



STAR Library Manager 2R1  
Release Announcement

September 2017

Formula Consultants Inc.



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STAR Library Manager, LIBMGR, is a proprietary product of Formula Consultants Incorporated. Library Manager is licensed for use in computer centers using Unisys OS 2200 and it enables those systems to use the resources of a virtual tape library (VTL).

The System for Tape Administration and Reporting, STAR-1100, is a proprietary product of Formula Consultants Incorporated. STAR-1100 satisfies the magnetic tape library management requirements of, and is licensed for use on, computer centers using Unisys OS 2200.

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Software Version: 2R1

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# General

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Formula Consultants Incorporated is pleased to announce that Level 2R1 of STAR Library Manager is now available for distribution. STAR Library Manager is FCI's library control software for the Dynamic Solutions International (DSI) virtual and physical tape libraries within the Unisys OS 2200 environment.

The STAR Library Manager level 2R1 product release can be obtained via the FCI Support Center.

## Product Overview

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The STAR Library Manager (LIBMGR) is software that enables OS 2200 to use the tape automation services of the DSI Virtual Tape Library (VTL) and DSI Physical LTO Library (PTL).

The LIBMGR program executes in a batch background run. OS 2200 uses the CARTTAPELIB\$ facility to pass tape mount, dismount, and poll requests to automated tape library solutions. In its interface with CARTTAPELIB\$, LIBMGR receives these requests, translates them into command sequences which can be recognized by the external library resources. The requests are passed to the VTL and PTL via COMAPI using a communication network controlled by CPcomm or CPCCommOS.

The CARTTAPELIB\$ interface allows OS 2200 to communicate with up to four tape library handlers. Consequently, LIBMGR supports up to four installation instances to allow full utilization of CARTTAPELIB\$. Each of these instances uses a different installation mode, from A through D. Each installation is independent and has its own background run.

STAR Library Manager programs use the COMAPI facility in OS 2200 to communicate with the STAR Scratch Pool Selector Server. The LIBMGR server also accepts requests through COMAPI.

The Library Manager product includes library support programs. The VTLReport and PTLReport programs produce reports of the volumes in the VTL and PTL respectively. The VTLUtility program supports movement of virtual volumes between the VTL, the VTL vault, and a physical stack tape volume. The OS 2200 SystemUnstack program allows the restoration of a virtual volume from a stack tape volume without using the VTL.

The Library Manager is released in absolute (zoom) form only, along with standard runstreams.

