DOCUMENTATION NOTE

NPS Reality v15.2
Online Documentation (Revision 2)

This Documentation Note summarises the changed topics in the Revision 2 release of the NPS Reality v15.2 Online Documentation, made in response to enhancements, bug fixes and Documentation Comments from our customers. Minor typographical corrections and indexing changes are omitted.

For more detailed information, refer to the Online Documentation itself.

Folder names for Reality V15.2

Unusually, Reality v15.2 is delivered as Service Pack updates to v15.1. Consequently, in the Online Documentation (and Installation Guides) folder names should continue to refer to 15.1 rather than 15.2. Where appropriate, the correct folder names are applied in this revision.

DataBasic Email API

The format of host configuration items is extended to include a TLS (transport layer security) option, and optional authentication details (user account name and password) for logging into the mail server.

In addition, a new **EM_ADD_AUTH_DETAILS** function is available that can update the host configuration specified by the **EM_START_MAIL** function by adding or overwriting the authentication details.

Attribute	Name	Description		
1	DESCRIPTION	Optional description of configuration for reference only.		
2	CONFIG	Optional configuration table.		
		Value	**Name**	**Description**
		1	RETRY LIMIT	Maximum number of times to retry receiving a response from the server. Setting the number of retries to -1 will retry forever whereas setting to zero will not retry after the initial attempt. If this is left blank, the default of 10 retries is used.
		2	RETRY SLEEP	The time in seconds (between 1 and 10) to sleep before the first attempt to receive a message and subsequent retries). If this is left blank, the default value of 1 second is used.

Attribute	Name	Description		
3	CONNECTION	The information required to set up communications with the server.		
		Value	**Name**	**Description**
		1	HOST	The fully-qualified name or IP address of the mail server to use.
		2	PORT	The port used for connecting to the mail server. If this is left blank, the default of 25 is used.
		3	PROTOCOL	The protocol used for connecting to the mail server. Currently, the only valid option is **TCP**. If this is left blank, the default value **TCP** is used.
		4	TLS	The setting for the TLS (transport layer security) option. If this is set, ;TLS=*option* is added to the details used for the connection. Currently, the only valid options are **none** and **server**. If neither option is set, the TLS string is not added to the connection.
4	AUTH DETAILS	Optional authentication details for logging into the mail server.		
		Value	**Name**	**Description**
		1	USER	The name of the user account with which to login to the mail server. If this is not set (null), no authentication is used.
		2	PASSWORD	The password of the user account. If no user account is defined, the password is ignored.

Finally, an example program using the API is now included in the documentation.

DataBasic Application Dump

The DataBasic application dump feature is enhanced so that, by default, multiple dump items that report identical warning or fatal run-time errors (occurring on the same port, account, user, program and line number) are suppressed. Instead, a single WARN or ABORT dump item is created at the first occurrence and thereafter a count on the item is incremented each time the error recurs. These duplicate item counts can effectively be reset by using a new RELOG.DB.DUMPS program. The previous functionality, in which all errors are reported regardless, can be restored by setting a new DB.DUMP.MULTIPLE custom option (it is unset/clear by default).

DataBasic Debugger

Summary of Debugger Commands (DataBasic)

Listed the additional commands mentioned below.

AT command (DataBasic debugger)

Added a new topic for this command, which displays Tandem status and enables, or disables, the current port for Tandem operation.

CS command (DataBasic debugger)

Added a new topic for this command, which displays the stack of PERFORM levels, their command, and data.

DCC command (DataBasic debugger)

Added a new topic for this command, which toggles the option that causes a forced break whenever descending to a child context.

DPC command (DataBasic debugger)

Added a new topic for this command, which toggles the option that causes a forced break whenever ascending to a parent context.

S command (DataBasic debugger)

Updated the following paragraph with information about INCLUDE statements, and updated the example accordingly.

