

NEC Storage Replication Navigator Suite
for Oracle Ver9.2
Installation Guide

Preface

Thank you for purchasing NEC Storage Replication Navigator Suite for Oracle.

This installation guide explains how to install NECStorage Replication Navigator Suite for Oracle. For details about how to use this product, see the electronic manual on the CD.


Notes

1. This product supports Windows Server 2003, Windows Server 2008 and Windows Server 2012.
2. Unless the longer names are required, the following abbreviations are used in this guide.

Abbreviation	Product name
Replication Navigator Suite	NEC Storage Replication Navigator Suite
Storage Manager	NEC Storage Manager
ControlCommand on Windows	NEC Storage ControlCommand on Windows
Protection Manager	NEC Storage Protection Manager
Replication Navigator	NEC Storage Replication Navigator
JobCenter	JobCenter
Replication Navigator ControlCommand for Oracle	NEC Storage Replication Navigator ControlCommand for Oracle
VSS Provider	NEC Storage VSS Provider

3. Trademarks and registered trademarks
 - Microsoft® and Windows® are trademarks or registered trademarks of the Microsoft Corporation in the United States and other countries.
 - Other product names and company names, etc. are trademarks or registered trademarks of the associated companies.
4. In this guide, precautionary notes that you must be especially aware of are indicated as shown below. Make sure to follow these notes.

If you ignore these notes and incorrectly handle the product, the operation of your system might be adversely affected.

Included symbols	
Symbol	Meaning
	Indicates contents for which special caution is required when performing an operation.

Contents

Chapter 1 Setup	1
1.1 Product Overview	1
1.2 System Configuration Example.....	2
1.3 Software Configuration	3
1.4 Operating Environments	5
1.5 Applying an Update Module.....	11
1.5.1 Windows Server 2003 x86 Architecture	11
1.5.2 Windows Server 2003 x64 Architecture	11
1.5.3 Windows Server 2008 x86 Architecture	12
1.5.4 Windows Server 2008 x64 Architecture	12
Chapter 2 Setting Up Replication Navigator Suite.....	13
2.1 Setup Method	13
2.2 Preparing for Setup	13
2.3 Installation	14
2.4 Uninstallation	19
2.5 Updating.....	22
2.6 Preparing for Operation	22

Chapter 1 Setup

1.1 Product Overview

This product supports an Oracle single instance database backup system configuration that uses replication functionality. The following bundled products are provided for NEC Storage M series disk arrays.

Table 1 Bundled Products for M series

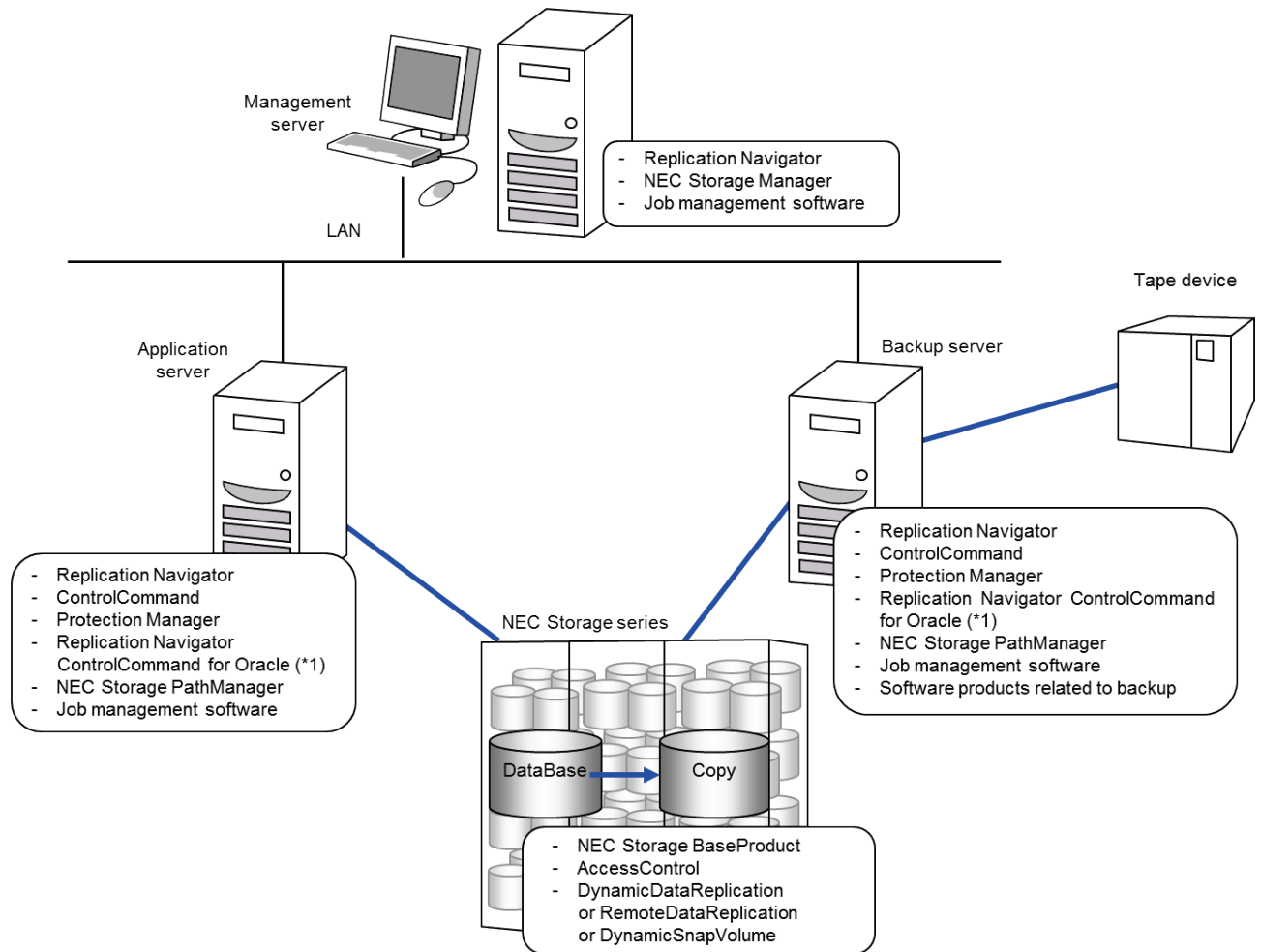
Product name	M100 series	M300 series	M500 series	M700 series
Replication Navigator	√	√	√	√
Protection Manager	√	√	√	√
ControlCommand on Windows	√	√	√	√
VSS Provider	√	√	√	√
DynamicDataReplication Lite	--	--	--	--
DynamicDataReplication	√	--	--	--

