Reality v14.0

Release Information

NECSWS.COM

\Orchestrating a brighter world

Document control

Software Version	Document Status	Document Revision	Issue Date	Reason for Change
v14.0	Published	v0.1	August, 2008	Final draft

Table of Contents

Section 1: Introduction

Reality is a software environment that supports multiple 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 V14.0 for UNIX and Windows. Reality V14.0 adds new features and enhanced compatibility with similar database systems. Faults reported since Production Release of Reality V12.0 have been resolved. See New Features in Reality V14.0 (page 11) and Fault Resolutions (page 20) for more details.

Reality V14.0 is supplied on two CDs. Included on the first CD are:

- The Reality database software.
- User Documentation
- UNIX-Connect: Networking software that provides communications between Reality databases and between Reality and host system environments.
- Reality Remote Tape: Server software that allows a Reality host to use tape units on remote systems.
- PCSNI: Client software that allows communication between a PC and a Reality database.
- JReal: Client software that provides the Java programmer with the ability to run Remote Basic subroutines and to write custom servlets to access a Reality database via RealWeb.
- RealWeb: Client software that provides a Web developer with DataBasic experience with access to data held in a Reality database.
- RealSQL-JDBC Driver: Client software that provides a standard API for Java applications, applets and servlets using SQL to access data.
- RealSQL-ODBC Driver: Client software that allows PC applications to access data using SQL.
- WinSQLM: Client software that assists in creating SQL tables based on existing Reality dictionary definitions.
- RealEdit: A Reality editor that runs on Windows PCs.
- Remote Basic ActiveX Control: A DLL that can be used in PC programs written in Visual Basic to run Remote Basic subroutines on a Reality database.
- Reality and RealWeb demonstration software. The second CD contains the Web Services feature (including the Jetty web server).

Note

A third CD is available on request: This contains the Reality GUI Administration tool, which consists of:

- GUI Administration server.
- Client configuration utility.
- Client deployment service. If you require this feature, contact your NEC representative.

This version of the software supersedes all previously released versions. NEC 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 representative or the NEC web site, www.nec-is.com/reality.

1.1 Backwards compatibility

NEC strives to make each new version of Reality fully backwards compatible with previous versions. However, fault resolutions 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.

Section 2: Related documents

Reality is supplied with comprehensive on-line documentation for viewing in a web browser. Refer to the Document Directory in the on-line documentation for details.

Section 3: Packaging

All the software comprising this release is supplied on the installation CDs, with electronic versions of all documents (including this one).

The first installation CD contains the following components.

Software	Version
PDS History Tool	V12.0
Reality	V14.0
User Documentation	V14.0
UNIX-Connect)	V1.5
Reality Remote Tape	V12.0
PCSNI (client)	V2.3.1
JReal (client)	V3.2
RealSQL-JDBC Driver (client)	V1.0.1
RealSQL-ODBC Driver (Windows client)	V2.5.1
RealSQL-ODBC Driver (UNIX client)	V2.5.1
RealWeb HTML (client)	V3.0
RealWeb Servlets (client)	V3.2
WinSQLM (client)	V2.0
Reality Demonstration	V12.0

RealWeb Demonstration	V1.1
WinSNI Configuration Editor (client)	V1.0
RealEdit (client)	V1.1.1
Remote Basic ActiveX Control	V1.0
TCP Bridge	V1.0.1

The second installation CD contains the following components.

Software	Version
Web Services	V1.0

The third installation CD (available on request) contains the following components.

Software	Version
GUI Administration Tools	V2.0
Installation Guide for GUI Administration Tools	V2.0

Section 4: Prerequisites

4.1 Reality on UNIX

One of the following:

- SUN SPARC running Solaris 8, 9 or 10.
  IBM pSeries (RS 6000), running AIX 5.2 or 5.3.
  PC with Intel Pentium processor or equivalent running Red Hat Linux version 7.2, 9, ES/AS versions 2.1 or 3 (32-bit), ES3 (64-bit) or ES4.
- 128Mb RAM minimum (512Mb recommended), plus 2-6Mb per Reality User. See also Memory on page 7.
- 500 Mb of available space to accommodate setup (actual hard disk used once installed will be between 220Mb and about 350Mb, 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 on the Reality CD).
- NEC Customisation (a CD is available for SUN, for other operating systems, contact NEC).
- C compiler (on Solaris, if a C compiler is not available you can install the GNU C Compiler from the NEC Customisation CD).

4.1.1 UNIX-Connect

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

4.2 Reality on windows

- PC with Intel Pentium processor or equivalent, 200MHz or faster, running Windows 2000 SP1+ (Professional or Server), Server 2003, XP (Home or Professional), or Vista.

Note

Reality is not available for Windows 95, 98, 98 SE or ME.

- 64Mb RAM minimum (128Mb recommended), plus 2-6Mb per Reality User. See also Memory below.
- 500Mb of available disk space to accommodate setup (actual hard disk used once installed will be between 150Mb and about 350Mb, 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.
- NEC 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.
- Reality backup and restore is supported on 4mm, 8mm and DLT tape units.
- Using at least a dual processor system is highly recommended.