> For each CALL or GOSUB statement, or external function call, the current program name and line number are displayed, prefixed by C (CALL), G (GOSUB) or F (function call). The current routine is at the top, prefixed by a chevron. If an INCLUDE statement is encountered, the actual line in the source program is shown in square brackets, appended to the line.

SL command (DataBasic debugger)

Added a new topic for this command, which is similar to the **S** command but in addition displays the depth of the stack at each subroutine and external function.

X command (DataBasic debugger)

Updated the following paragraph, now that hexadecimal input is accepted:

> If you specify a variable name, its current value is displayed followed by an equals sign (=). The = is a prompt for input of the value to set that variable to. If the input takes the form of a sequence of 2-digit hexadecimal numbers separated by spaces, the command converts these to ASCII text. Otherwise, the input is assumed to be ASCII text. Enclosing quote marks and a trailing space (if present) are ignored. Up to 2040 characters can be entered.

DataBasic

CATALOG command (DataBasic)

Added new syntax option:

Q If the *file-specifier* is a Q-pointer, then attribute 6 of the MD command definition item is the *name* of that Q-pointer.

Absent this option, attribute 6 is the *value* of the Q-pointer. This is usually preferred as it allows BVERIFY to access the source even if the original Q-pointer is deleted.

COMPARE statement (DataBasic)

Corrected the example.

PERFORM statement (DataBasic)

Corrected to note that if the **PASSLIST** clause is used without the *inputListVar* parameter, the content of the default select list is used.

SELECT, SELECTE statements (DataBasic)

Added the following as comment (moved from elsewhere in the topic and modified):

> A list created from a file selects item-ids one group at a time as they are read by the **READNEXT** statement, rather than all at once as in English. Therefore, if you change an item's id, it could be selected again. For this reason, if you are adding items or changing item-ids — or other users could be — you should perform an English **SELECT** command prior to executing the program and use **SELECTE** (or **PERFORM** a **SELECT** from within the DataBasic program).

SYSTEM function (DataBasic)

Corrected the value returned by SYSTEM(73) to include the tape drive *devicepath*.

UPCASE function (DataBasic)

Corrected the example.

VARTYPE, VARVAL and VARVALTYPE functions (DataBasic)
VARVALSET statement (DataBasic)

Noted a restriction whereby the *variable* parameter may be unresolvable without a symbol table.

English

LIST-SPREAD command (English)

Added an example.

ML and MR Codes - Mask Decimal with Alignment (English)

Added an "inserting left zero fill" example.

SORT-SPREAD command (English)

Now refers to LIST-SPREAD for an explanation of command usage.

TCL

DIR-VIEW (TCL)

Added syntax options:

E On Windows systems, generate UNIX-style line endings (single LF).

O Overwrite any existing DIR-VIEW file.

HYPER-ADD command (TCL)

Added the following as comments:

> If the hyper file uses a simple lookup table, HYPER-ADD can add a new section anywhere in the table, but for a range lookup table, HYPER-ADD can only add new sections to the end of the table. If you need to add a new section somewhere in the middle of a range lookup table, you must use HYPER-EDIT instead. Note that HYPER-EDIT does not auto-reconcile; you should therefore use HYPER-RECONCILE to ensure the hyper file remains consistent.
>
> You are strongly recommended *not* to suppress file locking. If any other users have the hyper file open when its lookup table is modified they will not see the change until the file is closed and reopened again. This may result in inconsistencies in the hyper file.

HYPER-ADD-INDEX command (TCL)

Added an example of how the command might be used.

HYPER-CREATE-INDEX command (TCL)

Added the following as a comments:

DEFINE-INDEX must be used to define the index before HYPER-CREATE-INDEX is used.

HYPER-CREATE-INDEX creates indexes on data sections contained in the hyper file's dictionary. If the hyper file's lookup table points to data sections in other dictionaries or accounts, then any indexes should be created on them independently and then HYPER-ADD-INDEX used to add the index into the hyper file.

