK_DSMDSINGLEDATETIME	Yes	No	Yes	Yes
DsMdSpatial	PK_DSMDSPATIAL	Yes	No	Yes	Yes
DsMdSpatialKeyword	PK_DSMDSPATIALKEYWORD	Yes	No	Yes	Yes
DsMdSSAPComponent	PK_DSMDSSAPCOMPONENT	Yes	No	Yes	Yes
DsMdSSAPComponent	xDsMdSSAPComponentDEDate	No	No	No	No
DsMdSSAPComponentAPVersion	PK_DSMDSSAPCOMPONENTAPVERSION	Yes	No	Yes	Yes

Table 4-2. Index List (7 of 7)

Table Name	Index Name	PK	FK	U	C
DsMdSSAPComponentFileStorage	PK_DSMDSSAPCOMPFILESTORAGE	Yes	No	Yes	Yes
DsMdSSAPComponentFileStorage	x DsMdSSAPComponentFileStorage	No	No	No	No
DsMdStagingTable	xDsMdStagingTableIFN	No	No	Yes	Yes
DsMdStagingTable	xDsMdStagingTableSnm	No	No	No	No
DsMdTelephoneNumbers	PK_DSMDTELEPHONENUMBERS	Yes	No	Yes	Yes
DsMdTemporal	PK_DSMDTEMPORAL	Yes	No	Yes	Yes
DsMdTemporalKeyword	PK_DSMDTEMPORALKEYWORD	Yes	No	Yes	Yes
DsMdUnDeletedGranules	PK_DSMDDELETEDGRANULES	Yes	No	Yes	Yes
DsMdUninterpretedData	PK_DSMDUNINTERPRETEDDATA	Yes	No	Yes	Yes
DsMdUnloadList	pk_dsmdunloadlist	Yes	No	Yes	Yes
DsMdUpdateSequence	pk_dsmdupdateseq	Yes	No	Yes	Yes
DsMdUserCommentDocument	PK_DSMDUSERCOMMENTDOCUMENT	Yes	No	Yes	Yes
DsMdValidationDocument	PK_DSMDVALIDATIONDOCUMENT	Yes	No	Yes	Yes
DsMdXAR	PK_DSMDXAR	Yes	No	Yes	Yes
DsSiReqDomain	PK_DSSIREQDOMAIN	Yes	No	Yes	Yes
DsSiRequest	PK_DSSIREQUEST	Yes	No	Yes	No
DsSiRequest	xDsSiRequestrpclD	No	No	Yes	Yes
DsSiRequest	xDsSiRequestPriorityCrTime	No	No	No	No
DsSiAcqBand	PK_DSSIACQBAND	Yes	Yes	Yes	Yes
DsSiAcqPolygon	PK_DSSIACQPOLYGON	Yes	Yes	Yes	Yes
DsSiAcquireCmd	PK_DSSIACQUIRECMD	Yes	No	Yes	Yes
DsSiAcquireCmd	xDsSiAcquireCmdreqldCID	No	No	Yes	No
DsSiAcquireCmdFileInfo	PK_DSSIACQUIRECMDFILEINFO	Yes	Yes	Yes	Yes
DsSiURs	PK_DSSIURS	Yes	Yes	Yes	Yes
DsSiRequestDetails	PK_DSSIREQUESTDETAILS	Yes	No	Yes	No
DsSiRequestDetails	xDsSiRequestDetailsrpclD	No	No	Yes	Yes
DsSiRequestDetails	xDsSiRequestDetailsCrTime	No	No	No	No
DsSiParameters	PK_DSSIPARAMETERS	Yes	Yes	Yes	Yes
DsQAMUTESDTSite	PK_DSQAMUTESDTSITE	Yes	No	Yes	Yes
EcDbDatabaseVersions	PK_ECDBVERSIONS	Yes	No	Yes	Yes
EMSArch	extract_idx3	No	No	No	Yes
EMSArchData	extract_idx2	No	No	No	Yes
EMSArchUpdData	extract_idx	No	No	No	Yes

4.2 Segments

Sybase supports the declaration of segments. A segment is a named pointer to a storage device(s). Segments are used to physically allocate a database object to a particular storage device. Segments defined for the SDSRV and all other subsystem databases are described in Table 4-3.

Table 4-3. Segment Descriptions

Segment	Description
default	Default data segment used if no other segment specified in the create statement.
logsegment	SYSLOGS, Transaction Logs
systemsegment	System tables and indexes.
SDSOPSDAT01	SDSRV OPS mode data segment.
SDSOPSIDX01	SDSRV OPS mode index segment.
SDSTS1DAT01	SDSRV TS1 mode data segment.
SDSTS1IDX01	SDSRV TS1 mode index segment.
SDSTS2DAT01	SDSRV TS2 mode data segment.
SDSTS2IDX01	SDSRV TS2 mode index segment.

4.3 Caches

A cache is a block of memory that is used by Sybase to retain and manage pages that are currently being processed. By default, each database contains three caches:

Data cache – retains most recently accessed data and index pages

Procedure cache – retains most recently accessed stored procedure pages

User transaction log cache – transaction log pages that have not yet been written to disk for each user

The size of each of these default caches is a configurable item which must be managed on a per DAAC basis. These caches may be increased or decreased by the DAAC DBA as needed.

The data cache can be further subdivided into named caches. A named cache is a block of memory that is named and used by the DBMS to store data pages for select tables and/or indexes. Assigning a database table to named cache causes accessed pages to be loaded into memory and retained. The named cache does not need to be allocated to accommodate the entire database table since the DBMS manages the cache according to use. Named caches greatly increase performance by eliminating the time associated for disk input and output (I/O). There are no named caches that are currently defined for the SDSRVSubsystem database. Named caches may be defined as the memory usage of the SDSRV database becomes more well known and the DAACs move into an operational environment. As named caches are defined this portion of the document will be updated.

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5. Database Security

5.1 Initial Users

The database security discussed within this section is bounded to security implementation within the Sybase SQL Server DBMS. A Sybase general approach to security is adopted as illustrated in Figure 5-1.

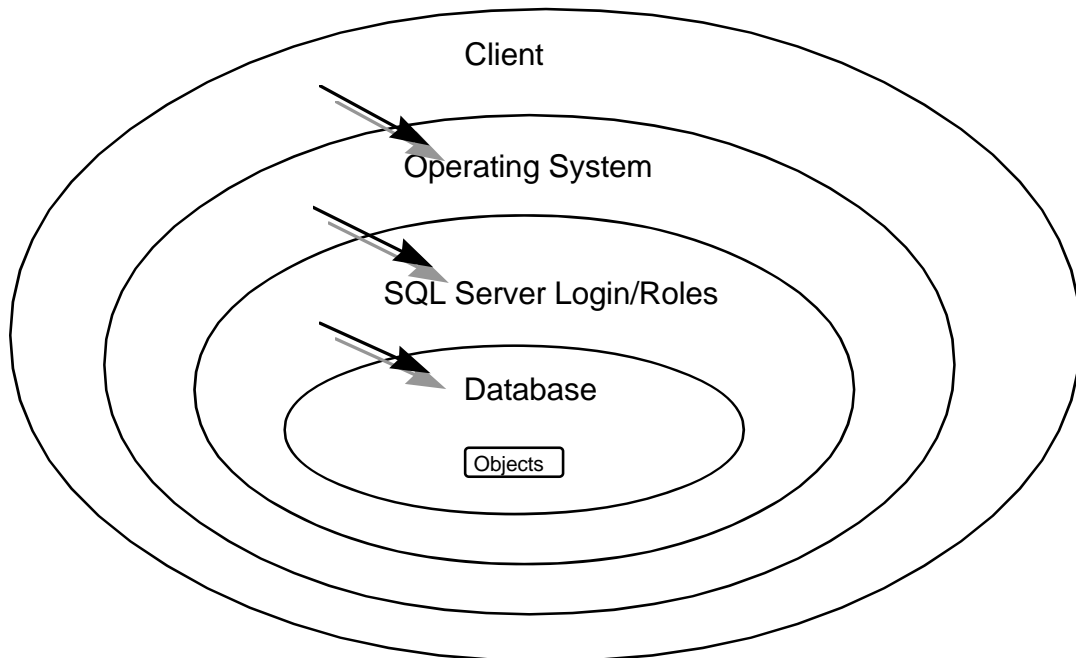


Figure 5-1. Sybase General Approach to SQL Server Security¹

The client (user) requires a SQL Server login to access the DBMS. The login is assigned to a user with certain related permissions for gaining access to particular objects (e.g., database tables, views, commands) within the database. The System Administrator may grant or revoke objects permissions for a login individually or based on defined group or roles.

Groups are a means of logically associating users with similar data access needs. Once a group has been defined, object and command permissions can be granted to that group. A user who is member of a group inherits all of the permissions granted to that group. No groups have been initially defined in the <SUBSYS> Subsystem “default database. The DAACs should define

¹ Reference Sybase Student Guide: *Advanced SQL Server Administration*.

database groups to support the database security requirements of their individual DAACs. Security for local DAAC users should be controlled by assigning each user to the appropriate group.

Roles were introduced in Sybase to allow a structured means for granting users the permissions needed to perform standard database administration activities and also provide a means for easily identifying such users. There are six pre-defined roles that may be assigned to a user. A definition of each of these roles follows, as well as a description of the types of activities that may be performed by each role.

System Administrator (*sa_role*): This role is used to grant a specific user permissions needed to perform standard system administrator duties including:

- installing SQL server and specific SQL server modules
- managing the allocation of physical storage
- tuning configuration parameters
- creating databases

Site Security Officer (*sso_role*): This role is used to grant a specific user the permissions needed to maintain SQL server security including:

- adding server logins
- administrating passwords
- managing the audit system
- granting users all roles except the *sa_role*

Operator (*oper_role*): This role is used to grant a specific user the permissions needed to perform standard functions for the database including:

- dumping transactions and databases
- loading transactions and databases

Navigator (*navigator_role*): This role is used to grant a specific user the permissions needed to manage the navigation server.

Replication (*replication_role*): This role is used to grant a specific user the permissions needed to manage the replication server.

Sybase Technical Support (*sybase_ts_role*): This role is used to grant a specific user the permissions needed to execute database consistency checker (dbcc), a Sybase supplied utility supporting commands that are normally outside of the realm of routine system administrator activities.

The DAACs should review these roles and assign them to the appropriate login and/or groups.

5.2 Login/Group Object Permissions

During initial database installation logins used by the ECS custom code were created and permissions assigned for access to the SDSRV Subsystem database. In addition, special database installation login, sdsrv_role, was created to support database installation needs. For each login, the level of access is limited to that associated with their login, group or assigned group/role. Object Permissions are set within the installation scripts of the SDSRV Subsystem for each object and group/role.

Upon initial installation the following users will have access to SDSRV database. The level of access is limited to that associated with their assigned group and/or role. A complete definition of each of these groups and roles is given below in Table 5-1.

Table 5-1. Logins

Login Name	Default Database	Group/role
EcDsScienceDataServer	EcDsScienceDataServer1	sdsrv
EcDsHdfEosServer	EcDsScienceDataServer1	sdsrv
Sdsrv_role	EcDsScienceDataServer1	sa_role

A specification of the object permissions is contained in Table 5-2. Permissions are identified in Table 5-3.

