

FUJITSU Software

NetCOBOL V11.0.0

A decorative horizontal band with a red-to-dark-red gradient. It features abstract, glowing white and red lines that swirl and intersect, creating a sense of motion and energy.

Release Notes

Windows(64)

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Preface

This book explains Release Note of NetCOBOL.

About the alias of the product

The name of the product described in this book is written for short as follows.

Product Name	Abbreviation
Microsoft® Windows Server® 2012 R2 Datacenter Microsoft® Windows Server® 2012 R2 Standard Microsoft® Windows Server® 2012 R2 Essentials Microsoft® Windows Server® 2012 R2 Foundation	Windows Server 2012 R2
Microsoft® Windows Server® 2012 Datacenter Microsoft® Windows Server® 2012 Standard Microsoft® Windows Server® 2012 Essentials Microsoft® Windows Server® 2012 Foundation	Windows Server 2012
Microsoft® Windows Server® 2008 R2 Foundation Microsoft® Windows Server® 2008 R2 Standard Microsoft® Windows Server® 2008 R2 Enterprise Microsoft® Windows Server® 2008 R2 Datacenter	Windows Server 2008 R2
Windows® 8.1 Windows® 8.1 Pro Windows® 8.1 Enterprise	Windows 8.1 (x64)
Windows® 8 Windows® 8 Pro Windows® 8 Enterprise	Windows 8(x64)
Windows® 7 Home Premium Windows® 7 Professional Windows® 7 Enterprise Windows® 7 Ultimate	Windows 7(x64)
Microsoft(R) Visual C++(R) development system	Visual C++
Microsoft(R)Visual Basic(R) programming system	Visual Basic
Oracle Solaris	Solaris

- In this manual, when all the following products are indicates, it is written as "Windows" or "Windows(x64)".
 - Windows Server 2012 R2
 - Windows Server 2012
 - Windows Server 2008 R2
 - Windows 8.1(x64)
 - Windows 8(x64)
 - Windows 7(x64)

Purpose of this book

This book explains the function addition, the trouble correction from the old edition, and information on interchangeability according to them.

It has aimed can the smoother shift of the customer who was using the old edition to this product.

Object reader in this book

An old product is introduced, and it is targeted for the shift to this product to be examined, and to be shifting.

Location of this book

Please refer to the manual of each program for a whole image or detailed information because it is fragmentary information though this book explains the function addition, the trouble correction, and information on interchangeability according to them.

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Chapter 1 Outline of Additional Functionality

New product functionality and content is outlined below by version and level.

All Products

The following Information applies to all products.

Table 1.1 Outline of additional functionality in NetCOBOL V11

NO.	V/L	Function Name	Content	Location in Manual
1	V11.0.0	Fujitsu Common Tools	Fujitsu Middleware Installation System and FJQSS (Information Collection Tool)	- Overview Software Release Guide - FJQSS User's Guide



Note

The V/L column lists the version and level of NetCOBOL Enterprise Edition.

1.1 NetCOBOL

Information described here applies to the following products.

- NetCOBOL Enterprise Edition V11.0.0 for Windows (64bit)

Table 1.2 Outline of additional functionality in NetCOBOL V11

NO.	V/L	Function Name	Content	Location in Manual
1	V11.0.0	UTF-32 support	Encoding form UTF-32 can now be used.	User's Guide - 20 Unicode
2	V11.0.0	COBOL Resource Project function support	A "COBOL resource project" is used for management of the library file and the descriptor file on the NetCOBOL Studio.	NetCOBOL Studio User's Guide - 3.1.2.2 COBOL Resource Project
3	V11.0.0	COBOL Solution Project function support	A "COBOL solution project" is used for management of multiple projects on the NetCOBOL Studio.	NetCOBOL Studio User's Guide - 3.1.2.3 COBOL Solution Project
4	V11.0.0	Project configuration conversion command	Provide the project configuration conversion command as a transfer support tool in order to convert the project in Project Manager to the project in NetCOBOL Studio.	NetCOBOL Studio User's Guide - E.3 Transition of Project According to Project Configuration Conversion Command
5	V10.4.0	31-digit support	Up to 31 digits can now be used for numeric items.	NetCOBOL Language Reference - 1.2.3.1 Numeric Literal - 1.7 Operation Mode - 5.4.8 PICTURE Clause - 5.4.16 USAGE Clause - 8.2.2 Host Variable Definitions

NO.	V/L	Function Name	Content	Location in Manual
				<ul style="list-style-type: none"> - Appendix D Intermediate Results NetCOBOL User's Guide <ul style="list-style-type: none"> - 6.9 How to Use Other File Systems - A.2.2 ARITHMETIC NetCOBOL Messages
6	V10.4.0	Recursive calls	Programs can now be called recursively. Data items used by the recursive program are defined in the LOCAL-STORAGE SECTION.	NetCOBOL Language Reference <ul style="list-style-type: none"> - 2.3.8 Recursive Attribute of the Program - 3.1.1 Program-Id Paragraph - 6.4.7 CALL statement NetCOBOL User's Guide <ul style="list-style-type: none"> - 8.1.1 Calling Relationship Forms
7	V10.4.0	FETCH FIRST/LAST Statement support	FIRST and LAST can now be specified for embedded SQL FETCH statements.	NetCOBOL Language Reference <ul style="list-style-type: none"> - 8.6.4 FETCH Statement
8	V10.4.0	Extension of the file size limit	The maximum file size of a record sequential file, a line sequential file and an index file can now be extended to the system limit.	NetCOBOL User's Guide <ul style="list-style-type: none"> - 6.9 How to Use Other File Systems
9	V10.2.0	FETCH NEXT/PRIOR Statement support	NEXT and PRIOR can be specified for the embedded SQL FETCH Statement.	Language Reference <ul style="list-style-type: none"> - 8.6.4 FETCH Statement NetCOBOL User's Guide <ul style="list-style-type: none"> - Acquisition of data by FETCH PRIOR statement
10	V10.2.0	IBM DB2 SQLCA compatibility	SQLSTATE, SQLCODE, and SQLERRD included in SQLCA can be compiled.	Language Reference <ul style="list-style-type: none"> - 8.2.4 SQLSTATE/SQLCODE - 8.2.6 SQLERRD
11	V10.2.0	Unified specification of high-speed file processing	High-speed file processing can be specified for record sequential and line sequential files with one configuration specification as opposed to requiring specification for each file.	NetCOBOL User's Guide <ul style="list-style-type: none"> - High-Speed File Processing
12	V10.2.0	Event Log output	The Windows Event Log can be specified as the output destination for DISPLAY statements.	NetCOBOL User's Guide <ul style="list-style-type: none"> - ACCEPT/DISPLAY Function - @CBR_DISPLAY_CONSOLE_EVENTLOG_LEVEL (Specify the Event Type for DISPLAY UPON CONSOLE output to the Event Log)

NO.	V/L	Function Name	Content	Location in Manual
				<ul style="list-style-type: none"> - @CBR_DISPLAY_CONSOLE_EVENTLOG_SRCNAME (Specify the Event Source Name for DISPLAY UPON CONSOLE output to the Event Log) - @CBR_DISPLAY_CONSOLE_OUTPUT (Specify the Event Log for DISPLAY UPON CONSOLE output) - @CBR_DISPLAY_SYSERR_EVENTLOG_LEVEL (Specify the Event Type for DISPLAY UPON SYSERR output to the Event Log) - @CBR_DISPLAY_SYSERR_EVENTLOG_SRCNAME (Specify the Event Source Name for DISPLAY UPON SYSERR output to the Event Log) - @CBR_DISPLAY_SYSERR_OUTPUT (Specify the Event Log for DISPLAY UPON SYSERR output) - @CBR_DISPLAY_SYSOUT_EVENTLOG_LEVEL (Specify the Event Type for DISPLAY UPON SYSOUT output to the Event Log) - @CBR_DISPLAY_SYSOUT_EVENTLOG_SRCNAME (Specify the Event Source Name for DISPLAY UPON SYSOUT output to the Event Log) - @CBR_DISPLAY_SYSOUT_OUTPUT (Specify the Event Log for DISPLAY UPON SYSOUT output)
13	V10.2.0	CHECK function suppress option	<p>Runtime options are provided to suppress individual CHECK functions.</p> <ul style="list-style-type: none"> - nocb - noci - nocl - nocn - nocp 	<p>NetCOBOL User's Guide</p> <ul style="list-style-type: none"> - Format of Runtime Options
14	V10.2.0	TRACE function suppress option	<p>Runtime option is provided that suppresses the TRACE function.</p>	<p>NetCOBOL User's Guide</p> <ul style="list-style-type: none"> - Format of Runtime Options

NO.	V/L	Function Name	Content	Location in Manual
			- nor	
15	V10.2.0	TRACE information file for separate processes	Separate TRACE information files can be generated for different processes to avoid conflicts in writing to the file.	NetCOBOL Debugging Guide - Trace Information
16	V10.2.0	Simpler identification of application errors in COBOL Error Report	When an application error occurs and COBOL Error Report starts, message JMW0099I-U is output. This makes such application errors easy to identify in the output.	NetCOBOL Messages - COBOL Error Report Messages
17	V10.2.0	Suppression of SYSERR of DISPLAY statement	The message output to SYSERR of the DISPLAY statement is suppressed.	NetCOBOL User's Guide - @NoMessage(Set to Suppress Runtime Messages)
18	V10.2.0	NetCOBOL Studio	NetCOBOL Studio includes development features for COBOL programming based on Eclipse, an open-source GUI development environment.	NetCOBOL Studio User's Guide
19	V10.2.0	Remote development functions	COBOL programs for the Solaris, Linux(Itanium), Linux(x64), or Windows(x64) servers can be developed remotely. After performing standalone tests on a local computer, add the settings for remote development to the project for a smooth transition to test builds and links on a server.	NetCOBOL Studio User's Guide - Remote Development Function
20	V10.2.0	Debug functions	The interactive debugger can help programmers detect logic errors in program processing. It can be used to set breakpoints to halt execution of a program, and to verify execution of a program by confirming data item values. The debugging of multithreaded programs is supported; however, the debugger does not support multiple debug sessions in a single workspace.	NetCOBOL Studio User's Guide - Debugging Function
21	V10.2.0	Screen Handling Module	Screen handling module is supported.	Language Reference - 2.8 Screen Handling Module NetCOBOL User's Guide - Using Screens

Note

The Location in Manual column shows which sections of the documentation are impacted by the change.

