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DIVA Core

Local Delete

User Guide

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Telestream Contact Information

To obtain product information, technical support, or provide comments on this guide, contact us using our web site, email, or phone number as listed below.

Resource	Contact Information
DIVA Core Technical Support	Web Site: https://www.telestream.net/telestream-support/diva/support.htm Depending on the problem severity, we will respond to your request within 24 business hours. For P1, we will respond within 1 hour. Please see the Maintenance & Support Guide for these definitions. • Support hours for customers are Monday - Friday, 7am - 6pm local time. • P1 issues for customers are 24/7.
Telestream, LLC	Web Site: www.telestream.net Sales and Marketing Email: info@telestream.net Telestream, LLC 848 Gold Flat Road, Suite 1 Nevada City, CA USA 95959
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Preface

This guide describes the installation, configuration, and use of the Local Delete functionality for the DIVA Core 8.2 system.

Topics

- Audience
- Documentation Accessibility
- Access to Telestream Support
- Related Documents
- Document Updates

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Audience

System Administrators are guided through Local Delete configuration, and users through Local Delete operational processes and functionality.

Documentation Accessibility

For information about Telestream's commitment to accessibility, visit the Telestream Support Portal located at:

https://www.telestream.net/telestream-support/diva/support.htm

Access to Telestream Support

Telestream customers that have purchased support have access to electronic support through the Telestream Support Portal located at:

https://www.telestream.net/telestream-support/diva/support.htm

Related Documents

For more information, see the DIVA Core documentation set for this release located at:

https://www.telestream.net/telestream-support/diva/support.htm

Document Updates

The following table identifies updates made to this document.

Date	Update
April 2022	Updated Copyright information.
	Updated book for release 8.2.
	Updated terminology to new standards (see the Overview for updated terms).
June 2022	Migrated book to Telestream format.
August 2022	Minor terminology updates.
September 2022	Updated terminology and new title page graphic.

Overview

The DIVA Core Local Delete application monitors DIVA Connect archived Virtual Objects and deletes them only when various criteria have been met. Local Delete must be used with DIVA Connect for proper operation.

You can run Local Delete on demand using a batch file (see *Running Local Delete on Demand*), or automatically as a Windows Service (see *Installing Local Delete as a Service*).

Local Delete is supported on 64-bit Microsoft Windows platforms and Oracle Linux 7 (x86_64, 64-bit) environments. Refer to the Linux installation instructions in the DIVA Core Installation and Configuration Guide for Linux-specific directions concerning running DIVA Core components as services under Linux.

Local Delete enables two different types of delete operations:

- Watermarked Disk Purge
- Site Purge

Topics

- Site Verification Criteria
- Watermarked Disk Purge
- Site Purge
- Sample Local Delete Workflow
- New Terminology

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Site Verification Criteria

Before Virtual Objects can be deleted by Local Delete, they must meet the site verification criteria defined in the Local Delete configuration file. Each verification criteria is a constraint that must be met before Virtual Objects are eligible for deletion. For example, you can create site verification criteria stating that a Virtual Object must have one tape instance on a remote site before it can be deleted on the local site.

Watermarked Disk Purge

Watermarked Disk Purge deletes content from a managed disk array when the disk reaches the high watermark. It only deletes content that fulfills the site verification criteria. Matching Virtual Objects are deleted in the order they were archived on the site being purged, unless the purgeMostRecent flag is set. When deletes occur from the array, some matching Virtual Objects may not be purged if the low watermark is reached before they can be processed.

Watermarked Disk Purge mode uses the configuration file lynxLocalDelete.conf.watermarked.ini (see *Sample Configuration File* for a sample configuration file).

Setting the Watermark

You must set the high and low watermarks to specify how full the disk must become before Local Delete deletes from a watermarked disk array. When the array becomes x% full (x being the high watermark), Virtual Object instances are deleted from the array until the disk reaches y% full (y being the low watermark).

Site Purge

A Site Purge will delete all instances of a qualifying Virtual Object on a particular site. It will begin to schedule deletes as soon as the site verification criteria has been fulfilled. Virtual Objects are deleted (by default) in the order they were archived on the site being purged.