Table 5-2. Permission Key

Permission	Description
A	All
S	Select
I	Insert
U	Update
D	Delete
E	Execute

Table 5-3. Object Permissions (1 of 7)

Role	Group/SYBASE LOGIN	Object	Permissions Granted					
			A	S	I	U	D	E
None	sa	All	Y					
sa_role	Sdsrv_role	All	Y					
	EMSgroup	Meta						
		EMSProcArchExtract						
		EMSProcArchUpdExtract						
		EMSProcGetMetaDataExtract						
		EMSProcPrepareArchExtract						
	sdsrv	DsBtNotifierQueue						
		DsDeDictionaryAttribute						
		DsDeDictionaryContent						
		DsDeDictionaryRule						
		DsDeECSKeywordValid						
		DsDeEvent						
		DsGeESDTConfiguredType						
		DsMdAdditionalAttributes						
		DsMdAlgorithmPackage						
		DsMdAlgorithmPkgFileStorage						
		DsMdAltitudeResolution						
		DsMdAnalysisSource						
		DsMdAncillaryInput						
		DsMdAncillaryInputGranule						
		DsMdApContactXref						
		DsMdAPSAPComponentXref						
		DsMdAttributeConversion						
		DsMdAttributeList						
		DsMdAttributeTableXref						
		DsMdBaseDependent						
		DsMdBrowse						
		DsMdBrowseFileStorage						
		DsMdBrowseGranuleXref						
		DsMdCampaign						
		DsMdCIBoundingRectangle	Y					
		DsMdCICircle	Y					
		DsMdCIGPolygGPolygonContainer	Y					
		DsMdCIGPolygon	Y					
		DsMdCIPoint	Y					
		DsMdCollBrowseXref						
		DsMdCollDisciplineKeywordXref						
		DsMdCollectionAddnlAttribsXref						
		DsMdCollectionAnalysisXref						
		DsMdCollectionAPXref						
		DsMdCollectionAssociation						
		DsMdCollectionCampaignXref						
		DsMdCollectionContactXref						
		DsMdCollectionGranuleXref						
		DsMdCollectionInstrumentXref						
		DsMdCollectionPlatformXref						

Table 5-3. Object Permissions (2 of 7)

Role	Group/SYBASE LOGIN	Object	Permissions Granted					
			A	S	I	U	D	E
		DsMdCollections						
		DsMdCollectionSensorXref						
		DsMdCollFloatInfoContent						
		DsMdCollIntegerInfoContent						
		DsMdCollReview						
		DsMdCollStorageMedium						
		DsMdCollStringInfoContent						
		DsMdCollURLInfo						
		DsMdCollVerticalSpatialDomain						
		DsMdCollZoneIdentifier						
		DsMdCommandConversion						
		DsMdContact						
		DsMdContactAddress						
		DsMdContactOrganizations						
		DsMdContactPersons						
		DsMdCSDTDescription						
		DsMdDAP						
		DsMdDAPFileStorage						
		DsMdDeletedGranules						
		DsMdDepthResolution						
		DsMdDisciplineKeywords						
		DsMdECSPParameterKeywords						
		DsMdEmailAddress						
		DsMdFileStorage						
		DsMdGranuleAnalysisXref						
		DsMdGranuleCampaignXref						
		DsMdGranuleInstrumentXref						
		DsMdGranuleLocality						
		DsMdGranulePlatformXref						
		DsMdGranuleReview						
		DsMdGranules						
		DsMdGranuleSensorXref						
		DsMdGranuleVersions						
		DsMdGrBoundingRectangle	Y					
		DsMdGrCircle	Y					
		DsMdGrFloatInfoContent						
		DsMdGrGPolygGPolygonContainer	Y					
		DsMdGrGPolygon	Y					
		DsMdGrIntegerInfoContent						
		DsMdGrPoint	Y					
		DsMdGrSensorCharacteristics						
		DsMdGrStorageMedium						
		DsMdGrStringInfoContent						
		DsMdGrVerticalSpatialDomain						
		DsMdIdentifier						
		DsMdInputGranule						
		DsMdInsertSequence						

Table 5-3. Object Permissions (3 of 7)

Role	Group/SYBASE LOGIN	Object	Permissions Granted					
			A	S	I	U	D	E
		DsMdInstrument						
		DsMdInstrumentCharacteristic						
		DsMdJoins						
		DsMdKeyDependency						
		DsMdLocality						
		DsMdL7ErrorHandling						
		DsMdL7ErrorHandling_gr						
		DsMdMeasuredParameter						
		DsMdMultipleDate TimePeriod						
		DsMdMultipleTypeCollection						
		DsMdOperationMode						
		DsMdOperatorConversion						
		DsMdOrbitCalcSpatialDomain						
		DsMdOrbitCalculatedSpatial						
		DsMdOrbitPolygons	Y					
		DsMdOrbitPolygons__Orbit	Y					
		DsMdParmToTableVector						
		DsMdPersonOrganizationXref						
		DsMdPGEGroup						
		DsMdPlanarCoordinateSystems						
		DsMdPlatform						
		DsMdPlatformCharacteristic						
		DsMdPlatInstrCode						
		DsMdProcessHistFileStorage						
		DsMdProcessingHistory						
		DsMdProcessingQA						
		DsMdProductDbXref						
		DsMdQaGranule						
		DsMdQaGranuleFileStorage						
		DsMdQaGranuleXref						
		DsMdQualityTextComment						
		DsMdRangeDate Time						
		DsMdRegularPeriodic						
		DsMdSDSRVLookup						
		DsMdSensor						
		DsMdSensorCharacteristic						
		DsMdSingleDate Time						
		DsMdSpatial						
		DsMdSpatialKeyword						
		DsMdSSAPComponent						
		DsMdSSAPComponentAPVersion						
		DsMdSSAPComponentfileStorage						
		DsMdStagingTime						
		DsMdTelephoneNumbers						
		DsMdTemporal						
		DsMdTemporalKeyword						
		DsMdTemporalSize						

Table 5-3. Object Permissions (4 of 7)

Role	Group/SYBASE LOGIN	Object	Permissions Granted					
			A	S	I	U	D	E
		DsMdUnloadList						
		DsMdUpdateSequence						
		DsMdUninterpretedData						
		DsMdUserCommentDocument						
		DsMdValidationDocument						
		DsMdXAR						
		DsSiAcqBand						
		DsSiAcqPolygon						
		DsSiAcquireCmd						
		DsSiAcquireCmdFileInfo						
		DsSiParameters						
		DsSiReqDomain						
		DsSiRequest						
		DsSiRequestDetails						
		DsSiURs						
		EcDbDatabaseVersions						
	public	DsBtNotifierQueue						
		DsDeDictionaryAttribute						
		DsDeDictionaryContent						
		DsDeDictionaryRule						
		DsDeECSKeywordValid						
		DsDeEvent						
		DsGeESDTConfiguredType						
		DsMdAdditionalAttributes						
		DsMdAlgorithmPackage						
		DsMdAltitudeResolution						
		DsMdAnalysisSource						
		DsMdAncillaryInput						
		DsMdAncillaryInputGranule						
		DsMdApContactXref						
		DsMdAPSAPComponentXref						
		DsMdAttributeConversion						
		DsMdAttributeList						
		DsMdAttributeTableXref						
		DsMdBaseDependent						
		DsMdBrowse						
		DsMdBrowseGranuleXref						
		DsMdCampaign						
		DsMdCIBoundingRectangle						
		DsMdCIBoundingRectangle_R						
		DsMdCICircle						
		DsMdCIGPolygGPolygonContainer						
		DsMdCIGPolygon						
		DsMdCIPoint						
		DsMdCollBrowseXref						
		DsMdCollDisciplineKeywordXref						
		DsMdCollectionAddnlAttribsXref						

Table 5-3. Object Permissions (5 of 7)

Role	Group/SYBASE LOGIN	Object	Permissions Granted					
			A	S	I	U	D	E
		DsMdCollectionAnalysisXref						
		DsMdCollectionAPXref						
		DsMdCollectionAssociation						
		DsMdCollectionCampaignXref						
		DsMdCollectionContactXref						
		DsMdCollectionGranuleXref						
		DsMdCollectionInstrumentXref						
		DsMdCollectionPlatformXref						
		DsMdCollections						
		DsMdCollectionSensorXref						
		DsMdCollFloatInfoContent						
		DsMdCollIntegerInfoContent						
		DsMdCollReview						
		DsMdCollStorageMedium						
		DsMdCollStringInfoContent						
		DsMdCollVerticalSpatialDomain						
		DsMdCollZoneIdentifier						
		DsMdCommandConversion						
		DsMdContact						
		DsMdContactAddress						
		DsMdContactOrganizations						
		DsMdContactPersons						
		DsMdCSDTDescription						
		DsMdDAP						
		DsMdDepthResolution						
		DsMdDisciplineKeywords						
		DsMdECSPParameterKeywords						
		DsMdEmailAddress						
		DsMdFileStorage						
		DsMdGranuleAnalysisXref						
		DsMdGranuleCampaignXref						
		DsMdGranuleInstrumentXref						
		DsMdGranuleLocality						
		DsMdGranulePlatformXref						
		DsMdGranuleReview						
		DsMdGranules						
		DsMdGranulesAncillaryInputXref						
		DsMdGranuleSensorXref						
		DsMdGranulesOrbitParmXref						
		DsMdGranuleVersions						
		DsMdGrBoundingRectangle						
		DsMdGrBoundingRectangle_R						
		DsMdGrCircle						
		DsMdGrFloatInfoContent						
		DsMdGrGPolygGPolygonContainer						
		DsMdGrGPolygon						
		DsMdGrIntegerInfoContent						

Table 5-3. Object Permissions (6 of 7)

Role	Group/SYBASE LOGIN	Object	Permissions Granted					
			A	S	I	U	D	E
		DsMdGrPoint						
		DsMdGrSensorCharacteristics						
		DsMdGrStorageMedium						
		DsMdGrStringInfoContent						
		DsMdGrVerticalSpatialDomain						
		DsMdIdentifier						
		DsMdInputGranule						
		DsMdInsertSequence						
		DsMdInstrument						
		DsMdInstrumentCharacteristic						
		DsMdJoins						
		DsMdKeyDependency						
		DsMdL7ErrorHandling						
		DsMdL7ErrorHandling_gr						
		DsMdLocality						
		DsMdMeasuredParameter						
		DsMdMultipleDateTimePeriod						
		DsMdMultipleTypeCollection						
		DsMdOperationMode						
		DsMdOperatorConversion						
		DsMdOrbitCalcSpatialDomain						
		DsMdOrbitCalculatedSpatial						
		DsMdOrbitParametersGranule						
		DsMdOrbitPolygons						
		DsMdOrbitPolygons__Orbit						
		DsMdParmToTableVector						
		DsMdPersonOrganizationXref						
		DsMdPGEGroup						
		DsMdPlanarCoordinateSystems						
		DsMdPlatform						
		DsMdPlatformCharacteristic						
		DsMdPlatInstrCode						
		DsMdProcessingHistory						
		DsMdProcessingQA						
		DsMdProductDbXref						
		DsMdQaGranule						
		DsMdQaGranuleXref						
		DsMdQualityTextComment						
		DsMdRangeDateTime						
		DsMdRegularPeriodic						
		DsMdSDSRVLookup						
		DsMdSensor						
		DsMdSensorCharacteristic						
		DsMdSingleDateTime						
		DsMdSpatial						
		DsMdSpatialKeyword						
		DsMdSSAPComponent						

Table 5-3. Object Permissions (7 of 7)

Role	Group/SYBASE LOGIN	Object	Permissions Granted					
			A	S	I	U	D	E
		DsMdSSAPComponentAPVersion						
		DsMdTelephoneNumbers						
		DsMdTemporal						
		DsMdTemporalKeyword						
		DsMdUnloadList						
		DsMdUpdateSequence						
		DsMdUninterpretedData						
		DsMdUserCommentDocument						
		DsMdValidationDocument						
		DsMdXAR						
		DsSiAcqBand						
		DsSiAcqPolygon						
		DsSiAcquireCmd						
		DsSiAcquireCmdFileInfo						
		DsSiReqDomain						
		DsSiRequest						
		EcDbDatabaseVersions						

6. Scripts

Sub-directories that support the creation of the SDSRV database are found in the ClearCase /ecs/formal/DSS/sdsrv/sybase/db directory. Each sub-directory has its own Imakefile. The entire schema is delivered by using the Makefile in the /ecs/formal/DSS/sdsrv/sybase/db directory which allows all the sub-directories to be delivered at the same time. The README file found in the /sybase/db directory provides information necessary to understand prior to running the scripts. The DsDbREADME file found in the ../sybase/db/tools directory contains documentation relevant to the installation process.