√ Bundled

-- Unbund*led

1.2 System Configuration Example

An example Oracle single instance database of an online backup system that uses Replication Navigator Suite for Oracle is provided below.



To perform a tape backup, a backup server is required. The management server can also be used as a backup server.

1.3 Software Configuration

The required software and installation destinations to build an Oracle single instance database backup system are shown below. The shaded software (items 8 and below) is included with Replication Navigator Suite.

Table 2 Software Configuration

Item	Software	Application server		Backup server		Management server
		64Bit	32Bit	64Bit	32Bit	
1	Microsoft .NET Framework 2.0 *1	√	√	√	√	√
2	FTP service (OS standard) *2	--	--	√	√	--
3	Storage Manager server	--	--	--	--	√
4	Storage Manager client	--	--	--	--	√
5	NEC Storage PathManager	√	√	√	√	--
6	Job Application Management software	√	√	√	√	√
7	Backup software *2	--	--	√	√	×
8	ControlCommand on Windows *3	√	√	√	√	√
9	VSS Provider *4	--	△	--	△	--
10	VSS Provider (x64) *4	△	--	△	--	--
11	Protection Manager - Copy Controller *5	--	√	--	√	--
12	Protection Manager - Copy Controller (x64) *5	√	--	√	--	--
13	Replication Navigator ControlCommand for Oracle	√	√	√	√	--
14	Replication Navigator *6	√	√	√	√	√

√ Installation required

△ Installation optional

-- Installation not required

*1 If it is Windows Server 2008 (including R2), as Microsoft .NET Framework 2.0 is install by default, it is not necessary to install again.

If it is Windows Server 2012 (including R2), Microsoft .NET Framework 3.5 must be installed.

Install the .NET Framework 3.5 by either of the following procedures

[procedure 1]

1. Log in as a user with Administrator privileges.
2. Set the installation media of the OS that is used to the server.

3. Execute the following from the command prompt.

```
dism /online /enable-feature /featurename:NetFx3 /all /source:D:¥sources¥sxs
```

(Installation media is described as D drive. Change the drive letter according to your environment.)

[procedure 2]

1. Log in as a user with Administrator privileges.

2. Please install the .NET Framework 3.5 from "Add Roles and Features".

(The machine that can be connected to "Windows Update" is required.)

*2 The FTP service and backup software are only required if you want to perform a tape backup.

*3 For x86 machine, install the 32-bit version of VSS Provider, and, for x64 machine, install the 64-bit version of VSS Provider (x64) to perform a file system online backup.

*4 For x86 machine, install the 32-bit version of Protection Manager - Copy Controller, and, for x64 machine, install the 64-bit version of Protection Manager - Copy Controller (x64).

*5 Install Replication Navigator as a **manager** in the management server that generates the job network.

1.4 Operating Environments

The Windows Server 2003 operating environments are described below.

Table 3 Application Server and Backup Server Operating Environment

OS	<ul style="list-style-type: none"> Windows Server 2003, Standard Edition (SP1, SP2) Windows Server 2003, Enterprise Edition (SP1, SP2) Windows Server 2003 R2, Standard Edition Windows Server 2003 R2, Enterprise Edition Windows Server 2003 R2, Standard Edition (SP2) Windows Server 2003 R2, Enterprise Edition (SP2) Windows Server 2003, Standard x64 Edition (SP1, SP2) Windows Server 2003, Enterprise x64 Edition (SP1, SP2) Windows Server 2003 R2, Standard x64 Edition Windows Server 2003 R2, Enterprise x64 Edition Windows Server 2003 R2, Standard x64 Edition (SP2) Windows Server 2003 R2, Enterprise x64 Edition (SP2)
Software	<ul style="list-style-type: none"> •BaseProduct (including NEC Storage Manager) •DynamicDataReplication Ver2 or later, RemoteDataReplication Ver2 or later, DynamicSnapVolume, or DynamicSnapVolume Ver3 •AccessControl •ControlCommand on Windows •Protection Manager •Replication Navigator ControlCommand for Oracle •Oracle9i Database Release 2 Standard Edition •Oracle9i Database Release 2 Enterprise Edition •Oracle Database 10g Release2 Standard Edition •Oracle Database 10g Release2 Enterprise Edition •Oracle Database 11g Release1 Standard Edition •Oracle Database 11g Release1 Enterprise Edition •Oracle Database 11g Release2 Standard Edition •Oracle Database 11g Release2 Enterprise Edition •EXPRESSCLUSTER X 1.0 / 2.0 / 2.1 / 3.0 / 3.1 / 3.2 / 3.3 •JobCenter R12.7 / R12.8 / R12.9 / R12.10 / R13.1 / R13.2 •NetBackup 6.0 / 6.5 / 7.0 / 7.1 / 7.5 / 7.6 •Backup Exec 12 / 12.5 / 2010 •ARCserve Backup r11.5 / r12 / r12.5 / r15 / r16 / r16.5

