

LabSolutions™

Instruction Manual

System Backup/Restore

Read this manual thoroughly before you use the product.
Keep this manual for future reference.

Introduction

Read this Instruction Manual thoroughly before using the product.

Thank you for purchasing this product.

This manual describes backing up and restoring your system. Read this manual thoroughly before using the product and operate the product in accordance with the instructions in this manual.

Keep this manual for future reference.

Important

- ♦ If the user or usage location changes, ensure that this Instruction Manual is always kept together with the product.
- ♦ If this manual or a product warning label is lost or damaged, immediately contact your Shimadzu representative to request a replacement.
- ♦ To ensure safe operation, read all Safety Instructions before using the product.
- ♦ To ensure safe operation, contact your Shimadzu representative if product installation, adjustment, re-installation (after the product is moved), or repair is required.

Notice

- ♦ Information in this manual is subject to change without notice and does not represent a commitment on the part of the vendor.
- ♦ Any errors or omissions which may have occurred in this manual despite the utmost care taken in its production will be corrected as soon as possible, although not necessarily immediately after detection.
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Replacement parts for this product will be available for a period of seven (7) years after the product is discontinued. Thereafter, such parts may cease to be available.

Note, however, that the availability of parts not manufactured by Shimadzu shall be determined by the relevant manufacturers.

About this Instruction Manual

■ Indications Used in this Manual

Indication	Meaning
 NOTE	Emphasizes additional information that is provided to ensure the proper use of this product.

Warranty

Shimadzu provides the following warranty for this product.

1 Period

Please contact your Shimadzu representative for information about the period of this warranty.

2 Description:

If a product/part failure occurs for reasons attributable to Shimadzu during the warranty period, Shimadzu will repair or replace the product/part free of charge (including USB dongle). However, in the case of products which are usually available on the market only for a short time, such as personal computers and their peripherals/parts, Shimadzu may not be able to provide identical replacement products.

3 Limitation of Liability:

1. In no event will Shimadzu be liable for any lost revenue, profit or data, or for special, indirect, consequential, incidental or punitive damages, however caused regardless of the theory of liability, arising out of or related to the use of or inability to use the product, even if Shimadzu has been advised of the possibility of such damage.
2. In no event will Shimadzu's liability to you, whether in contract, tort (including negligence), or otherwise, exceed the amount you paid for the product.

4 Exceptions:

Failures caused by the following are excluded from the warranty, even if they occur during the warranty period.

1. Improper product handling
2. Repairs or modifications performed by parties other than Shimadzu or Shimadzu designated companies
3. Product use in combination with hardware or software other than that designated by Shimadzu
4. Computer viruses leading to device failures and damage to data and software, including the product's basic software
5. Power failures, including power outages and sudden voltage drops, leading to device failures and damage to data and software, including the product's basic software
6. Turning OFF the device without following the proper shutdown procedure leading to device failures and damage to data and software, including the product's basic software
7. Reasons unrelated to the product itself
8. Product use in harsh environments, such as those subject to high temperatures or humidity levels, corrosive gases, or strong vibrations
9. Fires, earthquakes, or any other act of nature, contamination by radioactive or hazardous substances, or any other force majeure event, including wars, riots, and crimes
10. Product movement or transportation after installation
11. Consumable items
Recording media such as CD-ROMs are considered consumable items.

If there is a document such as a warranty provided with the product, or there is a separate contract agreed upon that includes warranty conditions, the provisions of those documents shall apply.

Warranty periods for products with special specifications and systems are provided separately.

The license cannot be reissued if you lose the USB dongle.

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1 System Backup

With the system backup function, you can back up the LabSolutions database. Then if some problem occurs, you can return to the state at the time of the backup, even if the server or database is damaged. In addition, this function can perform a backup while LabSolutions is operating.

2 Usage Notes

Note the following points when using this function.

- You can perform a backup while LabSolutions is operating. However, a considerable load is applied to the server during the backup, so it is recommended that you schedule it for when instrument usage is low.
- Windows administrator rights are required to implement the backup.

3 Backup Procedures

3.1 Default Settings: Setting the Backup Destination

(1) Open the following file using Notepad.

C:\LabSolutions\System\config\LSSSystemBackupConfiguration.xml

(2) Specify the backup destination folder between <BackupPath> and </BackupPath>.

```
<?xml version="1.0" encoding="utf-8" ?>
<CLSSSystemBackupRestoreConfiguration xmlns:xsi="http://w

  <!-- Backup Setting -->
  <Backup>

    <!-- Set the [backup path]. -->
    <BackupPath>D:\Backup</BackupPath>
```

 NOTE

For the backup destination, specify a different drive from the system, such as NAS.