4.3 Memory

Reality memory usage is difficult to predict, but as a rough sizing guide use 128Mb for the system and then 2Mb to 6Mb 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.

4.4 Foreign database support and SQL view

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

4.5 Client components

4.5.1 PCSNI

- Microsoft Windows 2000, XP (Home or Professional), Server 2003 or Vista.
- A LAN cards.
- TCP/IP networking
- A way of resolving host name and IP addresses (for example, a hosts file or a domain name service)

4.5.2 RealEdit

- Microsoft Windows 2000, XP (Home or Professional), Server 2003 or Vista.
- NEC PCSNI software V2.2 Rev C or later.

4.5.3 JReal

Java Run Time Environment (JRE) version 1.2 or above. If this is not available, it can be downloaded from Sun's Java web site (http://java.sun.com/j2se/).

4.5.4 RealSQL-ODBC driver

- Microsoft Windows 2000, XP (Home or Professional), Server 2003 or Vista.
- NEC PCSNI software V2.2 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 require UNIX-Connect.

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.

4.5.5 RealSQL-JDBC driver

- Java Run Time Environment (JRE) version 1.2 or above. If this is not available, it can be downloaded from java.sun.com/j2se.
- If you are connecting to a Reality database on a UNIX host, the host will require UNIX-Connect.

4.5.6 WinSQLM

- Microsoft Windows 2000, XP (Home or Professional), Server 2003 or Vista.
- NEC PCSNI software V2.2 Rev C or later.
- 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 require UNIX-Connect.

4.5.7 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 1.2 or above. If this is not available, it can be downloaded from java.sun.com/j2se.
- If you are connecting to a Reality database on a UNIX host, the host will require UNIX-Connect.

4.5.8 Remote tape server

- Any UNIX or Windows system that supports Reality.

4.5.9 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 5.0.

- 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.

4.5.10 Remote basic ActiveX control

- Microsoft Windows 2000, XP (Home or Professional), Server 2003 or Vista
- PCSNI software V2.2 Rev C or later

4.6 Online documentation

The on-line documentation can be installed on a web or file server, or on individual PCs running Windows 2000, XP, Server 2003 or Vista. On Windows systems, it can also be viewed from the Reality CD.

To view the on-line documentation, you will require one of the following web browsers:

- Internet Explorer 6.0 or 7.0 (PC only).
  –or–
- Mozilla Firefox 2.0 (PC or UNIX).

Note

You can also view the on-line documentation on some earlier versions of the above browsers and on some other types of browsers. A message will warn you that your browser is not fully supported.

4.7 GUI administration tools

4.7.1 GUI administration server

The GUI Administration server will run on the majority of platforms that support Reality V11.0 and later, subject to the following additional requirements:

4.7.1.1 UNIX and windows

- Reality V11.0 or later.
- Java V1.4.1_02 or later. (Versions of the JRE suitable for Windows, Linux and Solaris are supplied on the CD.)
- 256Mb RAM minimum (512Mb recommended), plus 2-6Mb per Reality User.
- 5MB free disk space, plus space for JRE (around 40-50Mb for Java V1.4.1_02).
- TCP/IP network

4.7.1.2 Windows

- 500MHz or faster processor.
- Windows XP + SP1, Windows 2000 + SP3.

Note

The Reality GUI Administration Server is not currently certified on Windows XP SP2, Server 2003 SP1 or Vista, though this is subject to review. For the latest information, refer to the Reality pages on the NEC portal (www.nec-is.com/reality).

4.7.2 Client deployment service

The Client Deployment Service will run on the majority of platforms that support Reality V11.0 and later, subject to the following additional requirements:

4.7.2.1 UNIX and windows

- Web server (it is strongly recommended that you use the web server supplied with Reality).
- 128 MB Memory (256Mb recommended).
- Java V1.4.1_02 or later (versions of the JRE suitable for Windows, Linux and Solaris are supplied on the CD).
- 80MB free disk space (includes around 40-50 MB for JRE).
- TCP/IP network.

4.7.2.2 Windows

- 500MHz or faster processor.
- Windows XP + SP1, Windows 2000 + SP3.

Note

The Reality Client Deployment Service is not currently certified on Windows XP SP2, Server 2003 SP1 or Vista, though this is subject to review. For the latest information, refer to the Reality pages on the NEC portal (www.nec-is.com/reality).

4.7.3 Client configuration utility

Java V1.4.1_02 or later (versions of the JRE suitable for Windows, Linux and Solaris are supplied on the CD).

4.7.4 GUI administration client

Any Windows or Linux platform with Java V1.4.1_02 or later and for which a web-start component is available. The following is recommended:

4.7.4.1 Linux

- 128Mb RAM minimum (512Mb recommended).
- 5MB free disk space, plus space for JRE (around 40-50Mb for Java V1.4.1_02)
- Netscape 6 or 7, or Mozilla 1.4 or 1.5 (to display on-line documentation).

4.7.4.2 Windows

- 500MHz or faster processor.
- Windows 2000 SP3+, XP Home Edition SP1+ or XP Professional Edition SP1+.