Table 4 Management Server Operating Environment

OS	Windows Server 2003, Standard Edition (SP1, SP2) Windows Server 2003, Enterprise Edition (SP1, SP2) Windows Server 2003 R2, Standard Edition Windows Server 2003 R2, Enterprise Edition Windows Server 2003 R2, Standard Edition (SP2) Windows Server 2003 R2, Enterprise Edition (SP2) Windows Server 2003, Standard x64 Edition (SP1, SP2) Windows Server 2003, Enterprise x64 Edition (SP1, SP2) Windows Server 2003 R2, Standard x64 Edition Windows Server 2003 R2, Enterprise x64 Edition Windows Server 2003 R2, Standard x64 Edition (SP2) Windows Server 2003 R2, Enterprise x64 Edition (SP2)
Software	<ul style="list-style-type: none"> • JobCenter R12.7 / R12.8 / R12.9 / R12.10 / R13.1 / R13.2 • NEC Storage Manager • Replication Navigator • ControlCommand on Windows

The Windows Server 2008 operating environments are described below.

Table 5 Application Server and Backup Server Operating Environment

OS	<p>Windows Server 2008, Standard (x86) Windows Server 2008, Enterprise (x86) Windows Server 2008, Standard (x64) Windows Server 2008, Enterprise (x64) Windows Server 2008, Standard (x86) (SP2) Windows Server 2008, Enterprise (x86) (SP2) Windows Server 2008, Standard (x64) (SP2) Windows Server 2008, Enterprise (x64) (SP2) Windows Server 2008 R2, Standard Windows Server 2008 R2, Enterprise Windows Server 2008 R2, Standard (SP1) Windows Server 2008 R2, Enterprise (SP1)</p>
Software	<ul style="list-style-type: none"> •BaseProduct (including NEC Storage Manager) •DynamicDataReplication Ver2 or later, RemoteDataReplication Ver2 or later, DynamicSnapVolume, or DynamicSnapVolume Ver3 •AccessControl •ControlCommand on Windows •Protection Manager •Oracle Database 10g Release2 Standard Edition •Oracle Database 10g Release2 Enterprise Edition •Oracle Database 11g Release1 Standard Edition •Oracle Database 11g Release1 Enterprise Edition •Oracle Database 11g Release2 Standard Edition •Oracle Database 11g Release2 Enterprise Edition •Oracle Database 12c Release1 Standard Edition •Oracle Database 12c Release1 Enterprise Edition •EXPRESSCLUSTER X 2.0 / 2.1 / 3.0 / 3.1 / 3.2 / 3.3 •JobCenter R12.7 / R12.8 / R12.9 / R12.10 / R13.1 / R13.2 / R14.1 •JobCenter Lite R14.1 •NetBackup 6.5 / 7.0 / 7.1 / 7.5 / 7.6 •Backup Exec 12 / 12.5 / 2010 •ARCserve Backup r12 / r12.5 / r15 / r16 / r16.5

Table 6 Management Server Operating Environment

OS	Windows Server 2008, Standard (x86) Windows Server 2008, Enterprise (x86) Windows Server 2008, Standard (x64) Windows Server 2008, Enterprise (x64) Windows Server 2008, Standard (x86) (SP2) Windows Server 2008, Enterprise (x86) (SP2) Windows Server 2008, Standard (x64) (SP2) Windows Server 2008, Enterprise (x64) (SP2) Windows Server 2008 R2, Standard (x64) Windows Server 2008 R2, Enterprise (x64) Windows Server 2008 R2, Datacenter (x64) Windows Server 2008 R2, Standard (x64) (SP1) Windows Server 2008 R2, Enterprise (x64) (SP1) Windows Server 2008 R2, Datacenter (x64) (SP1)
Software	<ul style="list-style-type: none"> • JobCenter R12.7 / R12.8 / R12.9 / R12.10 / R13.1 / R13.2 / R14.1 • NEC Storage Manager • Replication Navigator • ControlCommand on Windows

The Windows Server 2012 operating environments are described below.

Table 7 Application Server and Backup Server Operating Environment

OS	Windows Server 2012 Standard Windows Server 2012 Datacenter Windows Server 2012 R2 Standard Windows Server 2012 R2 Datacenter
Software	<ul style="list-style-type: none"> •BaseProduct (including NEC Storage Manager) •DynamicDataReplication Ver2 or later, RemoteDataReplication Ver2 or later, DynamicSnapVolume, or DynamicSnapVolume Ver3 •AccessControl •ControlCommand on Windows •Protection Manager •Oracle Database 11g Release2 Standard Edition •Oracle Database 11g Release2 Enterprise Edition •Oracle Database 12c Release1 Standard Edition •Oracle Database 12c Release1 Enterprise Edition •EXPRESSCLUSTER X 3.1 / 3.2 / 3.3 •JobCenter R13.1 / R13.2 / R14.1 •JobCenter Lite R14.1 •NetBackup 7.6 •ARCserve Backup r16.5

Table 8 Management Server Operating Environment

OS	Windows Server 2012 Standard Windows Server 2012 Datacenter Windows Server 2012 R2 Standard Windows Server 2012 R2 Datacenter
Software	•JobCenter R13.1 / R13.2 / R14.1 •NEC Storage Manager •Replication Navigator •ControlCommand on Windows

1.5 Applying an Update Module

1.5.1 Windows Server 2003 x86 Architecture

To use the VSS linkage function, apply the hotfixes below.

It is also necessary in case of Windows Server 2003 R2.

The application from (KB)891957 to (KB)916048 is unnecessary in case of SP2.