The directories have the following structure:

- proc = stored procedures
- tables = table definitions
- triggers = trigger definitions
- data = important schema data inputs
- tool = tool kit, including DsDbbuild_relb0_schema
- doc = documentation (includes schema - pdm files from S-designor)
- rulflt = rule/default definitions

The content of these directories necessary for building a working schema are delivered by the:

../sybase/db/Makefile and ../sybase/db/proc/Imakefile, ../sybase/db/tables/Imakefile,,
../sybase/db/triggers/Imakefile, ../sybase/db/tools/Imakefile into a single target directory.

6.1 Installation Scripts

Scripts used to support installation of the SDSRV database are listed in Table 6-1. These scripts are found in the directory /ecs/formal/DSS/sdsrv/sybase/db/tools.

Table 6-1. Installation Scripts

Script File	Description
EcDsDbBuild	Create a new intialized SDSRV database.
EcDsDbPatch	Upgrade an existing <SUBSYS> database to the next valid database version level.
EcDsDbDump	Dump a specified <SUBSYS> database on demand.
EcDsDbLoad	Load a specified <SUBSYS> database on demand.
EcDbDesc	List and detail the structure of all database objects in the specified ECS database.
EcDbChecksum	Provide row count totals for each of the tables in a specific ECS database.

6.2 De-Installation Scripts

Scripts used to support de-installation of the SDSRV Subsystem database are listed in Table 6-2.

Table 6-2. De-Installation Scripts

Script File	Description
EcDsDbDrop	Drop all objects in the specified <SUBSYS> database.

6.3 Backup and Recovery Scripts

Scripts used to perform backup and recovery of the SDSRV Subsystem database are listed in Table 6-3. These are configured to run automatically using the Unix chron facility. Transaction logs dumps (incremental dumps) are performed 3 times each day. Database dumps (full database dumps) are performed once each day.

Table 6-3. Backup and Recovery Scripts

Script File	Description
EcCoDbSyb_DumpDb	Dumps all databases for managed by the SQL server instance.
EcCoDbSyb_DumpTran	Dumps the transaction log for all databases managed by the SQL server.

6.4 Miscellaneous Scripts

Miscellaneous scripts applicable to the SDSRV Subsystem database are listed in Table 6-4.

Table 6-4. Miscellaneous Scripts and Input Data Files (1 of 4)

Script	Description
EcDdmMonitorServer	Monitors segment usage and user levels for a selected SQL server. Superseded by DbVision COTS.
EcDdmSegmentUse	Monitors segment usage. Used by EcDdmMonitorServer. Superseded by DbVision COTS.
EcDdmUserCounts	Monitors user access. Used by EcDdmMonitorServer. Superseded by DbVision COTS.
EcCoDbSyb_CkErrorLog	Checks the error log for error messages warranting DBO attention. Superseded by DbVision.
EcCoDbSyb_DbStat	Updates index statistics for each table in the selected database.
EcDsDeletionCleanup.pl	Perl script used in granule deletion.
EcDsResetLock	Perl script used in granule deletion.

Table 6-4. Miscellaneous Scripts and Input Data Files (2 of 4)

Script	Description
EcCoDbSyb_DboMail	Emails DBA error notification via e-mail. Used by EcCoDbSyb_DumpDb/Tran and EcCoDbSyb_CkErrorLog scripts.
../tools/DsDbCleanIntegrity	Clean orphan granules out of DsMdGrPoint, DsMdGrCirlce, DsMdGrBoundingRectangle and DsMdGrGPolygon.
../tools/EcDsSrDbPatch	Apply patch to a SDSRV database by running the DsDbBuildSchemaPatch.
../tools/EcDsSrDbBuild	Build SDSRV database by running the DsDbbuild_relb0_schema.
../tools/EcDsSrDbDrop	Drop the SDSRV database schema by running the DsDbDropSchema.
../tools/EcDsSrDbDump	Dump the SDSRV database to the specified device.
../tools/EcDsSrDbLoad	Load SDSRV database from the specified device.
../tools/EcDsSrDBMigrate	Migrate the SDSRV database from one mode to another.
../tools/EcDsSrDbGetNewGranules	Access the most recently inserted granules for Aster routine processing.
../tools/EcDsSrDbL7Clean	Logically delete all L70RWRS1 and L70RWRS2 granules, which are not clean up after the combining process.
../tools/EcDsSrDbL7CleanRC	List of all enviornment variables used by EcDsSrDbL7Clean.
../tools/EcDsSrDbL7ErrorHandling	Allows the user to merge/demerge/promote/delete L70R subintervals and scenes.
../tools/EcDsSrDbL7ErrorHandlingRC	List of all environment variables used by EcDsSrDbL7ErrorHandling.
../tools/DsDbUserCheck	Check DsDbUserList.
../tools/DsDbUserList	Contains a list of valid usernames.
../tools/DsDbSybaseLogins	Adds logins to the SYBASE SQL Server.
../tools/DsDbisql	Preprocessor for isql.
../tools/DsDbbuild_relb0_schema	Script uses to build the database.
../tools/DsDbCleanGranules	Used for testing. Deletes all granules associated with a given ESDT name. Included for SDSRV testing engineers.
../tools/DsDbCleanCollection	Used for testing. Deletes the Collection associated with a given ESDT name. Included for SDSRV testing engineers.
../tools/DsDbCleanSingleGranule	Used for testing. Deletes a single granule given a dbID. (You must look at the database to get the dbID for a granule). Included for SDSRV testing engineers.

Table 6-4. Miscellaneous Scripts and Input Data Files (3 of 4)

Script	Description
../tools/DsDbMocExt	Used by MOC to extract Landsat 7 metadata from SDSRV database and transfer data to remote site.
../tools/DsDbMocRc	Used by DsDbMocExt to extract Landsat 7 metadata from SDSRV database. This is a template to be customized at the sites.
../tools/DsDbDeleteRequest.ksh	Removed the request queue by time.
../tools/DsDbDeleteRequestByRpcId	Remove request queue by rpc ID.
../tools/DsDbMoveESDTGranules	Move Granules from one ESDT to another.
../tools/DsDbRemoveLandsatData	Remove the L70R granules and all the references of these granules.
../tools/DsDbSQSbcplLBOX	BCP the rectangle data type granules to lbox data type.
../tools/DsDbSqsBcpOrbitPolygon	BCP the MISR Orbit Polygon data to the DsMdOrbitPolygons table.
../tools/DsDbSrFileLocMetadata	Recovery of effected lost files.
../tools/DsDbSrGranPHMetadata	Recovery for a list of lost files.
../tables/DsDbB0DataTypes.sql	Creates user defined data types and defaults with any bindings.
../tables/DsDbB0DAPTables.sql	Generates the Delivered Algorithm Package tables.
../tables/DsDbB0SpatialTables.sql	Generates the Spatial tables.
../tables/DsDbB0TemporalTables.sql	Generates the Temporal tables.
../tables/DsDbB0GranuleTables.sql	Generates the Granule tables.
../tables/DsDbB0CollectionTables.sql	Generates the Collection tables.
../tables/DsDbB0DataOrigTables.sql	Generates the Data Originator tables.
../tables/DsDbB0ContactTables.sql	Generates the Contact tables.
../tables/DsDbB0DictionaryTables.sql	Generates the Data Dictionary tables.
../tables/DsDbB0SystemTables.sql	Generates the system tables.
../tables/DsDbB0SystemWrapperTables.sql	Generates the system wrapper tables.
../tables/DsDbB0RecoveryTables.sql	Generates the system recovery tables.
../proc/DsDbDeleteProcs.sql	Generates all delete stored procedures.
../proc/DsDbInsertProcs.sql	Generates all insert stored procedures.
../proc/DsDbSelectProcs.sql	Generates all select stored procedures.
../proc/DsDbUpdateProcs.sql	Generates all update stored procedures.
../proc/DsDbOtherProcs.sql	Generates all other stored procedures that are used for various purposes other than delete, insert, select, or update.

Table 6-4. Miscellaneous Scripts and Input Data Files (4 of 4)

Script	Description
../proc/DsDbRecoveryProcs.sql	Generates all stored procedures that are used for SDSRV server recovery.
../triggers/DsDbTriggers.sql	Generates all the triggers on the tables.
../data/DsDbGenGrants.sql	Generates the grants on all objects and assigns the permissions.
../data/DsDbDictionaryData.sql	Installs system level metadata for the data dictionary tables. Required to make SDSRV properly work.
../data/DsDbGenSystemData.sql	Installs system level metadata for the data dictionary tables. Required to make SDSRV properly work.
../data/DsDbGenWrapCommands.sql	Installs system level metadata for wrapper tables. Required to make SDSRV properly work.
../tools/DsDbChange_DB_Schema.sql	SQL used to do schema convert from drop2 - drop3.
../ruldfit/DsDbRules.sql	Generates all the rules for SDSRV database.
../patches/DsDbBuildSchemaPatch	Korn shell script used to run the patches.
../tools/DsDbBuildConstraints.sql	SQL used to rebuild all RI constraints. Used by Build and Update scripts.