Note

The Reality GUI Administration Client is not currently certified on Windows XP SP2, Server 2003 SP1 or Vista, though this is subject to review. For the latest information, refer to the Reality pages on the NEC portal (www.nec-is.com/reality).

- 128Mb RAM minimum (256Mb recommended).
- 5MB Free disk space, plus space for JRE (around 40-50Mb for Java V1.4.1_02)
- Internet Explorer 6.0 or 7.0, or Mozilla Firefox 2.0 (to display on-line documentation).

Suitable versions of Java are supplied on the CD.

Section 5: New features in Reality v14.0

The features below that are marked as optional are chargeable and must be separately enabled with a software key. Contact your NEC representative to obtain the keys you need.

5.1 Safe and secure

5.1.1 Data encryption

Reality Data Encryption makes your data more secure and allows you to control which users can access items of data. Each encrypted file has an associated key that is stored in a centrally located file – users are granted access to the file by being given permission to use that key. The encryption key file is itself protected by a database administration key that is only accessible to the users of the database. You can use either the DES:CBC or Triple DES algorithm to encrypt your data.

Encryption is transparent to the users that are granted access to a file, they do not have to manually decrypt an encrypted file before they can use it, but can view, change and delete the file in the normal way.

Data saved to tape can also be encrypted, the majority of save and restore commands do not decrypt encrypted data before saving to tape, and tape devices can be configured to encrypt data before saving.

The DataBasic ENCRYPT and DECRYPT functions have been extended to allow encryption using DES:CBC or the Triple DES, with keys either from the encryption key file or specified explicitly.

5.1.2 Disaster recovery

The Disaster Recovery (DR) feature has been enhanced as follows:

- The transfer of clean logs from the master to the slave is now automated. In normal operation, manual intervention is no longer required.
- The tlmenu utility has been enhanced to allow the user to set up a database as a DR slave and to configure the required master database. It also allows manual intervention if required.

5.2 Interoperability

5.2.1 HTML from English

The HTML from English feature allows you to embed an English report in a web page for display in a browser. You must provide a web page template that includes a marker to show where to embed the data and generate the report using the GENML or SGENML TCL command. The data is formatted as a table. If required, you can format the column text by using the XT conversion code in the data definition items used when generating the report.

5.2.2 Remote basic ActiveX interface

This feature consists of an ActiveX DLL that can be used from Microsoft Visual Basic or Office VBA to call DataBasic subroutines on a Reality database. The DLL exposes a single object that provides the necessary properties, methods, and so on.

5.2.3 SQL-VIEW

This feature is now available on AIX.

5.3 Indexing enhancements

5.3.1 Configurable frame size

On previous versions of Reality, the frame size was fixed at 1Kb. V12.0 allowed a single exception to this – AIX platforms could use 4Kb frames.

V14.0 extends this by allowing the frame size to be set to 1, 2, 4 or 8Kbytes. A new option to mkdbase allows the frame size to be set when creating or rebuilding a partition database and a new configuration file parameter allows you to set the default frame size for new databases on your host.

Two new utilities are available to help choose a frame size for a particular database and to calculate new modulus for database files:

- The OPTIMUM-FRAME-SIZE TCL command processes file statistics and displays the result of changing the database's frame size. This can be used to help decide the optimum frame size for the database.
- The OPTIMUM-MODULO TCL command calculates the optimum modulo at a specified frame size for one or more files and sets the resizing parameters for those files. The database can then be saved, rebuilt with the new frame size, and then restored, with each file being given the optimum modulo for the new frame size.

A new configuration file parameter allows you to use automatic file sizing as the default for a database. This parameter is set in the master configuration file, so that all new databases are created with automatic file sizing enabled.

The ACCOUNT-RESTORE and M-A-R commands now create automatically sized files if automatic file sizing is selected.

5.3.2 MultiStream account restore

The dbsave utility has been enhanced to increase the restore speed and reduce fragmentation of the restored data.

5.3.3 Large clean logs

This optional feature increases the maximum size of a clean log from 2 Gigabytes to 200 Gigabytes. However, since the current limit is adequate for most customers, the default value remains unchanged at 1.5 Gigabytes. V14.0 clean logs that are smaller than 2 Gigabytes are fully compatible with Reality V12.0.

5.3.4 New default database type (UNIX)

On UNIX, partition database using standard host files with all the files on the same file system is now the default (that is, the type of database created if there is no entry in the file realfstab and you have not specified which type you require). The filestore database type is now deprecated, but a new option to mkdbase allows you to create a filestore database if required.

5.3.5 ANALYZE command

A new command, ANALYZE, is provided to display information about processes being executed on a specified port.

5.4 MultiValue compatibility

Reality V14.0 has been further enhanced to improve compatibility with other MultiValue systems. In addition, the following features simplify migration to Reality from other MultiValue systems.