Also noted that HYPER-CREATE-INDEX prompts for the same options as CREATE-INDEX.

LOGOFF-ALL command (TCL)

A new **LOGOFF-ALL** command is available that logs off all or a specified range of ports and disconnects them from the database.

TANDEM command (TCL)

Updated to describe new **(D** and **(DK** command options to intercept the System debugger and DataBasic debugger streams, as well as new P and S menu options to set the privilege level and split screen mode.

Command Definition Items

Updated to state that an S-type sentence TCL macro cannot have an unsigned integer as its second attribute:

Attribute	Description
Item-id	Macro name.
1	First character: **S** Provided the second characters is a space, any subsequent text is ignored; it can therefore contain a comment if required.
2+	Each subsequent attribute must contain a single TCL or macro command. Responses to prompts for input generated by the command can be supplied, with value marks as separators. Empty lines and those beginning with asterisks (*) are ignored; the latter can therefore be used for comments. The macro terminates at the end of the item. ***Notes*** Attribute 2 cannot be an unsigned integer, to prevent confusion with an S-type data definition. If necessary, attribute 2 can be empty or an asterisk. For compatibility with other MultiValue systems, responses to prompts can also be separated by two left chevrons ("<<"). In this case, each response (and its chevrons) can be in a separate attribute.

Miscellaneous changes

In no particular order:

Outgoing Web Services - Examples

Updated the "Celsius to Fahrenheit" example to use revised URLs.

Terminal Types

Noted that TERM TYPE 6 is the terminal type most commonly associated with Microsoft Windows.

AFS-ENABLE, AFS-EXPAND, AFS-HOLD and AFS-TRIM commands

Noted that these commands are not transaction logged.

realbdck utility

Corrected the **realdbck -m** *size* option to say that *size* is specified in kilobytes (not megabytes).

Environment Variables for Windows

Added information about the RWSMAXSIZE environment variable.

CSV-COPY command

Noted the following restriction:

> The use of the **BREAK-ON** and **TOTAL** connectives in the *output-specification* is discouraged, because they will break the one-to-one mapping between the selected items and the CSV items.

Data Encryption

Updated the following note to include reference to Disaster Recovery and Shadow couplings:

> Both databases in a FailSafe pair, or a DR coupling or a shadow coupling, must use the same REK file. This file is not transaction logged, so the system administrator must ensure that changes on one database are copied to the other.

MC Codes (English conversion codes)

Updated to provide fuller explanations and examples of **MCP**, **MCPN** and **MCNP** codes.

Output Devices (Spooler)

Updated the description of Attribute 2 of the NETDEVS structure:

Item-id	Device name specified in the DESPOOLER.CONTROL record for the PTR network Despooler.
Attribute 1	ROUTE-FILE entry for the remote system/printer to which the despooler is attached.

Attribute 2	On UNIX, 'SHR' flags the printer as shareable. On Windows, these network printers are always shareable. A shareable printer is enabled for sharing, or made permanent, in the despooler DSM screen.
Attribute 3	NETDSP to specify a network Despooler.

T-DEVICE (Tape)

Added syntax options:

E	Check tape image exists (fail if it doesn't).
R	Open existing image read only (implies option **E** is present).

BUILD.PRINTERS command (Spooler)

Added syntax options (and a help screen):

B	List which despoolers and formqueues would be created, and which already exist, if the command were run without the **B** option. Effectively provides a "browse" command mode.
V	List which despoolers and formqueues are created, and which already exist, as well as to which despooler each formqueue is assigned. Effectively provides a "verbose" command mode.

Checking for Spooler Errors (Spooler)

Updated to mention the Error heading of the **DISP.DETAIL** detailed report which displays the error text corresponding to the Despooler error.

chkdev (Host Utilities)

Updated to clarify that the **-r** option checks only the default **$REALROOT/files/devices** (for UNIX) or **%REALROOT%\files\devices** file (for Windows).

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