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Appendix A. Science Data Server ERDs

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On Insert, the Metadata contains one or more Collection ShortName and VersionID pairs in a group to be used for updating the DsMdCollectionAPXref table

ESDT

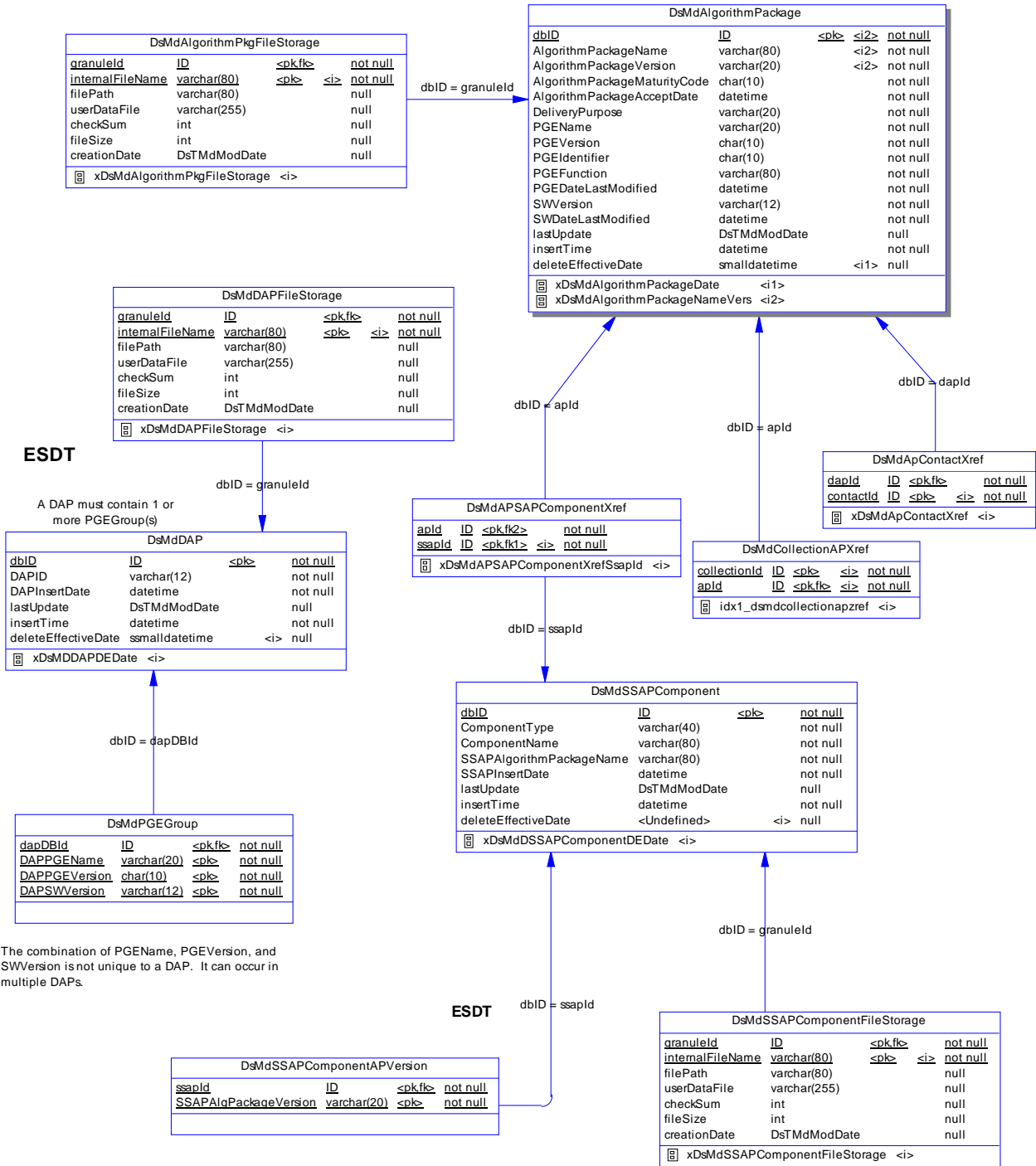


Figure A-1. Delivered Algorithm Package

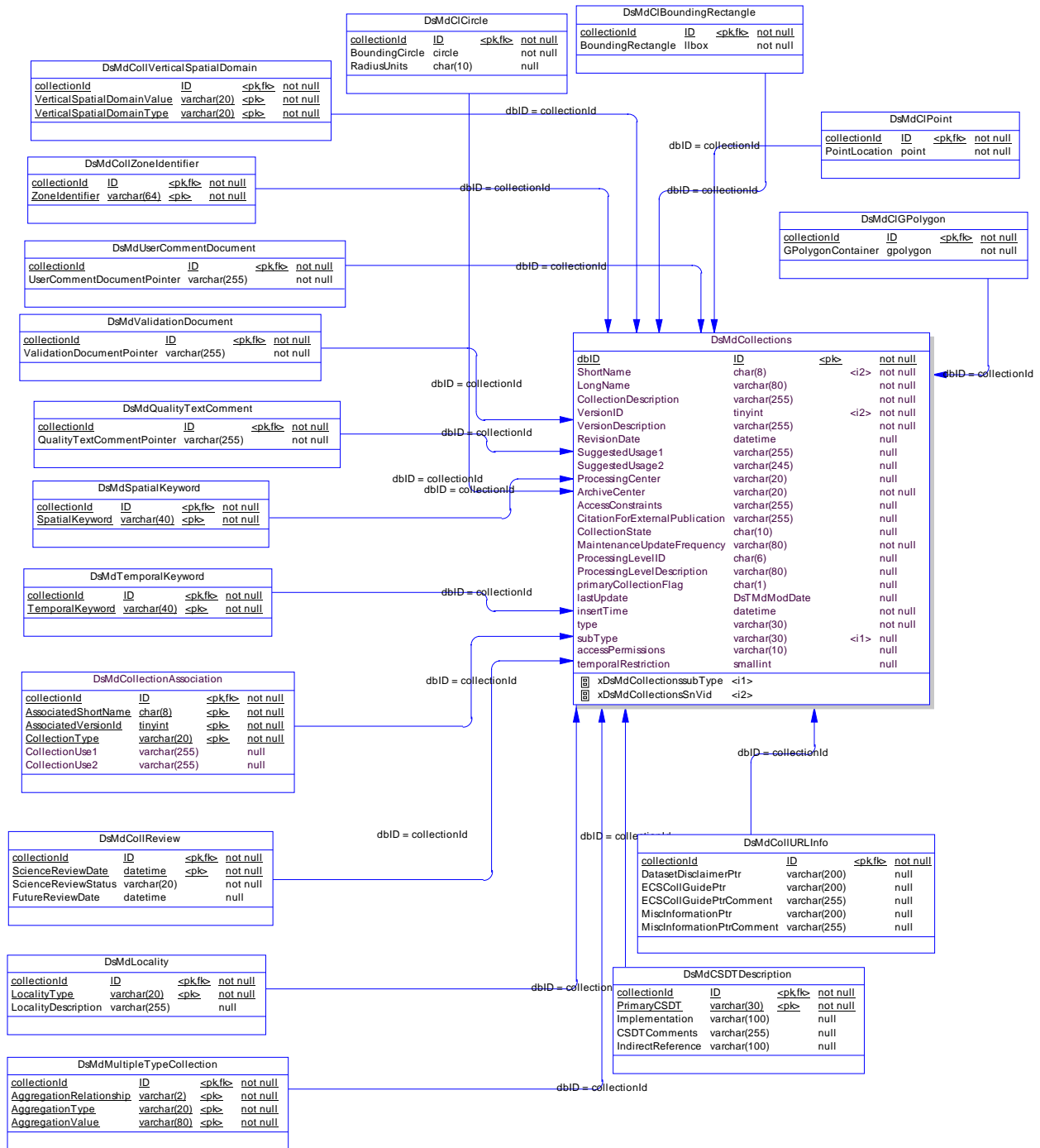


Figure A-2. Collection (1 of 2)

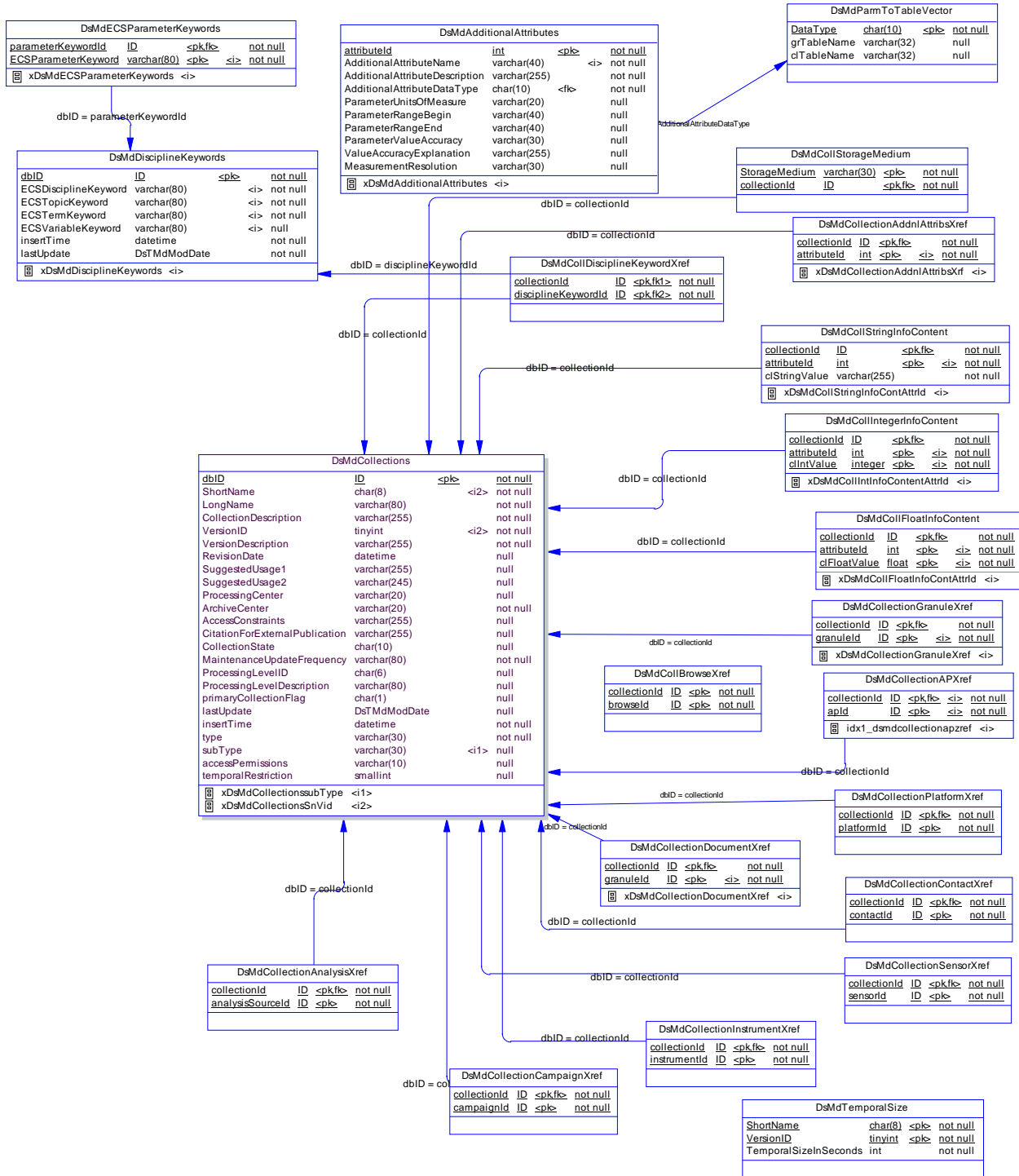


Figure A-2. Collection (2 of 2)