- Port range logon. A range of ports can be defined in the devices file; if the user attempts to log on to the first port in the range, the next available port is assigned.
- User-defined PLid Format: This is an optional feature (enabled by software key) and can only be used when logging on to Reality via a port specified in the devices file using the OPEN keyword.
- TANDEM enhancements:
    - The BREAK-KEY-ON and BREAK-KEY-OFF TCL commands have been enhanced to allow the BREAK key to be enabled and disabled remotely.
    - A new BREAK command can break into the program that is running on a specified port.
    - A new POKE command can execute a single command on a specified port.
    - A new PEEK command can establish a view-only mode TANDEM session to a specified port. A new option to the TANDEM command provides the same functionality.
- Indexes. These can now be created from dictionary definition items, without first being defined with the DEFINE-INDEX command.
- POINTER-FILE – each account can now have its own local pointer file to hold saved lists, instead of using the global pointer file. Using a local file has the following benefits:
    - The lists will be automatically moved or deleted with the account.
    - Because the items are local to the account, their names do not include the account name. This means that accounts can be renamed more easily.
    - Local pointer files imported from accounts saved on other MultiValue systems can be used without modification.

See also DataBasic compiler enhancements.

5.4.1 Environment settings

A new tool is available in SSM to make it easier to configure the Reality environment settings (previously set using the SET-OPTION command). This can be used to select settings that emulate different MultiValue systems (such as mvEnterprise, mvBase and

D3) and for backwards compatibility with earlier versions of Reality. The chosen settings can be saved and associated with user profiles so that each user is given a suitable profile at log on or applied when required with a new SET-ENVIRONMENT TCL command.

Environment settings can also be defined with the new DEFINE-ENVIRONMENT command. The following new environment settings (custom options) are available:

$<.FORMAT

2DIGIT.DATE

ALT. MT

BSELECT. NULL

CATALOG. COMP

DEL.FILE.EXEC

EXEC.BASIC.OBJ

INHIB.MLMR

INHIBIT!SYS

LITERAL.MASK

MCT.SQUOTE

MFILL.FORMAT

RPLTERM

For details of the effect of these, refer to the Environment Options topic in the Reality On-line Documentation.

5.4.2 DataBasic

The DataBasic compiler (the BASIC command) can now be configured to generate an executable (platform-specific) item in the dictionary of the file containing the source item, instead of a deliverable (platform-independent) item in the data section (there are options to generate both). This replaces the previous R option, which generated both deliverable and executable items in the data section.

The new option can be selected in three ways: by including a configuration statement in your source code; by setting a custom option in your Environment (see above) or by specifying the R option when compiling (as before). A second source code configuration statement allows you to generate both executable and deliverable items.

If you use the new option, it is only necessary to catalog your program once, because the MD entry will already reference the executable generated by the BASIC command. The CATALOG command does not regenerate an executable found in the dictionary unless this is specifically requested.

The new feature is fully backwards compatible with earlier versions of Reality; all commands that access deliverable and/or executable items (RUN, DEBUG, and so on.) support both the old and new compiler features.

- The TAB character is now treated as whitespace.

- In an external subroutine module, comments are now allowed before the SUBROUTINE statement.
- A semicolon can now be the first statement on a line.
- A semicolon is now allowed immediately following an EQUATE statement (that is, with no white space before the semicolon).
- The DO keyword is now optional in single line LOOP constructs.
- In GOSUB and GOTO statements, the statement label can now include the terminating colon, if any.
- Format strings: in programs that use any of the MultiValue modes (set with the $OPTIONS statement), the M modifier has no effect (that is, if the scaling parameter is omitted, the value is not scaled).
- The STATUS () function (provided for compatibility with MultiValue systems that do not include a SETTING clause in their file access statements) can now be used with the MATREADU, READU and READVU statements and the RECORDLOCKED () function as well as the Sequential File Access statements.
- A new predefined constant, @USER, is available to return the account name.
- In programs that use mvEnterprise mode (set with the $OPTIONS statement), the following are available:
    - SYSTEM () function. The elements available correspond to those available on the mvEnterprise system.
    - Pattern matching: Multiple patterns used with the MATCH(ES) operator can be separated by any of the Reality system delimiters attribute mark (@AM), value mark (@VM) or subvalue mark (@SM or @SVM).
    - @DAY, @MONTH and @YEAR predefined constants, equivalent to formatting the output of the DATE () function using the 'DD', 'DM' and 'DY' conversion codes. A CLEARINPUT statement that clears the typeahead buffer (a synonym for INPUTCLEAR).
    - A FORMLIST statement (a synonym for SELECT).

5.5 Reality environment

5.5.1 Reality licenses

Reality now allows certain system utilities to function without a user licence; instead, they use reserved ports that do not require user licences. This allows critical operations to be carried out when there are no user licences available.

You will now be warned when your user licences are about to expire by means of messages in the daemon log, it is strongly recommended that you configure system alerts so that your administrators will be notified when these warnings are logged. If your user licences should expire, you can extend them for a short period so that your users can continue working while you obtain new ones. The Licence Special File generated by MAKE-SPECIAL now includes the reserved ports and licence expiry dates. In addition, this information is available in the file REALITY-LICENCE in the SYSMAN account.

5.5.2 Supported platforms

Reality V14.0 adds support for AIX 5.3 and Windows Vista.

Support for Solaris 2.6 and 7, and Windows NT Server has been discontinued:

Client components: Reality Explorer is no longer available.