- Windows Server 2003 hotfix - Microsoft Knowledge Base (KB) 891957
- Windows Server 2003 hotfix - Microsoft Knowledge Base (KB) 912063
- Windows Server 2003 hotfix - Microsoft Knowledge Base (KB) 917107
- Windows Server 2003 hotfix - Microsoft Knowledge Base (KB) 916048
- Windows Server 2003 hotfix - Microsoft Knowledge Base (KB) 933653
- Windows Server 2003 hotfix - Microsoft Knowledge Base (KB) 940349
- Windows Server 2003 hotfix - Microsoft Knowledge Base (KB) 949391

For details, see the following Microsoft support websites:

<http://support.microsoft.com/default.aspx?scid=kb;en;891957>

<http://support.microsoft.com/default.aspx?scid=kb;en;912063>

<http://support.microsoft.com/default.aspx?scid=kb;en;917107>

<http://support.microsoft.com/default.aspx?scid=kb;en;916048>

<http://support.microsoft.com/default.aspx?scid=kb;en;933653>

<http://support.microsoft.com/default.aspx?scid=kb;en;940349>

<http://support.microsoft.com/default.aspx?scid=kb;en;949391>

1.5.2 Windows Server 2003 x64 Architecture

To use the VSS linkage function, apply the hotfixes below.

It is also necessary in case of Windows Server 2003 R2.

The application from (KB)891957 to (KB)916048 is unnecessary in case of SP2.

- Windows Server 2003 hotfix - Microsoft Knowledge Base (KB) 891957
- Windows Server 2003 hotfix - Microsoft Knowledge Base (KB) 912063
- Windows Server 2003 hotfix - Microsoft Knowledge Base (KB) 917107
- Windows Server 2003 hotfix - Microsoft Knowledge Base (KB) 916048
- Windows Server 2003 hotfix - Microsoft Knowledge Base (KB) 903081
- Windows Server 2003 hotfix - Microsoft Knowledge Base (KB) 921597
- Windows Server 2003 hotfix - Microsoft Knowledge Base (KB) 933653
- Windows Server 2003 hotfix - Microsoft Knowledge Base (KB) 940349
- Windows Server 2003 hotfix - Microsoft Knowledge Base (KB) 949391

For details, see the following Microsoft support websites:

<http://support.microsoft.com/default.aspx?scid=kb;en;891957>

<http://support.microsoft.com/default.aspx?scid=kb;en;912063>

<http://support.microsoft.com/default.aspx?scid=kb;en;917107>

<http://support.microsoft.com/default.aspx?scid=kb;en;916048>

<http://support.microsoft.com/default.aspx?scid=kb;en;903081>

<http://support.microsoft.com/default.aspx?scid=kb;en;921597>

<http://support.microsoft.com/default.aspx?scid=kb;en;933653>

<http://support.microsoft.com/default.aspx?scid=kb;en;940349>

<http://support.microsoft.com/default.aspx?scid=kb;en;949391>

1.5.3 Windows Server 2008 x86 Architecture

To use the VSS linkage function, apply the hotfixes below.

It is unnecessary in case of Windows Server 2008 SP2 and Windows Server 2008 R2.

Windows Server 2008 hotfix - Microsoft Knowledge Base (KB) 955656

For details, see the following Microsoft support websites:

<http://support.microsoft.com/default.aspx?scid=kb;en;955656>

1.5.4 Windows Server 2008 x64 Architecture

To use the VSS linkage function, apply the hotfixes below.

It is unnecessary in case of Windows Server 2008 SP2 and Windows Server 2008 R2.

Windows Server 2008 hotfix - Microsoft Knowledge Base (KB) 955656

For details, see the following Microsoft support websites:

<http://support.microsoft.com/default.aspx?scid=kb;en;955656>

Chapter 2 Setting Up Replication Navigator Suite

2.1 Setup Method

This section explains how to set up the Replication Navigator Suite products.



You cannot execute the Replication Navigator Suite setup program over a file sharing network.



For details about installation, or if you want to install software separately, see the corresponding software installation guide. However, because Replication Navigator Suite is made up of multiple software media images, the installer file paths in the software installation guides might differ from the ones Replication Navigator Suite uses. If the paths differ, read the paths in the guides as though they are the ones in the Replication Navigator Suite `README.TXT` file.

2.2 Preparing for Setup

Before setting up Replication Navigator Suite, make the following preparations:

- If an older version of Replication Navigator Suite product has been installed, please uninstall it.
- To use the Replication Navigator Suite setup program, Microsoft .NET Framework 1.1 or later must be installed.
- If it is Windows Server 2012 (including R2), Microsoft .NET Framework 3.5 must be installed.

Install the .NET Framework 3.5 by either of the following procedures.

[procedure 1]

- (1) Log in as a user with Administrator privileges.
- (2) Set the installation media of the OS that is used to the server.
- (3) Execute the following from the command prompt.

```
dism /online /enable-feature /featurename:NetFx3 /all /source:D:\sources\sxs
```

*Installation media is described as D drive. Change the drive letter according to your environment.

[procedure 2]

- (1) Log in as a user with Administrator privileges.
- (2) Please install the .NET Framework 3.5 from "Add Roles and Features".

*The machine that can be connected to "Windows Update" is required.

2.3 Installation



You cannot execute the Replication Navigator Suite setup program over a file sharing network.

Before performing setup, make sure of the following:

- You are logged in with Administrator privileges.
- No programs are running.

