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SMS Documents

Client TSA Specification

Target Service API

Storage Management Services Architecture Overview

System Independent Data Format

Storage Management Services Library

Storage Management Services Protocol

TSA Development Guide

Miscellaneous Novell Document

Media Manager Functional Specification

Β

Revision History

The following changes were made to this document:

Unsupported:

The following functions are not supported by Novell: NWSMStripPathChild NWSMGetPathChild NWSMPathIsNotFullyQualified NWSMLegalDosName NWSMGetVolume NWSMStripEndSeparator NWSMFixDosPath

These functions may still be used, however, they may not appear in future SMS utilities library.

Added

NWSMSetMediaHeaderInfo NWSMGetMediaHeaderInfo NWSMSetSessionHeaderInfo NWSMGetSessionHeaderInfo NWSMSetRecordHeader NWSMUpdateRecordHeader NWSMGetRecordHeader NWSMListSMDRs NWSMConvertError NWSMGetSMSModuleVersionInfo

Deleted:

NWSMUnloadDataRequestor and NWSMLoadDataRequestor (the SIDR is replaced by the SMDR, which is loaded/unloaded automatically).

Changed:

Changed all error prefix from SMDF to NWSMUT.

Changed the lower case "p" to an upper case "P" for the following function names:

NWSMUnpackDate to NWSMUnPackDate NWSMUnpackTime to NWSMUnPackTime NWSMUnpackDateTime to NWSMUnPackDateTime

NWSM_GET_FIELDS_TABLE - changed data type of dataSize from a UINT16 to a UINT32.

SMDFGetFields - corrected parameter description for bufferSize.

SMDFFixedSize macro - changed (UINT32)1 to 1L

 $\label{eq:smdfsizeOfFieldData-corrected macro description and completion codes$

SMDFSetUINT32Data - corrected function description, parameter description, and completion code description.

SMSDFSetUint64 - corrected function, parameter, and completion code descriptions. Also, changed parameter *numberOfBytes* to *sizeOfDataSize* to reflect its true function.

NWSMStripEndSeparator - changed data type of separatorPos from a STRING to a CHAR.

NWSMFixDosPath - corrected comments about which string returns the fixed up string and how to detect which string contains the fixed up string.

NWSMPutFirstName, NWSMPutNextName, and NWSMPutOneName - corrected error about Macintosh separators from "\0" to ":".

Reorganized the document.

GL

Glossary

API	Application Programming Interface. This interface presents the open system for the SMS.
Bay	One object among a <i>fixed</i> number of objects, as seen by the device. For instance, a changer can only have five bays, each holding one media. A bay differs from a slot because the bay has a fixed number of objects.
Changer	A machine containing one or more devices and one or more bays.
Data Set	A generic term meaning a collection of related data. For example, each directory or file on a file server is a data set.
Data Set Data	Contains the data set's data, path information, attributes, etc. Under SMS, this is the target's data formatted by the TSA (see <i>System Independent Data Format</i> for more information).
Data Set Information	Information needed to help an application (e.g., SME). For example, this information can be the data set's name, creation date, etc. An application can use this to display the data set that is being serviced. Under SMS, this is the scan and scan control information (see <i>System Independent Data Format</i> for more information).
Device	An object that, under SDI, can mount, read, or write to the media. A device does not contain any slots or bays.
DR API	Data Requestor API. The older version of SMS referred to the Target Service Agent API and connectivity functions as the DR API. The DR API now refers only to connectivity functions (i.e., functions to connect to another module) and functions that list other modules. The Target Service Agent API is now known as the Target Service API.
Emancipate	To release the device or media.
Empty Media	Media with no SIDF header.
End of Recorded Data	The end of the last session on the medium.
FID	Field IDentifier. A data format that allows the identification of data sets. For more information, see System Independent Data Format.
Fix-up	The setting of one or more pointers. Under SMS, this refers to setting up function pointers at call time.
Fully Qualified Data Set Name	A complete path (primary resource, parent(s), and an optional node terminal name). For example, in NetWare v3.11 this

	could be "volume:dirName/dirName/fileName" or "volume:dirName/dirName/." This name may or may not have been verified.
Handle	An unsigned 32-bit integer. Do not pass a null pointer to functions. You must pass a zeroed variable (i.e., handle = 0).
Internetwork	Comprises all LANs of an organization or groups of organizations.
Media	This may refer to the smallest object that can physically be managed by a device. Managing the media consists of mounting, moving, or accessing as a unit. A single medium includes a single tape (even if the tape is partitioned) for sequential devices, a single disk for Magneto-Optical (MO) and Write Once Read Many (WORM) devices, and a single partition on hard disk devices. The media handle returned by SDI refers to this object. This document uses the term media to suggest either a single medium or many media, unless there is a need to clarify which is which.
Media Handle	See Media.
Media Label	See Media Set.
Media Set	One logical object consisting of one or more sequentially numbered media. Each medium in the media set has the same name and a sequence number. The sequence number establishes the medium's uniqueness in the media set. These are called the media label. A media set is treated a one logical group.
Medium	The singular of media.
Module	An abstraction of a particular set of functions or idea (e.g., TSA or SME).
NLM	NetWare Loadable Module.
Nonwaiting	A type of function call that starts the operations required for the function and returns a pending status. At some asynchronous time after the call, SDI sets a variable to indicate the call's completion status. Applications must poll this variable, until SDI sets to a nonwaiting value.
Object	Under SDI, a bay, device, slot, or media. A changer is not an object.
Packetization	The process of stuffing data into packets.

Primary Resources	Main objects on a target. For example, in NetWare v3.11 these are the bindery and volumes; on a workstation these are the drives (A:, B:, etc.).
Public API	An exported API from a module under the NetWare OS. The public API allows applications external to the module to call its functions.
Resource	A data set on the target. For example, in DOS, resources are drives, directories, and files. For a detailed explanation of resources, see <i>Target Service API</i> .
RPC	Remote Procedural Call
Sector Address	Sector addresses are physical and session relative (i.e., the sector address following a session header is sector one [1]).
SD API	Storage Device API
SDI	Storage Device Interface
Sibling Device	A device that can access the same set of media that its parent can.
SIDR	Service Independent Data Requestor. This is replaced by the SMDR.
Slot	An area within an object, as seen by the device, to hold a medium (the number of areas can vary from object to object). For example, a magazine object may have 5 slots, while another may have 10 slots. Also, two-sided media used in a device with one head, is seen by the device as two media or as an object with two slots (i.e., WORM). If the media is used in a device with two heads, the media has 1 slot.
SMDR	Storage Management Data Requestor (formerly known as SIDR)
SME	Storage Management Engine. Its main function is to manage the user's storage management affairs and to direct each module to accomplish this desired task (e.g., have the TSA send the data specified by the user to the media).
SMS	Storage Management Services
SMSP	Storage Management Services Protocol
Storage Management	Refers to the backing up, archiving, restoring, and scanning of data found on a target service.

Subjugate	To assign to an application.
Target	See Target Service
Target Service	Any network entity that needs storage management. The SMS views all services (e.g., print services, communication services, workstations, etc.) as targets.
TS API	Target Service API.
TSA	Target Service Agent. A target agent that processes the target's unique data for an SME.
Unpacketization	The process of pulling data out of packets and reassembling the data.
Waiting Functions	A type of function call that returns to the calling application after having completed all operations.

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