Reality client components are no longer supported on Windows NT 4.0.

On-line Documentation: The Reality on-line documentation is now supported only on Internet Explorer 6.0 and 7.0, and Firefox 2.0. Netscape, Mozilla and earlier versions of Firefox are no longer supported.

5.5.3 TCL stacker enhancements

The TCL Dot Processor (command stacker) has been enhanced to allow the following:

- Place a command on the stack without executing it.
- Add commands that are embedded in Procs, etc. to the stack.
- Convert commands on the stack to upper case.
- Execute sequences of commands.
- Save and restore command sequences.
- Immediate edit operations.
- Persistent commands (previously used commands are copied to the top of the stack instead of being moved).
- Emulation of the Dot processors provided with other MultiValue systems.
- TCL commands run by a user can be logged for support and audit purposes.

5.5.4 Excluding files from transactions

Files can now be marked for exclusion from transactions by including a new option (T) in attribute 1 of the file definition item. For files configured in this way, changes are not rolled back if a transaction is aborted. It is recommended that this code is used for application log files.

5.5.5 DataBasic enhancements

- A new function, RECORDLOCKED (), can be used to find out whether a file item is locked.
- A new statement, CLEARDATA, clears the data stack used by the DATA statement.
- A new statement, INPUTCLEAR, clears the typeahead buffer.
- New PAUSE and WAKE statements allow you to suspend a program until reactivated by a program running on another port.
- New functions, RAISE and LOWER, allow you to promote and demote system delimiters in a dynamic array.
- A new COMPARE function compares two strings and returns whether they are identical or, if not, which is the greater. The comparison uses the ASCII values of the characters and the lengths of the strings.
- A new function, SORT, sorts the items in a dynamic array. You can use an ascending or descending ASCII or numeric sort.
- The SYSTEM function has new elements that return information about the running program and the underlying host system.
- If you have code that you want to include in every code module in a data section, you can now create an item to be automatically included without having to use the INCLUDE statement.

- Within DataBasic, the active select list is now accessible as list 0. This allows you to use the SELECT statement to create a new active list and improves compatibility with other MultiValue systems.
- The EQUATE statement now allows you declare a symbol to be equivalent to a single DataBasic statement or intrinsic function. When you compile your program, a pre-processor replaces all occurrences of each symbol with the corresponding value. Any variables referred to in your expression will use run-time values.

Note

These features are only available if the new compiler has been selected. See Restrictions.

5.5.6 Customisation

The NEWAC file (SYSFILES account) now contains a USER data section in which you can place items to be added to an account's master dictionary. You can also specify items to be deleted.

5.5.7 Aborts and core dumps

On UNIX, the default behaviour when a process abort has been changed to always generate a core dump. This results in more accurate diagnostic information than was previously available, making it easier for NEC support to analyse and fix problems.

Section 6: Restrictions

This section lists the restrictions that were current when Reality V14.0 was released. For the latest information, refer to the Reality pages on the NEC portal (www.nec-is.com/reality).

6.1 All versions

- File triggers can currently only be associated with file data sections.
- To avoid possible problems with existing applications, the default compiler used by the BASIC command is that which was supplied with Reality V11.0. This means that the new DataBasic features described in the New Features section will not be available. If you want to use the new features, you can specify the new compiler using one of the methods described in using alternative compilers.

Note

The demonstration database created when you install the demonstration/evaluation version of Reality is configured to use the new compiler.

- Shadow database cannot currently use partition databases constructed from standard host files on different file systems (see Types of Databases).

6.2 AIX

The foreign database files feature is not currently available on AIX.

6.3 Linux

The UNIX-Connect Simple File Transfer (SFT) utility is not available on Linux.

6.4 On-line documentation

On Windows XP SP2, Windows Server 2003 SP1 or Vista, if the documentation is installed on the local file system and you are using Internet Explorer, you will 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).

6.5 GUI administration tool

- The GUI Administration Tool client is only available for Linux and Windows.
- The GUI Administration Tool will not use any licences in this release. However, NEC reserves the right to change this in future versions of the Reality product.
- The GUI Administration feature is not currently certified on Windows XP SP2, Server 2003 SP1 or Vista, though this is subject to review. For the latest information, refer to the Reality pages on the NEC portal (www.nec-is.com/reality).

Section 7: Fault resolutions

Reality V14.0 includes resolutions of the following faults:

Fault number	Description
	If the documentation is installed on the local file system and you are viewing it in Mozilla Firefox, on returning to your search results after viewing another topic, they will be unformatted and none of the links will work.
049436	Database name is enclosed in double quotes when viewing MYSQL external table via SQL-VIEW.
084727	Creating a DIR-VIEW file is not transaction logged.
084805	Saving a file with DY in its MD item is very slow if the file has an index.
084847	DataBasic index variables are handled incorrectly.
084906	PRESTARTUP and STARTUP Procs are not run by tlmenu Check/Reconfigure Databases Prior to Recovery command (Database Recovery menu) when reconfiguring a FailSafe secondary as the primary database.
084909	Tlmenu does not display the device path when listing tape devices.
084910	Tlmenu does not abort if the link fails when attempting to re-establish FailSafe operation.
084913	SYS-UPDATE aborts when processing a DataBasic program called U50BB.
084919	Core dumps occur during garbage collect.
084921	SORT causes core dumps.

