

NSDSS Database Guide

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1. About This Document

This chapter provides a general overview of this document and contains the following major sub-sections:

- Document Purpose
- Document Audience
- Using this Document
- References

2. Document Purpose

This document serves as the Reference guide for the NSDSS Web Services Prototype. It explains how to operate and use the NSDSS Web Services (NSDSS WS) after it has been installed and pre-configured. In particular, the document focuses on how to access NSDSS Web Services and perform tasks such as:

- Data Permissions
- Operations and Maintenance
- Exception Handling

In summary, this document is intended to serve the following purposes:

- Give you a general overview of the NSDSS Web Services.
- Explain how to operate and administer NSDSS WS.

3. Document Audience

3.1. Pre-Requisites

The following knowledge, skills, and experience are recommended before reading this document:

- Working knowledge of the installation facility's network topology and the interconnections between the facility's components and target client network topology.
- Working knowledge of how to perform administration on Windows Server 2008.
- Working knowledge of how to perform administration on IIS.
- Basic proficiency in using one of the following web browsers:
 - Microsoft® Windows® Internet Explorer® 7 (or up)
 - Mozilla Firefox™ 2.0 (or up)

3.2. Out-of-Scope Content

The following topics are not covered by this document but may be available in other referenced documents (see references):

- Functional specifications
- Installation instructions
- Configuration instructions
- Application programming interface (API) descriptions
- Any other out-of-scope content is not covered by any part of the NSDSS documentation suite.

3.3. Optional Content

4. Using This Document

4.1. Document Structure

This document is divided into the following chapters:

4.2. Typographical Conventions

The following sections describe the typographical conventions used in this document.




4.2.1. Formatting Styles

Formatting Description	Element or Information Type	Examples
Arial	Field names (Includes drop-down lists, check boxes, radial buttons, and other lists and selections)	
	API method or operation names	
ARIAL SMALL CAPS	Keystrokes	
<i>Calibri Bold Italics</i>	References to other documents or source material	

	Screen, window, pop-up, and tab names. (First letter capitalized)	
<u>Calibri Bold + Italics + Underline, Blue</u>	Cross-references (links) to other headings or sections in this document	
<i>Calibri Italics</i>	Emphasis to a block of text	
Courier New	Code samples (Such as scripts, file formats, XML data, and so on)	
	Directory paths	
	Filenames	
Courier New Bold < <i>Courier New Bold Italics</i> >	Input (text) that the user must enter (Variables are expressed in italics surrounded by angle brackets <>)	

4.2.2. Special Icons

The following special icons are used in this document to alert the reader to important pieces of information:

Icon	Description
	<p>Note: Extra or supplementary information that needs to be emphasized to the reader. Can provide further context, instructions, or understanding.</p>
	<p>Tip: Useful tips or pointers that can help the reader while they are using the product or this document.</p>
	Reference
	<p>Warning: Alerts the reader to a potential action, practice, or situation that can result in major damage to data or the system. Damage is permanent and irreversible. Results may be contrary to what is expected or intended.</p>

Description

4.3. References

The latest versions of the following documents should be used in conjunction with this NSDSS WS Reference guide. They provide other useful, supplementary information about the product.

Reference	Description

5. Overview

Description

This document contains database references for the following databases.

Sources

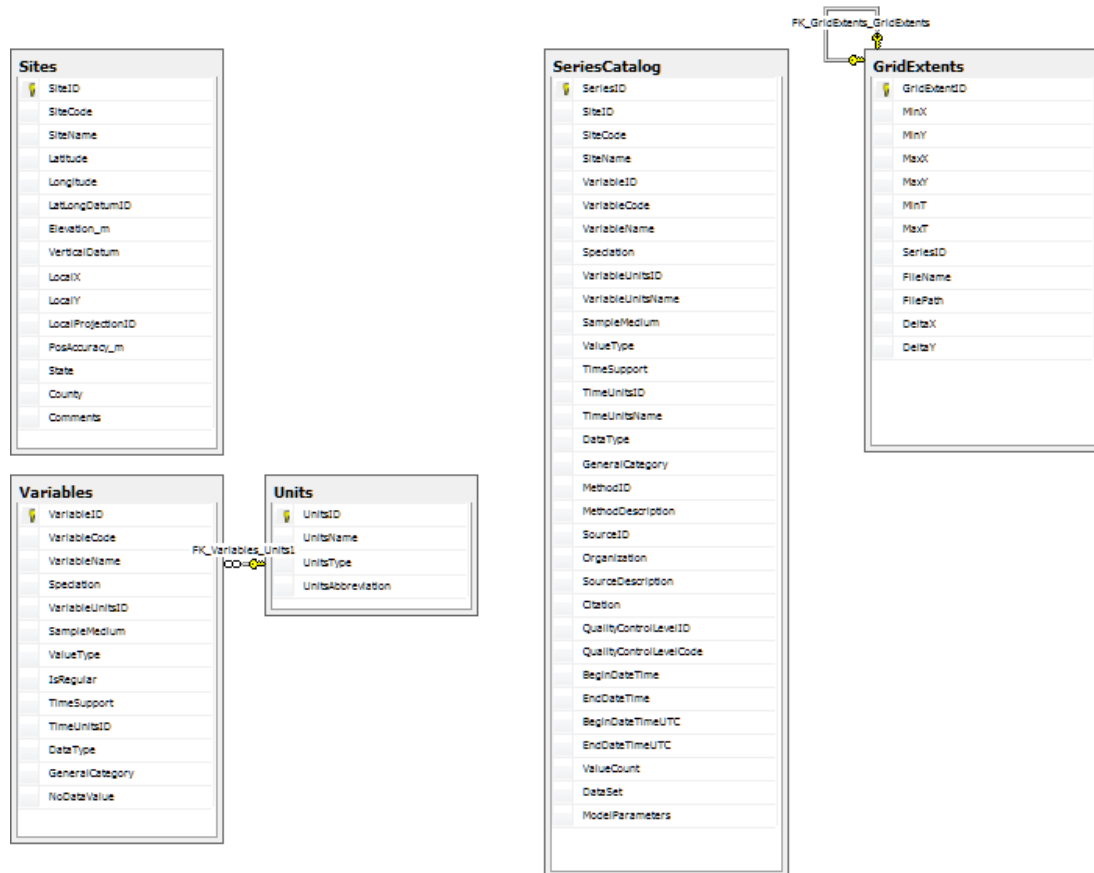
Name	Description
NSDSS NetCDF Metadata Store	DB used by the NetCDF Web Service to store metadata for all NetCDF files in the currently configured NetCDF file store. (Note: Non-ODM tables and non-ODM conformant ODM tables are documented here - for all other ODM tables see ODM Data Model Documentation)
NSDSS Metadata Catalog	DB used by the NSDSS to store metadata on all databases (ODM or NetCDF) accessible through the NSDSS.
NSDSS Model Publishing Database	DB used to store XML representations of NSDSS data models.

5.1. NSDSS NetCDF Metadata Store Database

Description

DB used by the NetCDF Web Service to store metadata for all NetCDF files in the currently configured NetCDF file store. (Note: Non-ODM table are documented here - for all other ODM tables see ODM Data Model Documentation)

Remarks



See Also

- Tables
- Views
- Procedures

5.1.1. Tables: NSDSS NetCDF Metadata Store

Tables

Name	Description
GridExtents	Table which describes data stored in the NSDSS that is of spatial grid format of time series point data.
SeriesCatalog	Table containing Catalog of NetCDF Data Series available in the NSDSS Catalog.

5.1.1.1. *Table: GridExtents*

Description

Table which describes data stored in the NSDSS that is of spatial grid format of time series point data.

Row Count

193

Columns

Name	Type	Required?	Description
GridExtentID	int IDENTITY	Yes	Grid Extent Primary Key
MinX	float	No	Minimum Longitude in degrees
MinY	float	No	Minimum Latitude in degrees
MaxX	float	No	Maximum Longitude in degrees
MaxY	float	No	Maximum Latitude in degrees
MinT	datetime	No	Earliest Datetime in range
MaxT	datetime	No	Latest Datetime in range
SeriesID	int	Yes	Foreign key to Series Catalog for the extent
FileName	nchar(127)	No	Base filename described by extent (no path data)
FilePath	nchar(127)	No	File path relative to filestore base path to file associated with extent.
DeltaX	float	No	Approximate longitude between points in degrees.
DeltaY	float	No	Approximate latitude between points in degrees.

Relationships

Primary Table	Primary Key	Foreign Table	Foreign Key
---------------	-------------	---------------	-------------

Referenced By

Name
NetCDFMetadata

Remarks

Not ODM - For storage of metadata associate with NetCDF store that is not part of ODM model. Filename and filepath conform to Windows filesystem naming conventions.

Definition

```
CREATE TABLE [dbo].[GridExtents]
(
    [GridExtentID] int IDENTITY NOT NULL,
    [MinX] float NULL,
```

```
[MinY] float NULL,  
[MaxX] float NULL,  
[MaxY] float NULL,  
[MinT] datetime NULL,  
[MaxT] datetime NULL,  
[SeriesID] int NOT NULL,  
[FileName] nchar(127) NULL,  
[FilePath] nchar(127) NULL,  
[DeltaX] float NULL,  
[DeltaY] float NULL  
CONSTRAINT [PK_GridExtents] PRIMARY KEY  
(  
    [GridExtentID]  
)  
)
```

5.1.1.1. *Table: SeriesCatalog*

Description

Table containing Catalog of NetCDF Data Series available in the NSDSS Catalog.

