LightLink Migration Process Solution Guide

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1. Migration Overview

The migration feature of LightLink allows an authorized user to export the configuration and messages from one LightLink system into another. The most common use is to migrate a LightLink server to a newer computer or operating system. The Migration Tool is implemented in three applications: LightLink Configuration Exporter, LightLink Administrator, and LightLink System Manager. The export feature of LightLink serializes the configuration data of one LightLink system into an XML file, which can then be imported into the other LightLink system. In addition, some configuration and message files are manually collected for use with the new system. The import features are implemented in the Administrator and System Manager utilities.

- LightLink Configuration Exporter (ll_exporter.exe) is an application that allows the user to select a system and export the configuration of that system to an XML file.

  The user gathers any message files to be imported into the new system, and collects DSM configuration files from any other Input Manager hosts in the LightLink system besides the host on which the LightLink Configuration Exporter is run.

- LightLink Administrator has a set of features that allows the user to import Input Manager and Output Manager configuration information from the export XML file.

- LightLink System Manager has a set of features that allows the import and export of Marquee, TaskLink, and Broadcaster messages (LLM and LDB files) and DataLink configuration files from one system to another.

The Import features in System Manager are normally hidden to prevent inadvertent or unauthorized use. The Default Profile in Security Manager for the System Manager application has an entry called SM_ShowMigration that is set to a value of '1' to enable the import features in System Manager for the migration menu entries to appear in System Manager under the Tools menu.

The Configuration Exporter will export selected Data Source Managers (DSMs) and Output Channel Managers (OCMs) from the LightLink system. To import those configuration items into a multi-host LightLink system, the import features must be invoked on each of the hosts on which those configuration items are to be hosted. For example, the import process must be run on each LightLink server that hosts an Input Manager, importing the DSMs associated with that IM component, so that the INI, SDF, and DSS files associated with those DSMs are correctly placed.

1.1. Migration Process Overview

The migration process, given that the required files are available, is broken into separate steps for exporting and importing:

1. Export old system configuration data
2. Import the exported configuration data and messages to the Inova LightLink system

The following sections explain the migration process using 2.6 as the example source system.

1.2. Prerequisites

Migrating a LightLink 2.6/5.x system (the source installation) to LightLink (the target installation) requires the following:

- For LightLink 2.6 or 5.0-5.2 systems: a file-based version of LightLink system that can be exported directly from a live system or from a gather (LightLink backup).

- For LightLink 5.7 or newer systems: a server-based version of LightLink system that has been exported from the live LightLink system since a connection to a valid LIGHTLINK DB instance is required. The LightLink configuration Exporter tool must be run on a host with a LIGHTLINK DB instance running on it.

- A collection of all required files from the source installation (all INI, SDF, and DSS files from ALL IM hosts copied to the local host 'srvcfg/dsms' folder of the LightLink server installation).

- Any Supervisor installation to import OCMs, devices and messages; DSMs must be imported on the Input Manager host where the DSM will reside. Otherwise the support files will not be copied correctly.

1.2.1. Log Files to use during Migration

There are three primary log files to reference while performing migration. Use the Log Viewer in the target LightLink System to view these log files to investigate issues that may arise during migration.

- The LightLink Configuration Exporter application logs information to ll_exporter.log.

- The Inova Administrator application logs information about the import of output channels and data sources to lladmin.log.

- The sysman.log file provides information about messages and LLD file migration performed using the System Manager application.

1.3.   Features

The Inova Migration provides the following features in this version:

- LightLink output channels of the following types can be exported from versions 2.6 and 5.x, and imported:

    – TCP/IP

    – Desktop

    – Email

    – XML

- LightLink 2.6 and 5.x messages can be migrated into an existing and configured Inova LightLink system.

- LightLink 2.6 and 5.x DataLink (.lld) files can be migrated to work with an existing and configured Inova LightLink system.

- The following LightLink data sources can be exported from versions 2.6 and 5.x, and imported into the Inova LightLink system:

    – Aspect RTB

    – Avaya Aura / Nortel Symposium

    – LightLink Data Analysis (5.x and later)

    – LightLink DataScope (versions 5.7.2647 and later)

    – LightLink ODBC Database (5.7 and later)

    – LightLink XML (versions 5.7.2441 and later)

    – Transport based DSMs (e.g., Avaya CMS, Nortel Meridian Max, Rockwell Galaxy)

- Other LightLink data sources can be exported from versions 2.6 and 5.x, and imported into the Inova LightLink system, but have not been tested. For example:

    – All Headline News

    – Avaya RT Socket

    – Cisco UCCE and Cisco UCCX

    – Interactive Intelligence CIC versions 3 and 4

    – LightLink Custom Data Source

1.4.   Limitations

The following known issues exist in this version:

- Desktop 2.6 OCM imports into the Inova LightLink system and needs further testing (bug fixes have been applied but not fully tested)

- AMS export from 2.6 and 5.x and import into the Inova LightLink system has been implemented but not yet tested

- ODBC OCM export is not supported

1.5.   Required Security Manager Settings

There are two settings that must be made for the Message Migration options to show in the System Manager Tools menu for any particular user. To allow migration options for a user of System Manager:

1. Ensure that the user is a member of a LightLink Security Group (refer to the *LightLink Security Manager User Guide*).