084928	Port despooler can abort with return stack full.
084929	Setting the NumConnections parameter in the database config file has no effect.
084930	Trigger code core dumps instead of returning an error.
084931	When accessing a dynamic array element from the DataBasic debugger, the output can be corrupted if more than 29998 bytes are present.
084932	When Reality spawns a despooler process it may core dump.
084933	On Windows, Remote Tape service does not run unless Reality is installed.
084934	Reality process on UNIX killed by SIGPIPE signal 13 when using remote tape on Windows 2000.
084936	CSV-COPY enters debugger if debug enabled.
084937	Documentation error: description of ACCOUNT-RESTORE should say that if no parameters are supplied, the first account on the tape is loaded.
084939	On Linux, opening a remote file via a Q-pointer can fail.
084940	Writing to a file opened in an external subroutine using a named COMMON file variable passed to the subroutine can cause an abort.
084941	Cannot stack data to pass to the MIGRATE.ACCOUNT utility.
084942	When a Windows user logs off from the console, Reality processes are logged off.

084943	On Windows, tlmenu aborts when backing up databases if event log is locked by another process.
084945	DELETE-ACCOUNT aborts if the account contains a directory view that references a nonexistent host directory.
084947	Garbage collect of trigger control blocks can cause a core dump.
084948	SQL-VIEW: Oracle reserved words are not quoted.
084949	SQL: integer column with a value of zero returns a null strring.
084950	On Solaris 10, the inetd.conf and services files are no longer used. UNIXConnect and Remote Tape installation programs must use the correct locations.
084951	realbind allows a database with active transaction logging to be moved to a different instance, but rawlog is not moved.
084954	rmdbase permits the removal of a database associated with another instance of Reality. Because of this, mkdbase -r will allow a database associated with another instance of Reality to be rebuilt, but this will fail to complete.
084956	tlmenu should not be allowed to configure a database associated with another instance of Reality.
084958	realclone -pu detaches the raw log from an instance if the base version of Reality does not have a raw log.
084959	realclone -d does not remove the directory containing the instance.

084960	RESET.DESPOOLER clears down DESPOOLER.CONTROL items for active despoolers.
084965	tlmenu cannot configure secondary when setting up FailSafe.
084966	SQL-VIEW intermittently unable to open files.
084967	Core dumps occur when using remote files.
084970	If the database name is the same as that of an existing database, mkdbase overwrites the ROUTE-FILE entry for that database.
084972	realdd database daemon terminates unexpectedly.
084973	Unable to build debug versions of the daemons.
084974	Cannot run the cdinstall utility.
084976	In a DataBasic R conversion, the trailing ")" in a format mask may be treated as a literal.
084977	Core dumps occur during Reality initialisation.
084979	Cannot install fixes onto a database that has been associated with an instance of Reality.
084980	When using SAVE-IMAGE, LOAD-IMAGE or tlmenu with physical save, clean logs can get out of step.
084981	The tlrestore process can core dump if an error is detected during index update.
084982	When using physical save, tlmenu unnecessarily asks if you want to pause updates and, also unnecessarily, switches clean logs on completion.

084986	History file error during SYS-UPDATE.
084987	DataBasic R or L format string incorrectly strips parentheses from format mask.
084988	Extra form feeds and lines generated in print jobs.
084989	ISTAT (U of an AFS file gives repeated 100% progress updates.
084990	Problems with realdump host command.
084991	Invalid system name errors when updating ROUTE-FILE.
084993	If the maximum number of item locks is exceeded, the locks are not cleared.
084994	Soft GFEs generated when restoring clean logs after enabling AFS on a file.
084995	realload should have a 'read header' option to verify which tape or image is being restored.
084996	Multi-clean-log dump does not eject the tape on completion.
085000	If the printer is turned off while using NPU to port 9100, the process becomes.
085002	realdbck -a stops after finding first error.
085004	Remote Tape is not configured correctly when installed.
085005	realclone adds the absolute path of the Reality instance to the installed file instead of the soft link path.

085006	Transaction logging autoswitch does not work within Reality instances.
085007	Unable to restore items longer than 26 tape buffers.
085008	Cannot abort a transaction when you have updated a print job inside it.
085009	Abort when handling errors from OPENSEQ.
085011	NPU despoolers go offline.
085013	The $ character in an "L" or "R" format string is not processed correctly.
085014	File size limit option on a tape image does not work.
085016	TL-LISTFILES does not show a file created with TL-CREATE-FILE.
085017	The operation of the DataBasic functions REM() and MOD() is not as described in the documentation.
085024	When DSPMON is performed from a DataBasic program, stacked data is ignored.
085025	When saving multiple clean logs with the auto-delete after completion option, if a tape error occurs, the clean logs are deleted without being saved.
085026	realclone -u cannot update the current instance.
085027	FILE-SAVE repeatedly saves the same files.
085028	Cannot run the cdinstall utility.