1.2 PowerFORM

Information described here applies to the following products.

- NetCOBOL Enterprise Edition V11.0.0 for Windows (64bit)

Outline of additional functionality in PowerFORM

NO.	V/L	Function Name	Content	Location in Manual
1	V11.0.0	Unicode(UTF-32) support	UTF-32 data can now be used in COBOL applications.	PowerFORM Runtime Reference - How to Use PowerFORM RTS
2	V11.0.0	Encoding systems for print information file	Print Information File in UTF-8 with BOM can now be used in user created Unicode COBOL applications.	PowerFORM Runtime Reference - How to Use PowerFORM RTS - Chapter 5. Printer Information File - Appendix A. Troubleshooting Guide - Appendix E. Error Messages
3	V11.0.0	31-digit support	Up to 31 digits can now be used for numeric fields in COBOL applications.	PowerFORM Runtime Reference - Output field declarations
4	V11.0.0	Form exporting	The Form can now be outputted to PDF. And The character (surrogate pair) added by character-code standard "JIS X 0213:2004(JIS2004)" can be output.	PowerFORM Runtime Reference - Chapter 4. Extended Functions - Appendix C. Printer Information File
5	V11.0.0	Enhanced print features	Print options are provided to define the behavior when output printer is omitted and when it fails in opening the specified output printer.	PowerFORM Runtime Reference - Appendix C. Printer Information File
6	V11.0.0	Enhanced print features	Print options are provided to define the behavior when the specified paper was not supported with the printer device.	PowerFORM Runtime Reference - Appendix C. Printer Information File
7	V11.0.0	Enhanced print features	Print options are provided to define the behavior when the specified paper feed was not supported with the printer device.	PowerFORM Runtime Reference - Appendix C. Printer Information File

NO.	V/L	Function Name	Content	Location in Manual
8	V11.0.0	Enhanced print features	The processing time at expansion/reduction print and the print preview can be shortened.	PowerFORM Runtime Reference - Appendix C. Printer Information File
9	V11.0.0	Enhanced print features	The processing time of the Form output using the fixed-width font can be shortened.	PowerFORM Runtime Reference - Appendix C. Printer Information File
10	V11.0.0	Support locale	The following 4 locales outputs are supported. - Japanese - English - Chinese (simplified Chinese) - Portuguese	Release Notes - 4.4.4 PowerFORM RTS
11	V11.0.0	UTC (Coordinated Universal Time) support	UTC (Coordinated Universal Time) can be specified.	PowerFORM Runtime Reference - Appendix C. Printer Information File
12	V11.0.0	Enhanced print features	When the user character-code is UNICODE, the table of full-width/half-width character used by outputting the UNICODE character can be specified, and customize at the character-code level can be specified.	PowerFORM Runtime Reference - Appendix C. Printer Information File
13	V11.0.0	Enhanced print features	The Form Descriptor (free frame) can be used.	PowerFORM Runtime Reference - Chapter 4. Extended Functions
14	V11.0.0	Enhanced print features	The new function added in PowerFORM V11 can be used.	PowerFORM Getting Started - What's New in PowerFORM V11?

1.3 PowerBSORT

Information described here applies to the following products.

- NetCOBOL Enterprise Edition V11.0.0 for Windows (64bit)

There is no additional function.

1.4 J Adapter Class Generator

Information described here applies to the following products.

- NetCOBOL Enterprise Edition V11.0.0 for Windows (64bit)

Table 1.3 Outline of additional functionality in J Adapter Class Generator

NO.	V/L	Function Name	Content	Location in Manual
1	V11.0.0 (V11.0.0)	Unicode character for file path character string	The Unicode character can be used for the file path character string specified for a command line argument and an optional file.	-
2	V10.0.0 (V10.2.0)	J Adapter Class Generator	J Adapter Class Generator is a tool that generates a COBOL class (adapter class) used to call a Java class. Using the generated adapter class makes Java class libraries available from COBOL.	J Adapter Class Generator User's Guide

NOTE: The version in parentheses shows the version level in the NetCOBOL series.

Chapter 2 Information on interchangeability

Here, information on the interchangeability changed from the version and level before is described.

2.1 NetCOBOL Development Environment

Information described here applies to the following products.

- NetCOBOL Enterprise Edition V11.0.0 for Windows (64bit)

2.1.1 Runtime code-set when compilation option ENCODE is specified

Content

Added the compilation option ENCODE to define the encoding form of the data item.

With the specification of compilation option ENCODE, the runtime code set is changed.

- When the compilation option RCS is explicitly specified.
 - The runtime code-set becomes the code-set that is specified with the RCS compilation option.
- When the compilation option RCS is not specified explicitly.
 - When the compilation option ENCODE is specified explicitly, then the runtime code-set becomes the Unicode.
 - When the compilation option ENCODE is not specified explicitly, then the runtime code-set becomes Shift-JIS.

Conditions

1. In compiler versions prior to 10.5.0, the compilation option RCS (SJIS) is specified explicitly or implicitly and it is a program asset.
2. And, in compiler versions 11.0.0 and forward, without specifying the compilation option RCS (SJIS) explicitly, for the program assets of 1 above, the compilation option ENCODE(SJIS[,SJIS]) is described explicitly and recompiled.

Impact

The impact corresponding to the above conditions is as follows.

- An error (JMP00811-U) occurs in the following situations.
 - When the recompiled program is called from a program that is not recompiled.
 - When a program that is not recompiled is called from a program that is recompiled.
- During execution after the main program is recompiled, the source becomes the Unicode.

For details, refer to "Unicode" in the "NetCOBOL User's Guide".

Action

Create the target program without explicitly specifying the compilation option ENCODE.

Moreover, in regards to the repository, keep the compilation option RCS and the compilation option ENCODE specified on the reference and remote side the same.

2.1.2 Location of SQLCODE/SQLMSG/SQLERRD definition

SQLCODE, SQLMSG, and SQLERRD can now be defined outside of the SQL declaration section. Under the conditions listed below, SQL statement runtime information was not stored in V10.1.0. In V10.2.0 and later, runtime information is stored in SQLCODE, SQLERRD, and SQLMSG.

1. SQLSTATE is described inside the SQL declaration section, and

2. SQLCODE, SQLERRD, or SQLMSG are described outside the SQL declaration section, and
3. SQL statements are executed, and
4. SQLCODE, SQLERRD, or SQLMSG are referred to in the PROCEDURE DIVISION, and
5. Conditions 1 through 4 are occurred in the same compilation unit.

In V10.2.0 and later, SQLCODE, SQLERRD, and SQLMSG are reserved names used to fetch SQL statement runtime information. If you have variables by those names that are used for any other purpose, the results are unpredictable. In this case, change the names of those variables.

2.1.3 Result of addition and subtraction of zoned decimal item outside regulations

Under the following conditions, the execution result of V10.1.0 and that of V10.2.0 and later are different.

1. There is a binary operation of addition or the subtraction.
2. The number of identifier of the result is 1.
3. [NOT] ON SIZE ERROR is not specified.
4. ROUNDED is not specified.
5. Two operands are zoned decimal and numbers of digits are from 16 to 18.
6. The accuracy of intermediate result (*)of binary operation is from 17 to 19 digits.
7. Either of representation of two operands is wrong as zoned decimal.

* : Refer to "COBOL Language Reference" about the accuracy of intermediate result.



Example

```

WORKING-STORAGE SECTION.
01 DATA-ZONE1    PIC S9(18).
01 DATA-ZONE2    PIC S9(18).
01 DATA-2 REDEFINES DATA-ZONE2 PIC X(18).
01 DATA-ZONE3    PIC S9(18).
01 DATA-3 REDEFINES DATA-ZONE3 PIC X(18).

PROCEDURE DIVISION.
    MOVE X"FFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFF" TO DATA-2 DATA-3 .....(a)
    COMPUTE DATA-ZONE1 = DATA-ZONE2 + DATA-ZONE3
    DISPLAY DATA-ZONE1
  
```

In the above program, save area of alphanumeric item is allocated in zoned decimal. When (a) is executed, wrong representation (0xFFFF...FFFF) is set to DATA-ZONE2 and DATA-ZONE3 as zoned decimal.