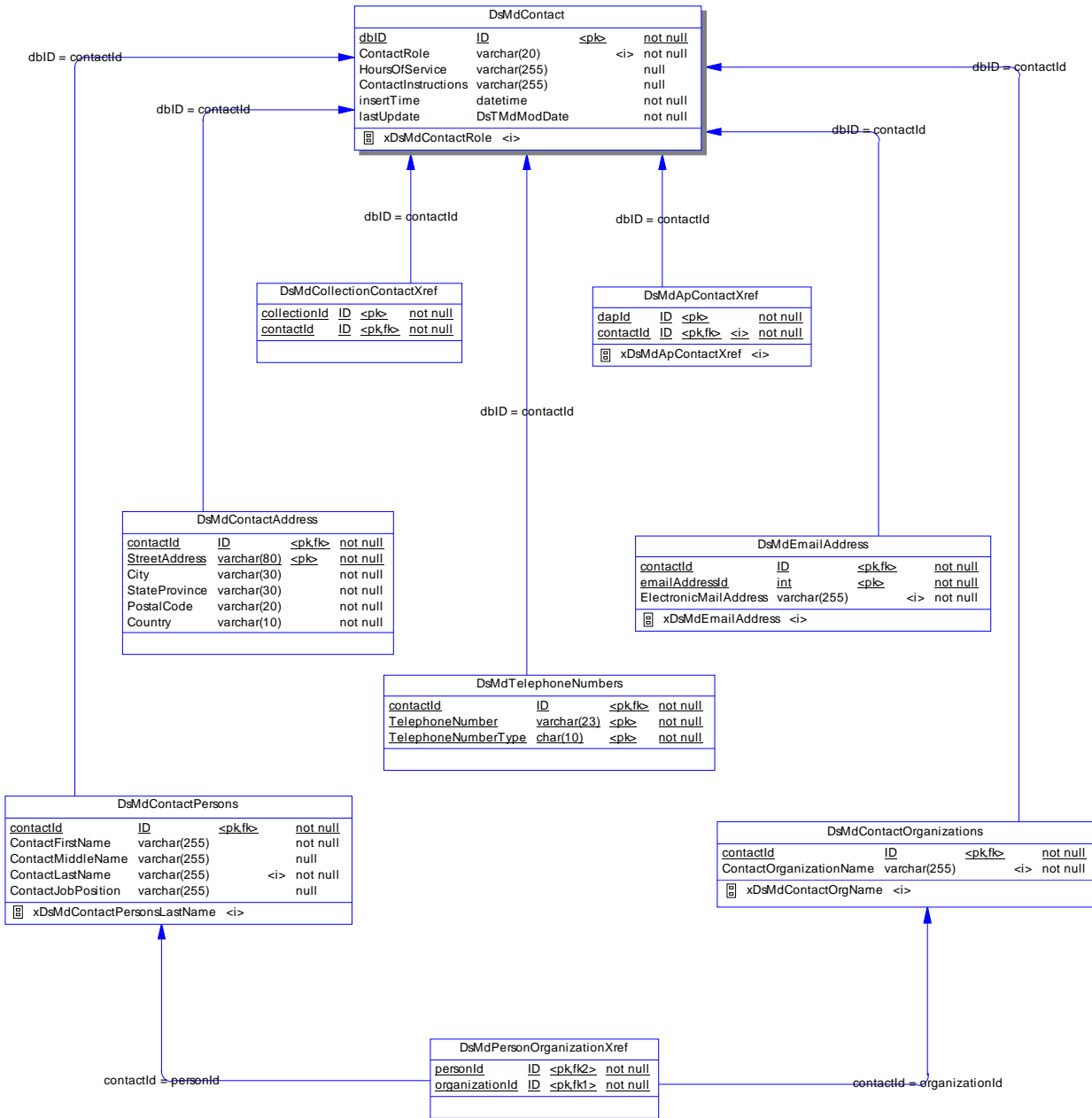


Figure A-3. Contact

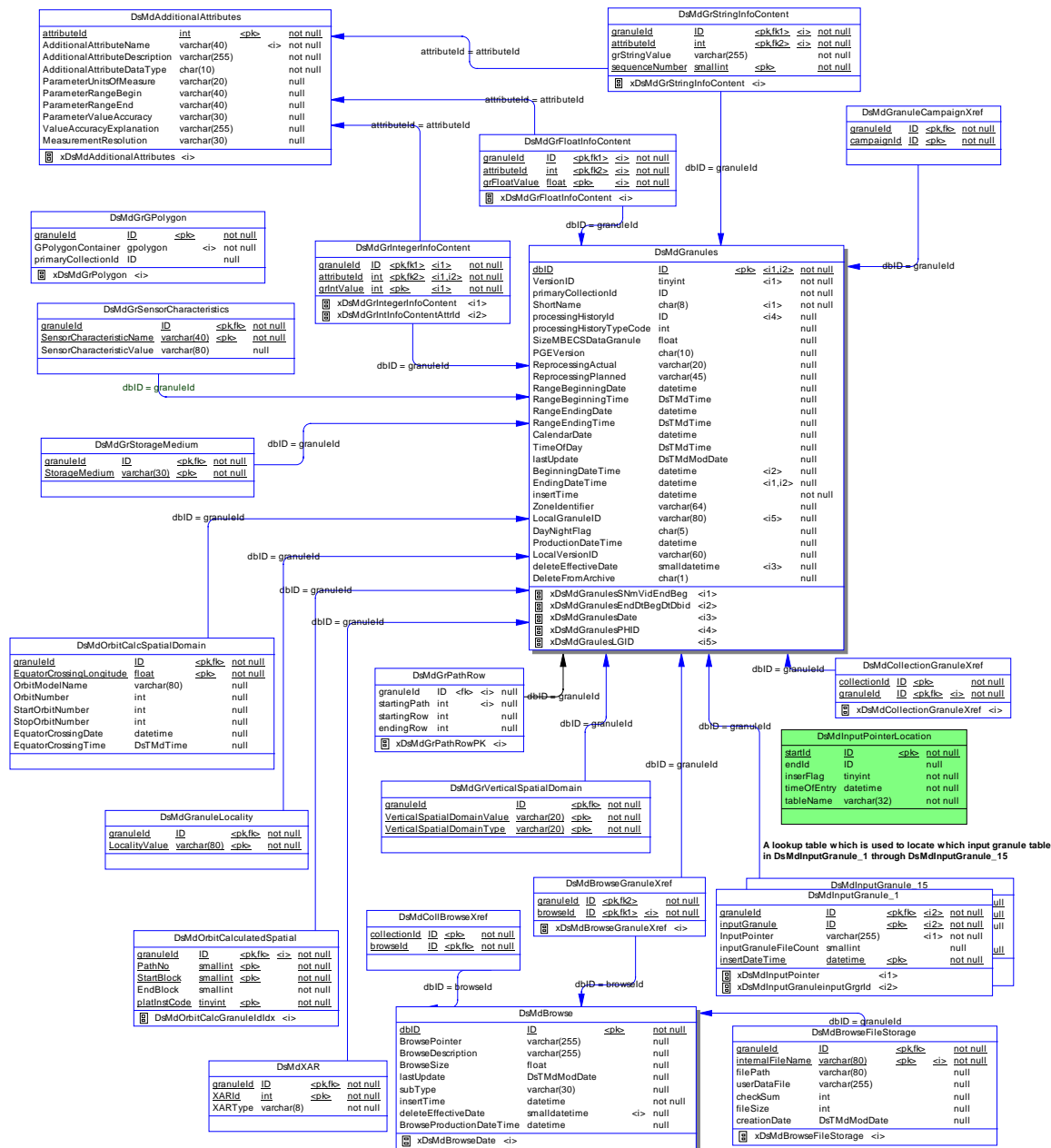


Figure A-4. Granules (1 of 3)

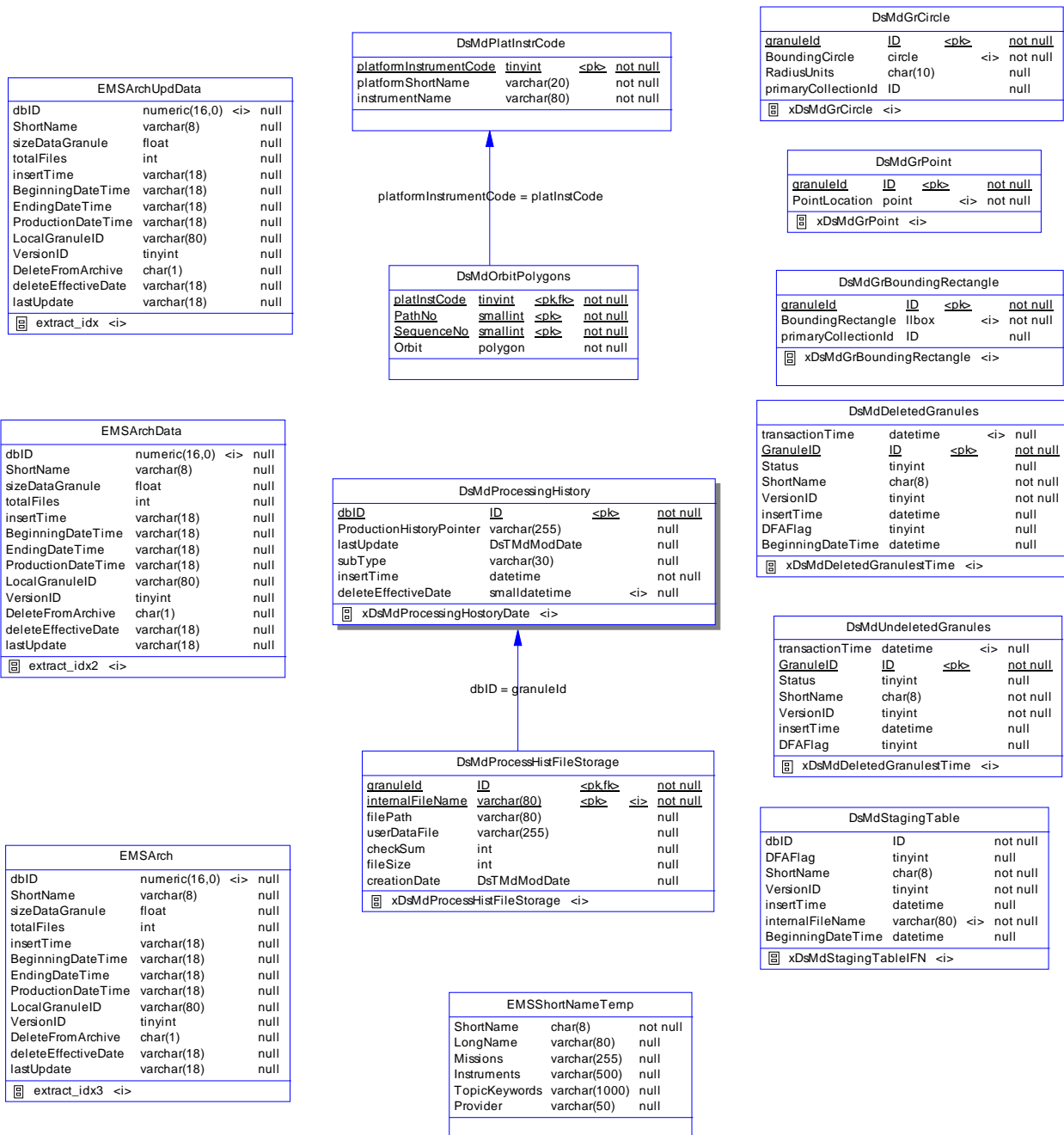


Figure A-4. Granules (2 of 3)