Row Count

193

Columns

Name	Type	Required?	Description
SeriesID	int IDENTITY	Yes	See ODM Data Model Documentation
SiteID	int	No	See ODM Data Model Documentation
SiteCode	nvarchar(50)	No	See ODM Data Model Documentation
SiteName	nvarchar(255)	No	See ODM Data Model Documentation
VariableID	int	No	See ODM Data Model Documentation
VariableCode	nvarchar(50)	No	See ODM Data Model Documentation
VariableName	nvarchar(255)	No	See ODM Data Model Documentation
Speciation	nvarchar(255)	No	See ODM Data Model Documentation
VariableUnitsID	int	No	See ODM Data Model Documentation
VariableUnitsName	nvarchar(255)	No	See ODM Data Model Documentation
SampleMedium	nvarchar(255)	No	See ODM Data Model Documentation
ValueType	nvarchar(255)	No	See ODM Data Model Documentation
TimeSupport	float	No	See ODM Data Model Documentation
TimeUnitsID	int	No	See ODM Data Model Documentation
TimeUnitsName	nvarchar(255)	No	See ODM Data Model Documentation
DataType	nvarchar(255)	No	See ODM Data Model Documentation
GeneralCategory	nvarchar(255)	No	See ODM Data Model Documentation
MethodID	int	No	See ODM Data Model Documentation
MethodDescription	nvarchar(max)	No	See ODM Data Model Documentation
SourceID	int	No	See ODM Data Model Documentation
Organization	nvarchar(255)	No	See ODM Data Model Documentation
SourceDescription	nvarchar(max)	No	See ODM Data Model Documentation
Citation	nvarchar(max)	No	See ODM Data Model Documentation
QualityControlLevelID	int	No	See ODM Data Model Documentation
QualityControlLevelCode	nvarchar(50)	No	See ODM Data Model Documentation
BeginDateTime	datetime	No	Earliest datetime of time series values in local timezone
EndDateTime	datetime	No	Latest datetime of time series values in local timezone

Name	Type	Required?	Description
BeginDateTimeUTC	datetime	No	Earliest datetime of time series values in UTC
EndDateTimeUTC	datetime	No	Lateest datetime of time series values in UTC
ValueCount	int	No	Number of entries in the time series
DataSet	nvarchar(255)	No	Associated dataset for series
ModelParameters	nvarchar(255)	No	Associated model parameters for the series

Referenced By

Name
NetCDFMetadata

Remarks

Note this is the ODM SeriesCatalog table augmented with additional fields to support time series and additional criteria required by the NSDSS Catalog Service.

Definition

```
CREATE TABLE [dbo].[SeriesCatalog]
(
    [SeriesID] int IDENTITY NOT NULL,
    [SiteID] int NULL,
    [SiteCode] nvarchar(50) NULL,
    [SiteName] nvarchar(255) NULL,
    [VariableID] int NULL,
    [VariableCode] nvarchar(50) NULL,
    [VariableName] nvarchar(255) NULL,
    [Speciation] nvarchar(255) NULL,
    [VariableUnitsID] int NULL,
    [VariableUnitsName] nvarchar(255) NULL,
    [SampleMedium] nvarchar(255) NULL,
    [ValueType] nvarchar(255) NULL,
    [TimeSupport] float NULL,
    [TimeUnitsID] int NULL,
    [TimeUnitsName] nvarchar(255) NULL,
    [DataType] nvarchar(255) NULL,
    [GeneralCategory] nvarchar(255) NULL,
    [MethodID] int NULL,
    [MethodDescription] nvarchar(max) NULL,
    [SourceID] int NULL,
    [Organization] nvarchar(255) NULL,
    [SourceDescription] nvarchar(max) NULL,
    [Citation] nvarchar(max) NULL,
    [QualityControlLevelID] int NULL,
    [QualityControlLevelCode] nvarchar(50) NULL,
    [BeginDateTime] datetime NULL,
    [EndDateTime] datetime NULL,
    [BeginDateTimeUTC] datetime NULL,
    [EndDateTimeUTC] datetime NULL,
    [ValueCount] int NULL,
    [DataSet] nvarchar(255) NULL,
    [ModelParameters] nvarchar(255) NULL
    CONSTRAINT [PK_SeriesCatalog] PRIMARY KEY
    (
        [SeriesID]
    )
)
```

)

5.1.1. Views: NSDSS NetCDF Metadata Store

Views

Name	Description
NetCDFMetadata	Derived view of GridExtents and SeriesCatalog for use by NetCDF Web Service in search and aggregation of catalog data.

5.1.1.1. View: NetCDFMetadata

Description

Derived view of GridExtents and SeriesCatalog for use by NetCDF Web Service in search and aggregation of catalog data.

Columns

Name	Type	Required?	Description
MinX	float	True	Minimum Longitude in degrees
MinY	float	True	Minimum Latitude in degrees
MaxX	float	True	Maximum Longitude in degrees
MaxY	float	True	Maximum Latitude in degrees
VariableCode	nvarchar(50)	True	See ODM Data Model Documentation
VariableName	nvarchar(255)	True	See ODM Data Model Documentation
VariableID	int	True	See ODM Data Model Documentation
Speciation	nvarchar(255)	True	See ODM Data Model Documentation
VariableUnitsID	int	True	See ODM Data Model Documentation
VariableUnitsName	nvarchar(255)	True	See ODM Data Model Documentation
SampleMedium	nvarchar(255)	True	See ODM Data Model Documentation
ValueType	nvarchar(255)	True	See ODM Data Model Documentation
TimeSupport	float	True	See ODM Data Model Documentation
TimeUnitsID	int	True	See ODM Data Model Documentation
TimeUnitsName	nvarchar(255)	True	See ODM Data Model Documentation
Data Type	nvarchar(255)	True	See ODM Data Model Documentation
GeneralCategory	nvarchar(255)	True	See ODM Data Model Documentation
MethodID	int	True	See ODM Data Model Documentation
MethodDescription	nvarchar(max)	True	See ODM Data Model Documentation
SourceID	int	True	See ODM Data Model Documentation
Organization	nvarchar(255)	True	See ODM Data Model Documentation
SourceDescription	nvarchar(max)	True	See ODM Data Model Documentation
Citation	nvarchar(max)	True	See ODM Data Model Documentation
QualityControlLevelID	int	True	See ODM Data Model Documentation
QualityControlLevelCode	nvarchar(50)	True	See ODM Data Model Documentation
BeginDateTimeUTC	datetime	True	Earliest datetime of time series values in UTC
EndDateTimeUTC	datetime	True	Latest datetime of time series values in UTC
FileName	nchar(127)	True	Base filename described by extent (no path data)

Name	Type	Required?	Description
FilePath	nchar(127)	True	File path relative to filestore base path to file associated with extent.
MinT	datetime	True	Earliest Datetime in range
MaxT	datetime	True	Latest Datetime in range
DeltaX	float	True	Approximate longitude between points in degrees.
DeltaY	float	True	Approximate longitude between points in degrees.
ValueCount	int	True	Number of entries in the time series
DataSet	nvarchar(255)	True	Associated dataset for series
ModelParameters	nvarchar(255)	True	Associated model parameters for the series

Definition

```

SELECT      NetCDFCatalog.MinX, NetCDFCatalog.MinY, NetCDFCatalog.MaxX, NetCDFCatalog.MaxY,
dbo.SeriesCatalog.VariableCode, dbo.SeriesCatalog.VariableName,
           dbo.SeriesCatalog.VariableID, dbo.SeriesCatalog.Speciation,
dbo.SeriesCatalog.VariableUnitsID, dbo.SeriesCatalog.VariableUnitsName,
           dbo.SeriesCatalog.SampleMedium, dbo.SeriesCatalog.ValueType,
dbo.SeriesCatalog.TimeSupport, dbo.SeriesCatalog.TimeUnitsID,
           dbo.SeriesCatalog.TimeUnitsName, dbo.SeriesCatalog.DataType,
dbo.SeriesCatalog.GeneralCategory, dbo.SeriesCatalog.MethodID,
           dbo.SeriesCatalog.MethodDescription, dbo.SeriesCatalog.SourceID,
dbo.SeriesCatalog.Organization, dbo.SeriesCatalog.SourceDescription,
           dbo.SeriesCatalog.Citation, dbo.SeriesCatalog.QualityControlLevelID,
dbo.SeriesCatalog.QualityControlLevelCode, dbo.SeriesCatalog.BeginDateTimeUTC,
           dbo.SeriesCatalog.EndDateTimeUTC, NetCDFCatalog.FileName,
NetCDFCatalog.FilePath, NetCDFCatalog.MinT, NetCDFCatalog.MaxT, NetCDFCatalog.DeltaX,
           NetCDFCatalog.DeltaY, dbo.SeriesCatalog.ValueCount,
dbo.SeriesCatalog.DataSet, dbo.SeriesCatalog.ModelParameters
FROM        dbo.GridExtents AS NetCDFCatalog INNER JOIN
           dbo.SeriesCatalog ON NetCDFCatalog.SeriesID =
           dbo.SeriesCatalog.SeriesID

```

References

Name
GridExtents
SeriesCatalog

Definition

```

SELECT      NetCDFCatalog.MinX, NetCDFCatalog.MinY, NetCDFCatalog.MaxX, NetCDFCatalog.MaxY,
dbo.SeriesCatalog.VariableCode, dbo.SeriesCatalog.VariableName,
           dbo.SeriesCatalog.VariableID, dbo.SeriesCatalog.Speciation,
dbo.SeriesCatalog.VariableUnitsID, dbo.SeriesCatalog.VariableUnitsName,
           dbo.SeriesCatalog.SampleMedium, dbo.SeriesCatalog.ValueType,
dbo.SeriesCatalog.TimeSupport, dbo.SeriesCatalog.TimeUnitsID,
           dbo.SeriesCatalog.TimeUnitsName, dbo.SeriesCatalog.DataType,
dbo.SeriesCatalog.GeneralCategory, dbo.SeriesCatalog.MethodID,
           dbo.SeriesCatalog.MethodDescription, dbo.SeriesCatalog.SourceID,
dbo.SeriesCatalog.Organization, dbo.SeriesCatalog.SourceDescription,
           dbo.SeriesCatalog.Citation, dbo.SeriesCatalog.QualityControlLevelID,
dbo.SeriesCatalog.QualityControlLevelCode, dbo.SeriesCatalog.BeginDateTimeUTC,