- V10.1.0

```
+333333333333333330
```

- V10.2.0 and later

```
+54555555545555554
```

The result of the arithmetic statement including the operand to which wrong internal format is set as zoned decimal is not provided for. Please correct the part where wrong internal format is set.

The outline of the representation that zoned decimal is correct is as follows.

Data item	Zone part	Numeric part	Sign part
Zoned decimal (SEPARATE)	3	0 to 9	2B,2D

Data item	Zone part	Numeric part	Sign part
Zoned decimal (no SEPARATE)	3		4,5

2.1.4 Interchangeable information regarding bug fixes

Here, it explains bug fixes corrected by NetCOBOL V11 and later version in which the operation of the NetCOBOL development environment changes in the following tables.

Table 2.1 Interchangeable information on bug fixes of NetCOBOL Development Environment

No.	V/L(*)	P number	Content																		
1	V10.1.0 to V10.4.0	PG76651	<p>When all of the following conditions are met while executing a COBOL program, a size comparison of national items varying in length (national language edited item, including the intrinsic function) was incorrect.</p> <ol style="list-style-type: none"> 1. Compile option RCS (UCS2,LE) or RCS (UTF16,LE) is specified. 2. And, there is a size comparison of a National item and a National item or National language character constant. 3. And, at least one side is an item with the ANY LENGTH clause is specified or reference modification. 4. And, the length of the compared targets differs. 																		
2	V10.1.0	PG77383	<p>Under the following conditions, the execution results are incorrect.</p> <ol style="list-style-type: none"> 1. The OPTIMIZE compiler option is specified (*1). 2. There is a statement that sets packed decimal item to numeric edited data item. 3. The number of digits for integer part of packed decimal item and numeric edited data item are the same and neither both of them doesn't have decimal-part. 4. The numeric edited data item specifies only zero suppression for the edit (Only '9', 'Z', and '*' are used for PICTURE character-string). 5. Before the statement in 2 (*2), there is a statement that sets data item (or intermediate result) to packed decimal item. 6. The relation between number of digits for the data item in 5 (or intermediate result) and number of digits for the packed decimal part in 2 is the following : <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th style="text-align: left;">Data item (or intermediate result)</th> <th style="text-align: left;">Packed decimal item</th> </tr> </thead> <tbody> <tr><td>2</td><td>3</td></tr> <tr><td>4</td><td>5</td></tr> <tr><td>6</td><td>7</td></tr> <tr><td>8</td><td>9</td></tr> <tr><td>10</td><td>11</td></tr> <tr><td>12</td><td>13</td></tr> <tr><td>14</td><td>15</td></tr> <tr><td>16</td><td>17</td></tr> </tbody> </table> <ol style="list-style-type: none"> 7. The data item in 5.(or intermediate result) and the packed decimal item in 2 don't have the decimal-part. <p>*1: The default is NOOPTIMIZE. *2: MOVE statement, COMPUTE statement, and so on.</p>	Data item (or intermediate result)	Packed decimal item	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
Data item (or intermediate result)	Packed decimal item																				
2	3																				
4	5																				
6	7																				
8	9																				
10	11																				
12	13																				
14	15																				
16	17																				
3	V10.1.0	PG78440	<p>Under the following conditions, the execution results are incorrect.</p>																		

No.	V/L(*)	P number	Content
			<ol style="list-style-type: none"> 1. The BINARY(BYTE) or BINARY(WORD, MLBOFF) compiler option is specified, along with 2. The following intrinsic functions: <ul style="list-style-type: none"> [A] <ul style="list-style-type: none"> - FUNCTION MAX - FUNCTION MIN - FUNCTION MEAN - FUNCTION MEDIAN - FUNCTION RANGE [B] <ul style="list-style-type: none"> - FUNCTION ANNUITY - FUNCTION NUMVAL - FUNCTION NUMVAL-C - FUNCTION RANDOM 3. The arguments of the function in 2) above are fixed point of 9 digit or less. 4. The number of the arguments in [A] above is 4 or more.

*: V/L is a scope where the bug exists.

2.2 NetCOBOL Runtime Environment

Information described here is applied to the following products.

- NetCOBOL Enterprise Edition V11.0.0 for Windows (64bit)

2.2.1 Character-code conversion result of data and imperfect character outside character-code range

Content

The result of the character-code conversion of the data stored in the data item of the DISPLAY statement, the STRING statement (writing 2), the UNSTRING statement (writing 2), and the WRITE statement of the print file changed to prevent an unjustified data error.

- Character-code conversion of data beyond the limits of character-code set conversion origin
 - Before V11.0
 - It is converted into an alternative character.
 - After V11.0
 - It becomes a code conversion error when executing it, and the following messages (detailed code 42 (0x2a)) are output.
 - DISPLAY statement: JMP0086I-W
 - STRING statement (writing 2) and the UNSTRING statement (writing 2): An overflow condition has occurred. JMP0260I-U when ON OVERFLOW is not specified
 - WRITE statement of the print file: JMP0310I-I/U and JMP0320I-I/U (It is executed along with the execution result when the input-output error of the file occurs).

- Character-code conversion of imperfect character

When a surrogate pair of the character-code is a high rank or only one of the subordinate positions is stored or the multi byte character is lacked. The result of converting such an imperfect character is different.

- Before V11.0

The character is converted into the replacement character.

- After V11.0

It becomes a code conversion error during execution, and the following messages (detail code 22 (0x16) or 42 (0x2a)) are output.

- DISPLAY statement: JMP0086I-W
- STRING statement (writing 2) and the UNSTRING statement (writing 2): An overflow condition has occurred. JMP0260I-U when ON OVERFLOW is not specified.
- WRITE statement of the print file: JMP0310I-I/U and JMP0320I-I/U (It is executed along with the execution result when the input-output error of the file occurs).

Action

Correct to store a correct character-code in the data item that refers to a detailed message code when executing it.

Specify the execute environment variable @CBR_CONVERT_CHARACTER=SYSTEM expressly when you want to obtain the result similar to before V11.0.

However, it is not possible to specify it by the program using the specification after V11.0.

Refer to environment variable information @CBR_CONVERT_CHARACTER on the user's guide for details.

2.2.2 Replacement character used by code conversion

Content

The replacement character used has changed when the character-code conversion corresponding to the character-code in the conversion origin does not exist.

- Before V10.4

Normal-width underscore "_"

- After V11.0

Normal-width question "?"

Action

Specify the execute environment variable information @CBR_CONVERT_CHARACTER=SYSTEM expressly.

However, it is not possible to specify it by the program using the specification after V11.0.

Refer to environment variable information @CBR_CONVERT_CHARACTER on the user's guide for details.

2.2.3 Change in severity code of message when application is executed

Content

The severity code of the message changed when the following applications were executed.

- Before V11.0

JMP0086I-E CHARACTER CODE CONVERSION FAILED. \$1 \$2

- After V11.0

JMP0086I-W CHARACTER CODE CONVERSION FAILED. \$1 \$2

Influence

The Return code (PROGRAM-STATUS) of the COBOL program changes with a change in the severity code.

Action

Refer to the Messages manual for additional details.

2.2.4 Interchangeable information regarding bug fixes

Here, it explains bug fixes corrected by NetCOBOL V10 or later version in which the operation of the NetCOBOL development environment changes in the following tables.

Table 2.2 Interchangeable information on bug fixes of NetCOBOL Runtime Environment

No.	V/L(*)	P number	Content
1	V10.1.0 to V10.4.0	PG97090	<p>The problem of not correctly replacing the alternative character specified for argument-2 was corrected when there was no national character corresponding to the character converted by the NATIONAL-OF function when the COBOL program was executed under the following conditions.</p> <ol style="list-style-type: none">1. It is a program compiled using compiler option RCS(UTF16,BE).2. And, the NATIONAL-OF function is used.3. And, Argument-2 is specified for the function of No.2. <p>And, data that is not alphanumeric characters is specified for argument-1 in No.2 above, and the code conversion error (there is no corresponding National character) occurs internally.</p>
2	V10.1.0 to V10.4.0	PG76651	<p>When all of the following conditions are met while executing a COBOL program, a size comparison of national items varying in length (national language edited item, including the intrinsic function) was incorrect.</p> <ol style="list-style-type: none">1. Compiler option RCS(UCS2,LE) or RCS(UTF16,LE) is specified.2. And, there is a size comparison of National item and National item or National language character constant.3. And, at least one side is an item with the ANY LENGTH clause is specified or reference modification.4. And, the length of the compared targets differs.
3	V10.1.0	PG77099	<p>Under the following conditions, the execution environment variable @CBR_SSIN_FILE=THREAD doesn't become effective, and one input file is shared by file input of ACCEPT statement in the process. (*)</p> <ol style="list-style-type: none">1. It is an application that operates by multi-thread.2. The execution environment variable @CBR_SSIN_FILE=THREAD is specified.3. ACCEPT statement is executed, and data is input from the file. <p>* : When the execution environment variable @CBR_SSIN_FILE=THREAD is specified, input file of each thread can be opened by file input of ACCEPT statement.</p>
4	V10.1.0	PG73346	<p>Under the following conditions, at the execution, Unnecessary zero string is set to four subordinate position digits of the hexadecimal character of eight digits buried under execution time message JMP0320I-I/U.</p> <ol style="list-style-type: none">1. File operation using COBOL file system (*) is done.2. Either of the following I/O statements is executed.