Sample Local Delete Workflow

As the user of Local Delete, suppose that you have a DIVA Connect system with two sites, a local site and a remote site. You want to delete Virtual Objects from the local site when they become archived to the remote site. To achieve this you can configure Local Delete in Site Purge mode and add site verification criteria for the remote site. The criteria is satisfied when the number of tape instances on the remote site becomes one or greater. The Local Delete configuration file for this would have the following parameters:

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```
SiteToVerify.numSites=1
SiteToVerify.1.sitename=remote
SiteToVerify.1.numTapeInstances=1

SiteToPurge.1.sitename=local
SiteToPurge.1.purgeType=site
```

New Terminology

The following terminology has been updated to reflect standardization efforts across all DIVA and Kumulate applications. There will be some variations in the documentation compared to the interface until everything is switched over to the new terminology; the documentation uses the new terms wherever possible.

- Running Requests are now called Jobs
- Request History is now called Job History
- Libraries are now called Managed Storage
- Datahub is now called Actor
- Proxyhub is now called Proxy Actor
- DIVA Core and DIVA Manager are now called DIVA Core / Core / Core Manager
- Category is now called Collection
- Source/Destination is now called Unmanaged Storage Repository
- Storage Repository is now called Managed Storage Repository
- Object is now called Virtual Object
- Group is now called Tape Group
- Link is now called Storage Link
- Storage Plan Manager is now called Storage Policy Manager
- Drop Folder Monitor (DFM) is now called Watch Folder Monitor (WFM)
- DIVA Command and Control Panel are now called System Management App
- DIVA Analytics and DIVAProtect are now called Analytics App

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Installation

Topics

- Prerequisites for Installation
- Installing Local Delete as a Service
- Running Local Delete on Demand

Prerequisites for Installation

To install Local Delete, upgrade all components of the DIVA Core System to the proper release.

- At least two (one local and one remote) Core Managers (release 7.3.1 or later) must be installed and properly configured.
- DIVA Connect 2.1 or later is required. Queries on the number of instances (tape or total instances) require DIVA Connect 2.2 or later.

Installing Local Delete as a Service

Telestream recommends installing Local Delete as a service. The lynxLocalDelete.bat script file supports the installation and uninstallation of the Local Delete service using the -i and -u options, respectively.

Refer to the Linux installation instructions in the DIVA Core Installation and Configuration Guide for Linux-specific directions concerning running DIVA Core components as services under Linux.

Note: The Local Delete service will be installed using the configuration file found in the %DIVA_HOME%\conf\lynxlocaldelete\ folder in Windows, or in the /home/diva/DIVA/conf/lynxlocaldelete/ directory in Linux. If you use a configuration file other than the default, specify the file with the -conf or -f options.

Windows Service Installation

Use the following procedure to install Local Delete as a service in Windows:

1. Open a Windows command prompt.
2. Change to the following folder:

   cd %DIVA_HOME%\Program\Utilities\bin
3. Execute the following batch file with the -i option (to install) or -u option (to uninstall):

   lynxLocalDelete.bat -i

Linux Service Installation

Use the following procedure to install Local Delete as a service in Linux:

1. Open a Linux terminal.
2. Change to the following folder:

   cd /home/diva/DIVA/Program/Utilities/bin

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3. Execute the following script file with the -i option (to install) or -u option (to uninstall).

lynxLocalDelete.sh -i

Running Local Delete on Demand

Local Delete can be run on-demand by executing a script. You must substitute Windows paths with Linux paths when operating on Linux. For example, the Windows path C:\DIVA\Program will be /home/diva/DIVA/Program when running under Linux.

Note: Linux commands, paths and file names are case-sensitive. The command line console must remain open while Local Delete is running. Closing the window will stop Local Delete.

1. Open a Windows command prompt or Linux terminal.
2. Change to the following folder:

cd %DIVA_HOME%\Program\Utilities\bin (Windows)

cd /home/diva/DIVA/Program/Utilities/bin (Linux)

3. Execute the following script without any command line parameters to start Local Delete.

lynxLocalDelete.bat (Windows)

lynxLocalDelete.sh (Linux)

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Configuration

This chapter identifies Local Delete configuration parameters.

Topics

■ Configuring Local Delete
■ Local Delete Configuration Parameters

Configuring Local Delete

Use the following procedure to configure Local Delete:

1. Rename lynxLocalDelete.conf.watermarked.ini or the lynxLocalDelete.conf.sitePurge.ini (use the watermarked version if you plan to use watermarking) to lynxLocalDelete.conf.

2. Open the lynxLocalDelete.conf file and enter the correct values for each of the configuration parameters.

Note: The parameter names for this mode are not case-sensitive, but the values are case-sensitive.

3. Restart the Local Delete service.

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Local Delete Configuration Parameters

The following tables describe the Local Delete configuration parameters. See Sample Configuration File for a sample configuration file.

Top Level Configuration Parameters

Top Level Parameter	Description	Default Value	Required
DeleteRequestPriority=Num	Num is an integer (1 to 100), which indicates the delete request priority.	50	No
SimultaneousDeleteOperations=Num	Num is an integer, which indicates the number of simultaneous deletes that can be processed by the application.	none	Yes
allowDeleteLastInstance=true/false	Set this to true for Local Delete to remove the last remaining instance of an Virtual Object on any site in the DIVA Connect network.	false	No
purgeMostRecentFirst=true/false	Set this to true for Local Delete to remove the most recently archived matching Virtual Objects first. By default, the utility purges the oldest matching Virtual Objects.	false	No

Site Verification Criteria Configuration Parameters

Site verification is optional. The parameters specify what to verify before purging. You can provide multiple criteria by creating criteria groups.

Note: You can only specify one of the following per criteria group: media, numTapeInstance, numInstances, or olderThanOnSiteHours.

Creating a Criteria Group:

The criteria group number distinguishes one group of related parameters from another. For instance:

```
SiteToVerify.1.sitename=lynxDR
SiteToVerify.1.numTapeInstances=1

SiteToVerify.2.sitename=local
SiteToVerify.2.media=remoteArray
```

In the previous example, the SiteToVerify.1 parameters are in a criteria group, while the SiteToVerify.2 parameters are in another group. Local Delete will verify there is one tape

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instance on the disaster recovery site and one instance on a local array called remoteArray.

Site Verification Parameter	Description	Default Value	Required
SiteToVerify.#.sitename=Site	# is the criteria group number Site is a string, which indicates the DIVA Core sitename. This is DIVA Connect sitename of a remote DIVA site or local to indicate the local site.	None	No
SiteToVerify.#.media=MediaType	# is the criteria group number MediaType is a string. If specified, an instance with this media must be present on the site.	None	No
SiteToVerify.#.numTapeInstances=Num	# is the criteria group number Num is an integer (1 to 100). If specified, the site must contain at least this many tape instances of the Virtual Object.	None	No
SiteToVerify.#.numInstances=Num	# is the criteria group number Num is an integer (1 to 100). If specified, the site must contain at least this many total instances of the Virtual Object.	None	No
SiteToVerify.#.olderThanOnSiteHours=Num	# is the criteria group number. Num is a positive floating point number. If specified, Virtual Objects at this site must be older than the value provided here (in fractional hours).	none	No

Site to Purge Configuration Parameters

You must specify the site name and indicate whether watermarked deletes must be performed. The purge group number distinguishes one group of related parameters from another. In DIVA Core 8.2, multiple purge groups may appear. Each purge group number identifies a site to delete from. The purge group number can also identify the array to delete from if watermarking is selected for the purge group.

Caution: **Each purge group uses the same verification criteria (aside from the watermark) to determine if deletes should be performed. This can cause unforeseen issues (especially) when watermarked deletes are combined with site deletes.**

Site to Purge Parameter	Description	Default Value	Required
SiteToPurge.#.sitename=Site	# is the purge group number Site is a string, which indicates the DIVA Connect sitename of the local DIVA Core system.	none	Yes
SiteToPurge.#.purgeType=purgeType	# is the site number The type of purge chosen (watermark for watermarked disk array deletes, or site for deleting all Virtual Object instances on a site).	watermark	No
SiteToPurge.#.watermarkedArrayName=ArrayName	# is the site number ArrayName is a string, which indicates the name of the array to monitor and purge from.	none	Yes
SiteToPurge.#.highWatermark=Num	# is the site number Num is an integer (1 to 100), which indicates the percentage an array must be full to start the purge process.	none	Yes
SiteToPurge.#.lowWatermark=Num	# is the site number Num is an integer (1 to 100), which indicates the percentage an array must be full to stop a purge process that is already active.	none	Yes
SiteToPurge.#.excludedMedia=MediaList	# is the site number MediaList is a comma-delimited list of media names. If a Virtual Object to be deleted has an instance on any media listed here, that instance will not be deleted. This parameter has no effect when deleting from a watermarked array.		

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Categories Configuration Parameters

Specifying categories is optional. This parameter specifies the collections of Virtual Objects to consider for deletion. If not specified, the default is all categories.

Categories Parameter	Description	Default Value	Required