```

```
        dbo.SeriesCatalog.EndDateTimeUTC, NetCDFCatalog.FileName,  
NetCDFCatalog.FilePath, NetCDFCatalog.MinT, NetCDFCatalog.MaxT, NetCDFCatalog.DeltaX,  
        NetCDFCatalog.DeltaY, dbo.SeriesCatalog.ValueCount,  
dbo.SeriesCatalog.DataSet, dbo.SeriesCatalog.ModelParameters  
FROM      dbo.GridExtents AS NetCDFCatalog INNER JOIN  
        dbo.SeriesCatalog ON NetCDFCatalog.SeriesID =  
dbo.SeriesCatalog.SeriesID
```

5.1.1.1. Procedure: *spUpdateSeriesCatalog*

Description

```
=====
Author: Jeff Horsburgh
Create date: 10-5-2006
Modified: 1-31-2007
Description: Clears the SeriesCatalog table
and regenerates it from scratch.
=====
```

Parameters

None

Remarks

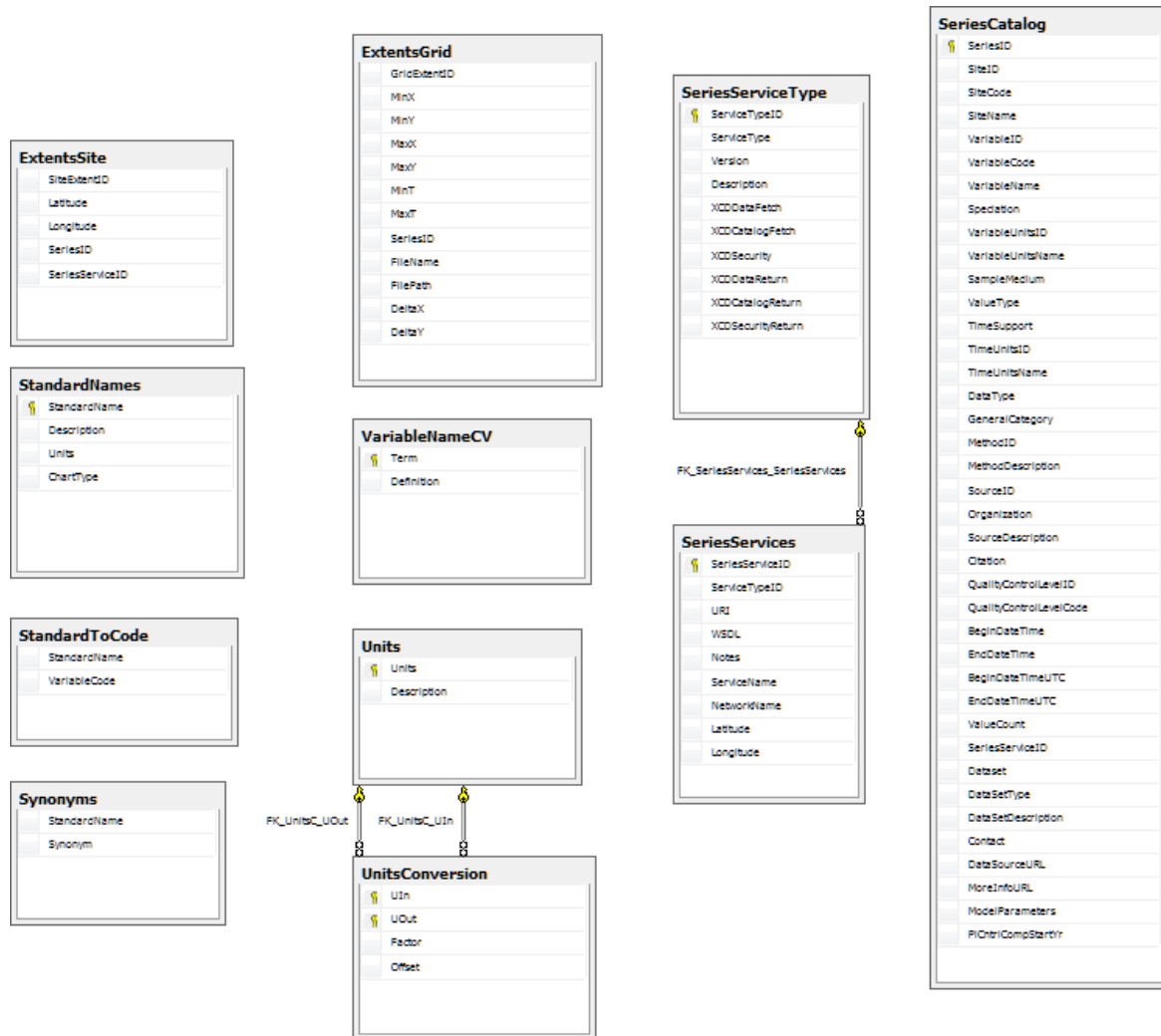
This is an ODM authored stored procedure and is unmodified by NSDSS.

5.2. NSDSS Metadata Catalog Database

Description

DB used by the NSDSS to store metadata on all databases (ODM or NetCDF) accessible through the NSDSS.

Remarks



See Also

- Tables
- Views
- Procedures

5.2.1. Tables: NSDSS Metadata Catalog

Description

Catalog of Metadata for all data stored in the NSDSS. (List of non-ODM and non-ODM conformant ODM tables)

Tables

Name	Description
ExtentsGrid	Table used to determine whether a point is within the grid extent of a NetCDF data file.
ExtentsSite	Table used to determine whether a time series exists at a specific ODM site location.
SeriesCatalog	Missing description.
SeriesServices	Lists the services available in the Metadata Catalog Store
SeriesServiceType	Lists the service type available in the Metadata Catalog. netcdf and ODM are initial options.
StandardNames	Table listing Standard Names as defined by NSDSS for time series variables available in the system
StandardToCode	Lists relationships between ODM Variable Codes and NSDSS Standard Names
Synonyms	Lists Synonyms for Standard Names
Units	Table of Units used in the Metadata Catalog
UnitsConversion	Unit conversion table
VariableNameCV	See ODM Data Model

5.2.1.1. Table: ExtentsGrid

Description

Table used to determine whether a point is within the grid extent of a NetCDF data file.

Row Count

192

Columns

Name	Type	Required?	Description
GridExtentID	int IDENTITY	Yes	Grid Extent Primary Key
MinX	float	No	Minimum Longitude in degrees
MinY	float	No	Minimum Latitude in degrees
MaxX	float	No	Maximum Longitude in degrees
MaxY	float	No	Maximum Latitude in degrees
MinT	datetime	No	Earliest Datetime in range
MaxT	datetime	No	Latest Datetime in range
SeriesID	int	Yes	Foreign key to Series Catalog for the extent
FileName	nchar(127)	No	Base filename described by extent (no path data)
FilePath	nchar(127)	No	File path relative to filestore base path to file associated with extent.
DeltaX	float	No	Approximate longitude between points in degrees.
DeltaY	float	No	Approximate latitude between points in degrees.

Referencing Views

Name
NetCDFMetadata

Definition

```
CREATE TABLE [ExtentsGrid]
(
    [GridExtentID] int IDENTITY NOT NULL,
    [MinX] float NULL,
    [MinY] float NULL,
    [MaxX] float NULL,
    [MaxY] float NULL,
    [MinT] datetime NULL,
    [MaxT] datetime NULL,
    [SeriesID] int NOT NULL,
    [FileName] nchar(127) NULL,
    [FilePath] nchar(127) NULL,
    [DeltaX] float NULL,
    [DeltaY] float NULL
)
```

)

5.2.1.2. Table: ExtentsSite

Description

Table used to determine whether a time series exists at a specific ODM site location.

Row Count

22762

Columns

Name	Type	Required?	Description
SiteExtentID	int IDENTITY	Yes	Extents Site Primary Key
Latitude	float	No	Latitude of time series
Longitude	float	No	Longitude of time series
SeriesID	int	Yes	Foreign key to series in SeriesCatalog
SeriesServiceID	int	No	Foreign key to determine service type

Referenced By

Name
ODMMetadata
RESTMetadata

Definition

```
CREATE TABLE [dbo].[ExtentsSite]
(
    [SiteExtentID] int IDENTITY NOT NULL,
    [Latitude] float NULL,
    [Longitude] float NULL,
    [SeriesID] int NOT NULL,
    [SeriesServiceID] int NULL
)
```

5.2.1.3. Table: NDCDSitesISH

Description

Table used to implement NCD REST data sources for 2011 NSDSS Workshop.