No.	V/L(*)	P number	Content
			<ul style="list-style-type: none"> - READ statement - WRITE statement - REWRITE statement - DELETE statement - START statement <p>3. The execution of I/O statement failed.</p> <p>* : It doesn't correspond when BSAM is specified.</p>
5	V10.1.0	PG79852	<p>Under the following conditions, when the message of the application error or execution time is generated in the running of COBOL application, the message that the following do not anticipate before outputting diagnostic report is output in COBOL Error Report.</p> <div style="border: 1px solid black; padding: 2px; margin: 5px 0;"> <p>There is no disk in the drive. Please insert the disk in the drive.</p> </div> <ol style="list-style-type: none"> 1. Environment variable @CBR_JUSTINTIME_DEBUG=NO is not specified. 2. The load module that operates in the process to be diagnosed makes DEBUG information file (*) (PDB file). 3. In the folder where the load module is stored in 2, there is no DEBUG information in 2. 4. The system that uses NetCOBOL drives the state that cannot be referred by the un-mount of virtual CD drive. 5. The drive character of the drive that makes DEBUG information file in 2 and the drive that cannot be referred in 4 is corresponding. <p>* : DEBUG information file (PDB file) is generated when the linkage option "/DEBUG" is specified.</p>
6	V10.1.0	PG79859	<p>Under the following conditions, when COBOL application is debugged by remote debugging facility of NetCOBOL Studio, the message that the following do not anticipate while debugging it is output.</p> <div style="border: 1px solid black; padding: 2px; margin: 5px 0;"> <p>There is no disk in the drive. Please insert the disk in the drive.</p> </div> <ol style="list-style-type: none"> 1. COBOL application is debugged by remote debugging facility of NetCOBOL Studio. 2. The load module that operates in the process to be diagnosed makes DEBUG information file (*) (PDB file). 3. In the folder where the load module is stored in 2, there is no DEBUG information in 2. 4. The system that uses NetCOBOL drives the state that cannot be referred by the un-mount of virtual CD drive. 5. The drive character of the drive that makes DEBUG information file in 2 and the drive that cannot be referred in 4 is corresponding. <p>* : DEBUG information file (PDB file) is generated when the linkage option "/DEBUG" is specified.</p>

*: V/L is a scope where the bug exists.

2.3 PowerFORM

Information described here applies to the following products.

- NetCOBOL Enterprise Edition V11.0.0 for Windows (64bit)

There is no information on interchangeability.

2.4 PowerBSORT

Information described here applies to the following products.

- NetCOBOL Enterprise Edition V11.0.0 for Windows (64bit)

There is no information on interchangeability.

2.5 J Adapter Class Generator

Information described here applies to the following products.

- NetCOBOL Enterprise Edition V11.0.0 for Windows (64bit)

There is no information on interchangeability.

Chapter 3 Program Fix List

In this software, the trouble that occurs by the version and level before is corrected.

This document explains the content of the correction corrected by this software of this version level.

3.1 NetCOBOL Development Environment

Information described here applies to the following products.

- NetCOBOL Enterprise Edition V11.0.0 for Windows (64bit)

Table 3.1 Program fix list for the NetCOBOL Development Environment

No.	V/L(*)	P number	Content
1	V10.1.0 to V10.4.0	PG98742	<p>When a COBOL program is executed, it might not behave correctly. Or while compiling the COBOL program, the compiler might terminate abnormally. The following conditions help identify when that situation might occur.</p> <p>[Condition 1]</p> <p>When a data item is declared either in WORKING-STORAGE SECTION, LOCAL-STORAGE SECTION (*1) or CONSTANT SECTION.</p> <ol style="list-style-type: none"> 1. When a group item of level-number 01 that has subordinate data item specifying the TYPE clause is defined. 2. And, in the group item of 1 REDEFINES clause is being specified. 3. And, when the length of the data item in 1 is smaller than the length of the data item being redefined in 2. <p>Or</p> <p>[Condition 2]</p> <p>When data item is declared in the FILE SECTION.</p> <ol style="list-style-type: none"> 1. When record description which includes the TYPE clause is being defined. 2. And, the file description entry that contains the record description entry of 4 contains two or more data description entries of level-number 01.(*2) 3. And, when the length of record description items in 4 is smaller than the length of record description items in 5. <p>*1: LOCAL-STORAGE SECTION functionality is supported in x64 V10.4 and later.</p> <p>*2: The record description item's area is redefined implicitly when more than 2 record description items are mentioned in the same file description items in the file section.</p> <p>Example 1)</p> <p>When a data item is declared either in WORKING-STORAGE SECTION, LOCAL-STORAGE SECTION or CONSTANT SECTION.</p> <pre> 01 D1 PIC X(20). *> SIZE 20 BYTE D1 is larger than D2. 01 D2 REDEFINES D1. *> SIZE 8 BYTE 02 D21 TYPE T1. *> SIZE 8 BYTE 01 T1 TYPEDEF. 02 TD1 PIC X(8). *> SIZE 8 BYTE </pre> <p>Example 2)</p> <p>When data items are declared in the FILE SECTION.</p>

No.	V/L(*)	P number	Content
			<pre> FD FILE1. 01 R1 PIC X(20). *> SIZE 20 BYTE R1 is larger than R2 01 R2 TYPE T2. *> SIZE 8 BYTE It is implicitly redefine *> and allocated in the same region as R1 and R2 01 T2 TYPEDEF. 02 TD2 PIC X(8). *> SIZE 8 BYTE </pre>
2	V10.4.0	PG99026	<p>When the following conditions [condition 1] or [condition 2] are met, during the execution of a COBOL program, the value of the index name might not be correct.</p> <p>[Condition 1]</p> <ol style="list-style-type: none"> 1. The LOCAL-STORAGE SECTION is utilized in the program. 2. And, the item that defined the index name is declared, one or more times, in the BASED-STORAGE SECTION, the FILE SECTION, and the WORKING-STORAGE SECTION. 3. And, neither CONSTANT SECTION nor the LINKAGE SECTION is declared. 4. And, when the program that contains the LOCAL-STORAGE Section is called two times or more. <p>Or</p> <p>[Condition 2]</p> <ol style="list-style-type: none"> 1. The item that describes the index name is declared in the LOCAL-STORAGE SECTION of the program. 2. And, either one or both the CONSTANT SECTION and the LINKAGE SECTION are defined. 3. And, when the program that contains the LOCAL-STORAGE index name is recursively called.
3	V10.1.0 to V10.4.0	PG99190	<p>When compiling a program which meets the following conditions, the compiler terminates abruptly after generating the following message (*1).</p> <p>(*1) JMN0124I-U This source file has an invalid character. The compilation is terminated. (substep-name=JMNALO, line-number=0.)</p> <ol style="list-style-type: none"> 1. Compilation option RCS(UTF16), ENCODE(UTF8,UTF16) or ENCODE(UTF8,UTF32) is specified. 2. And, compilation option CHECK(PRM),CHECK(ALL) or SAI is specified. 3. And, the encoding of the COBOL program is Shift_JIS. 4. And, a nonnumeric literal(except National character constant)is specified in the BY CONTENT phrase of CALL Statement or INVOKE Statement. 5. And, a national character is included in the nonnumeric literal of 4.
4	V10.1.0 to V10.3.0	PG90027	<p>Under the following conditions, when a COBOL project is imported, the following information might not be set.</p> <ul style="list-style-type: none"> - Compile options - Library names - Link options - Resource compiler options - Remote Development <p>Conditions:</p>

No.	V/L(*)	P number	Content
			<ol style="list-style-type: none"> 1. After NetCOBOL Studio starts, the dependency view is not opened. 2. And, an existing COBOL project is imported.
5	V10.1.0 to V10.4.0	PH00163	<p>Under the following conditions, the cobmkmf command might terminate abnormally.</p> <ol style="list-style-type: none"> 1. The COBFLAGS macro is specified for an operand of the cobmkmf command. 2. And, when you include the blank in the value of an optional command of the macro-definition-value of the COBFLAGS macro.
6	V10.2.0 to V10.4.0	PH00165	<p>Under the following conditions(*), the NetCOBOL Studio might terminate abnormally.</p> <p>* COBOL source file of this condition cannot be compiled.</p> <ol style="list-style-type: none"> 1. When the file is moved or copied by drag & drop between different projects, and the length of the character string of the full path of the receiving file is larger than 260. <p>Or,</p> <ol style="list-style-type: none"> 1. When the reference format of COBOL source is variable format. 2. And, the Analyze Dependency is executed from the context menu of the dependency view. Or Imports projects. 3. And, when COBOL source file of the following conditions is created. <ol style="list-style-type: none"> 3-1. When the COPY statements are conditions of either of the following. <ol style="list-style-type: none"> a-1. The text-name is specified with the COPY statement. a-2. And, the COB_LIBSUFFIX environment variable is not defined. Or when the value of the COB_LIBSUFFIX environment variable is "None". a-3. And, when the length of the character string of the text-name is larger than 256. Or, b-1. The text-name is specified with the COPY statement. b-2. And, the value of the COB_LIBSUFFIX environment variable is set to something other than "None". b-3. And, when the length of a set value of length + COB_LIBSUFFIX environment variable of the text name is larger than 259. Or, c-1. The text-name is specified with the COPY statement. c-2. And, the library-name is not specified by IN or OF of the COPY statement. c-3. And, LIB compiler option is specified. And, c-4. When the length of the character string of the text-name is larger than 255. Or, d-1. The text-name-literal is specified with the COPY statement. d-2. And, when the length of the character string of the text-name-literal is larger than 260. <p>Or,</p> <ol style="list-style-type: none"> e-1. XMDLIB or XFDLIB is specified for the library text with the COPY statement.