085030	The SET-STACK command fails.
085031	Error "** loggerpwsreinit: warning: context 3 still allocated - being released" during logoff.
085033	tlmenu cannot run remote commands when SYSMAN account has a password.
085035	SP-EDIT generates error, "no job file".
085036	Cannot start a DSPMON process from the DSPMON monitor screen.
085042	AFS-CONTRACT does not work if the account has a password.
085052	Problems with item locks and core dumps.
085053	The realrt remote tape process runs as root. This can allow a remote tape operation to overwrite any file on the remote system.
085057	GFEs reported after restoring system using LOAD-IMAGE.
085061	Disaster Recovery slave system stopped updating.
085066	The NPU process is not closing. Printing cannot continue because the despooler is waiting for the NPU process.
085070	Clearing a DIR-VIEW with CLEAR-FILE does not remove all the items.
085071	When performing a save on a FailSafe secondary with updates turned off, the last clean log switch is not updated on the secondary.

085074	Disaster Recovery system stopped updating.
085083	Incorrect permissions on ODBC driver trace file.
085093	ODBC driver uses 100% CPU when issuing commands to the Reality SQL server.
085096	FailSafe link fails when the administrator logs out of a secondary on a Windows server.
085097	AFS-CONTRACT can exit without returning a reason code.
085107	System hanging with no message queue.
085119	Updates to a Reality DR slave database stop part way through a clean log. The daemon log reports a corrupt image.
085123	Shadow database not being updated correctly.
085124	ACCOUNT-RESTORE (RO reports errors when used following an AFS-SET.
085125	SQL-VIEW pointers are not restored if the foreign database is not available.
085126	Reality DR slave will not start; realdrc is terminated by signal 11.
085129	Message queue for central daemon filling with clean log autoswitch messages.
085134	AFS-ENABLE and AFS-EXPAND commands give error “ambiguous account”.
090008	SQL COUNT() function can return the wrong result.

090093	There is no realfstab file template on Windows.
090098	LOGTO a nonexistent account can cause an exit to the debugger.
090106	Restoring an SQL-VIEW file stops with an error if the target is no longer valid.
090116	LIST-ITEM-LOCKS does not list all item locks.
090125	Soft GFEs occur when running SAVE with DIR-VIEW and SQL-VIEW.
090126	Changing block size when reading from a host file using the READBLK statement can result in data being lost.
090127	DataBasic: named common variables cannot be referenced if they have been passed to a subroutine.
090128	Column not found errors can occur with SQL-VIEW.
090129	Timeouts occur after 90 seconds when trying to modify security profiles using GUI Admin.
090130	Cannot install Reality on AIX using the GNU compiler.
090133	Cannot install Reality on Windows from Remote Desktop or when Fast User Switching is enabled.
090134	Unable to start Reality services on a new system.
090135	SQL CREATE PROCEDURE statement fails because of insufficient privileges on table.
090138	DataBasic profiler can cause processes to crash.

090139	FILE-SAVE on a transaction handling database causes the clean log image processor to.
090140	install_fix sets incorrect permissions on file build.conf, so that it cannot be updated with correct C compiler.
090143	Cannot re-establish FailSafe link and re-synchronise using tlmenu if secondary is stopped.
090146	Telnet to Reality on Windows hangs after starting a despooler.
090147	Reality start-up and shut-down scripts do not handle an unmounted realman partition correctly.
090148	Back-to-back FILE-SAVE/ACCOUNT-RESTORE through a named pipe hangs.
090150	The DataBasic VARVAL, VARVALTYPE or VARVALSET statements/functions cause Reality to enter an endless loop if the variable specified is equated to another variable.
090151	DataBasic: variables with names containing underscores cannot be used in break points.
090154	Cannot use .rdbrc file on Windows.
090157	On AIX, realdump host command causes a core dump.
090159	On AIX 5.3, the realprof host command does not recognise the process id.
090160	On-site build fails on AIX.
090162	T-DEVICE displays incorrect message when using a path containing spaces.

090163	tlmenu does not handle errors correctly when saving multiple clean logs.
090164	If the Windows user is a member of many groups, netadmin fails with "not an administrator".
090166	PH-STATUS shows the TL-MONITOR TIPH as active when it is not running.
090176	In the descriptions of the READV and WRITEV statements in the documentation, the links to the recommendations for efficient use go to the wrong topic.
090179	Shutting down Reality DR can result in a core dump.
090180	FILE-SAVE generates "File Save End ..." message in daemon log after every account.
090189	LIST-GROUP-LOCKS (portNum lists group locks for ports other than that specified.
090191	NPU despoolers connected to TCP/IP print server running on Windows abort with status, 'No Process, exec of cmd failed'.
090194	DataBasic and English give different results for "RE$" and "MRE$" formats.
090195	Formatting a negative number less than zero in DataBasic suppresses the leading zero if a precision is specified.
090196	DataBasic format strings do not apply the thousands separator correctly.
090197	DataBasic format strings with a credit indicator give unexpected results with positive and negative zero values.