Row Count

6376

Columns

Name	Type	Required?	Description
SiteID	varchar(50)	No	SiteID of time series
Country	varchar(10)	No	Country of time series
SiteName	varchar(255)	No	Name of Site of time series
Latitude	float	No	Latitude of time series
Longitude	float	No	Longitude of time series
StartDateStr	varchar(50)	No	Earliest datetime of time series values in local timezone
EndDateStr	varchar(50)	No	Latest datetime of time series values in local timezone
StartDate	datetime	No	Earliest datetime of time series values in local timezone
EndDate	datetime	No	Latest datetime of time series values in local timezone

Definition

```
CREATE TABLE [dbo].[NDCDSitesISH]
(
    [SiteID] varchar(50) NULL,
    [Country] varchar(10) NULL,
    [SiteName] varchar(255) NULL,
    [Latitude] float NULL,
    [Longitude] float NULL,
    [StartDateStr] varchar(50) NULL,
    [EndDateStr] varchar(50) NULL,
    [StartDate] datetime NULL,
    [EndDate] datetime NULL
)
```

5.2.1.2. Table: SeriesCatalog
Description

Table containing Catalog of Data Series available in the NSDSS Catalog.

Row Count

14845

Columns

Name	Type	Required?	Description
SeriesID	int IDENTITY	Yes	See ODM Data Model Documentation
SiteID	int	No	See ODM Data Model Documentation
SiteCode	nvarchar(50)	No	See ODM Data Model Documentation
SiteName	nvarchar(255)	No	See ODM Data Model Documentation
VariableID	int	No	See ODM Data Model Documentation
VariableCode	nvarchar(50)	No	See ODM Data Model Documentation
VariableName	nvarchar(255)	No	See ODM Data Model Documentation
Speciation	nvarchar(255)	No	See ODM Data Model Documentation
VariableUnitsID	int	No	See ODM Data Model Documentation
VariableUnitsName	nvarchar(255)	No	See ODM Data Model Documentation
SampleMedium	nvarchar(255)	No	See ODM Data Model Documentation
ValueType	nvarchar(255)	No	See ODM Data Model Documentation
TimeSupport	float	No	See ODM Data Model Documentation
TimeUnitsID	int	No	See ODM Data Model Documentation
TimeUnitsName	nvarchar(255)	No	See ODM Data Model Documentation
DataType	nvarchar(255)	No	See ODM Data Model Documentation
GeneralCategory	nvarchar(255)	No	See ODM Data Model Documentation
MethodID	int	No	See ODM Data Model Documentation
MethodDescription	nvarchar(max)	No	See ODM Data Model Documentation
SourceID	int	No	See ODM Data Model Documentation
Organization	nvarchar(255)	No	See ODM Data Model Documentation
SourceDescription	nvarchar(max)	No	See ODM Data Model Documentation
Citation	nvarchar(max)	No	See ODM Data Model Documentation
QualityControlLevelID	int	No	See ODM Data Model Documentation
QualityControlLevelCode	nvarchar(50)	No	See ODM Data Model Documentation
BeginDateTime	datetime	No	Earliest datetime of time series values in local timezone
EndDateTime	datetime	No	Latest datetime of time series values in local timezone

Name	Type	Required?	Description
BeginDateTimeUTC	datetime	No	Earliest datetime of time series values in UTC
EndDateTimeUTC	datetime	No	Lateest datetime of time series values in UTC
ValueCount	int	No	Number of entries in the time series
SeriesServiceID	int	No	Foreign key defining type of Service for time series
Dataset	nvarchar(255)	No	Associated data set for series
DataSetType	nvarchar(50)	No	Type of data set
DataSetDescription	nvarchar(255)	No	Long description of data set
Contact	nvarchar(255)	No	Admin/creator contact info for time series
DataSourceURL	nvarchar(255)	No	URL associated with data source for time series
MoreInfoURL	nvarchar(255)	No	URL for additional information on time series
ModelParameters	nvarchar(255)	No	Associated model parameters for the series
PICntrlCompStartYr	nvarchar(255)	No	Control value for NSDSS client

Referenced By

Name
NetCDFMetadata
ODMMetadata
RESTMetadata

Definition

```
CREATE TABLE [dbo].[SeriesCatalog]
(
    [SeriesID] int IDENTITY NOT NULL,
    [SiteID] int NULL,
    [SiteCode] nvarchar(50) NULL,
    [SiteName] nvarchar(255) NULL,
    [VariableID] int NULL,
    [VariableCode] nvarchar(50) NULL,
    [VariableName] nvarchar(255) NULL,
    [Speciation] nvarchar(255) NULL,
    [VariableUnitsID] int NULL,
    [VariableUnitsName] nvarchar(255) NULL,
    [SampleMedium] nvarchar(255) NULL,
    [ValueType] nvarchar(255) NULL,
    [TimeSupport] float NULL,
    [TimeUnitsID] int NULL,
    [TimeUnitsName] nvarchar(255) NULL,
    [DataType] nvarchar(255) NULL,
    [GeneralCategory] nvarchar(255) NULL,
    [MethodID] int NULL,
    [MethodDescription] nvarchar(max) NULL,
    [SourceID] int NULL,
    [Organization] nvarchar(255) NULL,
    [SourceDescription] nvarchar(max) NULL,
    [Citation] nvarchar(max) NULL,

```

```
[QualityControlLevelID] int NULL,  
[QualityControlLevelCode] nvarchar(50) NULL,  
[BeginDateTime] datetime NULL,  
[EndDateTime] datetime NULL,  
[BeginDateTimeUTC] datetime NULL,  
[EndDateTimeUTC] datetime NULL,  
[ValueCount] int NULL,  
[SeriesServiceID] int NULL,  
[Dataset] nvarchar(255) NULL,  
[DataSetType] nvarchar(50) NULL,  
[DataSetDescription] nvarchar(255) NULL,  
[Contact] nvarchar(255) NULL,  
[DataSourceURL] nvarchar(255) NULL,  
[MoreInfoURL] nvarchar(255) NULL,  
[ModelParameters] nvarchar(255) NULL DEFAULT (''),  
[PlCntrlCompStartYr] nvarchar(255) NULL DEFAULT ('')  
CONSTRAINT [PK_SeriesCatalog] PRIMARY KEY  
(  
    [SeriesID]  
)  
)
```


5.2.1.1. Table: SeriesServices

Description

Lists the services available in the Metadata Catalog Store

Row Count

9

Columns

Name	Type	Required?	Description
SeriesServiceID	int IDENTITY	Yes	Primary Key for SeriesServices
ServiceTypeID	int	Yes	Integer describing Service Type 1= NetCDF Service, 2=ODM Service
URI	nchar(255)	No	URI for the specific web service endpoint
WSDL	nchar(255)	No	WSDL for the specific service endpoint
Notes	nchar(255)	No	Notes for web service
ServiceName	nchar(255)	No	Service Name for web service
NetworkName	nchar(255)	No	Network name for ODM services
Latitude	float	No	Latitude of service endpoint
Longitude	float	No	Longitude of service endpoint

Relationships

Primary Table	Primary Key	Foreign Table	Foreign Key
SeriesServiceType	ServiceTypeID	SeriesServices	ServiceTypeID

Referenced By

Name
NetCDFMetadata
ODMMetadata
RESTMetadata

Definition

```
CREATE TABLE [dbo].[SeriesServices]
(
    [SeriesServiceID] int IDENTITY NOT NULL,
    [ServiceTypeID] int NOT NULL,
    [URI] nchar(255) NULL,
    [WSDL] nchar(255) NULL,
    [Notes] nchar(255) NULL,
    [ServiceName] nchar(255) NULL,
    [NetworkName] nchar(255) NULL,
    [Latitude] float NULL,
    [Longitude] float NULL
    CONSTRAINT [PK_SeriesServices] PRIMARY KEY
    (
        [SeriesServiceID]
    )
)
```

))

5.2.1.2. Table: SeriesServiceType

Description

Lists the service type available in the Metadata Catalog. netcdf and ODM are initial options.

Row Count

3

Columns

Name	Type	Required?	Description
ServiceTypeID	int IDENTITY	Yes	Primary Key for SeriesServiceType
ServiceType	nchar(10)	Yes	String representing service type of service
Version	nchar(10)	Yes	Version of service being specified
Description	nchar(255)	No	Description of Service Type
XCDDataFetch	xml	No	XML representing the template/envelope of a SOAP call to fetch data from service
XCDCatalogFetch	xml	No	XML representing the template/envelope of a SOAP call to fetch catalog entries from service
XCDSecurity	xml	No	XML representing the template/envelope of a SOAP call to acquire access tokens from service
XCDDataReturn	xml	No	XML representing the template/envelope of a SOAP call return to fetch data from service
XCDCatalogReturn	xml	No	XML representing the template/envelope of a SOAP call return to fetch catalog data from service
XCDSecurityReturn	xml	No	XML representing the template/envelope of a SOAP call return to acquire a security token from service

Relationships

Primary Table	Primary Key	Foreign Table	Foreign Key
SeriesServiceType	ServiceTypeID	SeriesServices	ServiceTypeID

Referenced By

Name
NetCDFMetadata
ODMMetadata
RESTMetadata

Definition

```
CREATE TABLE [dbo].[SeriesServiceType]
(
```

```
[ServiceTypeID] int IDENTITY NOT NULL,  
[ServiceType] nchar(10) NOT NULL,  
[Version] nchar(10) NOT NULL,  
[Description] nchar(255) NULL,  
[XCDDataFetch] xml NULL,  
[XCDCatalogFetch] xml NULL,  
[XCDSecurity] xml NULL,  
[XCDDataReturn] xml NULL,  
[XCDCatalogReturn] xml NULL,  
[XCDSecurityReturn] xml NULL  
CONSTRAINT [PK_SeriesServiceType] PRIMARY KEY  
(  
    [ServiceTypeID]  
)  
)
```

5.2.1.3. Table: StandardNames

Description

Table listing Standard Names as defined by NSDSS for time series variables available in the system

Row Count

16

Columns

Name	Type	Required?	Description
StandardName	nvarchar(255)	Yes	Standard name for variable
Description	nvarchar(max)	No	Description for StandardName
Units	nvarchar(255)	No	Default units for values of StandardName
ChartType	nvarchar(255)	No	Chart type, if any, for rendering of variable.

