

NEC

Reality v15.4

Release Information

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Document control

Software Version	Document Status	Document Revision	Issue Date	Reason for Change
v15.4	Published	v0.1	07/09/2023	Final draft.
V15.4	Draft	v0.2	22/12/2023	Added information on new product fixes.
V15.4	Published	v0.3	29/12/2023	Updated description of the new product fixes for the release.

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Section 1: Introduction

Reality is a software environment that supports multiple MultiValue SQL-enabled databases on a single host and includes a range of powerful utilities for building, managing and accessing the databases.

The release information in this document applies to Reality V15.4 for UNIX and Windows. Reality V15.4 adds new features and enhanced compatibility with similar database systems. Faults reported since the production release of Reality V15.2 have been resolved. See New features in Reality V15.4 and Fault Resolutions for more details.

Reality V15.4 is delivered as a Service Pack.

1.1 Retirement notice

This version of the software supersedes all previously released versions. NEC Software Solutions policy is to withdraw support for previous versions six months after a new release. The relevant date for this software can be obtained from your NEC Software Solutions representative or the Reality website.

1.2 Backwards compatibility

NEC Software Solutions attempts to make each new version of Reality fully backwards compatible with previous versions. However, fault resolutions and new features can, in some cases, result in changes to menus and prompts displayed by host and TCL utilities. Scripts which automate such utilities may therefore need to be reworked after upgrading or installing updates.

1.3 Deliverables

Reality V15.4 is delivered as a Service Pack.

1.4 Reality website

Visit the Reality website for:

- Product information.
- Latest updates.
- Latest documentation.

Reality is supplied with comprehensive Online Documentation for viewing in a web browser. Refer to the Document Directory in the online documentation for details.

Note

The documentation is subject to change and it is essential that you have the latest version. You should regularly access this from the Reality website.

For any suggestions or improvements to this documentation, please contact your NEC Helpdesk.

- Enquiries.

Section 2: Prerequisites

2.1 Reality on UNIX

- UNIX 64-bit architecture:
 - SUN SPARC running Solaris 11 or Solaris 10
 - IBM pSeries running AIX 7 or AIX 6
- Linux 64-bit architecture on Intel x64:
 - Red Hat ES 7 or 6 commercial release
 - CentOS 7 or 6 open software
- 128 MB RAM minimum (512 Mb recommended), plus 2-6 MB per Reality User. See also Memory (page 8).
- 1 GB of available space to accommodate set up (actual hard disk used once installed will be between 220 MB and about 350 MB, depending on the system components installed, plus space for databases).
- Korn shell.
- Perl - this is normally supplied with the operating system.
- UNIX-Connect for networking (supplied in the Reality ISO/DVD image file).
- NEC Software Solutions Customisation (a download is available for SUN; for other operating systems, contact NEC Software Solutions).
- C compiler (on Solaris, if a C compiler is not available you can install the GNU C Compiler from the NEC Software Solutions Customisation download).

2.2 UNIX-Connect

'rosi' UNIX user id with a home directory on a file system with at least 25 Mbytes free.

2.3 Reality on Windows

- PC with Intel x86/x64 processor or equivalent, 1 GHz or faster:
 - Windows 10 (64-bit only)
 - Windows 7
 - Windows Server 2012
 - Windows Server 2008
- The minimum memory as required for the base Windows release, plus 2-6 Mb per Reality user. (See also Memory (page 8).)
- Up to 1.5 GB of available disk space to accommodate setup (actual hard disk used once installed will be between 150 MB and about 350 MB for 32-bit and up to 500 MB for 64-bit deliveries, depending on the system components installed, plus space for databases).

It is recommended that Reality is installed on an NTFS partition.

- The Reality database can be loaded on to a Primary Domain Controller, Backup Domain Controller, stand-alone member server or WorkStation.
- Reality backup and restore is supported on 4 mm, 8 mm and DLT/LTO tape units.

- Using at least a dual processor system is highly recommended for more than a small user count in order to run on recent Windows releases.
- NEC Software Solutions can take no responsibility for the processor and memory requirements of other applications running on a Windows server. Ideally, Reality should be loaded on a dedicated server.
- NEC Software Solutions recommend Microsoft's A Guide to Assessing Windows Server Licensing and their prevailing licensing policy is used to determine what is required for end user deployment.

2.4 Memory

Reality memory usage is difficult to predict, but as a rough sizing guide use 128 Mb for the system and then 2 to 6 Mb per user, depending on type of user and application.

Performance problems are generally caused by lack of memory. If the server is not dedicated to Reality then other application memory requirements must be added to this.

2.5 Foreign database support and SQL View

These features require a working ODBC installation, with appropriate ODBC driver(s), on the Reality system.