090198	The optional parentheses around a format mask are often displayed.
090201	If the MU and ML Editor commands process a null line they abort.
090213	Reality DR generates many Transaction Logging log file entries.
090214	With no Reality DR key installed, tlmenu does not display the DR configuration menu, but still allows it to be selected.
090215	When connecting to a partition database using the Reality Filing Services C API, on disconnecting some allocated memory is not released.
090216	Reality DR does not correctly detect the secondary system on a Heartbeat system with a dedicated FailSafe LAN.
090217	DataBasic does not release index file control blocks.
090218	If an index is assigned to a DataBasic variable, when the variable is examined in the DataBasic debugger an error occurs.
090219	When calling the DataBasic READNEXT statement using an index variable, the SETTING statement is ignored.
090220	When using the DataBasic SELECT statement to create a list from a dynamic array, the result is returned in the SETTING variable.
090221	Copying a DataBasic index variable generates a [B14] Bad stack descriptor error.
090224	If the reality host command is run with the -t option, the DBSTART Proc does not run.

090228	Various issues with the XML parser.
090239	The realcoldstart script does not run on UNIX.
090242	VERIFY-INDEX reports that the index verifies, even if it does not.
090256	Unable to reserve ports for specific server connections.
090262	Interrupting a DELETE-INDEX corrupts the index so that it cannot be recreated.
090272	Cannot delete an account containing an INDEX-ITEM special view file.
090278	CREATE-INDEX with the (S option sometimes aborts.
090305	Windows fix installation utility allows the user to run SYS-UPDATE on selected databases but does not display the name of each database as it is processed.
090338	NPU occasionally hangs.

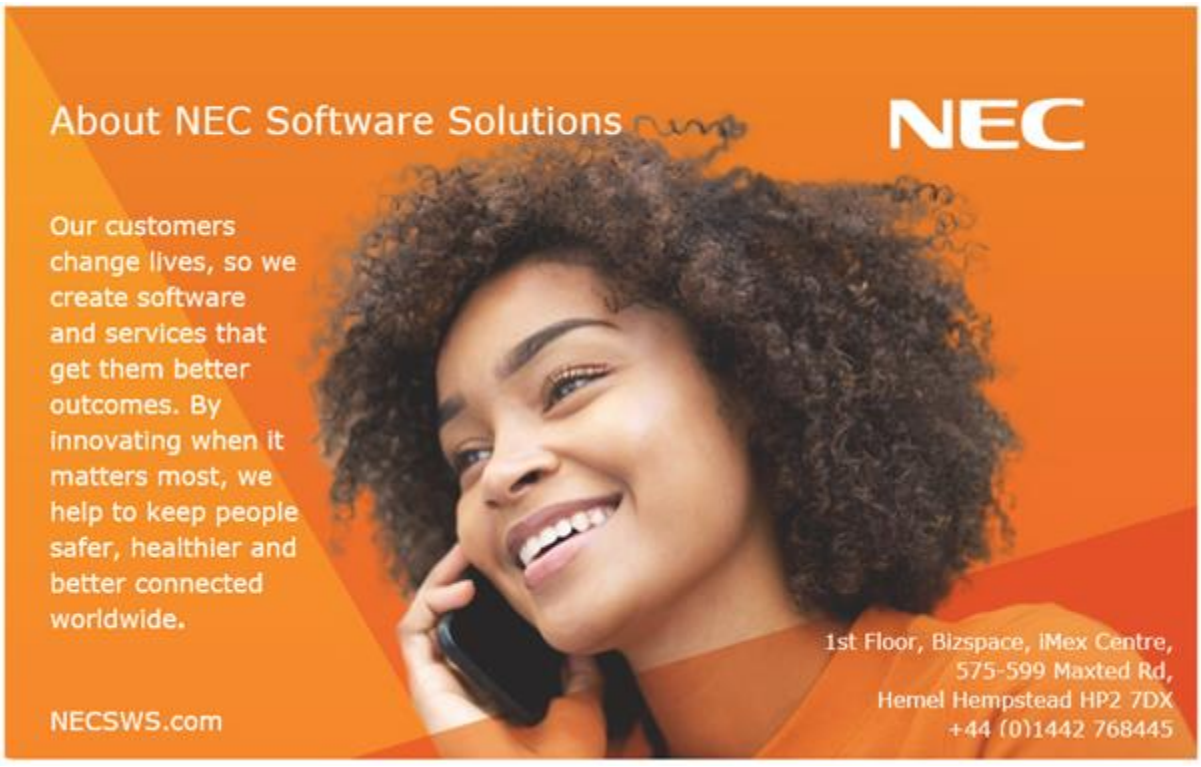
Section 8: Third-party products

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-complier (GNU Software Foundation)
- Gdb Debugger (GNU Software Foundation)
- Adobe Acrobat document reader (Adobe Systems Inc.)
- TomCat web server (Apache Software Foundation).
- Jetty web server (Mort Bay Consulting).


About NEC Software Solutions
NEC
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.
NECSWS.com
1st Floor, Bizspace, iMex Centre,
575-599 Maxted Rd,
Hemel Hempstead HP2 7DX
+44 (0)1442 768445