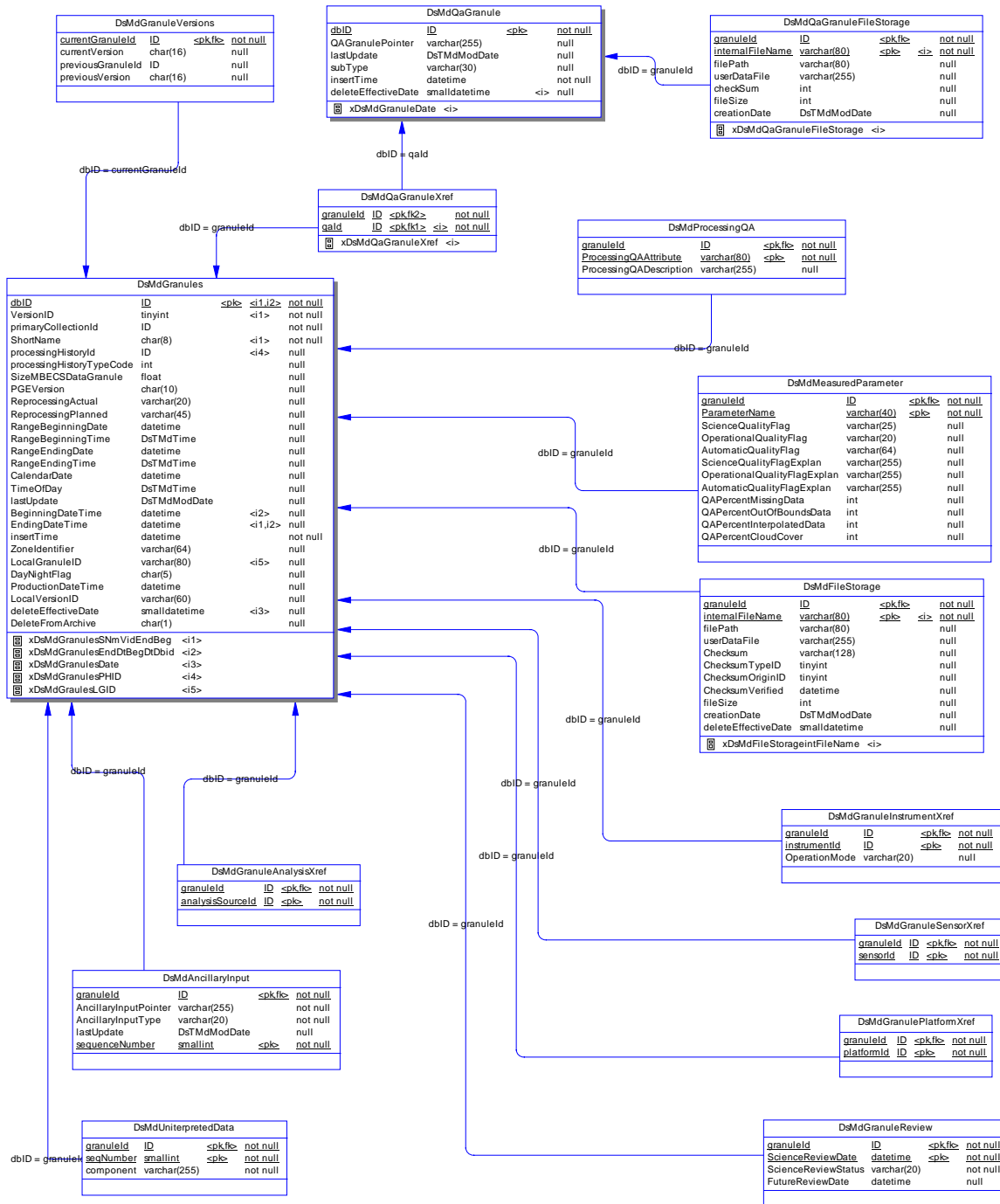


Figure A-4. Granules (3 of 3)