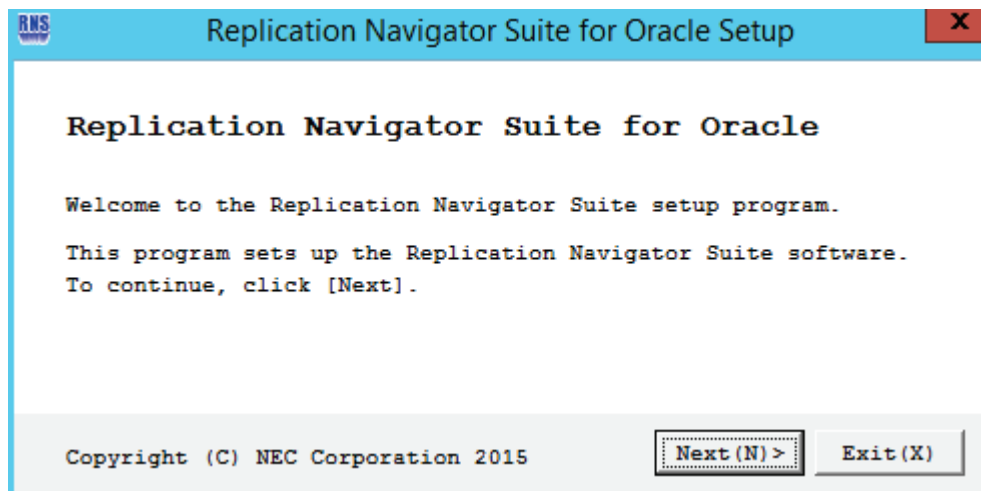
Insert the Replication Navigator Suite CD into the CD-ROM drive, the setup program executed automatically.

If the setup program does not start up, execute the following file on the CD:

`\RNSSETUP.EXE`

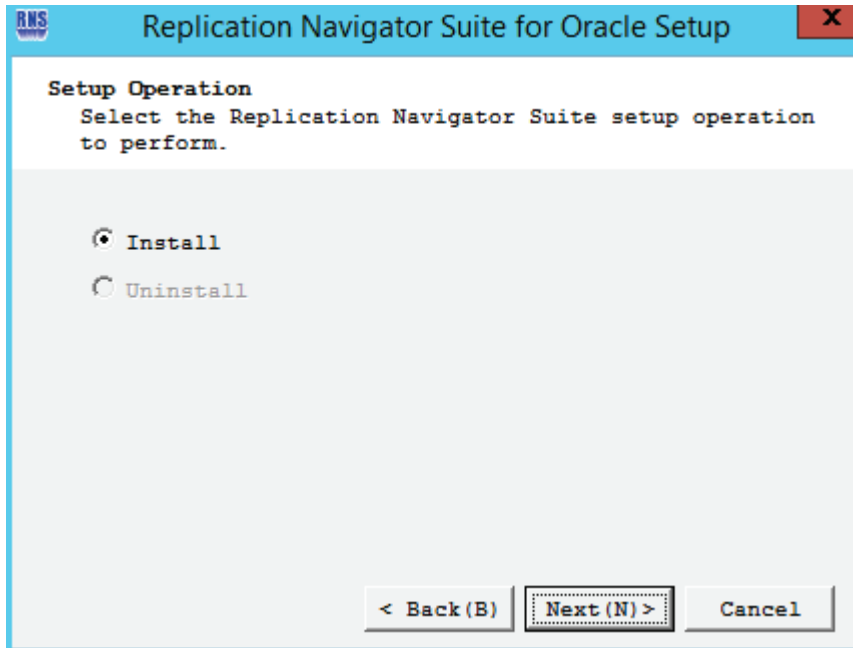
The following explains the procedure for installing the software using the Replication Navigator Suite setup program.

1. Welcome to the setup program window



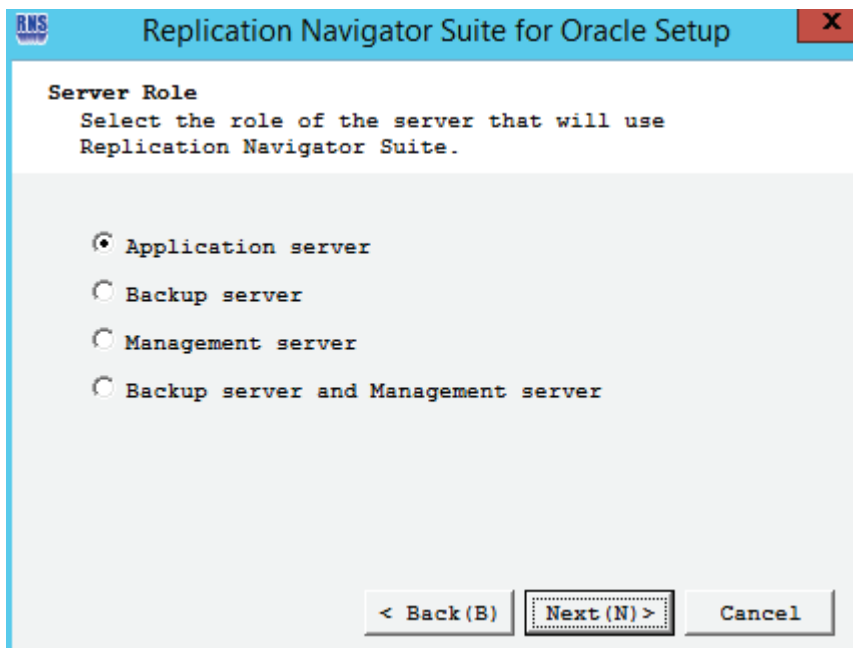
Click **Next**.