2. Open Security Manager and select the desired LightLink Security Group in the LightLink Security Accounts pane.

3. Click the *Configure* button.

4. On the Default Profiles tab, select *System Manager* in the application pull-down menu.

5. Set the *Show Migration* property to 1.

6. Enable *Force profile settings on all group members*.

7. On the Privileges tab, open the System Manager node and ensure the *Import and Export messages* privilege is enabled.

2. Export Features

The Export feature of LightLink allows you to stream out an XML representation of the LightLink configuration and write all messages currently in the LightLink system to LLM and LBD files. This can later be used by the Import feature to stream in the configuration components of the exported system. The export feature is implemented in two applications: the LightLink Configuration Exporter tool and the System Manager application.

2.1.   LightLink Configuration Exporter

The LightLink Configuration Exporter utility supports exporting the following LightLink versions, with the following differences in the database type and schema:

- 2.6 - file-based access databases

- 5.0 – 5.2 - file-based access databases

- 5.7 and higher - server-based database, based on SQL Server

LightLink does not support configuration export from versions 5.5 and 5.6.

The LightLink Configuration Exporter tool allows you to capture specific aspects of the system configuration in an XML file. The export consists of an XML file and a directory structure that contains all support files (i.e. SDF and DSS files) associated with any DSMs being exported; these files must be on the same host that is running the export. The XML file will contain all configuration information about the OCMs, DSMs, displays and display groups currently configured in the system being exported. Even though server-based systems store all messages in the database, exporting a 5.7 or newer system with LightLink Configuration Exporter will not export the messages contained in the database; this must be done in a separate step via the System Manager Export dialog.

Note also that LLD (DataLink) files are not maintained in the database and exist exclusively as files and should be copied to the same location to which the messages are exported.

A limitation of the current system is that LightLink Configuration Exporter cannot access DSM support files (INI, SDF, and DSS files) located on a remote host. All support files need to be copied into the local 'srvcfg/dsms' folder of the LightLink server installation before exporting or the subsequent import will fail.

2.2.   System Manager

System Manager provides an export feature that allows the export of all messages in the database. This includes all cancelled or ended messages, so the trashcan should be emptied before exporting the messages if they are not needed.

2.3.   Process Example

As an example, the steps below outline how to export LightLink data from an existing system:

1. Run the export tool, **ll_exporter.exe**

2. On the Export tab of this dialog-based tool, use the drop-down list to select the LightLink version of the installation being exported.

    a. If the LightLink version selected is file-based: Use the "Select Installation" to browse to an active LightLink installation directory or an Inova LightLink gather, which is used as the source for the export operation.

       – If the location is valid, the system will display the Installation description.

       – You can select the Database tab to browse and view the database files.

       – The INI tab will show the contents of the INI file(s) if any, exist.

       For the export to work, the installation directory has to have a certain structure. A 2.6 system should have its database file(s) in a subdirectory called PUBDATA and LLSERVER.INI file in a subdirectory called SRVCFG.

    b. If the LightLink version selected is server-based (i.e., 5.7): Use the "Connect to Database" button to have it look for a LIGHTLINK database instance to connect to.

       – If the database instance is valid, the system will display the Installation description and instance name.

       – You can select the Database tab to browse and view the database files.

       – The INI tab will be blank as version higher than 2.6 have no configuration INI file.

3. Click the Export to XML button to export the LightLink Configuration data to an XML format.

4. Complete the Save As dialog to select where the system should save the data.

5. Close the application using the Close option. You can view and verify the XML file using an Internet Browser.

6. Copy the active messages into the export folder used by the LL Configuration Exporter tool, above, and move them with the export XML files to the host(s) on which the LightLink system will be imported.

   – For LightLink versions 2.6, 5.0, 5.1, and 5.2: gather the message files from the LightLink install location in the ODMS/srvcfg folder and copy them into the export folder.

   – For LightLink version 5.7 and beyond: first enable the Migration Tool features in System Manager by setting the "Show Migration Tool" property for System Manager in the Security Manager application for the user(s) who will be doing the export; then in System Manager, in the Tools menu select the "Export Messages" menu item – set the destination folder (e.g., to the export folder).