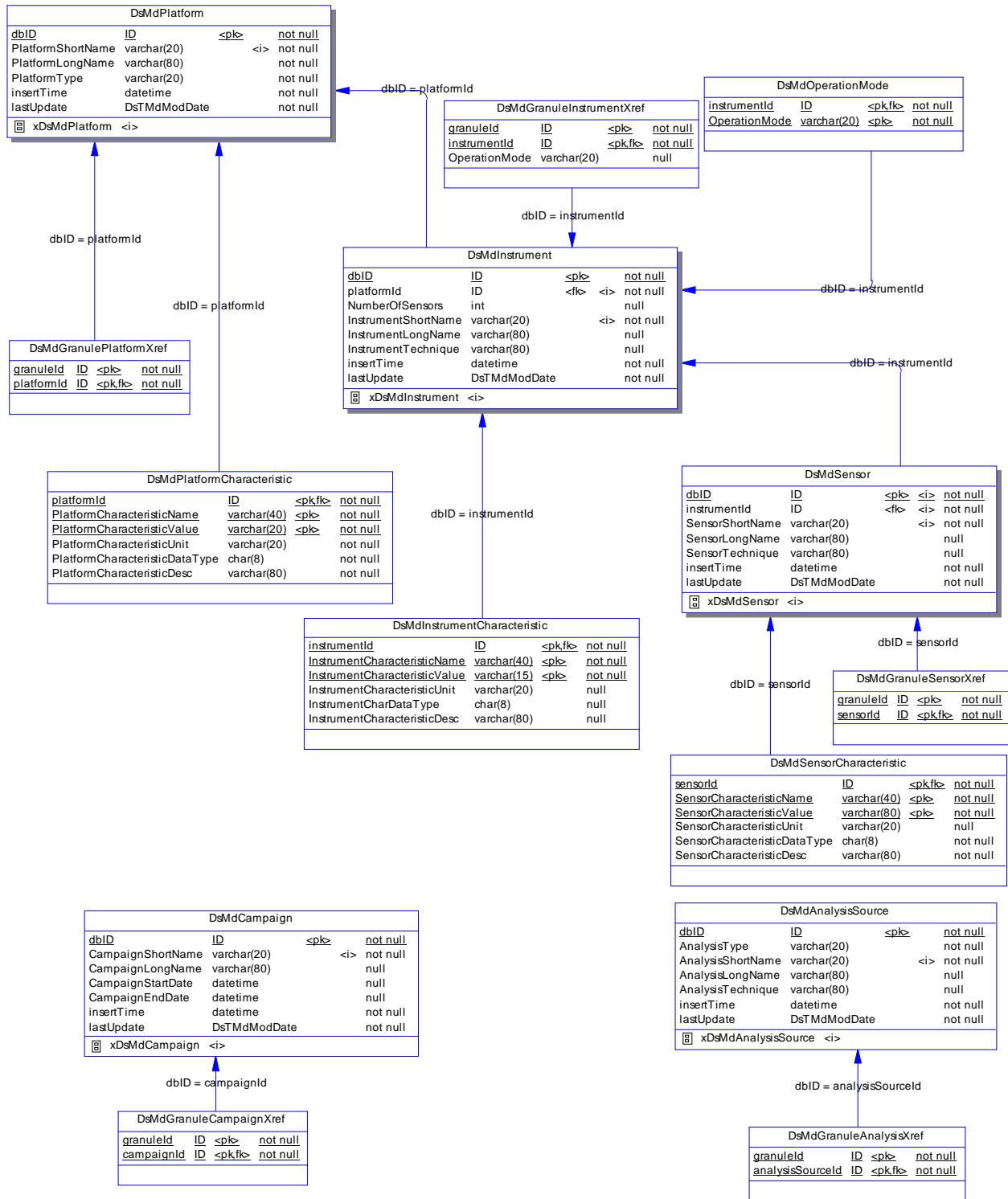


Figure A-5. Data Originator

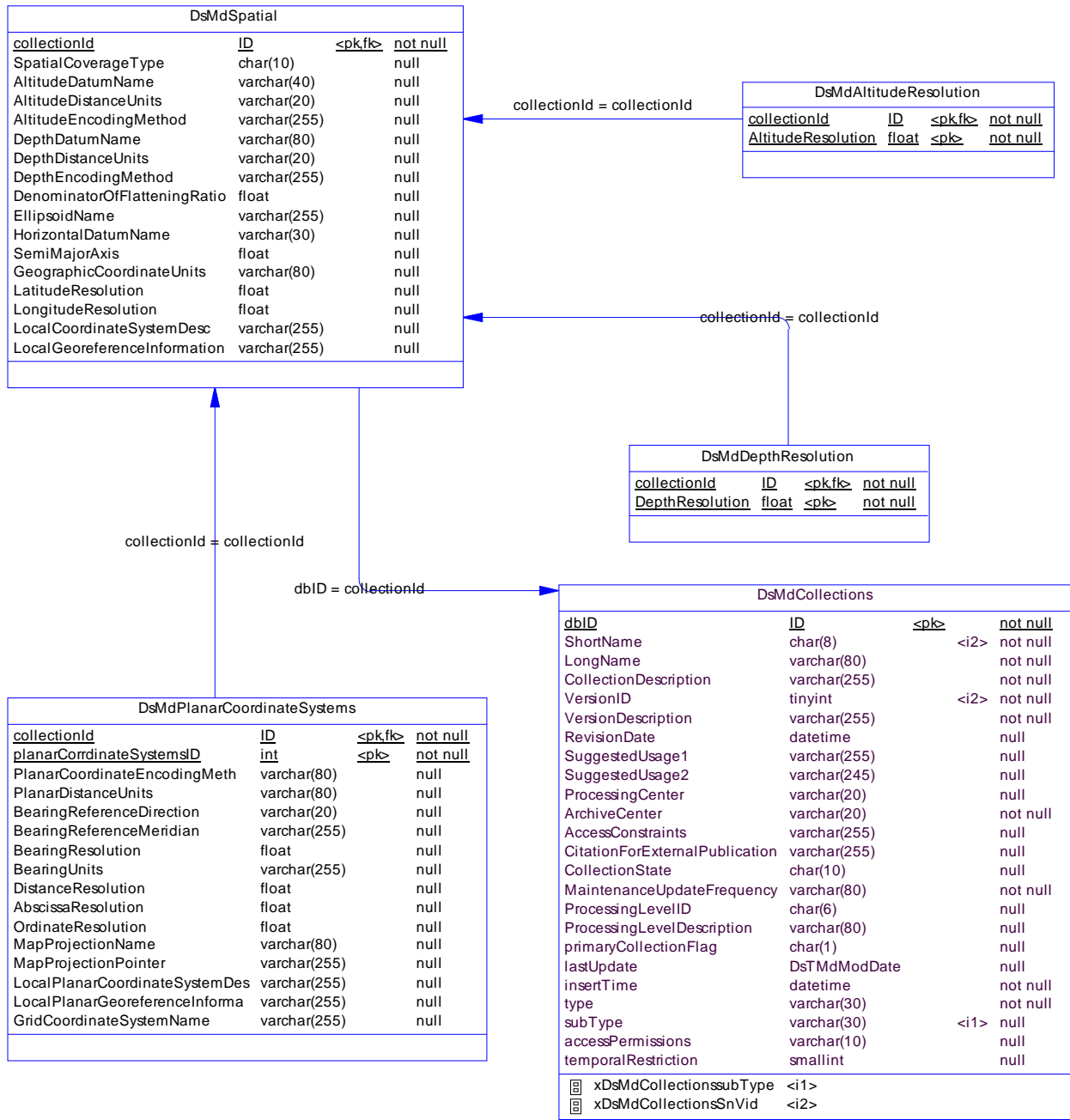


Figure A-6. Spatial

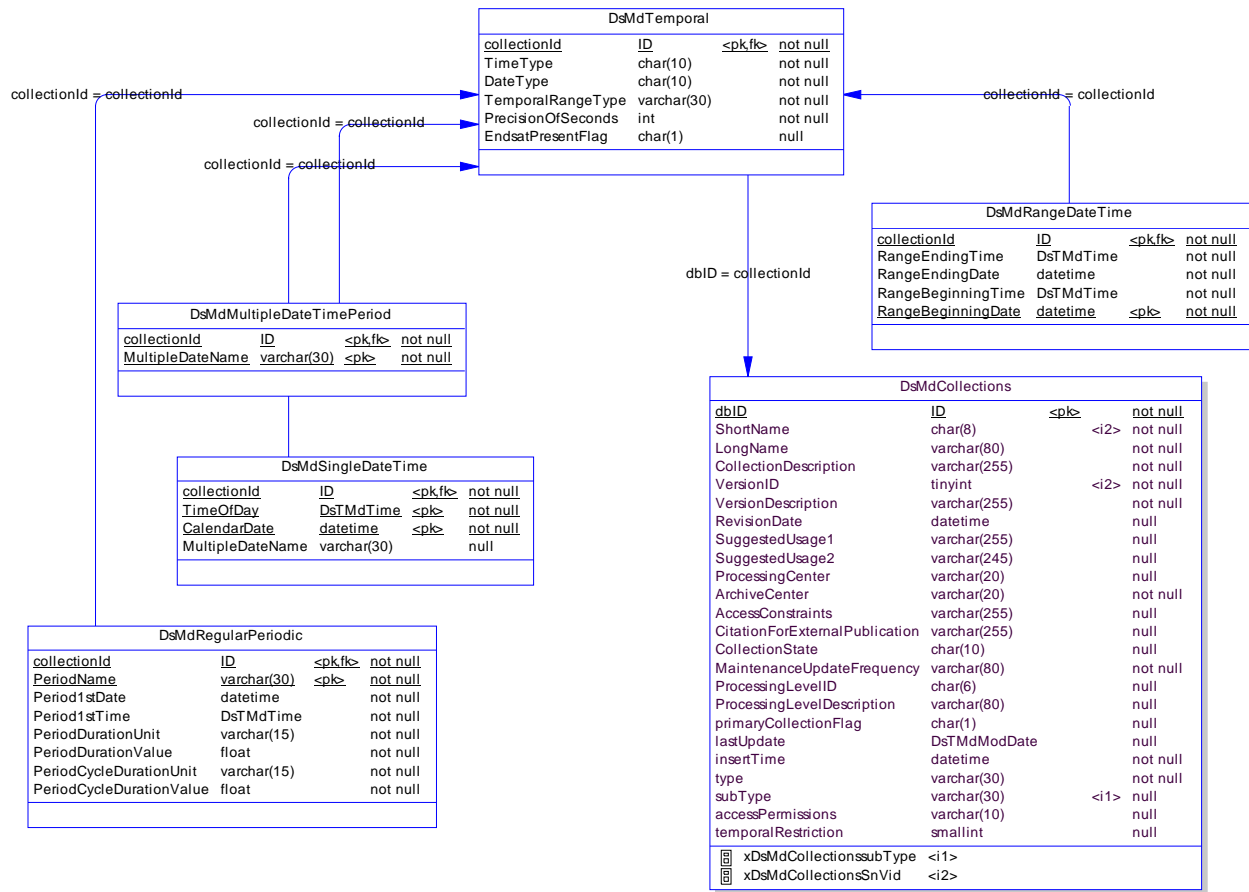


Figure A-7. Temporal

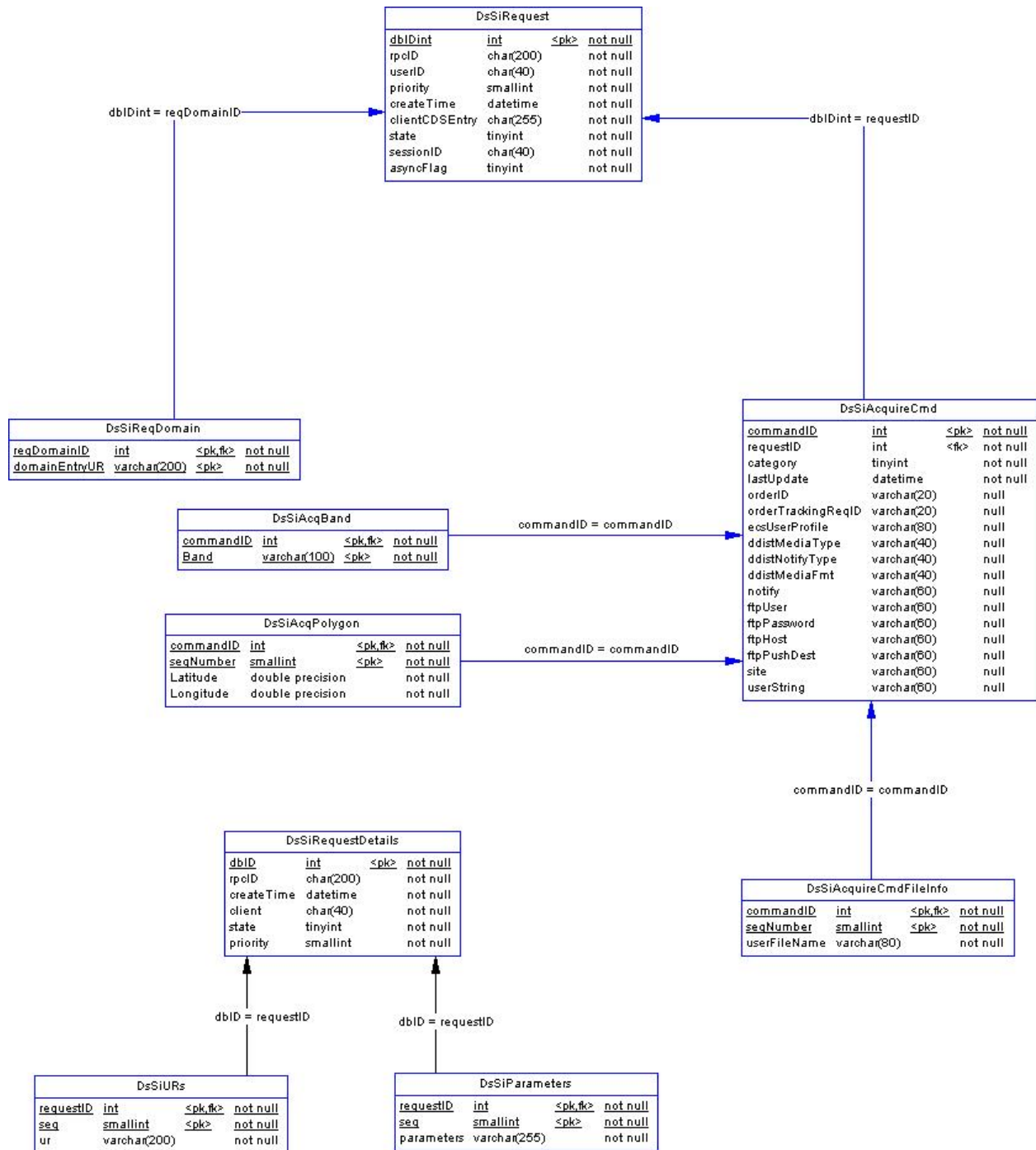


Figure A-8. Recovery

DsGeESDTConfiguredType			
<u>configuredName</u>	<u>varchar(20)</u>	<u><pk></u>	<u>not null</u>
<u>versionID</u>	<u>tinyint</u>	<u><pk></u>	<u>not null</u>
description	varchar(255)		null
descriptorFileName	varchar(80)		null
dllFileName	varchar(80)		null
spatialSearchType	varchar(40)		not null
esdtState	tinyint		not null

Figure A-9. Configured Type

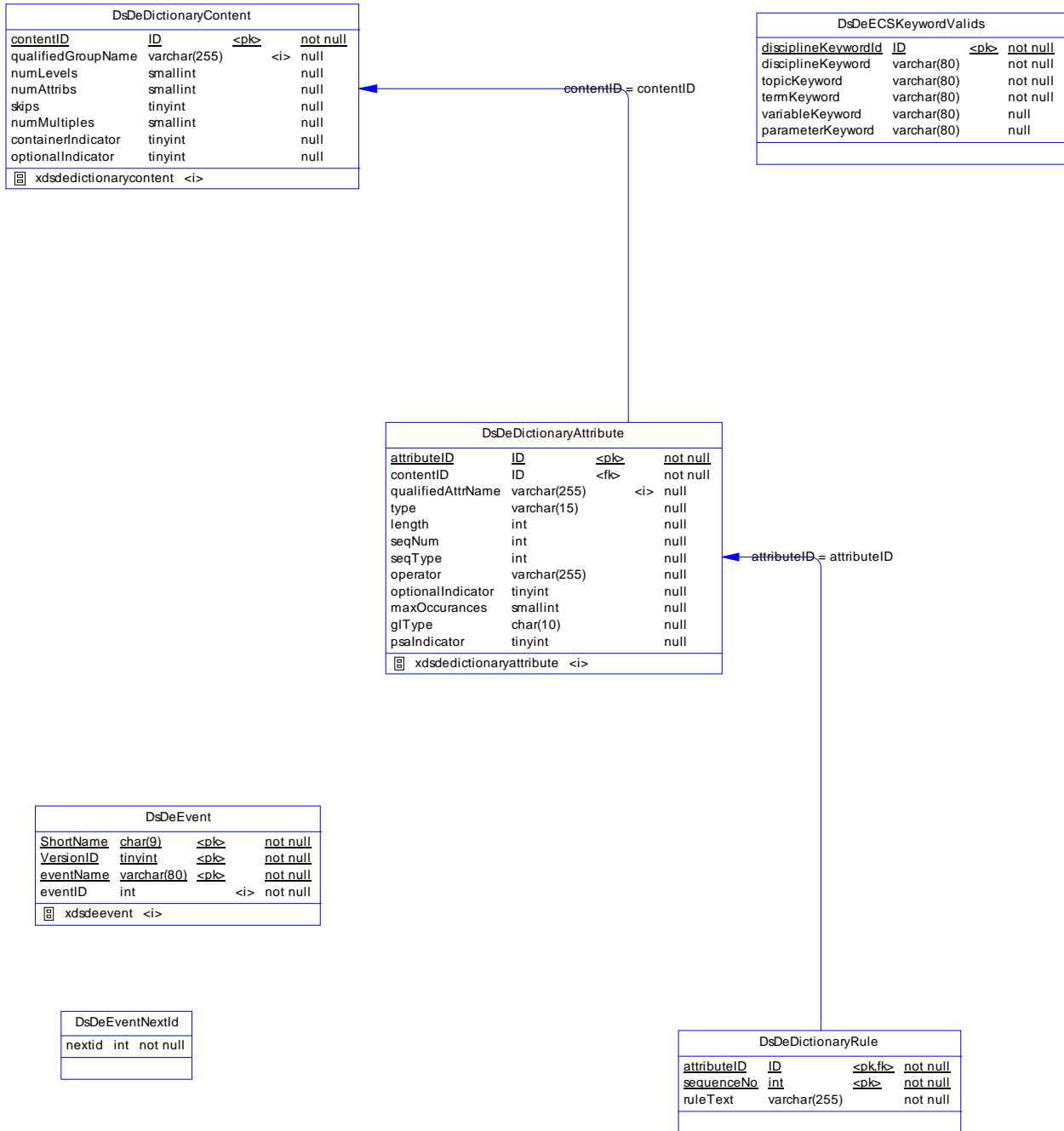


Figure A-10. Dictionary

DsMdAttributeList			
<u>listName</u>	varchar(30)	<pk>	not null
<u>sequenceNumber</u>	smallint	<pk>	not null
glType	varchar(30)		null
attributeName	varchar(255)		null

DsMdInsertSequence			
<u>BaseType</u>	varchar(40)	<pk>	not null
StoredProcName	varchar(40)		not null
ListName	varchar(40)		not null
CommandType	char		not null
DataType	char		not null
<u>SequenceNo</u>	int	<pk>	not null

Figure A-11. System Wrapper

DsMdIdentifier			
<u>identifierType</u>	char(30)	<pk>	not null
<u>identifierObjectType</u>	char(30)	<pk>	not null
lastIdentifier	ID		not null
lastIntIdentifier	int		not null
lastSmallIntIdentifier	smallint		not null
identifierPad1	char(255)		not null
identifierPad2	char(255)		not null
identifierPad3	char(255)		not null
identifierPad4	char(255)		not null
identifierPad5	char(255)		not null
identifierPad6	char(255)		not null
identifierPad7	char(255)		not null