2. Setup Operation window



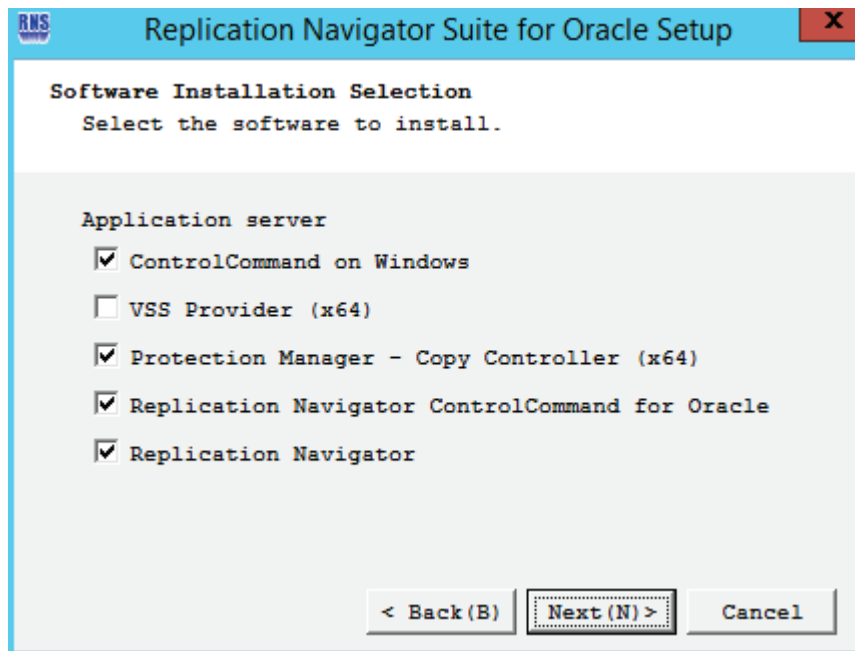
Select **Install**, and then click **Next**.

3. Server Role window



Select the server role, and then click **Next**.

4. Software Installation Selection window



Select the software to install, and then click **Next**.

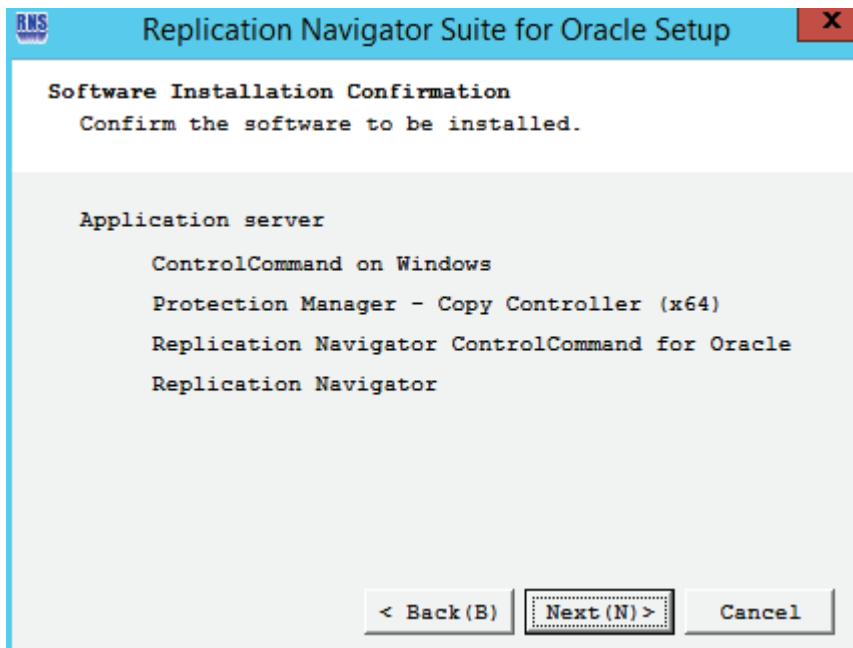
Supplement

Because the Replication Navigator Suite setup program automatically distinguishes between OS architectures to display the software that can be installed, your display might differ from the above example.



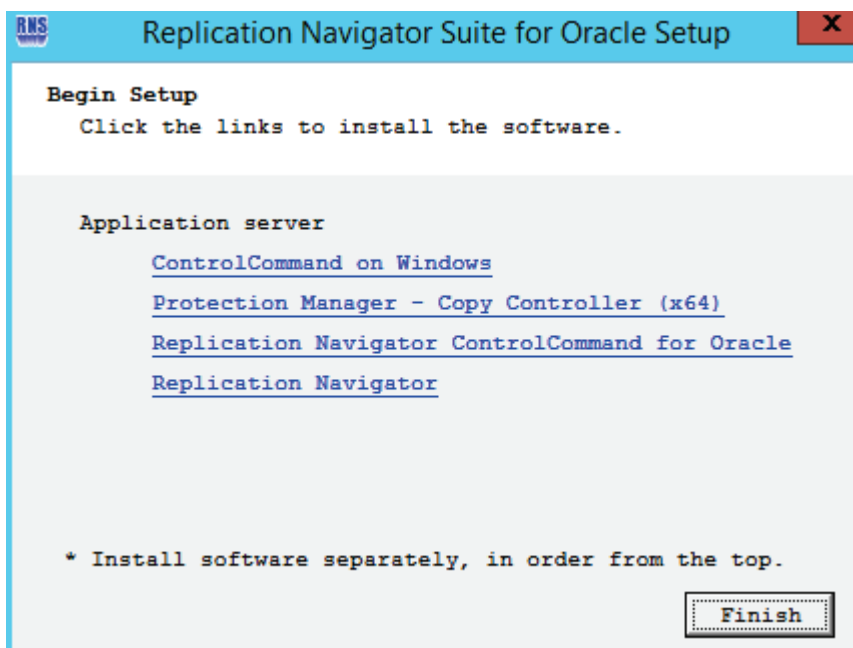
The software required for the server role you selected is checked for in advance. When using the Replication Navigator Suite setup program, if the software required for the server role is installed, setup ends. Therefore, when installing software that is not required for the server role during the second or a subsequent setup, separately install the software by using the `SETUP.EXE` file on the CD for that software, not by using the Replication Navigator Suite setup program.