Definition

```
CREATE TABLE [dbo].[StandardNames]
(
    [StandardName] nvarchar(255) NOT NULL,
    [Description] nvarchar(max) NULL,
    [Units] nvarchar(255) NULL,
    [ChartType] nvarchar(255) NULL
    CONSTRAINT [PK_StandardNames] PRIMARY KEY
    (
        [StandardName]
    )
)
```

5.2.1.4. Table: StandardToCode**Description**

Lists relationships between ODM Variable Codes and NSDSS Standard Names

Row Count

44

Columns

Name	Type	Required?	Description
StandardName	nvarchar(255)	No	Standard Name from StandardNames table
VariableCode	nvarchar(255)	No	Variable code in series catalog that maps to the corresponding Standard Name

Definition

```
CREATE TABLE [dbo].[StandardToCode]
(
    [StandardName] nvarchar(255) NULL,
    [VariableCode] nvarchar(255) NULL
)
```

5.2.1.5. Table: Synonyms

Description

Lists Synonyms for Standard Names

Row Count

50

Columns

Name	Type	Required?	Description
StandardName	nvarchar(255)	No	Standard Name for variable
Synonym	nvarchar(255)	No	Synonym for the associated StandardName

Definition

```
CREATE TABLE [dbo].[Synonyms]
(
    [StandardName] nvarchar(255) NULL,
    [Synonym] nvarchar(255) NULL
)
```

5.2.1.6. Table: Units**Description**

Table of Units used in the Metadata Catalog

Row Count

1

Columns

Name	Type	Required?	Description
Units	nvarchar(128)	Yes	Unit name
Description	nvarchar(255)	No	Unit description

Relationships

Primary Table	Primary Key	Foreign Table	Foreign Key
Units	Units	UnitsConversion	UIn
Units	Units	UnitsConversion	UOut

Definition

```
CREATE TABLE [dbo].[Units]
(
    [Units] nvarchar(128) NOT NULL,
    [Description] nvarchar(255) NULL
    CONSTRAINT [PK_Units] PRIMARY KEY
    (
        [Units]
    )
)
```


5.2.1.7. Table: UnitsConversion

Description

Unit conversion table

Row Count

0

Columns

Name	Type	Required?	Description
UIn	nvarchar(128)	Yes	Units input
UOut	nvarchar(128)	Yes	Units output
Factor	float	Yes	Factor to multiply input
Offset	float	Yes	Offset to add to input

Relationships

Primary Table	Primary Key	Foreign Table	Foreign Key
Units	Units	UnitsConversion	UIn
Units	Units	UnitsConversion	UOut

Definition

```
CREATE TABLE [dbo].[UnitsConversion]
(
    [UIn] nvarchar(128) NOT NULL,
    [UOut] nvarchar(128) NOT NULL,
    [Factor] float NOT NULL DEFAULT ((0.0)),
    [Offset] float NOT NULL DEFAULT ((0.0))
    CONSTRAINT [PK_UnitsConversion] PRIMARY KEY
    (
        [UIn],
        [UOut]
    )
)
```

5.2.1.8. Table: VariableNameCV**Description**

See ODM Data Model

Row Count

221

Columns

Name	Type	Required?	Description
Term	nvarchar(255)	Yes	See ODM Data Model Documentation
Definition	nvarchar(max)	No	See ODM Data Model Documentation

Check Constraints

Name	Check
CK_VariableNameCV_Term	(NOT [Term] like (((('%'+char((9))+char((10))+char((13))+']%'))

Definition

```
CREATE TABLE [dbo].[VariableNameCV]
(
    [Term] nvarchar(255) NOT NULL,
    [Definition] nvarchar(max) NULL
CONSTRAINT [PK_VariableNameCV] PRIMARY KEY
(
    [Term]
)
)
```

5.2.2. Views: NSDSS Metadata Catalog

Views

Name	Description
NetCDFMetadata	Derived view of ExtentsGrid and SeriesCatalog for use by Metadata Catalog Web Service in search and aggregation of catalog data. (generally used for NetCDF sources).
ODMMetadata	Derived view of ExtentsSite and SeriesCatalog for use by Metadata Catalog Web Service in search and aggregation of catalog data. (generally used for ODM sources)
RESTMetadata	Derived view of ExtentsSite and SeriesCatalog for use by Metadata Catalog Web Service in search and aggregation of catalog data. (generally used for NDCD REST data).

View: NetCDFMetadata**Description**

Derived view of ExtentsGrid and SeriesCatalog for use by Metadata Catalog Web Service in search and aggregation of catalog data. (generally used for NetCDF sources).

Columns

Name	Type	Required?	Description
VariableCode	nvarchar(50)	True	See ODM Data Model Documentation
VariableName	nvarchar(255)	True	See ODM Data Model Documentation
VariableID	int	True	See ODM Data Model Documentation
Speciation	nvarchar(255)	True	See ODM Data Model Documentation
VariableUnitsID	int	True	See ODM Data Model Documentation
VariableUnitsName	nvarchar(255)	True	See ODM Data Model Documentation
SampleMedium	nvarchar(255)	True	See ODM Data Model Documentation
ValueType	nvarchar(255)	True	See ODM Data Model Documentation
TimeSupport	float	True	See ODM Data Model Documentation
TimeUnitsID	int	True	See ODM Data Model Documentation
TimeUnitsName	nvarchar(255)	True	See ODM Data Model Documentation
Data Type	nvarchar(255)	True	See ODM Data Model Documentation
GeneralCategory	nvarchar(255)	True	See ODM Data Model Documentation
MethodID	int	True	See ODM Data Model Documentation
MethodDescription	nvarchar(max)	True	See ODM Data Model Documentation
SourceID	int	True	See ODM Data Model Documentation
Organization	nvarchar(255)	True	See ODM Data Model Documentation
SourceDescription	nvarchar(max)	True	See ODM Data Model Documentation
Citation	nvarchar(max)	True	See ODM Data Model Documentation
QualityControlLevelID	int	True	See ODM Data Model Documentation
QualityControlLevelCode	nvarchar(50)	True	See ODM Data Model Documentation
BeginDateTimeUTC	datetime	True	Earliest datetime of time series values in UTC
EndDateTimeUTC	datetime	True	Latest datetime of time series values in UTC
FilePath	nchar(127)	True	Base filename described by extent (no path data)
FileName	nchar(127)	True	File path relative to filestore base path to file associated with extent.
MaxT	datetime	True	Earliest Datetime in range
MinT	datetime	True	Latest Datetime in range
MaxY	float	True	Maximum Latitude in degrees

Name	Type	Required?	Description
MaxX	float	True	Maximum Longitude in degrees
MinX	float	True	Minimum Longitude in degrees
MinY	float	True	Minimum Latitude in degrees
ValueCount	int	True	Number of entries in the time series
EndDateTime	datetime	True	Latest datetime of time series values in local timezone
BeginDateTime	datetime	True	Earliest datetime of time series values in local timezone
SiteCode	nvarchar(50)	True	See ODM Data Model Documentation
SiteName	nvarchar(255)	True	See ODM Data Model Documentation
SeriesID	int	False	See ODM Data Model Documentation
SiteID	int	True	See ODM Data Model Documentation
URI	nchar(255)	True	Base URI used in conjunction with WSDL for accessing NSDSS Web service to access series data.
WSDL	nchar(255)	True	Name of WSDL file for NSDSS to access series data.
XCDDataFetch	xml	True	XML descriptor for parameters to be passed to NSDSS web servicequery in order to access series.
ServiceName	nchar(255)	True	Service Name used for dataset or series.
SeriesServiceID	int	True	Foreign key into SeriesServices table describing which service to use to access series.
DeltaX	float	True	Approximate longitude between points in degrees.
DeltaY	float	True	Approximate latitude between points in degrees.
Dataset	nvarchar(255)	True	Associated dataset for series
DataSetType	nvarchar(50)	True	Type of associated dataset for series
DataSetDescription	nvarchar(255)	True	Description of associated dataset for series
DataSourceURL	nvarchar(255)	True	URL for original source info on dataset or series
MoreInfoURL	nvarchar(255)	True	URL for more info on dataset or series
ModelParameters	nvarchar(255)	True	Parameters for model use of data series
Contact	nvarchar(255)	True	Admin/creator contact info for time series
PICntlCompStartYr	nvarchar(255)	True	Year of series start for NDCDdata series