CategoryIncludeFilter.#=Collection	# is an integer, which starts at 1 and increments by 1 for each additional filter. Collection is a string. Any purged Virtual Object must match one of these categories. Wildcards (asterisks *) are allowed.	All	Yes

DIVA Connect Configuration Parameters

This information is required to connect to DIVA Connect.

DIVA Connect Parameter	Description	Default Value	Required
DIVAConnect.address=Address	Address is the IP address of the DIVA Connect server.	none	Yes
DIVAConnect.port=Num	Num is a positive integer, which indicates the port of the DIVA Connect server.	none	Yes
DIVAConnect.user=UserName	UserName is the user name for the DIVA Connect API connection.,	none	Yes
DIVAConnect.password=Password	Password is the password for the DIVA Connect API connection.	none	Yes

DIVA Connect Database Configuration Parameters

This information is required to connect to the DIVA Connect Database.

DIVA Connect Database Parameter	Description	Default Value	Required
DIVAConnectDb.address=Address	Address is the IP address of the DIVA Connect Database.	none	Yes
DIVAConnectDb.port=Num	Num is a positive integer, which indicates the port of the DIVA Connect Database.	1521	No
DIVAConnectDb.user=UserName	UserName is the user name for the DIVA Connect Database.	none	Yes
DIVAConnectDb.password=Password	Password is the password for the DIVA Connect Database.	none	Yes
DIVAConnectDb.sid=Database_sid	Database_sid is the SID of the DIVA Connect Database.	lib5	No

Troubleshooting

Scenario	Description
Local Delete cannot connect to DIVA Connect on start.	An error message will be written to the log file and a reconnection attempt will be made after the period specified in the Check_Interval parameter in configuration file.
Connection to DIVA Connect is lost.	An error message will be written to the log file and a reconnection attempt will be made after the period specified in the Check_Interval parameter in configuration file.
DIVA Connect returns a DIVA_ERROR as a response to a getObjectDetailsList request.	The error is logged and the current processing cycle is interrupted by Local Delete. After the configured amount of time specified in the Check_Interval parameter in configuration file has passed, a new processing cycle is started using the initialTime parameter value for the last cleaned Virtual Object (this time is stored in a separate file each time when a Virtual Object is cleaned).
Delete request failed.	Local Delete will wait for the delete operation to finish. In case the delete request fails, the error will be logged and Local Delete will not attempt to retry the failed delete request.
Power Failure, Operational System Crash, and so on.	The customer is responsible for configuring the Windows Scheduled Task for Local Delete that will restart the application.

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Local Delete cannot read from, or write to, the file that stores the creation date of last cleaned Virtual Object.	The error is logged and Local Delete will periodically try to repeat the I/O operation.
The configuration file is not accessible.	The error is logged and Local Delete is stopped.
The configuration file is not valid.	The error is logged and Local Delete is stopped.

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Sample Configuration File

The following sample configuration file demonstrates a watermark delete. The deletion criteria is defined for when the DR site has a tape instance, and the local site has the Virtual Object stored on a media named tapeGroup3. The utility will only consider deleting Virtual Objects having categories of either AVID or MOVIE*. If all are true, and the used capacity on localArray1 array reaches seventy percent, the instance on that array is deleted.