5. Software Installation Confirmation window

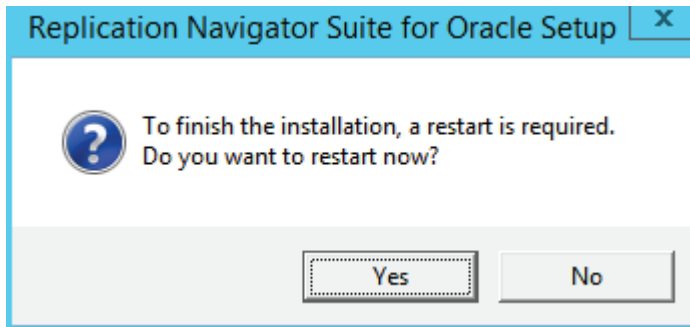


Check the software to be installed, and then click **Next**.

6. Begin Setup window



Click the links to install the software. Install software separately, in order from the top. After all the software is installed, and then click **Finish**.

Supplement

If you installed software that requires a restart, the above window appears. Click **Yes** and restart the computer.

Starting a software installer might take a while. Please wait if necessary.

2.4 Uninstallation

Before performing setup, make sure of the following:

- You are logged in with Administrator privileges.
- No programs are running.

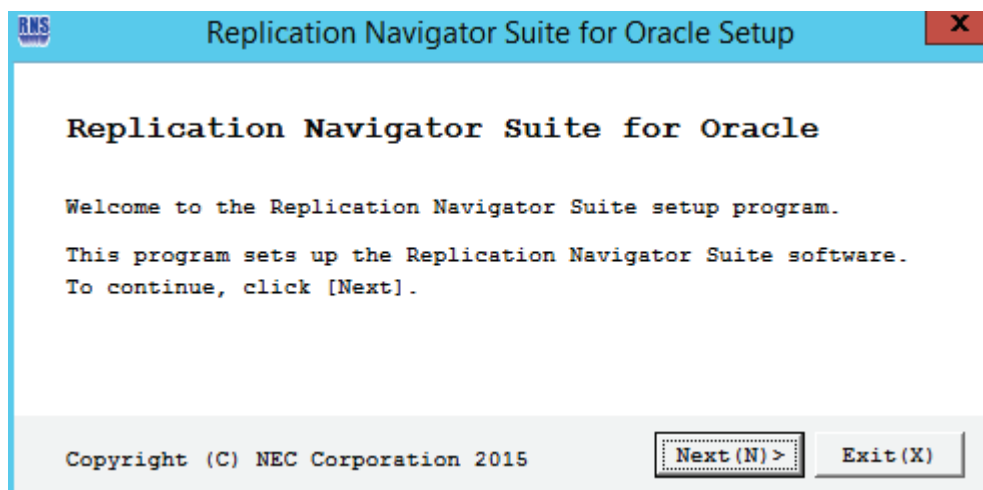
Insert the Replication Navigator Suite CD into the CD-ROM drive, the setup program executed automatically.

If the setup program does not start up, execute the following file on the CD:

```
\RNSSETUP.EXE
```

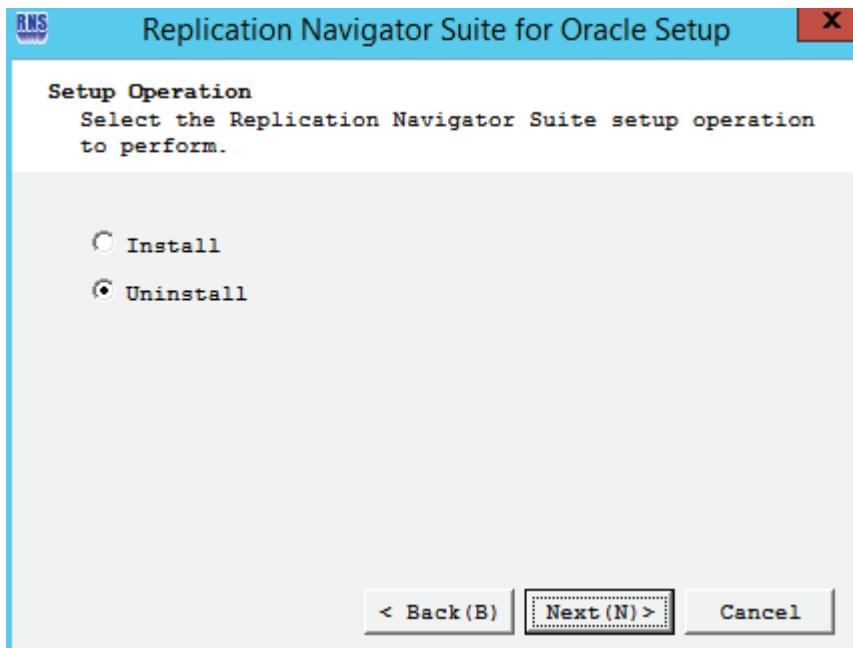
The following explains the procedure for uninstalling the software using the Replication Navigator Suite setup program.