No.	V/L(*)	P number	Content
			<p>e-2. And, when the length of the character string of the text-name is larger than 256.</p> <p>Or,</p> <p>f-1. The text-name is specified with the COPY statement.</p> <p>f-2. And, the library-name is not specified by IN or OF of the COPY statement.</p> <p>f-3. And, the value of the COB_LIBSUFFIX environment variable is set to something other than "None".</p> <p>f-4. And, when the length of the character string of the text-name is larger than 260.</p> <p>Or,</p> <p>3-2. When the length of the class-name of the CLASS-ID paragraph is larger than 256.</p> <p>Or,</p> <p>3-3. When the length of the class name of a class-specifier in the REPOSITORY paragraph is larger than 256.</p>
7	V10.1.0 to V10.4.0	PG76651	<p>When all of the following conditions are met while executing a COBOL program, a size comparison of national items varying in length (national language edited item, including the intrinsic function) was incorrect.</p> <ol style="list-style-type: none"> 1. Compiler option RCS(UCS2,LE) or RCS(UTF16,LE) is specified. 2. And, there is a size comparison of National item and National item or National language character constant. 3. And, at least one side is an item with the ANY LENGTH clause is specified or reference modification. 4. And, the length of the compared targets differs.
8	V10.1.0	PG78440	<p>Under the following conditions, the COBOL execution results are incorrect.</p> <ol style="list-style-type: none"> 1. The BINARY(BYTE) or BINARY(WORD,MLBOFF) compile option is specified. 2. And, the following intrinsic functions exist. <ul style="list-style-type: none"> - [A] <ul style="list-style-type: none"> - FUNCTION MAX - FUNCTION MIN - FUNCTION MEAN - FUNCTION MEDIAN - FUNCTION RANGE - [B] <ul style="list-style-type: none"> - FUNCTION ANNUITY - FUNCTION NUMVAL - FUNCTION NUMVAL-C - FUNCTION RANDOM 3. And, the arguments of function 2) above all are fixed point of 9 digits or less. 4. And, the number of arguments in [A] above is 4 or more.

No.	V/L(*)	P number	Content
9	V10.1.0 to V10.4.0	PG88616	<p>When [condition 1] or [condition 2] shown below occurs during the compilation of a COBOL program, there are times when the COBOL compiler outputs a wrong message such as the following.</p> <ul style="list-style-type: none"> - JMN1019I-W line-no marked area should be '-', '*', '/', 'D' or space. Will be taken as space. - JMN1123I-S line-no not allowed word 'nnn' appeared. Will be disabled till next recognizable clause, paragraph, section or division. - JMN1255I-S line-no 01 without specifying the item level 02 - 49 level item is specified. Will be taken as 01 level. - JMN1356I-W line-no header part incorrect word 'nnn' is specified. Will be disabled till next paragraph or division. <p>line-no: line number nnn: Number</p> <p>The above messages are examples and not a comprehensive list of all the possible messages.</p> <p>[condition 1]</p> <ol style="list-style-type: none"> 1. The COBOL program that includes the embedded SQL statement is being pre-compiled using the precob command of the Oracle Pro*COBOL., 2. And, the COBOL program is being created from the Pro*COBOL program of 1 above using the INSDBINF command,. 3. And, the COBOL program created in 2 above is compiled by specifying compile option "NUMBER". <p>Or [condition 2]</p> <ol style="list-style-type: none"> 1. The COBOL program (including the embedded SQL) is being pre-compiled after option "-g" is specified in the sqlpcob command of Symfaware. 2. And, the COBOL program created in 1 above is compiled by specifying compile option "NUMBER".
10	V10.1.0 to V10.4.0	PG89665	<p>When all of the following conditions are met, error messages are output during the compilation and the COBOL program cannot be compiled.</p> <p>JMN2206I-S KEY IS clause's data name 'xxxxx' cannot be an address variable item.</p> <ol style="list-style-type: none"> 1. The KEY IS specification of the OCCURS clause is being described. 2. And, the data name specified in 1 above is at a variable position in the records.
11	V10.1.0 to V10.4.0	PG81806	<p>When all of the following conditions are met during compilation of the COBOL program, the COBOL compiler terminates abnormally.</p> <ol style="list-style-type: none"> 1. Any of the following statements is described. <ul style="list-style-type: none"> - CALL STATEMENT - CANCEL STATEMENT - INVOKE STATEMENT - STRING statement/UNSTRING statement specified with a CSV-FORMAT 2. And, the statement in 1 above is being described in the conditional statement. 3. And, the hierarchy (*1) of the conditional statement in 2 above is more than 180.

No.	V/L(*)	P number	Content
			<p>*1: In the following code, hierarchy 1 is the EVALUATE statement and hierarchy 2 is the COMPUTE statement.</p> <pre data-bbox="608 320 1406 544" style="border: 1px solid black; padding: 5px;"> EVALUATE WHEN COMPUTE ON SIZE ERROR CALL END-COMPUTE END-EVALUATE </pre> <p>However, depending on the amount of computer memory, there may be no abnormal termination.</p>
12	V10.1.0 to V10.3.0	PG92450	<p>When all of the following conditions are met during execution of a program with a valid OPTIMIZE compile option, there is a move of wrong character (zero) in the leading zero string in the compilation option OPTIMIZE in regards to a numeric edited move with zero suppression.</p> <ol style="list-style-type: none"> 1. Compilation option OPTIMIZE (*1) is enabled. 2. And, a statement to move to the numeric edited item is described. 3. And, in the 100 lines before the position of the statement described in 2 above, the following are not described. <ul style="list-style-type: none"> - section - paragraph - conditional statement - procedure branching statement (*3) 4. And, in the numeric edited item of 2 above only zero suppression is specified in the edited method (in the string of the PICTURE clause a combination of '9', 'Z', '*' is used). <p>*1: The default value of the compile option is NOOPTIMIZE.</p> <p>*2: The comment line and the blank line are not counted. Since this is affected by the internal condition of the compiler, there are times when a correct move is performed even after it matches with the occurrence conditions.</p> <p>*3: Points to the statement that explicitly transfers the control to the statement.</p>
13	V10.1.0 to V10.4.0	PG97116	<p>When all of the following conditions are met during the compilation of the COBOL program, the compiler terminates abnormally and outputs the following message.</p> <p>The compilation process cannot be continued. If other diagnostic messages have been generated, correct those errors and try the compilation again. (substep-name=JMNRL, module-name=SABEMAC, detailcode=6202, line-number=nnn).</p> <ol style="list-style-type: none"> 1. Compilation option BINARY(BYTE) is specified. 2. And, MAX function or MIN function with numeric as argument is described. 3. And, the argument of function of 2 above is 3 or less. 4. And, the binary item is being specified in the argument of 2 above. 5. And, the area length of the binary item of 4 above, is 1, 3, 5, 6 or 7 bytes (*1). 6. And, the number of digits (*2) of the temporary data item string in the function value of function of 2 above is greater than 19 and less than 30. 7. And, the constant is not specified in the argument of 2 above.

No.	V/L(*)	P number	Content																				
			<p>8. And, in the argument of 2 above, the floating-point data item is not being specified.</p> <p>9. And, in the argument of 2 above, the item subscripting ALL is not specified.</p> <p>*1: The following binary items apply.</p> <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th rowspan="2">digit count</th> <th colspan="2">Allocated area length</th> </tr> <tr> <th>Signed</th> <th>Unsigned</th> </tr> </thead> <tbody> <tr> <td>1 - 2</td> <td>1 - 2</td> <td>1</td> </tr> <tr> <td>5 - 6</td> <td>5 - 7</td> <td>3</td> </tr> <tr> <td>10 - 11</td> <td>10 - 12</td> <td>5</td> </tr> <tr> <td>12 - 14</td> <td>13 - 14</td> <td>6</td> </tr> <tr> <td>15 - 16</td> <td>15 - 16</td> <td>7</td> </tr> </tbody> </table> <p>*2: The temporary data item stored in the function value becomes the following digit count.</p> <ul style="list-style-type: none"> - Integer part line = Maximum value in the integer part of the entire argument - Decimal part digit count = Maximum value in the decimal part of the entire argument 	digit count	Allocated area length		Signed	Unsigned	1 - 2	1 - 2	1	5 - 6	5 - 7	3	10 - 11	10 - 12	5	12 - 14	13 - 14	6	15 - 16	15 - 16	7
digit count	Allocated area length																						
	Signed	Unsigned																					
1 - 2	1 - 2	1																					
5 - 6	5 - 7	3																					
10 - 11	10 - 12	5																					
12 - 14	13 - 14	6																					
15 - 16	15 - 16	7																					
14	V10.2.0	PG64947	<p>Under the following conditions, the remote server connection fails.</p> <ol style="list-style-type: none"> 1. When it log in the client, login ID of client (Windows) contains the character treated as a special character with the shell of a remote server. 2. The NetCOBOL Studio of the client is started, and either is operated as follows. <ul style="list-style-type: none"> - Select the project > Property > Remote Development, and click the Browse button. - Select the project > Remote Development > Makefile Creation. 																				
15	V10.2.0	PG70814	<p>Under the following conditions, the message (<error occurred retrieving value>) is output at the remote debugging time.</p> <ol style="list-style-type: none"> 1. The NetCOBOL development package for Windows is installed in the client. 2. Server OS is Windows Server 2008 R2. 3. The NetCOBOL development package for Windows (x64) is installed in the server. 4. The server is set for remote development. 5. Debug your application on the server side by using remote debug function of NetCOBOL Studio. 6. The data item is added to the Watch view. 7. Use any of the following methods to perform unconditional execution: <ul style="list-style-type: none"> - Select Run > Resume from the menu bar - Press the F8 shortcut key. <p>The program is executed to the last.</p>																				
16	V10.1.0 to V10.2.0	PG83344	<p>Under the following conditions, the INSDBINF command terminates abnormally, or the COBOL program that INSDBINF command output is not correctly compiled.</p> <ol style="list-style-type: none"> 1. Pro*COBOL is used. 2. The character code of COBOL source program is UTF-8. 																				