Definition

```
SELECT      dbo.SeriesCatalog.VariableCode, dbo.SeriesCatalog.VariableName,
```

```

dbo.SeriesCatalog.VariableID, dbo.SeriesCatalog.Speciation, dbo.SeriesCatalog.VariableUnitsID,
    dbo.SeriesCatalog.VariableUnitsName, dbo.SeriesCatalog.SampleMedium,
dbo.SeriesCatalog.ValueType, dbo.SeriesCatalog.TimeSupport,
    dbo.SeriesCatalog.TimeUnitsID, dbo.SeriesCatalog.TimeUnitsName,
dbo.SeriesCatalog.DataType, dbo.SeriesCatalog.GeneralCategory, dbo.SeriesCatalog.MethodID,
    dbo.SeriesCatalog.MethodDescription, dbo.SeriesCatalog.SourceID,
dbo.SeriesCatalog.Organization, dbo.SeriesCatalog.SourceDescription,
    dbo.SeriesCatalog.Citation, dbo.SeriesCatalog.QualityControlLevelID,
dbo.SeriesCatalog.QualityControlLevelCode, dbo.SeriesCatalog.BeginDateTimeUTC,
    dbo.SeriesCatalog.EndDateTimeUTC, dbo.ExtentsGrid.FilePath,
dbo.ExtentsGrid.FileName, dbo.ExtentsGrid.MaxT, dbo.ExtentsGrid.MinT, dbo.ExtentsGrid.MaxY,
    dbo.ExtentsGrid.MaxX, dbo.ExtentsGrid.MinX, dbo.ExtentsGrid.MinY,
dbo.SeriesCatalog.ValueCount, dbo.SeriesCatalog.EndDateTime,
    dbo.SeriesCatalog.BeginDateTime, dbo.SeriesCatalog.SiteCode,
dbo.SeriesCatalog.SiteName, dbo.SeriesCatalog.SeriesID, dbo.SeriesCatalog.SiteID,
    dbo.SeriesServices.URI, dbo.SeriesServices.WSDL,
dbo.SeriesServiceType.XCDDDataFetch, dbo.SeriesServices.ServiceName,
dbo.SeriesCatalog.SeriesServiceID,
    dbo.ExtentsGrid.DeltaX, dbo.ExtentsGrid.DeltaY,
dbo.SeriesCatalog.Dataset, dbo.SeriesCatalog.DataSetType,
dbo.SeriesCatalog.DataSetDescription,
    dbo.SeriesCatalog.DataSourceURL, dbo.SeriesCatalog.MoreInfoURL,
dbo.SeriesCatalog.ModelParameters, dbo.SeriesCatalog.Contact,
    dbo.SeriesCatalog.PlCntrlCompStartYr
FROM      dbo.SeriesCatalog INNER JOIN
          dbo.ExtentsGrid ON dbo.SeriesCatalog.SeriesID =
          dbo.ExtentsGrid.SeriesID INNER JOIN
          dbo.SeriesServices ON dbo.SeriesCatalog.SeriesServiceID =
          dbo.SeriesServices.SeriesServiceID INNER JOIN
          dbo.SeriesServiceType ON dbo.SeriesServices.ServiceTypeID =
          dbo.SeriesServiceType.ServiceTypeID

```

References

Name
ExtentsGrid
SeriesCatalog
SeriesServices
SeriesServiceType

Definition

```

SELECT      dbo.SeriesCatalog.VariableCode, dbo.SeriesCatalog.VariableName,
dbo.SeriesCatalog.VariableID, dbo.SeriesCatalog.Speciation, dbo.SeriesCatalog.VariableUnitsID,
    dbo.SeriesCatalog.VariableUnitsName, dbo.SeriesCatalog.SampleMedium,
dbo.SeriesCatalog.ValueType, dbo.SeriesCatalog.TimeSupport,
    dbo.SeriesCatalog.TimeUnitsID, dbo.SeriesCatalog.TimeUnitsName,
dbo.SeriesCatalog.DataType, dbo.SeriesCatalog.GeneralCategory, dbo.SeriesCatalog.MethodID,
    dbo.SeriesCatalog.MethodDescription, dbo.SeriesCatalog.SourceID,
dbo.SeriesCatalog.Organization, dbo.SeriesCatalog.SourceDescription,
    dbo.SeriesCatalog.Citation, dbo.SeriesCatalog.QualityControlLevelID,
dbo.SeriesCatalog.QualityControlLevelCode, dbo.SeriesCatalog.BeginDateTimeUTC,
    dbo.SeriesCatalog.EndDateTimeUTC, dbo.ExtentsGrid.FilePath,
dbo.ExtentsGrid.FileName, dbo.ExtentsGrid.MaxT, dbo.ExtentsGrid.MinT, dbo.ExtentsGrid.MaxY,
    dbo.ExtentsGrid.MaxX, dbo.ExtentsGrid.MinX, dbo.ExtentsGrid.MinY,
dbo.SeriesCatalog.ValueCount, dbo.SeriesCatalog.EndDateTime,
    dbo.SeriesCatalog.BeginDateTime, dbo.SeriesCatalog.SiteCode,
dbo.SeriesCatalog.SiteName, dbo.SeriesCatalog.SeriesID, dbo.SeriesCatalog.SiteID,
    dbo.SeriesServices.URI, dbo.SeriesServices.WSDL,
dbo.SeriesServiceType.XCDDDataFetch, dbo.SeriesServices.ServiceName,
dbo.SeriesCatalog.SeriesServiceID,
    dbo.ExtentsGrid.DeltaX, dbo.ExtentsGrid.DeltaY,

```

```
dbo.SeriesCatalog.Dataset, dbo.SeriesCatalog.DataSetType,  
dbo.SeriesCatalog.DataSetDescription,  
    dbo.SeriesCatalog.DataSourceURL, dbo.SeriesCatalog.MoreInfoURL,  
dbo.SeriesCatalog.ModelParameters, dbo.SeriesCatalog.Contact,  
    dbo.SeriesCatalog.PlCntrlCompStartYr  
FROM      dbo.SeriesCatalog INNER JOIN  
    dbo.ExtentsGrid ON dbo.SeriesCatalog.SeriesID =  
    dbo.ExtentsGrid.SeriesID INNER JOIN  
    dbo.SeriesServices ON dbo.SeriesCatalog.SeriesServiceID =  
    dbo.SeriesServices.SeriesServiceID INNER JOIN  
    dbo.SeriesServiceType ON dbo.SeriesServices.ServiceTypeID =  
    dbo.SeriesServiceType.ServiceTypeID
```

5.2.2.1. View: ODMMetadata

Description

Derived view of ExtentsSite and SeriesCatalog for use by Metadata Catalog Web Service in search and aggregation of catalog data. (generally used for ODM sources)

Columns

Name	Type	Required?	Description
SeriesID	int	False	See ODM Data Model Documentation
SiteExtentID	int	False	Foreign Key into ExtentSite table referencing specific series.
Latitude	float	True	Latitude of location of site for series
Longitude	float	True	Longitude of location of site for series
SiteID	int	True	See ODM Data Model Documentation
SiteName	nvarchar(255)	True	See ODM Data Model Documentation
SiteCode	nvarchar(50)	True	See ODM Data Model Documentation
VariableID	int	True	See ODM Data Model Documentation
VariableName	nvarchar(255)	True	See ODM Data Model Documentation
Speciation	nvarchar(255)	True	See ODM Data Model Documentation
VariableCode	nvarchar(50)	True	See ODM Data Model Documentation
VariableUnitsID	int	True	See ODM Data Model Documentation
VariableUnitsName	nvarchar(255)	True	See ODM Data Model Documentation
SampleMedium	nvarchar(255)	True	See ODM Data Model Documentation
ValueType	nvarchar(255)	True	See ODM Data Model Documentation
TimeSupport	float	True	See ODM Data Model Documentation
DataType	nvarchar(255)	True	See ODM Data Model Documentation
TimeUnitsID	int	True	See ODM Data Model Documentation
TimeUnitsName	nvarchar(255)	True	See ODM Data Model Documentation
GeneralCategory	nvarchar(255)	True	See ODM Data Model Documentation
MethodDescription	nvarchar(max)	True	See ODM Data Model Documentation
MethodID	int	True	See ODM Data Model Documentation
SourceID	int	True	See ODM Data Model Documentation
Organization	nvarchar(255)	True	See ODM Data Model Documentation
SourceDescription	nvarchar(max)	True	See ODM Data Model Documentation
Citation	nvarchar(max)	True	See ODM Data Model Documentation
QualityControlLevelID	int	True	See ODM Data Model Documentation
QualityControlLevelCode	nvarchar(50)	True	See ODM Data Model Documentation

Name	Type	Required?	Description
BeginDateTime	datetime	True	Earliest datetime of time series values in local timezone
EndDateTime	datetime	True	Latest datetime of time series values in local timezone
EndDateTimeUTC	datetime	True	Earliest datetime of time series values in UTC
BeginDateTimeUTC	datetime	True	Latest datetime of time series values in UTC
ValueCount	int	True	Number of entries in the time series
SeriesServiceID	int	True	Foreign key defining type of Service for time series
URI	nchar(255)	True	Base URI used in conjunction with WSDL for accessing NSDSS Web service to access series data.
WSDL	nchar(255)	True	Name of WSDL file for NSDSS to access series data.
XCDDDataFetch	xml	True	XML descriptor for parameters to be passed to NSDSS web servicequery in order to access series.
ServiceName	nchar(255)	True	Service Name used for dataset or series.
NetworkName	nchar(255)	True	ODM Network name for dataset. See ODM documentaiton for additional information on Network
Dataset	nvarchar(255)	True	Associated data set for series
DataSetType	nvarchar(50)	True	Type of data set
DataSetDescription	nvarchar(255)	True	Long description of data set
Contact	nvarchar(255)	True	Admin/creator contact info for time series
DataSourceURL	nvarchar(255)	True	URL associated with data source for time series
MoreInfoURL	nvarchar(255)	True	URL for additional information on time series
ModelParameters	nvarchar(255)	True	Associated model parameters for the series