External components

PCSNI

- PC with Intel x86/x64 processor or equivalent, 1 GHz or faster, with 1 GB (for 32-bit) or 2 GB (for 64-bit) of memory, running Windows 10, Windows 7, Windows Server 2012, Windows Server 2008 (32-bit or 64-bit).
- A LAN card.
- TCP/IP networking.
- A way of resolving host name and IP addresses (for example, a hosts file or a domain name service).

2.6 RealEdit

- PC with Intel x86/x64 processor or equivalent, 1 GHz or faster, with 1 GB (for 32-bit) or 2 GB (for 64-bit) of memory, running Windows 10, Windows 7, Windows Server 2012,
- Windows Server 2008 (32-bit or 64-bit).
- NEC Software Solutions PCSNI software V2.3.1 Rev C or later.

2.7 JReal

Java Run Time Environment (JRE) version 1.4.1_02 or above. If this is not available, it can be downloaded from:

<http://www.oracle.com/technetwork/java/javase/downloads/index.html>

2.8 RealSQL-ODBC Driver

- PC with Intel x86/x64 processor or equivalent, 1 GHz or faster, with 1 GB (for 32-bit) or 2 GB (for 64-bit) of memory, running Windows 10, Windows 7, Windows Server 2012, Windows Server 2008 (32-bit or 64-bit).

- NEC Software Solutions PCSNI software V2.3.1 Rev C or later.
- Any ODBC Level 1 or 2 compliant application.
- A Winsock compliant TCP/IP transport stack for TCP/IP connections.
- If you are connecting to a Reality database on a UNIX host, the host will need UNIXConnect.

The PC applications and transport stacks use large amounts of memory. It is therefore essential that PCs running this package are configured for the optimum use of memory; otherwise it is possible that GPFs and other memory type errors will occur.

2.9 RealSQL-JDBC Driver

- Java Run Time Environment (JRE) version 1.4.1_02 or above. If this is not available, it can be downloaded from <http://www.oracle.com/technetwork/java/javase/downloads/index.html>.
- If you are connecting to a Reality database on a UNIX host, the host will need UNIXConnect.

2.9 RealWeb

- A web server with support for Java servlets. (This can be on the same system as the Reality database or on another system.) On web servers that do not support servlets, plug-ins can be used to add servlet support.
- Java Run Time Environment (JRE) version 1.4.1_02 or above. If this is not available, it can be downloaded from <http://www.oracle.com/technetwork/java/javase/downloads/index.html>.
- If you are connecting to a Reality database on a UNIX host, the host will need UNIXConnect.

2.10 Remote Tape Server

- Any UNIX or Windows system that supports Reality.

Note

The Reality Database product does not have to be loaded onto the Server with the tape devices, only the Remote Tape Server component.

2.11 Reality Web Services

- A web server with support for Java servlets (Jetty is supplied). This can be on the same system as the Reality database or on another system. On web servers that do not support servlets, plug-ins can be used to add servlet support.

Note

Reality Web Services have been tested on Jetty 5.1.4 and Tomcat 5.

- Java Runtime Environment (JRE) or Java Development Kit (JDK), version 1.4.1_02 or later. For Jetty, you can use either; for Tomcat you must use a JDK.

2.12 Remote Basic ActiveX Control

- PC with Intel x86/x64 processor or equivalent, 1 GHz or faster, with 1 GB (for 32-bit) or 2 GB (for 64-bit) of memory, running Windows 10, Windows 7, Windows Server 2012, Windows Server 2008 (32-bit or 64-bit).
- PCSNI (client) software V2.3.1 Rev C or later.

2.13 Online Documentation

The online documentation is intended to be installed on a web server. If necessary, it can also be installed on file server, or on individual PCs running Windows or Linux. It can also be viewed from the Reality ISO/DVD image file.

The online documentation is compatible with most contemporary web browsers (those listed below are suitable). However, be aware that browsers can change over time as to what they allow access to, in terms of local/remote drives and/or websites, so browser settings may need to be checked. If a particular browser prevents access, please try another browser:

- Mozilla Firefox
- Safari
- Google Chrome

Section 3: New features in Reality V15.4

Reality V15.4 contains a number of new features since the release of V15.3.

If you find any errors or have any suggestions for improvements in this documentation, please contact your NEC Helpdesk.

Note

The online documentation includes all the updates till fix version V15.1.0.0432.

2.1 SP-CLEAR

A new option D has been added to SP-CLEAR.

Options

D Removes the records older than the specified date and allows the jobs to be copied to archive files if required.

Example

The first time the D option is used, two new files will be created. These files are named SPOOL.JOBS.ARCHIVE and PRINT.JOB.CONTROL.ARCHIVE.

This new feature may only be used from TCL. The following example describes the use of the D switch.