   – For DataLink configuration files (.LLD): manually copy them into the export folder.

Note the following changes in the Inova LightLink system:

- In LightLink 2.6 and 5.0-5.2, an output channel could be added to a display group so that all displays on the channel would get a message sent to the group. This is not supported in LightLink 5.7. Only displays and virtual displays can be a member of a display group. If, during export, a display group is found with a channel as a member, a warning is presented to the user stating that the display group will be created in 5.7 without the channel member and that the display group should be reviewed and modified accordingly once migration is complete.

- Also in 2.6 and 5.0-5.2 the Email OCM allowed the user to add email addresses under the "To: Address" or the "CC: Address" devices. In LightLink 5.5 there is only a "To: Address" device on the email OCM. During export of Email OCMs, all addresses found on the "CC: Address" device will be remapped to the "To: Address" instead. If any address was a member of a display group in the source system, it will also be a member of the same display group in the target system.

3. Import Features

The Import features of LightLink allow you to read in an XML representation of the LightLink configuration that was previously exported. The message import feature accepts the messages from the exported system and automatically remaps references to data fields and destinations in the old system to corresponding ones in the new system.

3.1. Administrator

To import in LightLink Administrator:

1. Request configuration permission by clicking the lock icon in the toolbar.
2. Select what you will import:
    a. Right click on the Input Manager and select Import DSM.
    b. Right click on the Output Manager nods and select Import OCM.
3. You are prompted for a source XML file generated by the LightLink Configuration Exporter tool. The file is parsed and the components are displayed ; select which components are to be imported
4. Select the Import button. The selected components will be created in the current LightLink system.

    When importing DSMs, make sure you are on the Input Manager host when doing so otherwise the INI, DSS, and SDF files will not be copied properly as they will only be copied to the correct location on the local machine.

3.2. System Manager

After the configuration items are imported using Administrator, run System Manager to import messages from the original system. The "Import Messages…" function supports data field mapping and destination mapping between the old and new systems based on names.

Before importing messages,be sure to connect your Data Sources to ensure that all Data Fields are generated for proper data Field mapping to occur during message import. The mapping dialogs will scan the new system for items with names matching the old system and automatically map one to the other. This applies to LLM and LBD files; the "Migrate LLD Files…" function is provided for mapping DataLink configuration files (LLD). The user can override the automatic mapping and select an alternate mapping of data fields.

3.3. Process Example

1. To begin the Import, first install the desired version of LightLink Middleware and Supervisor applications on the target host machine(s).

2. Copy the export XML and its associated XSL file, and the content of the export folder to the target host machine(s).

3. Run LightLink Administrator on the target host machine and select the Import menu item on the Input Manager – this will bring up a dialog listing the DSMs available for import. Select the DSMs from the old system to be imported into the new one and press the 'Import' button.

   All selected DSMs will be added to the Input Manager running on the target system. Repeat on each machine hosting an Input Manager with which the DSM(s) are to be associated.

4. Run LightLink Administrator on any Supervisor host and select the Import menu item on an Output Manager – this will bring up a dialog listing the OCMs available for import. Select the OCMs from the old system to be imported into the new one and press the 'Import' button; when you import OCMs and devices, any related display groups, layouts and virtual displays are imported as well.

   All selected OCMs will be added to the Output Manager selected for import. Repeat for each Output Manager with which OCM(s) are to be associated. These repeated steps can be performed on any Supervisor host.

5. Run System Manager and select the 'Import Messages' item from the Tools menu item.

   A dialog appears that allows you to select a directory where messages from the old system are stored – these will be displayed in the message list.

6. You can then re-map the destination and data fields of the messages and import them into the new system.

A similar function is provided for migrating DataLink configuration files (.LLD). Refer to Section 4 for more details about migrating LLD files.

4. Migrate LLD Files

The menu option to *Migrate LLD Files* is for import only. However, *import* could be misleading for LLD files because they are not written to the database or otherwise known to the system. These files are only known to the DataLink Editor and DataLink clients; they are only files and are not sent from any OCM to any client within the LightLink system. The Migrate LLD Files feature is for moving them from one LightLink system to another and matching data field names with data field IDs in the LightLink system to which the messages are being moved.

The Migrate LLD Files dialog includes the following fields:

- LLD File Directory - Directory where LLD files are to be found

- Browse – Allows you to select a LLD Directory

- LLD Files - All LLD files found in the LLD Directory

- Select All - Selects all LLD files in the LLD Files list

- Match Data Fields - Automatically maps data fields in LLD file to corresponding data fields in the current LightLink system

- Data Field Details - Show data fields details for selected LLD files including original and mapped data field info

- Save Changes - Apply all changes to the selected LLD files

- Close - Close dialog