No.	V/L(*)	P number	Content
			3. The national character (3byte character) is described in COBOL source program.
17	V10.2.0	PG84741	<p>Under the following conditions, the precompiler link information or the resource compiler options are not saved in the COBOL projects.</p> <ol style="list-style-type: none"> 1. Open the properties dialog box of the COBOL project by using NetCOBOL Studio, and change the set value on either of the following pages: <ul style="list-style-type: none"> - Target page - Build > Compiler Options page - Build > COBOL Library name page - Build > Linker Options page 2. The OK button of the properties dialog is not clicked. 3. It changes to either of the following pages: <ul style="list-style-type: none"> - Build Tool > precompiler page - Build Tool > resource compiler page <p>The set values are changed, and the OK button of the properties dialog is clicked.</p>
18	V10.2.0	PG84944	<p>Under the following conditions, the linker outputs the following message.</p> <div style="border: 1px solid black; padding: 5px; margin: 5px 0;"> <pre>xxxx: warning LNK4042: object specified more than once; extras ignored</pre> </div> <p>xxxx is a file name corresponding to the kind of the DLL entry object.(*1)</p> <ol style="list-style-type: none"> 1. Open the properties dialog box of the COBOL project by using NetCOBOL Studio, and set the following in the Target pages <ul style="list-style-type: none"> - Select Dynamic-link library in the Target type, and - Select Using the runtime initialization (COBOL85.CBR) under DLL. <p>*1:</p> <ul style="list-style-type: none"> - Select For COBOL program only in DLL Entry Object <div style="border: 1px solid black; padding: 5px; margin: 5px 0;"> <pre><NetCOBOL installation folder\F4AGCBDM.obj></pre> </div> <ul style="list-style-type: none"> - Select For linking with non-COBOL Program in DLL Entry Object <div style="border: 1px solid black; padding: 5px; margin: 5px 0;"> <pre><NetCOBOL installation folder\F4AGMLDM.obj></pre> </div> <p>Even if this message is output, the dynamic link library can be correctly executed.</p>
19	V10.1.0 to V10.2.0	PG85966	<p>Under the following conditions, a wrong debugging information file is created, and the COBOL program cannot be debugged.</p> <ol style="list-style-type: none"> 1. The compilation option TEST is valid. 2. The text-name literal is specified for the COPY statement. 3. The library(*1) taken by the COPY statement in 2 contains the COPY statement for which text name is specified. 4. The compiler terminates abnormally.(*2) <p>*1: When the nested library, the library is either of library to the last hierarchy. *2: COBOL compiler returns return codes other than 0-3 without outputting the compiler message.</p>

No.	V/L(*)	P number	Content
20	V10.1.0 to V10.2.0	PG86728	<p>Under the following conditions, the compiler outputs an unjustified compile message.</p> <div style="border: 1px solid black; padding: 5px; margin: 5px 0;"> <p>The interface for method 'mmmmm' must conform to that of the overridden method. Method 'mmmmm' is ignored.</p> </div> <ol style="list-style-type: none"> 1. The OVERRIDE clause is specified in the Method definition. 2. The method in 1) and the method of the same name are in the parent class. When the USING parameter specified for each method meets the following requirements. <ol style="list-style-type: none"> a. The parameter of the other method is a group item. And the parameter of the other side method is group item or an alphanumeric item. b. The size of the parameter is the same.
21	V10.2.0	PG84745	<p>Under the following conditions 1 or conditions 2, you cannot refer to the value of the data item of the national characters added to the Watch view at debugging time. NetCOBOL Studio outputs message "Cannot evaluate the value".</p> <p>[Common conditions]</p> <ol style="list-style-type: none"> 1. The NetCOBOL development package for Windows (x64) is installed. 2. The NetCOBOL development package for Linux(x64) or Solaris is installed in the server. 3. The server is set for remote development. <p>[Conditions 1]</p> <ol style="list-style-type: none"> 1. A program is local debugged by NetCOBOL Studio. 2. A program is remotely debugged without rebooting NetCOBOL Studio. 3. The data item of national characters is added to the Watch view by the debugging operation in 2. <p>[Conditions 2]</p> <ol style="list-style-type: none"> 1. A program is remotely debugged by NetCOBOL Studio. 2. A program is local debugged without rebooting NetCOBOL Studio. 3. The data item of national characters is added to the Watch view by the debugging operation in 2.
22	V10.1.0 to V10.2.0	PG88107	<p>Under the following conditions, COBOL compiler terminates abnormally and outputs the following message.</p> <div style="border: 1px solid black; padding: 5px; margin: 5px 0;"> <p>JMN0102I-U The compilation process cannot be continued. If other diagnostic messages have been generated, correct those errors and try the compilation again. (substep-name=JMN300, module-name=SC30MKTT, detailcode=3209, line-number=nnn)</p> </div> <p>When there is either of the following statements:</p> <ul style="list-style-type: none"> - Statement that move a numeric item only of decimal-part to the BINARY-CHAR/SHORT/LONG/DOUBLE data item - Statement that move a temporary operational result to the BINARY-CHAR/SHORT/LONG/DOUBLE data item
23	V10.1.0 to	PG88615	<p>Under the following conditions, the compiler outputs an unjustified compile message (JMN1477I-I).</p>

No.	V/L(*)	P number	Content
	V10.2.0		<ol style="list-style-type: none"> 1. The SPECIAL-NAMES paragraph is declared. 2. The coding mistake of severity code S is found in special-names paragraph. <p>Note: Even if it satisfies all of the conditions, this event might not occur according to the state of the memory.</p>
24	V10.2.0	PG88994	<p>Under the following conditions, the compilation terminates abnormally.</p> <ol style="list-style-type: none"> 1. A special class of early binding is specified. 2. The method of the class in 1) is invoked by an in-line invocation.
25	V10.1.0 to V10.2.0	PG88850	<p>Under the following conditions, the execution results were incorrect.</p> <ol style="list-style-type: none"> 1. Compilation option OPTIMIZE is valid. 2. The following data items are declared. <ol style="list-style-type: none"> a. The data item is either of the following attributes: <ul style="list-style-type: none"> - Binary item of 18 digits or less - Index data item b. It is a data item in the following records: <ul style="list-style-type: none"> - A record which specified the EXTERNAL phrase - A record of file which specified the EXTERNAL phrase - A record of file of object definition and factory definition - A record of WORKING-STORAGE section of object definition and factory definition c. The OCCURS phrase is not specified. d. The data item is not subordinate to the group item in which the OCCURS phrase is specified. e. The position of the data item in the record is not a back of the item in which the OCCURS DEPENDING ON phrase is specified. 3. On procedure division, the data item that overlaps with the data item in 2) is not used. 4. On procedure division, the value is set to the data item in 2).

*: V/L is a scope where the bug exists.

3.2 NetCOBOL Runtime Environment

Information described here applies to the following products.

- NetCOBOL Enterprise Edition V11.0.0 for Windows (64bit)

Table 3.2 Program fix list for the NetCOBOL Runtime Environment

No.	V/L(*)	P number	Content
1	V10.1.0 to V10.4.0	PG76651	<p>When all of the following conditions are met while executing a COBOL program, a size comparison of national items varying in length (national language edited item, including the intrinsic function) was incorrect.</p> <ol style="list-style-type: none"> 1. Compile option RCS (UCS2,LE) or RCS (UTF16,LE) is specified.