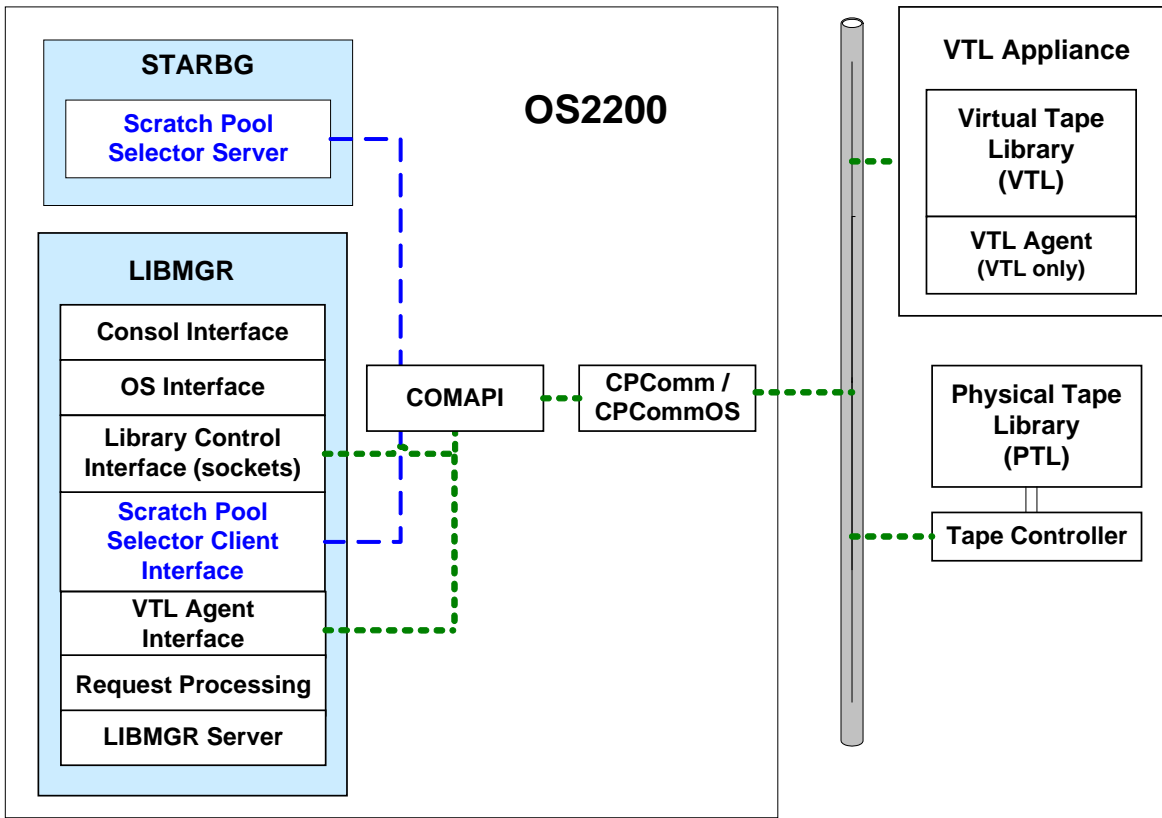


Figure 1. Overview of LIBMGR Components

# Release Description

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## Feature and Enhancement Release

STAR Library Manager 2R1 is a feature and enhancement release.

## New Features

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### Common configuration

All Star Library Manger utility programs use the same configuration element as the Library Manager for any given installation mode. Each program processes the configuration statements it requires and ignores the rest.

### VTL and PTL data structures

New data structures exist in the Star Library Manger programs for items associated with the VTL Appliance and the Library Controller for the PTL. These eliminate duplication of these items within library related data structures. New configuration statements and console keyins are introduced to support this feature.

### LIBMGR Server

The LIBMGR server externalizes several Library Manager functions, making them available to a calling program. This interface is used primarily by Library Manager auxiliary programs such as the VTL Utility.

A minimal client program can be driven via a batch/DEMAND script.

### Runtime selection of COMAPI installation mode

STAR Library Manger programs use the Call Router feature to allow runtime selection of which COMAPI installation mode is used for communications.

The STAR Library Manager configuration includes new statements to control the following:

- The preferred and possible COMAPI mode to use.
- The VTL and IP addresses associated with each COMAPI installation mode.
- The STAR Scratch Pool Selector Server IP address and COMAPI installation mode. This is a single COMAPI installation mode that is not affected by the COMAPI mode preference or console COMAPI mode switching keyins.
- The LIBMGR IP addresses associated with each COMAPI installation mode for the LIBMGR server. If this specifies a single IP address and COMAPI installation mode, it must be the same as the STAR Scratch Pool Selector Server and has the same mode selection behavior. This statement is used by the client program to find the LIBMGR server.

New console keyins exist to control COMAPI mode selection in LIBMGR.

## VTL monitoring

New configuration statements instruct LIBMGR to request that the VTL Agent monitor available disk space and volume counts in the library and vault. When enabled, a console message is produced when the number of volumes in a library or the VTL vault changes. Console messages are also produced if the amount of available storage drops below the configured minimum value.

## Reports

LIBMGR can produce print reports using only the information already in memory. Reports can be produced for VTL/PTLs, tape drives, and volumes. Reports can be requested using the new REPORT keyin or via the LIBMGR server.

The volume reports created by VTLReport and PTLReport can also include information from the Media Manager and the VTL Agent.