 NOTE

The backup destination folder must be created in advance.

(3) Save the file and close Notepad.

3.2 Performing a Manual Backup

- (1) Run the application as a Windows administrator.

C:\Program Files (x86)\LabSolutions\LSSSystemBackup.exe

- (2) The progress is displayed during the backup. When the backup is complete, the application will close.

```
=====
Welcome to LSSSystemBackup!!
=====

Backup started.
Backup of LabSolutions system files started.
Progress Status:(100 / 549)
Progress Status:(200 / 549)
Progress Status:(300 / 549)
Progress Status:(400 / 549)
Progress Status:(500 / 549)
Progress Status:(549 / 549)
Backup of LabSolutions system files completed.
Full backup of SQL Server started.
Progress Status:AcqSUMng.bak(1 / 6)
Verify OK
Progress Status:LSSLOG.bak(2 / 6)
Verify OK
Progress Status:LSSPROFILE.bak(3 / 6)
Verify OK
Progress Status:PROJECT_0.bak(4 / 6)
Verify OK
Progress Status:PROJECT_COMMON.bak(5 / 6)
Verify OK
Progress Status:ShimadzuAttestServer.bak(6 / 6)
Verify OK
Now outputting the system backup report...
Full backup of SQL Server completed.
Creation of configuration file started.
Creation of configuration file completed.
Backup completed.
```

3.3 Performing a Periodic Backup Automatically

A periodic backup can be performed automatically using Task Scheduler.

- (1) In the [Control Panel]-[Administrative Tool] window, run Task Scheduler.
- (2) Click [Create Basic Task].
- (3) Create a task in accordance with the following settings.

Create a Basic Task

Enter an appropriate name for the task at [Name].

Trigger

Specify the schedule for performing the backup.

Action

Select [Start a program].

Set the following at [Program/script].

C:\Program Files (x86)\LabSolutions\LSSSystemBackup.exe

(4) Open the task created again and specify the following settings.

[General] Tab Page

Enter the name of the user with OS administrator rights at [When running the task, use the following user account].

Select [Run whether user is logged on or not].

Select the [Run with highest privileges] checkbox.

 **NOTE**

Task Scheduler must be reconfigured if the password of the user specified in Task Scheduler changes.

3.4 Checking the Results of a Backup

When a system backup is performed, a folder is created at the backup destination for each backup implementation day and time, and the database and system files are backed up inside these folders.

Name	Date modified	Type	Size
 DataBaseFile	6/13/2017 5:57 PM	File folder	
 SystemFile	6/13/2017 5:56 PM	File folder	
 BackupHashFile	6/13/2017 5:57 PM	Text Document	52 KB
 LSSSystemBackup_20170613175651	6/13/2017 5:57 PM	Text Document	171 KB
 LSSSystemBackupInfo	6/13/2017 5:57 PM	XML Document	1 KB
 LSSSystemBackupReport_20170613085657	6/13/2017 5:57 PM	Adobe Acrobat D...	3 KB

Open the PDF file and check that everything is OK.

1/1 6/13/2017 5:57:10 PM		
===== Shimadzu LabSolutions System Backup Report =====		
PC information: LSS001		
Version: 6.81		
Performed on (date and time): 6/13/2017 5:56:57 PM(+09:00) - 6/13/2017 5:57:10 PM(+09:00)		

Database Name	Backup	Verify
AcqSVmng	OK	OK
LSSLOG	OK	OK
LSSPROFILE	OK	OK
PROJECT_0	OK	OK
PROJECT_COMMON	OK	OK
ShimadzuAttestServer	OK	OK

Total: OK		

 **NOTE**

The files backed up cannot be deleted automatically. Check the remaining memory capacity at the backup destination and then delete the files manually.

 **NOTE**

If the backup folder does not exist or cannot be accessed, then the backup process does not start. Check to make sure the content is correct and confirm the specified file.

 **NOTE**

If an error occurs during the backup process, a description of the error is recorded in a "LSSSystemBackup_<date>.log" file created in the backup folder. For details about errors, contact a Shimadzu representative.

4 Restoration Procedures

The LabSolutions database can be restored based on the files backed up.

Note that the computer and server being restored must be in the following condition.

- The operating system and database are operating as usual.
- LabSolutions is installed and the LabSolutions database has been created in same folder.

4.1 Default Settings: Setting the Restoration Source

(1) Open the following file using Notepad.