1. Welcome to the setup program window



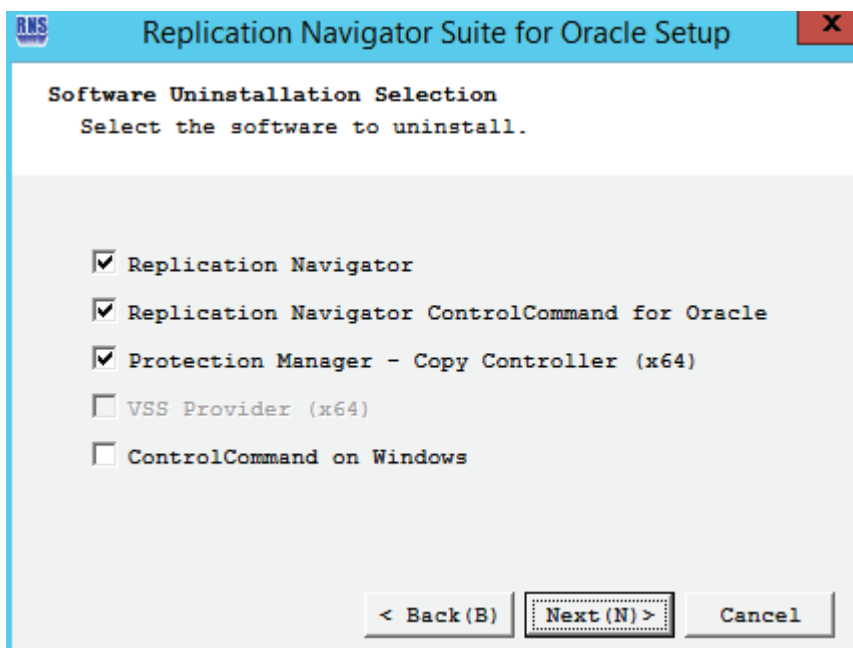
Click **Next**.

2. Setup Operation window



Select Uninstall, and then click **Next**.

3. Software Uninstallation Selection window

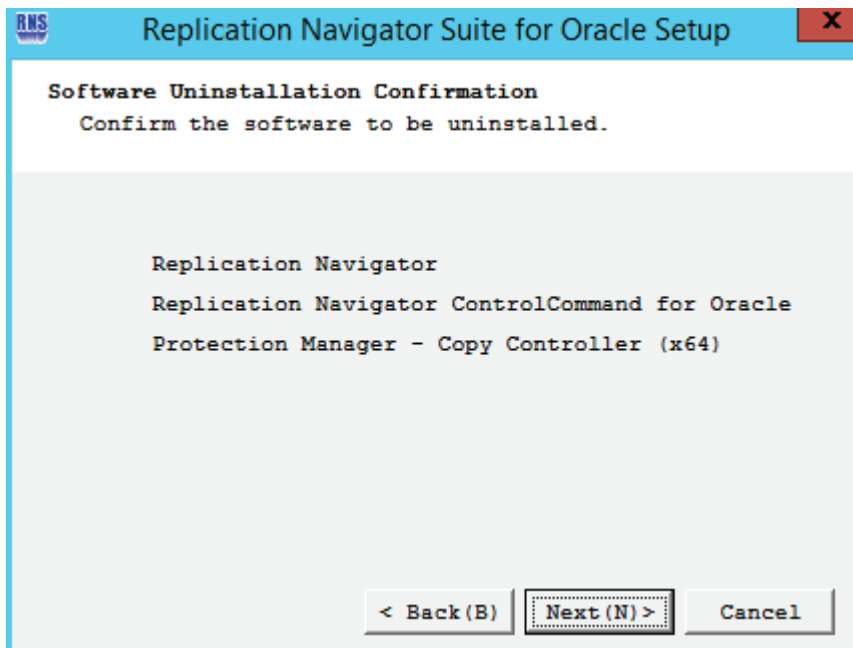


Select the software to uninstall, and then click **Next**.



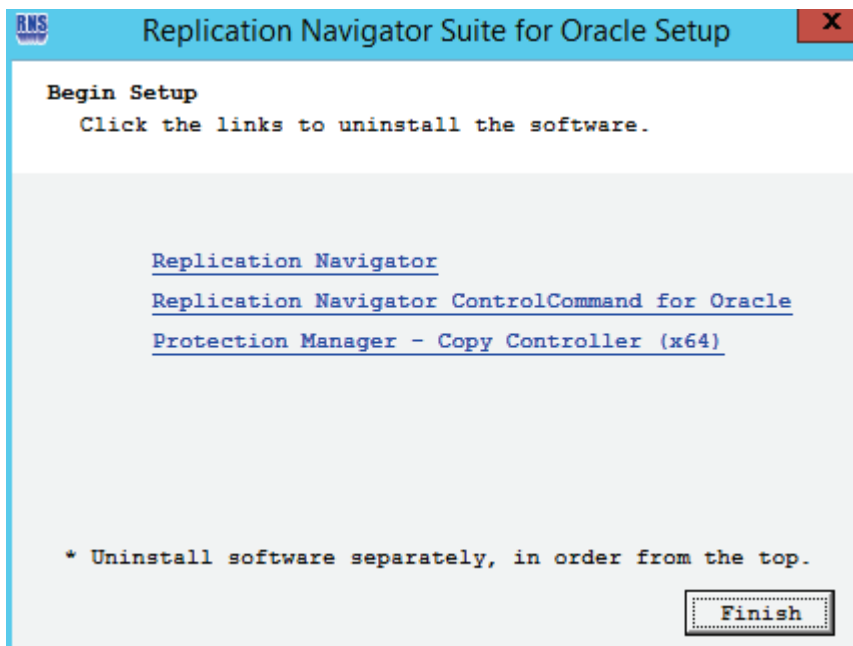
The Replication Navigator Suite setup program cannot be used to uninstall ControlCommand on Windows. To uninstall ControlCommand on Windows, use **[Add or Remove Programs]** or **[Programs and Features]** in the **[Control Panel]**.

4. Software Uninstallation Confirmation window



Check the software to be uninstalled, and then click **Next**.

5. Begin Setup window



Click the links to uninstall the software. Uninstall software separately, in order from the top. After all the software is uninstalled, and then click **Finish**.

Supplement

Starting a software installer might take a while. Please wait if necessary.

2.5 Updating

To update software, see the corresponding installation guide to uninstall, and then install the software.

2.6 Preparing for Operation

See the corresponding software manual.