## OS 2200 System Unstack Program

Library Manager 2R1 includes a utility function, the OS 2200 System Unstack Program. With this function, a physical stack tape, ejected from a PTL, can be read on an OS 2200 system which has compatible tape drives.



# Product Enhancements

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## File name changes

The names of the print, trace, and diag files produced by the STAR Library Manager utility programs VTLReport, VTLUtility and PTLReport now begin with a program identifier. The LIBMGR filenames have remained the same as past levels. PTLReport filenames begin with PTLRPT-. VTLReport filenames begin with VTLRPT-. VTLUtility filenames begin with VTLUTL-.

## Concurrent VTL and PTL Support

STAR Library Manager 2R1 supports VTLs and PTLs in the same configuration.

## New Configuration Statements

AGENT\_ASG\_FROM\_VAULT  
AGENT\_MOUNT\_FROM\_VAULT

These statements specifies whether tapes in the VTL vault will be considered for drive assignment and for mounting.

AGENT\_INFORMATION

The AGENT\_INFORMATION statement specifies whether or not LIBMGR should use the VTL Agent to provide additional information about libraries and volumes. This statement provides the operational control of the VTL\_AGENT statement in previous levels. The VTL\_AGENT statement is enhanced to control overall use of the VTL Agent.

The default for AGENT\_INFORMATION is ON. Setting VTL\_AGENT to ON will produce the desired information as in previous levels.

AGENT\_MONITOR

The AGENT\_MONITOR statement serves two purposes; it defines what is to be monitored and its presence enables the monitoring code in LIBMGR. The actual monitoring is done by the DSI VTL Agent product that resides on the VTL. Available disk space on the VTL and the number of volumes in its libraries and vault can be monitored.

## COMAPI\_MODE

The COMAPI\_MODE statement tells which installation modes of COMAPI can be used by STAR Library Manager programs. The mode preference is defined by the order of the modes on this statement.

## LM\_SRVR

The LM\_SRVR statement enables the LIBMGR server and identifies the IP address(es) and port that clients use to contact it.

## LM\_SRVR\_AUTH

Each LM\_SRVR\_AUTH statement identifies a userid and defines the restricted LIBMGR server functions that programs running under that userid can access.

## PTL and VTL

The PTL and VTL statements provide configuration information to the tape controller for a PTL or the VTL appliance such as the IP address. In previous levels this information was supplied on the PLIBRARY and LIBRARY statements

## PTLRPT\_LIB\_INIT\_FAIL and VTLUTL\_LIB\_INIT\_FAIL

The PTLRPT\_LIB\_INIT\_FAIL and VTLUTL\_LIB\_INIT\_FAIL parameters defines the action for the PTLReport and VTLUtility programs if there is a failure initializing a needed library. This parameter will determine if the program will terminate or wait.

## REPEAT

The REPEAT statement changes the time between classes of periodic console messages that report a continuing problem. The message classes are connection problems, COMAPI related problems, waiting for initialization, and informational messages.

# Enhanced Configuration Statements

## LIBRARY and PLIBRARY

In previous STAR Library Manager levels, the IP address for communicating with the library was on the LIBRARY or PLIBRARY statement. The IP address is actually associated with the VTL appliance or the tape controller and is moved to the VTL or PTL statement in level 2R1.

To accommodate updating to this software level, the IP address on the LIBRARY and PLIBRARY statement is now optional. If an IP address is present but there is no preceding VTL or PTL statement, the STAR Library Manager programs internally generate a VTL or PTL statement with the IP

address from the LIBRARY or PLIBRARY statement. This allows level 2R1 to function correctly with an unmodified configuration from a previous level.

### SCRATCH\_SERVER

The IP address on the SCRATCH\_SERVER statement accepts an optional COMAPI installation mode. This is in the form of a prefix consisting of a single letter from A to D followed by a # (pound sign). When present, the identified COMAPI mode will be used regardless of the COMAPI mode used for library communication.