C:\LabSolutions\System\config\LSSSystemRestoreConfiguration.xml

(2) Specify the folder containing the files to restore between <RestorePath> and </RestorePath>.

```
<?xml version="1.0" encoding="utf-8" ?>
<CLSSSystemBackupRestoreConfiguration xmlns:xsi="http://www.w3.org/
  <!-- Restore Setting -->
  <Restore>
    <!-- Set the [restore path]. -->
    <RestorePath>D:\Backup\FullBackup_20160929110514</RestorePath>
    <!-- Set the [restore mode]. (0:DB/FILE, 1:FILE, 2:DB) -->
```

(3) Save the file and close Notepad.

4.2 Implementing the Restoration

(1) In the [Control Panel]-[Administrative Tool]-[Services] window, stop "LSSService."

(2) Run the following application as a Windows administrator.

C:\Program Files (x86)\LabSolutions\LSSSystemRestore.exe

NOTE

If the database connection addresses for backup and restoration are different, the database connection address replaces the backup connection address after restoration is executed. Before execution, take a note of the database connection address of the restoration destination.

- (3) Before implementing the restoration, enter the reason. To continue, enter "Y."

```
=====
Welcome to LSSSystemRestore!!
=====

Restore started.
Enter a reason for restore.
Repair database.
Restore with this setting? (Y/N)
RestorePath : C:\backup\FullBackup_20170613175651
RestoreMode : DB/File
y
OK to stop the LabSolutions operation? (Y/N)
y
```

- (4) The progress is displayed during the restoration. When the restoration is complete, the application will close.

NOTE

If the database connection addresses for backup and restoration are different, the "The name of the database connection server is invalid." message is displayed. After the restoration is complete, start the database connection setting application and change the connection address to the connection address noted down as per the note in step (2).

```
=====
Welcome to LSSSystemRestore!!
=====

Restore started.
Enter a reason for restore.
Repair database.
Restore with this setting? (Y/N)
RestorePath : C:\backup\FullBackup_20170613175651
RestoreMode : DB/File
y
OK to stop the LabSolutions operation? (Y/N)
y
Configuration file check started.
Configuration file check completed.
Restore of LabSolutions system files started.
Progress Status:(100 / 167)
Progress Status:(167 / 167)
Restore of LabSolutions system files completed.
Restore of full backup of SQL Server started.
Restore progress:AcqSUMng.bak(1 / 6)
Restore progress:LSSLOG.bak(2 / 6)
Restore progress:LSSPROFILE.bak(3 / 6)
Restore progress:PROJECT_0.bak(4 / 6)
Restore progress:PROJECT_COMMON.bak(5 / 6)
Restore progress:ShimadzuAttestServer.bak(6 / 6)
Restore of full backup of SQL Server completed.
Restore completed.
```

(5) A log file is created in the restoration source folder specified in the setting file.

- LSSSystemRestore_YYYYMMDDHH24MISS.pdf

```
1/1
2017/06/12 13:33:03

===== Shimadzu LabSolutions System Restore Log =====

2017-06-12 13:32:13.816[INF]Progress Status : (0 / 0)
2017-06-12 13:32:15.824[INF]Restore progress : AcqSVMng.bak(1 / 9)
2017-06-12 13:32:18.373[INF]Restore progress : LSSLOG.bak(2 / 9)
2017-06-12 13:32:27.380[INF]Restore progress : LSSPROFILE.bak(3 / 9)
2017-06-12 13:32:31.935[INF]Restore progress : PROJECT_0.bak(4 / 9)
2017-06-12 13:32:42.417[INF]Restore progress : PROJECT_1.bak(5 / 9)
2017-06-12 13:32:45.218[INF]Restore progress : PROJECT_2.bak(6 / 9)
2017-06-12 13:32:53.892[INF]Restore progress : PROJECT_3.bak(7 / 9)
2017-06-12 13:32:56.550[INF]Restore progress : PROJECT_COMMON.bak(8 / 9)
2017-06-12 13:32:59.574[INF]Restore progress : ShimadzuAttestServer.bak(9 / 9)
2017-06-12 13:33:02.677[INF]Kind=Restore
2017-06-12 13:33:02.677[INF>Login User=Administrator
2017-06-12 13:33:02.677[INF]Day and Time=2017/06/12 13:33:02
2017-06-12 13:33:02.677[INF]From=C:\¥backup¥Full¥Backup_20170612113332
2017-06-12 13:33:02.677[INF]To=C:\¥LabSolutions¥
2017-06-12 13:33:02.677[INF]Version=6.81
2017-06-12 13:33:02.677[INF]Action Mode=DB/File
2017-06-12 13:33:02.677[INF]Device=Lacal/Share Disk
2017-06-12 13:33:02.677[INF]Restore Reason=Recovery database.
2017-06-12 13:33:02.679[INF]System Restore is done.
```

Open the log file and check that it contains "System Restore is done."