```
# The parameters at the very bottom of the file are to control the
# service and logging. The parameters are set to their recommended
# values, and should not be changed without consulting an
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# representative.
#
DeleteRequestPriority=70
SimultaneousDeleteOperations=25

# 2. Site Verify Criteria (here, we must have 1 tape instance on
# the DR site, and one instance on a local array called
# "remoteArray".)
SiteToVerify.1.sitename=lynxDR
SiteToVerify.1.numTapeInstances=1
SiteToVerify.2.sitename=local
SiteToVerify.2.media=tapeGroup3

# 3. Site to Purge parameters:
SiteToPurge.1.sitename=local
SiteToPurge.1.purgeType=watermark
SiteToPurge.1.watermarkedArrayName=localArray1
SiteToPurge.1.highWatermark=70
SiteToPurge.1.lowWatermark=50

# 4. Collection Include Filter parameters:
CategoryIncludeFilter.1= MOVIE*
CategoryIncludeFilter.2= AVID

# 5. DIVA Connect Connection parameters:
DIVAConnect.address=127.0.0.1
DIVAConnect.port=9500
DIVAConnect.username=diva
DIVAConnect.password=diva
```

```
# 6. DIVA Connect Database parameters:
DIVAConnectDb.address=127.0.0.1
DIVAConnectDb.port=1521
DIVAConnectDb.user=diva
DIVAConnectDb.password=diva
DIVAConnectDb.sid=lib5


#********************************************************************
*
# The rest of the parameters are to control the service and
# logging.
# These parameters are set to the recommended default values and
# should not be changed without consulting with a Front Porch
# Digital representative.
#
#********************************************************************
*

# Java Application
wrapper.java.command=$JAVA_HOME/bin/java

# Java Main class. This class must implement the WrapperListener
# interface or guarantee that the WrapperManager class is
# initialized. Helper classes are provided to do this for you. See
# the Integration section of the documentation for details.
wrapper.java.mainclass=com.storagetek.diva.lynxLocalDelete.control
.TanukiLauncher

# Java Classpath (include wrapper.jar) Add class path elements as
# needed starting from 1
wrapper.java.classpath.1=../../../Program/Utilities/lib/*.jar

#Wrapper application parameters
wrapper.java.app.parameter.1=
wrapper.java.app.parameter.2=
wrapper.java.app.parameter.3=
wrapper.java.app.parameter.4=

# Java Library Path (location of Wrapper.DLL or libwrapper.so)
wrapper.java.library.path.1=.

# Java Additional Parameters

# Initial Java Heap Size (in MB)
wrapper.java.initmemory=256

# Maximum Java Heap Size (in MB)
wrapper.java.maxmemory=256
#********************************************************************
*
# Wrapper Logging Properties
#********************************************************************
*

# Format of output for the console. (See docs for formats)
```

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```
wrapper.console.format=PM

# Log Level for console output. (See docs for log levels)
wrapper.console.loglevel=INFO

# Log file to use for wrapper output logging.
wrapper.logfile=

# Format of output for the log file. (See docs for formats)
wrapper.logfile.format=LPTM

# Log Level for log file output. (See docs for log levels)
wrapper.logfile.loglevel=INFO

# Maximum size that the log file will be allowed to grow to before
# the log is rolled. Size is specified in bytes. The default value
# of 0, disables log rolling. May abbreviate with the 'k' (kb) or
# 'm' (mb) suffix. For example: 10m = 10 megabytes.
wrapper.logfile.maxsize=10m

# Maximum number of rolled log files which will be allowed before
# old files are deleted.  The default value of 0 implies no limit.
wrapper.logfile.maxfiles=4

# Log Level for sys/event log output. (See docs for log levels)
wrapper.syslog.loglevel=NONE

#*****************************************************************
*
# Wrapper Windows Properties
#*****************************************************************
*
# Title to use when running as a console
wrapper.console.title=DIVA Core LocalDelete

#*****************************************************************
*
# Wrapper Windows NT/2000/XP Service Properties
#*****************************************************************
*

# WARNING - Do not modify any of these properties when an
# application using this configuration file has been installed as a
# service.
# Please uninstall the service before modifying this section. The
# service can then be reinstalled.


# Name of the service
wrapper.ntservice.name=DivaLld

# Display name of the service
wrapper.ntservice.displayname=DIVA Core LocalDelete Service

# Description of the service
```

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```
wrapper.ntservice.description=DIVA Core Local Delete provides
cleaning service for local environment from Virtual Objects which
are stored on remote environments

# Service dependencies. Add dependencies as needed starting from 1
wrapper.ntservice.dependency.1=

# Mode in which the service is installed. AUTO_START or
# DEMAND_START
wrapper.ntservice.starttype=AUTO_START

# Allow the service to interact with the desktop.
wrapper.ntservice.interactive=false
```

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