To delete the spool jobs from the formqueue STANDARD and to add the spool jobs to archive files:

Enter

```
SP-CLEAR (D
```

Enter the name of the spool queue to clear.

```
Form Queue - STANDARD
```

Enter the date after which the spool jobs would not be cleared.

```
Enter date (dd/mm/yy) - 03/04/23
```

Specify whether the spool jobs should be copied to archive files.

```
Archive jobs (Y/N) - Y
```

Records will be archived to SPOOL.JOBS.ARCHIVE and PRINT.JOB.CONTROL.ARCHIVE.

If the Archive by date switch has been used as above the spool jobs will be removed from SPOOL.JOBS and PRINT.JOB.CONTROL and will be copied to the archive files from where they may be retrieved if required.

Note

The archive files will only contain the latest version of the SPOOL.JOBS and PRINT.JOB.CONTROL items.

Section 4: Restrictions

This section lists the restrictions that were current when Reality V15.4 was released. For the latest information, refer to the Reality website.

For this release

- File triggers can currently only be associated with file data sections.
- Shadow database cannot currently use partition databases constructed from standard host files on different file systems (see Types of Database).

Online documentation

If the documentation is installed on the local file system and you are using Internet Explorer, you may receive a number of security warnings regarding active content. These can be avoided by installing the documentation on a web server (recommended), or by selecting the Allow active content to run in files on My Computer option (you can find this in Tools | Internet Options..., on the Advanced tab under Security).

Section 5: Fault Resolutions

Reality V15.4 includes resolutions of the following faults.

Declared for the Reality V15.4 release.

Bug No	Description
91623	Update PH-MONITOR to read tmp file from Config file and permit use of windows 12 hour date format USA format.
91629	Update JSON builder to be able to handle double quotes and slash characters (clog export).
91624	<p>Enhancement to SP-CLEAR</p> <p>Add a date option to SP-CLEAR (available as an enhanced feature from TCL) which includes an archive feature for records removed.</p> <p>SP-CLEAR (D</p> <p>The first time the D option is used, two new files will be created. These files are named SPOOL.JOBS.ARCHIVE and PRINT.JOB.CONTROL.ARCHIVE.</p> <p>This new feature may only be used from TCL. The following section describes the use of the D switch.</p> <p>:SP-CLEAR (D</p> <p>Form Queue – STANDARD name of Spool queue to clear</p> <p>Enter date (dd/mm/yy) - 03/04/23 Date after which spool jobs will not be cleared</p> <p>Archive jobs (Y/N) – Y Y or N should spool jobs be copied to archive files</p> <p>Records will be archived to SPOOL.JOBS.ARCHIVE and PRINT.JOB.CONTROL.ARCHIVE</p> <p>If the Archive by date switch has been used as above the spool jobs will be removed from SPOOL.JOBS and PRINT.JOB.CONTROL and will be copied to the archive files from where they may be retrieved if required.</p> <p>NB The archive files will only contain the latest version of the SPOOL.JOBS and PRINT.JOB.CONTROL</p>
91631	Cosmetic changes to tlmenu.
91633	Correct Realclone issue on Windows.
91644	Prevent issues arising with large items occasionally creating GFE's when multi threaded restores are performed.
91640	Ensure that DBSTART, PRESTARTUP and STARTUP Procs are called correctly.

Section 5: Fault Resolutions

Bug No	Description
91624	Further updates to SP-CLEAR (D.
91641	Prevent DELETE-CATALOG from removing the data portion of the file when the file name is entered in error.
91622	R Justified Dictionary items may fail to SELECT data correctly.
91632	Ensure that DELETE-ACCOUNT gives a list of Q Pointered accounts which will be removed and a confirmation prompt before account deletion.
91605	DIR-VIEWS. Ensure that (D option may be used when copying data between two directory views.
91649	Within the tmenu menus, force the software to verify and reset RRS_MODE_FS_ACTIVE to allow frequent toggles from primary to secondary. This fault has caused problems with Red Hat 8 failsafe systems.
91651	<p>If you are using English with a right justified dictionary item and the data is of the form A01, A001 then the data should be surrounded by square brackets, for example,</p> <pre>SELECT file WITH rjdict = "[A01]"</pre> <p>If the brackets are not included in the enquiry, then Reality will match A01, A001, A0001 as being matched to A01.</p> <p>This is due to right justification changing the data into binary format where 00 is treated in the same way as 0, that is, A01 = A001</p> <p>If the data is wholly numeric then the brackets may be omitted as in this case 1001 will NE 10001.</p> <pre>SELECT file WITH rjdict = "1001"</pre> <p>This corrects a fault introduced with fix 430.</p>

Declared for the initial Reality V15.3 release.

Bug No	Description
91601	Enable build of reality on Centos 8/Move to Reality V15.3.
91606	Correct error handling in tmenu.
91608	Amendment to realclone -pu to ensure all files are copied rather than just changes.
91610	Correct handling of Instances under Centos.
91611	New version of DELETE-ACCOUNT verb to behave as original if run from PROC by PH. Fixes issue in SYS-UPDATE.