No.	V/L(*)	P number	Content
			<p>2. And, there is a size comparison of a National item and a National item or National language character constant.</p> <p>3. And, at least one side is an item with the ANY LENGTH clause is specified or reference modification.</p> <p>4. And, the length of the compared targets differs.</p>
2	V10.1.0 to V10.4.0	PG88590	<p>Under the following conditions, the SORT statement may carry out an infinite loop.</p> <ol style="list-style-type: none"> 1. PowerBSORT is not installed. 2. The record length of the SORT file or MERGE file is 21477 to 21484 bytes. 3. The SORT statement or MERGE statement is executed.
3	V10.1.0 to V10.4.0	PG91976	<p>Under the following conditions, the OPEN statement terminates abnormally. (*) (EXCEPTION_ACCESS_VIOLATION)</p> <p>*: The occurrence frequency depends on the state of the memory.</p> <ol style="list-style-type: none"> 1. A line sequential file or print file without a FORMAT clause. 2. Using a File Identifier in the ASSIGN Clause. 3. The file is not allocated in the file identifier. 4. The OPEN statement in 1 above is executed.
4	V10.1.0 to V10.4.0	PG96520	<p>Under the following conditions, the message that should be outputted to a trace information file is outputted to a file that is not a trace information file (a socket is included).</p> <ol style="list-style-type: none"> 1. A TRACE function is used. 2. The file name of the same trace information is specified from two or more processes.
5	V10.1.0 to V10.4.0	PG97090	<p>Incorrectly replacing the alternative character specified for argument-2 when there is no national character corresponding to the character converted by the NATIONAL-OF function when the COBOL program is executed under the following conditions.</p> <ol style="list-style-type: none"> 1. It is a program translated specifying translation option RCS (UTF16,BE),. 2. And, the NATIONAL-OF function is used. 3. And, argumen-2 is specified in the function of 2 above. 4. And, data that is not alphanumeric characters is specified for argument-1 specified for the function of No.2, and the code conversion error (there is no corresponding National character) occurs internally.
6	V10.1.0 to V10.2.0	PG82410	<p>Under the following conditions, the SORT statement fails and outputs the following message.</p> <div style="border: 1px solid black; padding: 5px; margin: 10px 0;"> <p>JMP0601-I/U SORT OR MERGE STATEMENT ERROR. CODE=208.</p> </div> <ol style="list-style-type: none"> 1. PowerBSORT is not installed. 2. The folder name that exceeds 113 bytes (*1) is specified for environment variable BSORT_TMPDIR or TEMP 3. The SORT statement (*2) is executed. <p>*1: Lengths except "\" of end</p> <p>*2: The phenomenon might not be generated by the size of input file or record.</p>

No.	V/L(*)	P number	Content
7	V10.1.0 to v10.2.0	PG83883	<p>Under the following conditions, the opening of the file fails in the execution of the COBOL file access subroutine.</p> <ul style="list-style-type: none"> - Error Number: FA_EFNAME(114) - I-O Status : 90 <ol style="list-style-type: none"> 1. The COBOL file access subroutine inputs and outputs the index file. 2. As for API function (*1), the following are specified. <ul style="list-style-type: none"> - The file name is enclosed with the double quotation mark. and - The NULL pointer is specified for the record key list. (*2) 3. The API function in 2 is executed. <p>*1:</p> <ul style="list-style-type: none"> - cobfa_open - cobfa_openW <p>*2: If the NULL pointer is specified for the record key list to open an indexed file, this function automatically identifies the key list structure, record format, and record length of an existing file, and opens the file.</p>
8	V10.1.0 to V10.2.0	PG84084	<p>Under the following conditions, the OPEN statement fails and either of the following messages is output. (*)</p> <ul style="list-style-type: none"> - EXCEPTION_ACCESS_VIOLATION - JMP0311I-I/U 'INVALID PATH-NAME' - JMP0310I-I/U 'NON-FILE' <ol style="list-style-type: none"> 1. The COBOL file is specified with UNC. 2. The OPEN statement in 1 is executed.. <p>*: The occurrence frequency depends on the state of the memory.</p>
9	V10.1.0 to V10.2.0	PG84545	<p>Under the following conditions, COBOL file utility outputs the following message and recovery fails.</p> <div style="border: 1px solid black; padding: 5px; margin: 10px 0;"> <pre>System error occurred. code = 0x44</pre> </div> <ol style="list-style-type: none"> 1. cobfrcov command is used. 2. The path name including the comma (,) is specified for the unrecoverable-data-file-name.
10	V10.1.0 to V10.2.0	PG87520	<p>Under the following conditions, The move result by internal Bool item is incorrect.</p> <p>Note: The move result is different according to the state of the area allocated just behind the sending data item.</p> <p>[Condition 1]</p> <ol style="list-style-type: none"> 1. Move from the internal Boolean item to the internal Boolean item. 2. Data starting location (*) of the sending data item is different from data starting location of the receiving data item. 3. [a] + [b] > 32, or [c] + [d] > 32 a: Data starting location (*) of the sending data item

No.	V/L(*)	P number	Content
			<p>b: The length of sending data item or the length of receiving data item, whichever is smaller.</p> <p>c: Data starting location (*) of the receiving data item</p> <p>d: The length of receiving data item</p> <p>4. The receiving data item is subordinate to the group item.</p> <p>5. Data starting location of the receiving data item is not byte boundary of the group item in 4.</p> <p>6. "Bit length of sending data item" < " Bit length from bit data starting location on the receiving side to the first byte boundary "</p> <p>7. The bit data of the sending data item steps over byte boundary, or there is byte boundary between from starting locations of the sending data item to "Bit length from bit data starting location on the receiving side to the first byte boundary" in 6.</p> <p>*: relative bit position in byte</p> <p>Example of Condition 1</p> <div style="border: 1px solid black; padding: 5px; margin: 10px 0;"> <pre> DATA DIVISION. WORKING-STORAGE SECTION. 01 DATA1. 02 DATA1-1 PIC 1(5) BIT. 02 DATA1-2 PIC 1(4) BIT. 02 DATA1-3 PIC 1(7) BIT. 01 DATA2. 02 DATA2-1 PIC 1(1) BIT. 02 DATA2-2 PIC 1(32) BIT. 01 ANS-DATA PIC 1(32) BIT VALUE B"1111". PROCEDURE DIVISION. MOVE X"FFFF" TO DATA1. MOVE DATA1-2 TO DATA2-2. IF DATA2-2 = ANS-DATA THEN DISPLAY "OK" ELSE DISPLAY "NG" *> B"11111110-00000000" END-IF. </pre> </div> <p>[Condition 2]</p> <p>1. Move from the internal Boolean item to the internal Boolean item.</p> <p>2. The sending data item or the receiving data item is referred by the subscript.</p> <p>3. "The length of receiving data item" > 1</p> <p>4. It is either the following.</p> <ul style="list-style-type: none"> - "The length of sending data item" > 1 - The receiving data item is referred by the subscript. - "The length of receiving data item" > 25 <p>5. There is not the data starting location of the receiving data item on byte boundary.</p> <p>6. "Bit length of sending data item" < " Bit length from bit data starting location on the receiving side to the first byte boundary "</p> <p>7. The bit data of the sending data item steps over byte boundary, or there is byte boundary between from starting locations of the sending data item to "Bit length</p>

No.	V/L(*)	P number	Content
			<p>from bit data starting location on the receiving side to the first byte boundary" in 6.</p> <p>Example of Condition 2</p> <pre> DATA DIVISION. WORKING-STORAGE SECTION. 01 DATA1. 02 DATA1-1 PIC 1(5) BIT. 02 DATA1-2 PIC 1(4) BIT. 02 DATA1-3 PIC 1(7) BIT. 01 DATA2. 02 DATA2-1 PIC 1(10) BIT OCCURS 5 TIMES. 01 ANS-DATA PIC 1(10) BIT VALUE B"1111". 01 CNT PIC 9 VALUE 2. PROCEDURE DIVISION. MOVE X"FFFF" TO DATA1. MOVE DATA1-2 TO DATA2-1(CNT). IF DATA2-1(CNT) = ANS-DATA THEN DISPLAY "OK" ELSE DISPLAY "NG" *> B"111111110-00000000" END-IF. </pre>

*: V/L is a scope where the bug exists.

3.3 PowerFORM

Information described here applies to the following products.

- NetCOBOL Enterprise Edition V11.0.0 for Windows (64bit)

Program fix list for the PowerFORM

No.	V/L(*)	P number	Content
1	V10.1.0	PG63410	<p>Print may fail when using the form descriptor.</p> <ol style="list-style-type: none"> 1. Define UPC-A, UPC-E, or EAN-13 Barcode Field. 2. And, properties of whole fields make the following equation true. $(S - L + (N * 5)) \text{ mod } 256 = 255$ <p>where: S is the sum of data length. L is data length of last field in record list. N is the field count.</p> 3. And, set add-on data to barcode field of 1, and add record of the add-on data to end of record list.
2	V10.1.0	PG66643	<p>Printer output or output preview may print out the characters longer than the value of Field Length under the following condition:</p> <ol style="list-style-type: none"> 1. Font Pitch is not specified. And, 2. Use fixed font(e.g. MS Mincho). And, 3. "CORRECTPOS FLD" definition exists in Print Information File and the data length is longer than Field Length, or "CORRECTPOS ALL" definition exists there.