(6) Restart the server.

5 Appendix: Differential Backup

The differential backup function only backs up the parts that have changed since the most recent full backup. Accordingly, using it in combination with a full backup can shorten the time needed when performing frequent backups. However, both the full backup and differential backup files must be kept, so the procedure is somewhat complex.

5.1 Differential Backup Procedures

(1) Run the following batch file as a Windows administrator.

C:\Program Files (x86)\LabSolutions\LSSSystemBackup_diff.bat

(2) The progress is displayed during the backup. When the backup is complete, the application will close.

```
=====
Welcome to LSSSystemBackup!!
=====

Backup started.
Backup of LabSolutions system files started.
Progress Status:(100 / 552)
Progress Status:(200 / 552)
Progress Status:(300 / 552)
Progress Status:(400 / 552)
Progress Status:(500 / 552)
Progress Status:(552 / 552)
Backup of LabSolutions system files completed.
Differential backup of SQL Server started.
Progress Status:AcqSUMng.bak(1 / 6)
Verify OK
Progress Status:LSSLOG.bak(2 / 6)
Verify OK
Progress Status:LSSPROFILE.bak(3 / 6)
Verify OK
Progress Status:PROJECT_0.bak(4 / 6)
Verify OK
Progress Status:PROJECT_COMMON.bak(5 / 6)
Verify OK
Progress Status:ShimadzuAttestServer.bak(6 / 6)
Verify OK
Now outputting the system backup report...
Differential backup of SQL Server completed.
Creation of configuration file started.
Creation of configuration file completed.
Backup completed.
```

5.2 Checking the Results of a Backup

When a differential backup is performed, a folder is created for each backup implementation day and time at the storage destination for the most recent full backup. The database and system files are backed up inside these folders.

Name	Date modified	Type	Size
DataBaseFile	6/13/2017 5:57 PM	File folder	
DiffBackup_20170613193604	6/13/2017 7:36 PM	File folder	
DiffBackup_20170613193646	6/13/2017 7:37 PM	File folder	
SystemFile	6/13/2017 5:56 PM	File folder	
BackupHashFile	6/13/2017 5:57 PM	Text Document	52 KB
LSSSystemBackup_20170613175651	6/13/2017 5:57 PM	Text Document	171 KB
LSSSystemBackupInfo	6/13/2017 5:57 PM	XML Document	1 KB
LSSSystemBackupReport_20170613085657	6/13/2017 5:57 PM	Adobe Acrobat D...	3 KB

Open the PDF file and check that everything is OK.

Name	Date modified	Type	Size
DataBaseFile	6/13/2017 7:37 PM	File folder	
SystemFile	6/13/2017 7:37 PM	File folder	
BackupHashFile	6/13/2017 7:37 PM	Text Document	52 KB
LSSSystemBackup_20170613193646	6/13/2017 7:37 PM	Text Document	202 KB
LSSSystemBackupInfo	6/13/2017 7:37 PM	XML Document	1 KB
LSSSystemBackupReport_20170613103704	6/13/2017 7:37 PM	Adobe Acrobat D...	3 KB

Shimadzu LabSolutions System Backup Report		
6/13/2017 7:37:11 PM 1/1		
PC information: LSS001		
Version: 6.81		
Performed on (date and time): 6/13/2017 7:37:04 PM(+09:00) - 6/13/2017 7:37:10 PM(+09:00)		
Database Name	Backup	Verify
AcqSVMng	OK	OK
LSSL0G	OK	OK
LSSPROFILE	OK	OK
PROJECT_0	OK	OK
PROJECT_COMMON	OK	OK
ShimadzuAttestServer	OK	OK
Total: OK		

5.3 Procedures for Restoring from a Differential Backup

(1) Open the following file using Notepad.

C:\LabSolutions\System\config\LSSSystemRestoreConfiguration.xml

(2) Specify the folder containing the differential backup files to restore between `<RestorePath>` and `</RestorePath>`.

```
<?xml version="1.0" encoding="utf-8" ?>
<CLSSystemBackupRestoreConfiguration xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xi
  <!-- Restore Setting -->
  <Restore>
    <!-- Set the [restore path]. -->
    <RestorePath>C:\%backup%\FullBackup_20170612113332\DiffBackup_20170612113438</RestorePath>
    <!-- Set the [restore mode]. (0:DB/FILE, 1:FILE, 2:DB) -->
```

(3) Save the file and close Notepad.

(4) Perform the restoration as per the procedures in 4.2.