### VTL\_AGENT

The VTL\_AGENT statement specifies whether or not LIBMGR should communicate with the VTL Agent. This must be enabled for the following configuration statements to function:

AGENT\_ASG\_FROM\_VAULT,  
AGENT\_INFORMATION,  
AGENT\_MONITOR and  
AGENT\_MOUNT\_FROM\_VAULT.

## Deleted Configuration Statements

### VAULT\_SIZE

The VAULT\_SIZE statement is no longer used. STAR Library Manager programs that retrieve the contents of the VTL vault determine this value internally.

## New Operator Commands

### COMM or COMM-MODE

The COMM (COMM\_MODE) command controls LIBMGR's use of the COMAPI installation modes specified on the COMAPI\_MODE configuration statement. This command can instruct LIBMGR to switch to a specified COMAPI mode. It can also enable or disable the automatic selection of a COMAPI installation mode for use.

```
COMM ACTIVATE B  
COMM mode B is active  
COMM DISABLE A  
COMM mode A state changed from enable to disable
```

### REPORT

The REPORT command instructs LIBMGR to produce a printed report of the configured VTL and PTLs, tape drives, or library volumes.

```
REPORT VTL  
Report file LIBMGR$C*VTL-REPORT(27) created
```

## Enhanced Operator Commands

### DISPLAY COMM or COMMMODE

The COMM or COMMMODE type is added to the DISPLAY command. DISPLAY COMM reports the LIBMGR status of each COMAPI installation mode configured for use.

```
DISPLAY COMM  
mode A is disabled  
Active mode B is enabled  
mode C is enabled but COMAPI is not running
```

### DISPLAY DRIVE ALL

The DISPLAY DRIVE ALL command displays only drives with mounted volumes or those in the process of mounting or dismounting a volume. DISPLAY DRIVE ALL DETAIL produces a list of all drives as in previous levels.

```
DISPLAY DRIVE ALL  
No active drives
```

### DISPLAY VTL or PTL

The VTL and PTL types are added to the DISPLAY command. DISPLAY VTL or DISPLAY PTL reports information about a VTL appliance or a tape controller and the libraries it controls.

```
DISPLAY PTL PRODLIB  
PTL PRODLIB Libraries: 1 Mode B IP: 10.100.1.76  
LIB: PLIB01 - connected
```

### POLL with DETAIL option

The positive response from a POLL console command with the DETAIL option includes the list of drives on which the POLLED volume could be mounted.

```
POLL DS0203 DETAIL  
POLL DS0050 - is in library VTL01  
Drive: V98014,V98015
```

## New Runstreams

STPTLRPT-A, STPTLRPT-B, STPTLRPT-C and STPTLRPT-D

The new STAR Library Manager PTL Report runstreams have been provided to support the ability to produce a report of volumes in the PTL. These runstreams use the PTL Report program to produce a volume report.

## Product Documentation

The STAR Library Manager Installation and Administrator Guide FP-161-2R1 has been edited and reorganized to reflect additional integration among the auxiliary programs within the Library Manager product suite.

A new section has been added, "Administering Library Manager." This material provides context to existing material about planning, installing, configuring and operating Library Manager.

## STAR Library Manager Notes Of Interest

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None.

## Restrictions and Limitations

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The EXEC supports a maximum number of four (4) concurrent library control programs interfacing with CARTTAPELIB\$. Both LIBMGR and CSC use the CARTTAPELIB\$ interface for requesting media services such as mounts and dismounts. If CSC is not present, up to four (4) instances of LIBMGR can be run concurrently. If CSC is present, the number of supported instances of LIBMGR depends on the number of CSC instances.

## Compatibility

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Release 2R1 is generated under CP OS-2200 16 or higher. The STAR Library Manager requires STAR-1100 Level 8R1A or higher.

# Migration

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If you have previously generated STAR Library Manager with a COMAPILIB Build parameter pointing to other than the Mode A ComAPI installation file of SYSSLIB\$\*COMAPILIB, then you will be required to update your configuration element to add the new parameter of COMAPI\_MODE.