DsMdNotifierQueue			
<u>rpcid</u>	varchar(100)	<pk>	not null
servicename	varchar(30)		not null
granUR	varchar(255)		not null
insdate	DsTmModDate		not null
status	tinyint		not null
triggerTime	DsTmModDate		null

DsMdUnloadList			
<u>BaseType</u>	varchar(40)	<pk>	not null
<u>SubType</u>	varchar(30)	<pk>	not null
<u>ListName</u>	varchar(40)	<pk>	not null
CommandType	char		not null
Data Type	char		not null
<u>GroupName</u>	varchar(60)	<pk>	not null
ContainerGroupName	varchar(60)		null
<u>SequenceNo</u>	int	<pk>	not null

DsMdKeyDependency			
<u>TableName</u>	varchar(40)	<pk>	not null
<u>TableKeyName</u>	varchar(40)	<pk>	not null
<u>DependentTableName</u>	varchar(40)	<pk>	not null
<u>DependentTableKeyName</u>	varchar(40)	<pk>	not null
XrefFlag	char		not null
<u>SequenceNo</u>	int	<pk>	not null

DsMdBaseDependent			
<u>BaseType</u>	varchar(40)	<pk>	not null
<u>SubType</u>	varchar(30)	<pk>	not null
<u>BaseTableName</u>	varchar(40)	<pk>	not null
<u>DependentTableName</u>	varchar(40)	<pk>	not null
<u>DependentTableIDName</u>	varchar(40)	<pk>	not null
<u>SequenceNo</u>	int	<pk>	not null

DsMdCommandConversion			
<u>Operator</u>	varchar(40)	<pk>	not null
<u>GroupName</u>	varchar(40)	<pk>	not null
<u>BaseTable</u>	varchar(40)	<pk>	not null
DBCommand	varchar(255)		not null
<u>SequenceNo</u>	int	<pk>	not null

DsMdOperatorConversion			
<u>Operator</u>	varchar(40)	<pk>	not null
DBString	varchar(40)		not null

DsMdAttributeConversion			
<u>GIType</u>	varchar(40)	<pk>	not null
<u>DynamicSQLFlag</u>	char	<pk>	not null
DBString	varchar(40)		not null

DsMdJoins			
<u>table1</u>	varchar(60)	<pk>	not null
<u>column1</u>	varchar(60)	<pk>	not null
<u>table2</u>	varchar(60)	<pk>	not null
<u>column2</u>	varchar(60)	<pk>	not null

DsQAMUTESDTSite			
<u>ShortName</u>	char(8)	<pk>	not null
<u>Site</u>	varchar(25)	<pk>	not null

EcDbDatabaseVersions			
<u>EcDbSchemaVersionId</u>	smallint	<pk>	not null
<u>EcDbDropVersion</u>	char(64)	<pk>	not null
EcDbDropDescription	varchar(255)		null
EcDbCurrentVersionFlag	char(1)		null
EcDbDatabaseName	varchar(255)		null
EcDbDropInstallDate	datetime		null
EcDbSybaseVersion	varchar(255)		null
EcDbSybaseServer	varchar(255)		null
EcDbComments	varchar(255)		null
EcDbUpdateProcess	varchar(255)		null

DsMdSDSRVLookup			
<u>lookupType</u>	varchar(40)	<pk>	not null
<u>lookupValue</u>	varchar(40)	<pk>	not null
lookupString	varchar(255)		null
lookupInt	int		null
lookupFloat	float		null
lookupDatetime	datetime		null

DsMdAttributeTableXref			
<u>attributeName</u>	varchar(80)	<pk>	not null
<u>productName</u>	varchar(80)	<pk>	not null
tableName	varchar(32)		null
columnName	varchar(32)		null

DsMdProductDbXref			
<u>productName</u>	varchar(60)	<pk>	not null
<u>dbName</u>	varchar(60)	<pk>	not null
startDate	datetime		null
endDate	datetime		null

DsMdUpdateSequence			
<u>BaseType</u>	varchar(60)	<pk>	not null
<u>GroupName</u>	varchar(60)	<pk>	not null
DBCommand	varchar(120)		not null
ListName	varchar(60)		not null
CommandType	char		not null
Data Type	char		not null
<u>SequenceNo</u>	int	<pk>	not null

Figure A-12. System Information

DsMdChecksumTypes			
<u>ChecksumTypeID</u>	tinyint	<pk>	not null
ChecksumType	varchar(64)		not null

DsMdCksumMigration			
<u>maxdbID</u>	<u>ID</u>	<pk>	not null
currentdbID	ID		not null

DsMdChecksumOrigins			
<u>ChecksumOriginID</u>	tinyint	<pk>	not null
ChecksumOrigin	varchar(64))		not null

Figure A-13. Checksum Information

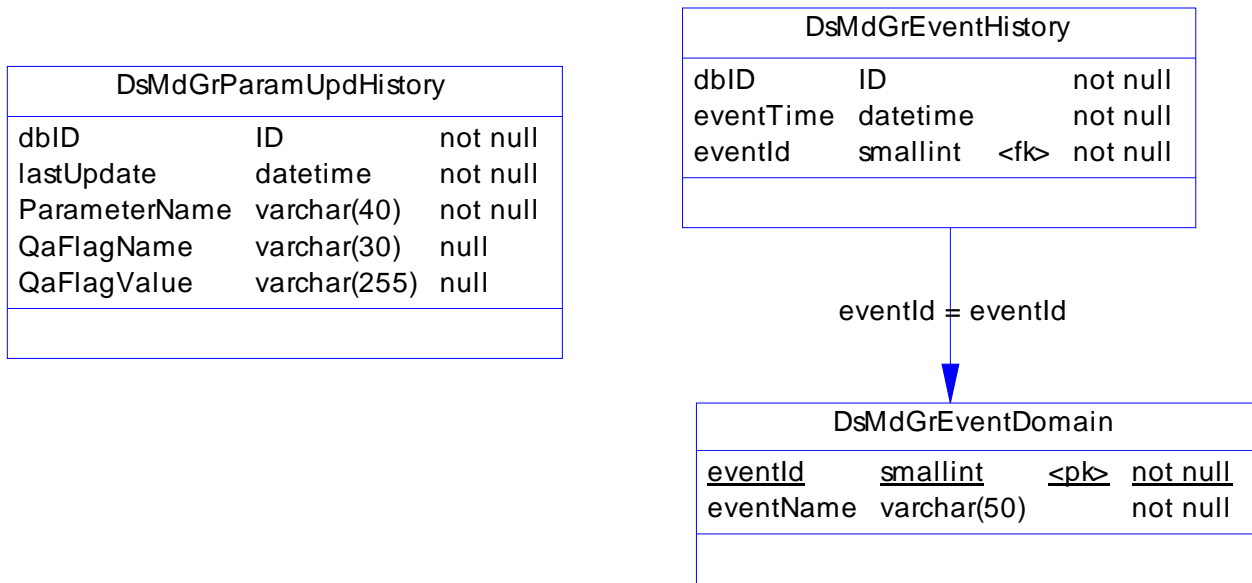


Figure A-14. EchoQa Export Support Information

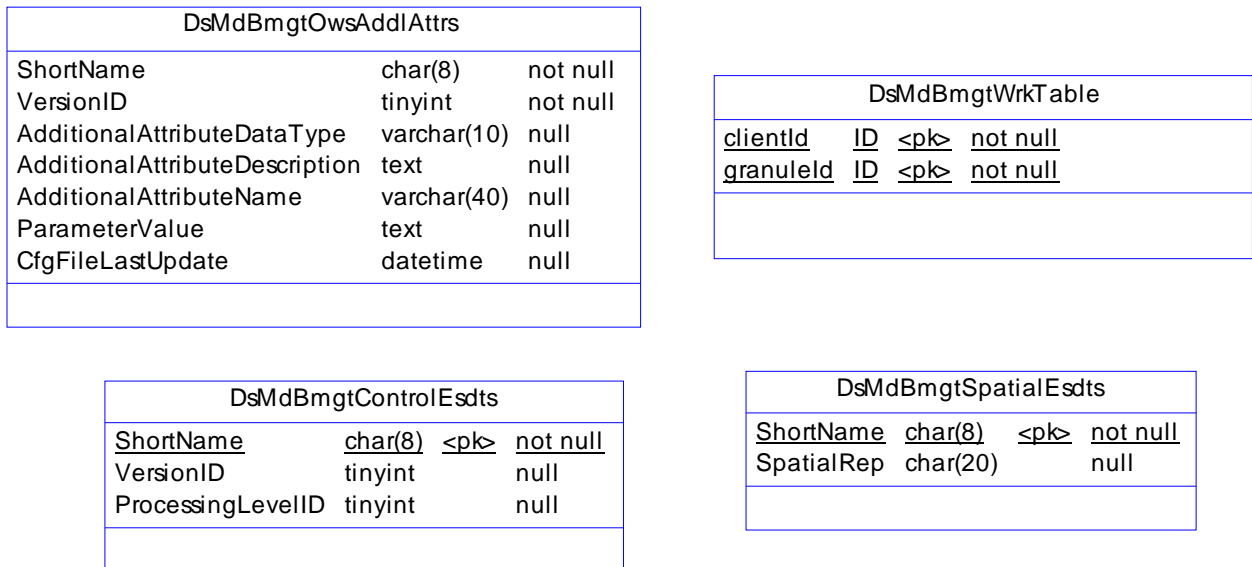


Figure A-15. Bmgt Information

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Abbreviations and Acronyms

ANSI	American National Standards Institute
ASCII	American Standard Code for Information Exchange
CASE	Computer Aided Software Engineering
CD	contractual delivery 213-001
CDRL	contract data requirements list
CI	configuration item
COTS	commercial off-the-shelf (hardware or software)
CSCI	computer software configuration item
DAAC	Distributed Active Archive Center
DBCC	Database Consistency Checker
DBMS	Database Management System
DCN	Document Change Notice
DID	data item description
DMS	Data Management Subsystem
ECS	EOSDIS Core System
EDC	EROS Data Center
EDHS	ECS Data Handling System
EOSDIS	Earth Observing System Data and Information System
EROS	Earth Resources Observation System
ERD	Entity Relationship Diagram
ESDIS	Earth Science Data and Information System (GSFC)
ESDT	Earth science data types
ESN	EOSDIS Science Network (ECS)
FK	Foreign Key
GSFC	Goddard Space Flight Center
GUI	graphic user interface
HDF	hierarchical data format

HDF-EOS	an EOS proposed standard for a specialized HDF data format
HTML	HyperText Markup Language
HTTP	Hypertext Transport Protocol
I/O	input/output
ICD	interface control document
INGST	Ingest Services CSCI
IOS	Interoperability Subsystem
LaRC	Langley Research Center (DAAC)
MSS	Management Support Subsystem
N/A	not applicable
NAS	National Academy of Science
NASA	National Aeronautics and Space Administration
NSIDC	National Snow and Ice Data Center (DAAC)
ODL	Object Definition Language
PCF	Process Control File
PDF	Portable Document Format
PDPS	Planning and Data Processing Subsystem
PGE	Product Generation Executive
PK	Primary Key
QA	Quality Assurance
SDSRV	Science Data Server CSCI
SQL	Structured Query Language
STMGT	Storage Management Software CSCI
SUBSRV	Subscription Server
WWW	World-Wide Web