No.	V/L(*)	P number	Content
3	V10.1.0	PG69450	<p>Print or print preview may occasionally fail with error code 18 or 21, with the following detail codes:</p> <ul style="list-style-type: none"> * 18-42d1-00000005-00000000 * 21-02b6-00000005-00000000 * 18-0011-00000005-00000000 <p>under the following condition:</p> <ol style="list-style-type: none"> 1. Run more than one print process using following features: <ul style="list-style-type: none"> - expansion/reduction print - Bitmap Field - Print Preview
4	V10.1.0	PG77501	<p>NetCOBOL uninstaller will not remove the files used by PowerFORM RTS under the following condition:</p> <ol style="list-style-type: none"> 1. Run the uninstaller as a user different than the user that did the install.
5	V10.1.0	PG78189	<p>It may abort logging for the job despite not reaching to the maximum size of the log for form features per job under the following condition:</p> <ol style="list-style-type: none"> 1. Trace log storage folder (MEFTLOGROOT) is specified. And, 2. The size of at least one of media data, overlay descriptor, form descriptor, or print information file is greater than or equal to 1048576 bytes. And, 3. The file size value makes the following inequation true. $\text{"FLOOR}((\text{File_Size_In_Bytes} \text{ MOD } 65536) / 1024) * 1024 > \text{Maximum_Size_Of_The_Log_Per_Job}[\text{MEFTLOGSIZEP}]"$
6	V10.1.0	PG84734	<p>When printing from print preview window, the setting defined by program interfaces may be disabled, which results in omitting partitions and/or fields, and/or throwing one or more errors, under the following condition:</p> <ol style="list-style-type: none"> 1. The sum of the count of partition output interface calls per form print unit exceeds 65535. And, 2. Open print preview window. And, 3. Click [Print] button to print it out. <p>On condition that it may not occur depending on the memory usage.</p>
7	V10.1.0	PG95041	<p>Printer output or output preview may fail with 44 notification code, or may print the form without printing the images, depending on the type of printer, under the following conditions:</p> <p>[Condition 1]</p> <ol style="list-style-type: none"> 1. Use the form definition with one or more bitmap fields. And, 2. Printer resolution value is less than 1440. And, 3. 1440 can be divided by the resolution value (e.g.. 300dpi). And, 4. Vertical or horizontal size of the image is 1px. <p>Or,</p> <p>[Condition 2]</p> <ol style="list-style-type: none"> 1. Use the form definition with one or more bitmap fields. And,

No.	V/L(*)	P number	Content
			2. Printer resolution value is greater than 1440. And, 3. Vertical or horizontal size is less than or equal to the result of dividing the resolution by 1440.
8	V10.1.0	PG95043	Despite the printability of the max 99999 of pages, the pages more than #1000 won't be actually printed out under the following conditions: 1. Display the print dialog box with the following settings: - Set MEFTDLG environment variable to "Y". or, - Set SETPRTDIALOG in Print Information File to "2" or "3". 2. And, Specify the value more than or equal to 1000 for the range of pages in the print dialog box.

*: V/L is a scope where the bug exists.

3.4 PowerBSORT

Information described here applies to the following products.

- NetCOBOL Enterprise Edition V11.0.0 for Windows (64bit)

There is no information on the program correction.

3.5 J Adapter Class Generator

Information described here applies to the following products.

- NetCOBOL Enterprise Edition V11.0.0 for Windows (64bit)

Table 3.3 Program fix list for the J Adapter Class Generator

No.	V/L(*)	P number	Content
1	V10.2.0 to V10.4.0	PG94539	When all of the following conditions are met, the Java2cob command outputs the following diagnostic message and cannot generate COBOL source. Java VM could not be started. Check the JDK environment definition (PATH, CLASSPATH) and JDK installation. 1. The adaptor class generator of the NetCOBOL development package for Windows(x64) is installed. 2. And, it Fujitsu JDK for Windows(x64) is not installed. 3. And, Oracle JDK for Windows(x64) is installed . 4. And, the java2cob command was executed.

*: V/L is a scope where the bug exists.

Chapter 4 Notes to consider when a Japanese native application is converted to run globally

This chapter describes what is involved in taking a Japanese native application global.

4.1 Assumption

The program resources and run time code-set are made by Unicode.



See

Refer to "Unicode" of "NetCOBOL User's Guide" for details.

4.2 Environments

There are following notes in the environments.

- This product must only be installed in a folder which has the only ASCII character set.
- When COBMKMF is used, the character outside ASCII cannot be used for the file name and the folder name of program resources.

4.3 Languages

The language used by this product (GUI, messages, etc.) is determined according to the setting of the display language of the execution environment of the Windows system.

By default, if the set display language cannot be used, English is selected as the default

The default of the display language of the user account can be set depending on the following criteria.

- For Windows 8 and beyond, Windows Server 2012
"Language" of Control Panel
- Windows 7 Enterprise/Ultimate, Windows Server 2008 R2
"Keyboards and Languages" tab of "Region and Language" of Control Panel
- The other edition of Windows 7

Note that for the other editions of Window 7, the display language default cannot be set by the Control Panel. Usually, the display language of the Windows system is the default of the display language of the user account.

Compilation messages

In this compiler, in accordance with the UI language during compilation, the COBOL command messages are set to Japanese or English, accordingly.

Runtime messages

The language of the Runtime Error Messages is decided when the runtime environment is established.

If there is no message of an applicable language, a Runtime Error Message is displayed in English.

NetCOBOL Studio

- When you use NetCOBOL Studio, define the applicable language of OS when the NetCOBOL product is installed, the system locale (This is set on the "Administrative" of "Region and Language" dialog box of the Control Panel), the display language (This is set on the "display language" of the Control Panel), and the language of the Format (This is set on the "Formats" of "Region and Language" dialog box of the Control Panel).

- Match the language of the client to the language of the server when you use the remote development function of NetCOBOL Studio. When the language of the client and the server is different, the message of the server might not be able to be displayed with NetCOBOL Studio of the client.

PowerFORM

When you use PowerFORM, define the same OS language for the system locale (This is set on the "Administrative" of "Region and Language" dialog box of the Control Panel) and the display language (This is set on the "display language" of the Control Panel) when the NetCOBOL product is installed.

4.4 Feature difference with Japanese version

In NetCOBOL, there are a Japanese version and a Global version. This product is a Global version.

This section explains the feature differences between a Japanese version and a Global version.

4.4.1 Related products

The following NetCOBOL family products are not supported.

- FORM
- MeFt/Web

The following Fujitsu products are not supported.

- Interstage Charset Manager
- Interstage List Works
- Interstage Business Application Server
- PowerRDBconnector
- INTARFRM



Note

For the following products, the name is different with the Japanese version.

Global version	Japanese version
PowerFORM RTS	MeFt
PowerBSORT	PowerSORT

4.4.2 Specifications

The following specifications are different with the Japanese version.

Currency symbol

In this compiler, currency sign of OS is used as Currency Symbol character.

If character other than the currency sign of OS is used, the method of specifying may differ based on the character intended to use.

- Characters with same code as \$(X'24') or \ (X'5C')
- Specified with/based on compile option CURRENCY.



See

Refer to "CURRENCY(currency symbol handling)" of "NetCOBOL User's Guide" for details.

- 1 byte character other than this
CURRENCY SIGN clause is used, specified inside the source program.



See

Refer to "CURRENCY SIGN clause" of "NetCOBOL Language Reference" for details.



Note

- Characters consisting of multiple bytes cannot be used as currency symbol character. For possible characters that can be used as currency symbol, please refer "CURRENCY SIGN clause" of COBOL Language Reference.
- If currency sign of OS cannot be used as currency symbol, in that case \ (X'5C') will be taken as currency symbol.
- If data is passed between compilation units with different currency symbols, results might not be as expected. Specify the compilation option CURRENCY or CURRENCY SIGN clause to use the same currency symbol.

Handling of National item spaces

In this compiler, National item space (Trailing Blank and Figurative Constant SPACE) of Unicode encoding is handled as alphabetic spaces (U+0020).

Specify compilation option NSP, if national spaces are to be changed.



See

Refer to "NSP(Handling of spaces related to national item)" of "NetCOBOL User's Guide" for details.



Note

If data is passed between compilation units with different National item spaces, results might not be as expected. Specify the compilation option NSP, and use the same national item space.

Printing font

If you use a print file without a FORMAT clause, a default font name according to the setting of the display language of the execution environment of the Windows system will be used.

When the display language is Japanese, the default font name is "MS Mincho, MS Gothic" and with any other language, the default font name is "Courier New".

In this scenario, the printing font value can be changed by the environment variables.



See

Refer to "Printing" of "NetCOBOL User's Guide" for details.

4.4.3 PowerFORM

- The following function is not supported in Global version.
 - Making of Form Descriptors (PXD) for Class Interface.
 - Selection of Target System of the overlay pattern table. Target System becomes Windows fixed.
 - Overlay conversion of Template Image.
- When PowerFORM is used, the only ASCII characters can be used.
- When Form Descriptors is edited, the initial values of the size of the form and the font-name, etc. are different.

4.4.4 PowerFORM RTS

When the Form is output in a Global version, it is necessary to specify the following.

- Specify Unicode for an application code.



.....
Refer to "How to Use PowerFORM RTS" of "PowerFORM Runtime Reference" for details.
.....

- Specify the font name by an English name.



.....
Refer to "Appendix C. Printer Information File" of "PowerFORM Runtime Reference" for details.

- MAPFONT (Map font names)
-

- Specify the printer information file to which BOM(UTF-8) is added.



.....
Refer to "Chapter 5. Printer Information File" of "PowerFORM Runtime Reference" for details.
.....

- Specify "USECHARTYPE UNI" with the printer information file. Adjust each character-code by "UNICODEN" and "UNICODEW" when the output result is not correct.



.....
Refer to "Appendix C. Printer Information File" of "PowerFORM Runtime Reference" for details.

- USECHARTYPE (Unicode full-width/half-width character table)
 - UNICODEW (Unicode full-width character range)
 - UNICODEN (Unicode half-width character range)
-

- The default value of the font name is different according to the locale.



See

.....
Refer to "Appendix C. Printer Information File" of "PowerFORM Runtime Reference" for details.

- MAPFONT (Map font names)
-