The rest of the STAR Library Manager release 2R1 will function correctly using a release 1R3 configuration. The configuration must be updated if you wish to access features introduced in release 2R1.



**Warning:** *If you use an installation mode of ComAPI other than Mode A (the default), the Library Manager configuration must be updated with an explicit COMAPI\_MODE statement. Otherwise, Library Manager will fail to connect with the VTL.*

# Previous Level Support

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Prior levels of STAR Library Manager currently supported include 1R3.

FCI will support STAR Library Manager level 1R3 until September, 2018.

# Documentation

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Documents provided with release 2R1 include:

- *STAR Library Manager 2R1 Release Announcement*
- *STAR Library Manager 2R1 Installation and Administrator Guide, FP-161-2R1*
- *STAR Library Manager 2R1 Quick Start Notes*
- *OS 2200 Release Tape Recreation Instructions*

## FCI Website

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You may obtain general information about Formula Consultants, Inc. and its products at our website at [www.formula.com](http://www.formula.com). Once you register with the site and receive a userid and password, you can also download Notes of Interest. Product Software Release DVD and Software Object Module Updates and documentation in PDF format is also available (Adobe Acrobat Reader required).

## FCI Support Center

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FCI Support Center (FCISC) is available for use to support STAR Library Manager 2R1. The FCI Support Center is a 2200 host server software system accessible via the standard UNISYS Remote Site Support (RSS). It allows you to send and receive data electronically to and from FCI. Refer to the *STAR Library Manager Installation and Administrator Guide* for more information.

## OS 2200 EXEC Considerations

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Unisys maintains OS 2200 EXEC Problem List Entries (PLEs) for Unisys maintains Problem List Entries (PLEs) to report problems and corrections to its products. You should review the following PLEs to see if any are appropriate for your build.

<b>PLE #</b>	<b>Needed for</b>
18925532	Prevent COMAPI level 8R1 and lower from causing LibManager to abort.

## Corrections

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Updates and corrections to STAR Library Manager 2R1 are obtained from the FCI Support Web Site. These are object module updates that are included in the COMUS build.

# Ordering Instructions

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To order your site's copy of STAR Library Manager 2R1, contact a sales representative at Formula Consultants Inc., at 714-778-0123

or complete the attached Product Order Form and fax it to 714-778-6364, or mail your order to:

**Formula Consultants Incorporated**

P.O. Box 544  
Anaheim, CA 92815  
Attn: Product Sales

or Order STAR Library Manager 2R1 electronically by addressing your e-mail to:

[sales@formula.com](mailto:sales@formula.com)

or Order STAR Library Manager 2R1 through the Formula Consultants website at:

[www.formula.com](http://www.formula.com)



# Product Order Form

PRODUCT: STAR LIBRARY MANAGER Level 2R1

CUSTOMER: \_\_\_\_\_

DELIVERY ADDRESS: \_\_\_\_\_  
\_\_\_\_\_

CITY,, STATE: \_\_\_\_\_

ZIP CODE: \_\_\_\_\_

CONTACT: \_\_\_\_\_

TELEPHONE NUMBER: \_\_\_\_\_

LAST STAR LIBRARY MANAGER LEVEL RECEIVED: \_\_\_\_\_

## General Releases

The OS 2200 Software for STAR Library Manager is available electronically on DVD and can be downloaded from the FCI support web site.

The software is formatted in a Unisys OS 2200 DVD tape image. You can access the DVD as a simulated tape, or use it to recreate the release tape. Those options are explained, in more detail, in the OS 2200 Release Tape Recreation Instructions.

## Media for General Release

FCI offers the following options for receiving the general release of STAR Library Manager 2R1:

- ❑ Support Website Download
- ❑ DVD
- ❑ Electronic via RSS and the FCI Support Center  
Use `SY$LIBPLIBMGR$.NEW-RELEASE/RSS-SCRIPT` to copy to local tape.

## Media for Corrections

FCI offers the following options for receiving corrections to STAR Library Manager 2R1.

- ❑ Support Website download
- ❑ Email