Definition

```
SELECT      dbo.SeriesCatalog.SeriesID, dbo.ExtentsSite.SiteExtentID, dbo.ExtentsSite.Latitude,
dbo.ExtentsSite.Longitude, dbo.SeriesCatalog.SiteID,
           dbo.SeriesCatalog.SiteName, dbo.SeriesCatalog.SiteCode,
dbo.SeriesCatalog.VariableID, dbo.SeriesCatalog.VariableName, dbo.SeriesCatalog.Speciation,
           dbo.SeriesCatalog.VariableCode, dbo.SeriesCatalog.VariableUnitsID,
dbo.SeriesCatalog.VariableUnitsName, dbo.SeriesCatalog.SampleMedium,
           dbo.SeriesCatalog.ValueType, dbo.SeriesCatalog.TimeSupport,
dbo.SeriesCatalog.DataType, dbo.SeriesCatalog.TimeUnitsID, dbo.SeriesCatalog.TimeUnitsName,
           dbo.SeriesCatalog.GeneralCategory, dbo.SeriesCatalog.MethodDescription,
dbo.SeriesCatalog.MethodID, dbo.SeriesCatalog.SourceID,
           dbo.SeriesCatalog.Organization, dbo.SeriesCatalog.SourceDescription,
dbo.SeriesCatalog.Citation, dbo.SeriesCatalog.QualityControlLevelID,
           dbo.SeriesCatalog.QualityControlLevelCode,
dbo.SeriesCatalog.BeginDateTime, dbo.SeriesCatalog.EndDateTime,
```

```

dbo.SeriesCatalog.EndDateTimeUTC,
    dbo.SeriesCatalog.BeginDateTimeUTC, dbo.SeriesCatalog.ValueCount,
dbo.SeriesCatalog.SeriesServiceID, dbo.SeriesServices.URI, dbo.SeriesServices.WSDL,
    dbo.SeriesServiceType.XCDDDataFetch, dbo.SeriesServices.ServiceName,
dbo.SeriesServices.NetworkName, dbo.SeriesCatalog.Dataset,
    dbo.SeriesCatalog.DataSetType, dbo.SeriesCatalog.DataSetDescription,
dbo.SeriesCatalog.Contact, dbo.SeriesCatalog.DataSourceURL,
    dbo.SeriesCatalog.MoreInfoURL, dbo.SeriesCatalog.ModelParameters
FROM      dbo.SeriesCatalog INNER JOIN
    dbo.ExtentsSite ON dbo.SeriesCatalog.SeriesID =
dbo.ExtentsSite.SeriesID INNER JOIN
    dbo.SeriesServices ON dbo.SeriesCatalog.SeriesServiceID =
dbo.SeriesServices.SeriesServiceID INNER JOIN
    dbo.SeriesServiceType ON dbo.SeriesServices.ServiceTypeID =
dbo.SeriesServiceType.ServiceTypeID
WHERE     (dbo.SeriesCatalog.SeriesServiceID <> 15)
    
```

References

Name
ExtentsSite
SeriesCatalog
SeriesServices
SeriesServiceType

Definition

```

SELECT     dbo.SeriesCatalog.SeriesID, dbo.ExtentsSite.SiteExtentID, dbo.ExtentsSite.Latitude,
dbo.ExtentsSite.Longitude, dbo.SeriesCatalog.SiteID,
    dbo.SeriesCatalog.SiteName, dbo.SeriesCatalog.SiteCode,
dbo.SeriesCatalog.VariableID, dbo.SeriesCatalog.VariableName, dbo.SeriesCatalog.Speciation,
    dbo.SeriesCatalog.VariableCode, dbo.SeriesCatalog.VariableUnitsID,
dbo.SeriesCatalog.VariableUnitsName, dbo.SeriesCatalog.SampleMedium,
    dbo.SeriesCatalog.ValueType, dbo.SeriesCatalog.TimeSupport,
dbo.SeriesCatalog.DataType, dbo.SeriesCatalog.TimeUnitsID, dbo.SeriesCatalog.TimeUnitsName,
    dbo.SeriesCatalog.GeneralCategory, dbo.SeriesCatalog.MethodDescription,
dbo.SeriesCatalog.MethodID, dbo.SeriesCatalog.SourceID,
    dbo.SeriesCatalog.Organization, dbo.SeriesCatalog.SourceDescription,
dbo.SeriesCatalog.Citation, dbo.SeriesCatalog.QualityControlLevelID,
    dbo.SeriesCatalog.QualityControlLevelCode,
dbo.SeriesCatalog.BeginDateTime, dbo.SeriesCatalog.EndDateTime,
dbo.SeriesCatalog.EndDateTimeUTC,
    dbo.SeriesCatalog.BeginDateTimeUTC, dbo.SeriesCatalog.ValueCount,
dbo.SeriesCatalog.SeriesServiceID, dbo.SeriesServices.URI, dbo.SeriesServices.WSDL,
    dbo.SeriesServiceType.XCDDDataFetch, dbo.SeriesServices.ServiceName,
dbo.SeriesServices.NetworkName, dbo.SeriesCatalog.Dataset,
    dbo.SeriesCatalog.DataSetType, dbo.SeriesCatalog.DataSetDescription,
dbo.SeriesCatalog.Contact, dbo.SeriesCatalog.DataSourceURL,
    dbo.SeriesCatalog.MoreInfoURL, dbo.SeriesCatalog.ModelParameters
FROM      dbo.SeriesCatalog INNER JOIN
    dbo.ExtentsSite ON dbo.SeriesCatalog.SeriesID =
dbo.ExtentsSite.SeriesID INNER JOIN
    dbo.SeriesServices ON dbo.SeriesCatalog.SeriesServiceID =
dbo.SeriesServices.SeriesServiceID INNER JOIN
    dbo.SeriesServiceType ON dbo.SeriesServices.ServiceTypeID =
dbo.SeriesServiceType.ServiceTypeID
WHERE     (dbo.SeriesCatalog.SeriesServiceID <> 15)
    
```

5.2.2.2. View: RESTMetadata

Description

Derived view of ExtentsSite and SeriesCatalog for use by Metadata Catalog Web Service in search and aggregation of catalog data. (generally used for NDCD REST data).

Columns

Name	Type	Required?	Description
SeriesID	int	False	See ODM Data Model Documentation
SiteExtentID	int	False	Foreign Key into ExtentSite table referencing specific series.
Latitude	float	True	See ODM Data Model Documentation
Longitude	float	True	See ODM Data Model Documentation
SiteID	int	True	See ODM Data Model Documentation
SiteName	nvarchar(255)	True	See ODM Data Model Documentation
SiteCode	nvarchar(50)	True	See ODM Data Model Documentation
VariableID	int	True	See ODM Data Model Documentation
VariableName	nvarchar(255)	True	See ODM Data Model Documentation
Speciation	nvarchar(255)	True	See ODM Data Model Documentation
VariableCode	nvarchar(50)	True	See ODM Data Model Documentation
VariableUnitsID	int	True	See ODM Data Model Documentation
VariableUnitsName	nvarchar(255)	True	See ODM Data Model Documentation
SampleMedium	nvarchar(255)	True	See ODM Data Model Documentation
ValueType	nvarchar(255)	True	See ODM Data Model Documentation
TimeSupport	float	True	See ODM Data Model Documentation
DataType	nvarchar(255)	True	See ODM Data Model Documentation
TimeUnitsID	int	True	See ODM Data Model Documentation
TimeUnitsName	nvarchar(255)	True	See ODM Data Model Documentation
GeneralCategory	nvarchar(255)	True	See ODM Data Model Documentation
MethodDescription	nvarchar(max)	True	See ODM Data Model Documentation
MethodID	int	True	See ODM Data Model Documentation
SourceID	int	True	See ODM Data Model Documentation
Organization	nvarchar(255)	True	See ODM Data Model Documentation
SourceDescription	nvarchar(max)	True	See ODM Data Model Documentation
Citation	nvarchar(max)	True	See ODM Data Model Documentation
QualityControlLevelID	int	True	See ODM Data Model Documentation
QualityControlLevelCode	nvarchar(50)	True	See ODM Data Model Documentation
BeginDateTime	datetime	True	Earliest datetime of time series values in local timezone

Name	Type	Required?	Description
EndTime	datetime	True	Latest datetime of time series values in local timezone
EndTimeUTC	datetime	True	Latest datetime of time series values in UTC
BeginDateTimeUTC	datetime	True	Earliest datetime of time series values in UTC
ValueCount	int	True	Number of entries in the time series
SeriesServiceID	int	True	Foreign key defining type of Service for time series
URI	nchar(255)	True	Base URI used in conjunction with WSDL for accessing NSDSS Web service to access series data.
WSDL	nchar(255)	True	Name of WSDL file for NSDSS to access series data. (In this case interpreted as REST endpoint)
XCDDDataFetch	xml	True	XML descriptor for parameters to be passed to NSDSS web servicequery in order to access series.
ServiceName	nchar(255)	True	Service Name used for dataset or series.
NetworkName	nchar(255)	True	ODM Network name for dataset. (Blank)
Dataset	nvarchar(255)	True	Associated data set for series
DataSetType	nvarchar(50)	True	Type of data set
DataSetDescription	nvarchar(255)	True	Long description of data set
Contact	nvarchar(255)	True	Admin/creator contact info for time series
DataSourceURL	nvarchar(255)	True	URL associated with data source for time series
MoreInfoURL	nvarchar(255)	True	URL for additional information on time series
ModelParameters	nvarchar(255)	True	Associated model parameters for the series