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Bug No	Description
91612	Ensure PCL2PDF uses the Java Language Server as the default connection.
91572	Enhancement to DECRYPT/ENCRYPT to add algorithms for SHA, AES and other openssl.
91614	Intercall functions added (U2-VIEW and U2-SET) to allow pointers to a U2 database.
91617	Fix for issue with incorrect scale being applied for SQL-VIEW numeric and decimal columns.
91618	U2-CHANGE verb added, to allow U2-VIEWS to enable password amendment with U2-VIEW'S.
91619	SET-FILE reinstated - only relevant to new databases. The verb had been removed from mkdbase but would still be there in mkdbase -r.
91620	DELETE-FILE syntax corrected and improved error checking.
91615	Rebranded to NEC Software Solutions UK Limited.
85973	Fix for tlmenu perl warnings when selecting to save a database with transaction handling.

Declared in previous Reality V15.2 product updates.

Bug No	Description
91565	Enable use of session licences on SSH connections.
91567	Enable tlmulti selection of primary secondary database. Prevents the deletion of Clean Logs (tlmulti) if the database is defined as a secondary.
91569 91566	Correct DataBasic debugger L and V commands when listing more than one include line.
85965	Enable RealEdit V1 to connect to database after enabled debugger on RealEdit V2.
91573	Add BITAND, BITOR, BITXOR, BITNAND, BITNOR, BITXNOR and BITNOT DataBasic functions . Documentation for these items is available on the Reality website on the usual documentation page.
85966	Resolve memory allocation issues on Solaris 11.4.
91574	Enhance English sentence to allow dynamic modification and compatibility with other flavours such as D3.

Section 5: Fault Resolutions

Bug No	Description
90792 85550 90787 90786 91579	
91575	Allow SAVE options X or Y to be used without options Z or S.
91576	Fix restore of data section create image.
85968	Stop SIGHUP in early stages of login cause reality to exit.
85967	Fix tlmenu syntax error on line 180.
91558	Fix LIST LFB special file.
85969	Reduce eliminate hit processes on abortive terminal closure.
85970	Fix getcwd following symbolic links.
91580	Correct REST-ENABLE handling of @PARAM and provide updated RW_RESTFUL.
91582	Correct the index handling of null nodes and end of list even.
85971 91583	READNEXT of the output of an ISELECT with KEYS-ONLY truncates the item count.
91585	Correct release of item locks for VERIFY-INDEX (T with MvStyleItemLocks set.
91586	Correct Variable Unassigned error in Network File Maintenance.
91587	Correct DBO %Admin handling of both formats of the function.
91562	Add a number of monitoring utilities to listdb.
91588	New SP-SUMMARY verb to summarise formqueue contents and statuses.
91589	realevent enhancements for items and extended html templates.
91434	New NEW.LISTVERBS verb to provide improved layout of details over original LISTVERBS verb.
85972	New PH-MONITOR verb to monitor output of TIPH process, enhancement to PH-START.

Section 5: Fault Resolutions

Bug No	Description
91591	Enhance LISTFILES to allow sorting of files by descending total file size.
91593	New GSSM verb to allow a global update of items in the NETWORK, USERS and SECURITY files (as controlled with menu within SSM).
91598	Additional Trigger types now available.
-----	New Verb LIST-ALL-TRIGGERS to list all the triggers associated with a Reality account.
-----	Enhancement to ACCESS Function.
91590	Add new TIDYPF verb. Enhance DELETE-ACCOUNT.
91595	New Verb XDT.
91596	New Verbs – LIST-TABLE and SORT-TABLE.
91599	PCL2PDF – Correct handling of delta row compression raster images.
91594	New verb EESEARCH to allow searching of all, selected or single files for character strings. The returned results show the file name, data section and item id of those matching items.
91597	Enhancements to GENML/SGENML to output formats json, html, csv or XML.
91600	New verb SLS to perform log file reporting and maintenance.


Section 6: Third Party Products

The following third party products are used within Reality:

- GNUMalloc (GNU Software Foundation);
- zlib compression library (GNU Software Foundation).
- DES Encryption library (Eric Young - eay@cryptsoft.com).

The following third party products may be included with Reality (depending on the operating system and the features selected):

- Perl scripting environment (GNU Software Foundation).
- Gzip compression software (GNU Software Foundation).
- GNU C-compiler (GNU Software Foundation).
- Gdb Debugger (GNU Software Foundation).
- Adobe Acrobat document reader (Adobe Systems Inc.).
- Apache Tomcat™ web server (Apache Software Foundation).
- Jetty web server (Mort Bay Consulting).



About NEC Software Solutions

Our customers change lives, so we create software and services that get them better outcomes. By innovating when it matters most, we help to keep people safer, healthier and better connected worldwide.

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