Definition

```

SELECT      dbo.SeriesCatalog.SeriesID, dbo.ExtentsSite.SiteExtentID, dbo.ExtentsSite.Latitude,
dbo.ExtentsSite.Longitude, dbo.SeriesCatalog.SiteID,
           dbo.SeriesCatalog.SiteName, dbo.SeriesCatalog.SiteCode,
dbo.SeriesCatalog.VariableID, dbo.SeriesCatalog.VariableName, dbo.SeriesCatalog.Speciation,
           dbo.SeriesCatalog.VariableCode, dbo.SeriesCatalog.VariableUnitsID,
dbo.SeriesCatalog.VariableUnitsName, dbo.SeriesCatalog.SampleMedium,
           dbo.SeriesCatalog.ValueType, dbo.SeriesCatalog.TimeSupport,
dbo.SeriesCatalog.DataType, dbo.SeriesCatalog.TimeUnitsID, dbo.SeriesCatalog.TimeUnitsName,
           dbo.SeriesCatalog.GeneralCategory, dbo.SeriesCatalog.MethodDescription,
dbo.SeriesCatalog.MethodID, dbo.SeriesCatalog.SourceID,
           dbo.SeriesCatalog.Organization, dbo.SeriesCatalog.SourceDescription,
dbo.SeriesCatalog.Citation, dbo.SeriesCatalog.TimeUnitsID, dbo.SeriesCatalog.TimeUnitsName,
           dbo.SeriesCatalog.QualityControlLevelID,
           dbo.SeriesCatalog.QualityControlLevelCode,
dbo.SeriesCatalog.BeginDateTime, dbo.SeriesCatalog.EndDateTime,
           dbo.SeriesCatalog.EndDateTimeUTC,
           dbo.SeriesCatalog.BeginDateTimeUTC, dbo.SeriesCatalog.ValueCount,
dbo.SeriesCatalog.SeriesServiceID, dbo.SeriesServices.URI, dbo.SeriesServices.WSDL,
           dbo.SeriesServiceType.XCDDDataFetch, dbo.SeriesServices.ServiceName,

```

```

dbo.SeriesServices.NetworkName, dbo.SeriesCatalog.Dataset,
    dbo.SeriesCatalog.DataSetType, dbo.SeriesCatalog.DataSetDescription,
dbo.SeriesCatalog.Contact, dbo.SeriesCatalog.DataSourceURL,
    dbo.SeriesCatalog.MoreInfoURL, dbo.SeriesCatalog.ModelParameters
FROM      dbo.SeriesCatalog INNER JOIN
    dbo.ExtentsSite ON dbo.SeriesCatalog.SeriesID =
    dbo.ExtentsSite.SeriesID INNER JOIN
    dbo.SeriesServices ON dbo.SeriesCatalog.SeriesServiceID =
    dbo.SeriesServices.SeriesServiceID INNER JOIN
    dbo.SeriesServiceType ON dbo.SeriesServices.ServiceTypeID =
    dbo.SeriesServiceType.ServiceTypeID
WHERE     (dbo.SeriesCatalog.SeriesServiceID = 15)

```

References

Name
ExtentsSite
SeriesCatalog
SeriesServices
SeriesServiceType

Definition

```

SELECT     dbo.SeriesCatalog.SeriesID, dbo.ExtentsSite.SiteExtentID, dbo.ExtentsSite.Latitude,
    dbo.ExtentsSite.Longitude, dbo.SeriesCatalog.SiteID,
    dbo.SeriesCatalog.SiteName, dbo.SeriesCatalog.SiteCode,
    dbo.SeriesCatalog.VariableID, dbo.SeriesCatalog.VariableName, dbo.SeriesCatalog.Speciation,
    dbo.SeriesCatalog.VariableCode, dbo.SeriesCatalog.VariableUnitsID,
    dbo.SeriesCatalog.VariableUnitsName, dbo.SeriesCatalog.SampleMedium,
    dbo.SeriesCatalog.ValueType, dbo.SeriesCatalog.TimeSupport,
    dbo.SeriesCatalog.DataType, dbo.SeriesCatalog.TimeUnitsID, dbo.SeriesCatalog.TimeUnitsName,
    dbo.SeriesCatalog.GeneralCategory, dbo.SeriesCatalog.MethodDescription,
    dbo.SeriesCatalog.MethodID, dbo.SeriesCatalog.SourceID,
    dbo.SeriesCatalog.Organization, dbo.SeriesCatalog.SourceDescription,
    dbo.SeriesCatalog.Citation, dbo.SeriesCatalog.QualityControlLevelID,
    dbo.SeriesCatalog.QualityControlLevelCode,
    dbo.SeriesCatalog.BeginDateTime, dbo.SeriesCatalog.EndDateTime,
    dbo.SeriesCatalog.EndDateTimeUTC,
    dbo.SeriesCatalog.BeginDateTimeUTC, dbo.SeriesCatalog.ValueCount,
    dbo.SeriesCatalog.SeriesServiceID, dbo.SeriesServices.URI, dbo.SeriesServices.WSDL,
    dbo.SeriesServiceType.XCDDDataFetch, dbo.SeriesServices.ServiceName,
    dbo.SeriesServices.NetworkName, dbo.SeriesCatalog.Dataset,
    dbo.SeriesCatalog.DataSetType, dbo.SeriesCatalog.DataSetDescription,
    dbo.SeriesCatalog.Contact, dbo.SeriesCatalog.DataSourceURL,
    dbo.SeriesCatalog.MoreInfoURL, dbo.SeriesCatalog.ModelParameters
FROM      dbo.SeriesCatalog INNER JOIN
    dbo.ExtentsSite ON dbo.SeriesCatalog.SeriesID =
    dbo.ExtentsSite.SeriesID INNER JOIN
    dbo.SeriesServices ON dbo.SeriesCatalog.SeriesServiceID =
    dbo.SeriesServices.SeriesServiceID INNER JOIN
    dbo.SeriesServiceType ON dbo.SeriesServices.ServiceTypeID =
    dbo.SeriesServiceType.ServiceTypeID
WHERE     (dbo.SeriesCatalog.SeriesServiceID = 15)

```

5.2.3. Procedures: NSDSS Metadata Catalog

Procedures

Name	Description
spUpdateSeriesCatalogODMOnly	===== Author: Jeff Horsburgh Create date: 10-5-2006 Modified: 1-31-2007 Description: Clears the SeriesCatalog table and regenerates it from scratch. =====

5.2.3.1. Procedure: *spUpdateSeriesCatalogODMOnly*

Description

=====
Author: Jeff Horsburgh
Create date: 10-5-2006
Modified: 1-31-2007
Description: Clears the SeriesCatalog table
and regenerates it from scratch.
=====

Parameters

None

Remarks

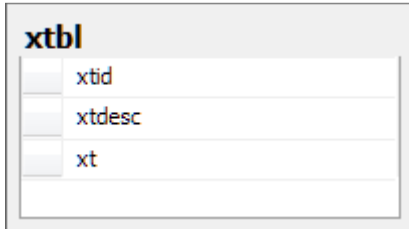
This is an ODM authored stored procedure and is modified only to prevent update of NetCDF and REST related database series.

5.3. NSDSS Model Publishing Database Database

Description

DB used to store XML representations of NSDSS data models.

Remarks



xtbl	
	xtid
	xtdesc
	xt

See Also

- Tables

5.3.1. Tables: NSDSS Model Publishing Database

Tables

Name	Description
xtbl	Table for storing XML representations of NSDSS Data Models.

5.3.1.1. Table: *xtbl*

Description

Table for storing XML representations of NSDSS Data Models.

Row Count

3

Columns

Name	Type	Required?	Description
xtid	bigint IDENTITY	Yes	Primary Key for XML Model storage table
xtdesc	nchar(255)	No	Description of Model
xt	xml	No	XML representation of Model

Definition

```
CREATE TABLE [xtbl]
(
    [xtid] bigint IDENTITY NOT NULL,
    [xtdesc] nchar(255) NULL,
    [xt] xml NULL
)
```

6. Scripts

These scripts are located in C:\Users\Administrator\My Documents.

6.1. ImportNCDCSites.dtsx

A SQL Server DTS package for Importing NCDC Sites data.

6.2. NCMSC.dtsx

A SQL Server DTS package for Importing GCM Data into NCMeta. (Vestigial)

6.3. Excel Import – Scat to NCMeta.dtsx

Another SQL Server DTS package for Importing GCM Data into NCMeta. (Vestigial)

6.4. Project Scripts

Several other one time scripts are located in C:\Users\Administrator\My Documents\SQL Server Management Studio\Projects. These scripts are one-time scripts used to adjust import data of various forms into the metadata catalog and to test methodologies for development of various Web service Methods. They are left as examples of how the databases can be manipulated in order to resolve data input inconsistencies and to query for various data in the databases.

6.5. Other scripts (Job scripts)

See Jobs Section for descriptions of other scripts.

7. Jobs

CDW_NSDSS_NSDSS_<various numbers>: One time Jobs used to Copy databases during prototype development. Left in the system as examples of how to copy databases if duplication is necessary for further production.

Start Incremental <Table,View> Population on <Database Table>: One time jobs used by the Full-Text Search Wizard to set up index tables for full text search.

Update Pub Data: Daily Job updating the NSCAT with Metadata from the publishing database SeriesCatalog.

Update WERC Data: Daily Job updating the NSCAT with Metadata from the WERC (ODM) database SeriesCatalog.

Scripts for these jobs can be found in C:\Users\Administrator\My Documents

8. Logins

8.1. Webclient

Read access from users for webservice for standard users

8.2. Nscatmaster

Read/write access into the NSCAT database by the service

8.3. Sa

System administrator

8.4. Pubdata

User for Publish service to write data into the Metadata catalog

8.5. Ffact

User for various system jobs and for SQL Server Access for specific UAF ODM data upload tasks

8.6. Algodoc

User for documentation automation of database – can be deleted

9. Credentials

Credentials were created on the NSDSS to facilitate one time copy transfers from database servers during development. They are vestigial and can be deleted from the system but are left as artifacts for further development in case valid credentials are necessary in the future, as examples.

9.1. NSDSSUser

9.2. SAmaster

10. Free Text Search Indices

Free Text Search Indices are generated using SQL Server 2008 Free Text Search Services. Indices can be rebuilt using the general methodologies documented by Microsoft. The tables that need to be reindexed should search term need to be added or removed are the SeriesCatalog table, NetCDFMetadata, and the ODMMetadata views in the NSCAT database. Further use of the Full-Text search wizard can be found in the Microsoft SQL Server documentation.

