

FUJITSU Software

NetCOBOL V11.0.0



Release Notes

Windows

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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(R) Windows Server(R) 2012 R2 Datacenter Microsoft(R) Windows Server(R) 2012 R2 Standard Microsoft(R) Windows Server(R) 2012 R2 Essentials Microsoft(R) Windows Server(R) 2012 R2 Foundation	Windows Server 2012 R2
Microsoft(R) Windows Server(R) 2012 Datacenter Microsoft(R) Windows Server(R) 2012 Standard Microsoft(R) Windows Server(R) 2012 Essentials Microsoft(R) Windows Server(R) 2012 Foundation	Windows Server 2012
Microsoft(R) Windows Server(R) 2008 R2 Foundation Microsoft(R) Windows Server(R) 2008 R2 Standard Microsoft(R) Windows Server(R) 2008 R2 Enterprise Microsoft(R) Windows Server(R) 2008 R2 Datacenter	Windows Server 2008 R2
Microsoft(R) Windows Server(R) 2003, Standard x64 Edition Microsoft(R) Windows Server(R) 2003, Enterprise x64 Edition Microsoft(R) Windows Server(R) 2003 R2, Standard x64 Edition Microsoft(R) Windows Server(R) 2003 R2, Enterprise x64 Edition	Windows Server 2003(x64)
Microsoft(R) Windows Server(R) 2003, Enterprise Edition for Itanium-based Systems Microsoft(R) Windows Server(R) 2003, Datacenter Edition for Itanium-based Systems	Windows Server 2003(Itanium)
Microsoft(R) Windows Server(R) 2003, Standard Edition Microsoft(R) Windows Server(R) 2003, Enterprise Edition Microsoft(R) Windows Server(R) 2003 R2, Standard Edition Microsoft(R) Windows Server(R) 2003 R2, Enterprise Edition	Windows Server 2003
Windows(R) 8.1 Windows(R) 8.1 Pro Windows(R) 8.1 Enterprise	Windows 8.1
Windows(R) 8 Windows(R) 8 Pro Windows(R) 8 Enterprise	Windows 8
Windows(R) 7 Home Premium Windows(R) 7 Professional Windows(R) 7 Enterprise Windows(R) 7 Ultimate	Windows 7

Product Name	Abbreviation
Windows Vista(R) Home Basic Windows Vista(R) Home Premium Windows Vista(R) Business Windows Vista(R) Enterprise Windows Vista(R) Ultimate	Windows Vista
Microsoft(R) Windows(R) operating system Version 3.1	Windows 3.1
Microsoft(R) Visual Studio(R)	Visual Studio
Microsoft(R) Internet Explorer	Internet Explorer
Oracle Solaris 10 Oracle Solaris 11	Solaris
Red Hat(R) Enterprise Linux(R) 5(for Intel64) Red Hat(R) Enterprise Linux(R) 6(for Intel64) Red Hat(R) Enterprise Linux(R) 7(for Intel64)	Linux(64)
Red Hat(R) Enterprise Linux(R) 5(for x86)	Linux
Java(TM) Platform, Standard Edition Development Kit	JDK
Java(TM) Platform, Standard Edition Runtime Environment	JRE
Adobe(R) Reader(R)	Adobe Reader
Adobe(R) Acrobat(R)	Adobe Acrobat

- In this manual, when all the following products are indicated, it is written as "Windows".

- Windows Server 2012 R2
- Windows Server 2012
- Windows Server 2008 R2
- Windows 8.1
- Windows 8
- Windows 7

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	OS support	Windows 8, Windows 8.1, Windows Server 2012 and Windows Server 2012 R2 are supported.	
2	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 (32bit).

1.1 NetCOBOL

Information described here applies to the following products.

- NetCOBOL Enterprise Edition V11.0.0 for Windows (32bit)

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.	NetCOBOL User's Guide - 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 - COBOL Resource project - COBOL resource generation wizard - 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 - COBOL Solution project - COBOL solution generation wizard - COBOL Solution Project
4	V11.0.0	The default value of paper size and printing format specification support	Paper size and printing format can now be specified in print information file.	NetCOBOL User's Guide - Print Information File
5	V11.0.0	FETCH FIRST/LAST Statement support	FIRST and LAST can now be specified for embedded SQL FETCH statements.	Language Reference - FETCH Statement
6	V11.0.0	Project configuration conversion command	Provide the project configuration conversion command as a transfer	NetCOBOL Studio User's Guide

NO.	V/L	Function Name	Content	Location in Manual
			support tool in order to convert the project in Project Manager to the project in NetCOBOL Studio.	- Transition from Project Manager
7	V11.0.0	Free format COBOL editor support	Free format style COBOL editor can now be used in NetCOBOL Studio.	NetCOBOL Studio User's Guide - Reference Formats - SRF compile option
8	V11.0.0	Eclipse 4.3 workbench support	Eclipse 4.3 workbench can now be used in NetCOBOL Studio, in which view layout can be changed and recent plug-in can be used.	NetCOBOL Studio User's Guide - NetCOBOL Studio - Differences between Eclipse 3.4 and Eclipse 4.3
9	V11.0.0	Security enhancement in remote development	SSH Port Forwarding enhances the security in remote developing on Linux(x64).	NetCOBOL Studio User's Guide - NetCOBOL Remote Development Service
10	V11.0.0	COBOL plug-in for Interstage Studio	COBOL/CORBA application now can be developed in Interstage Studio.	NetCOBOL Studio User's Guide
11	V11.0.0	PICTURE strings 50 digits support	PICTURE strings 50 digits can now be used.	Language Reference - PICTURE Clause
12	V11.0.0	New version Linker support	New version Linker can now be supported.	User's Guide - LINK Command Format
13	V11.0.0	Specify compiler options that is not in the "Add Compiler Options" dialog	Compiler options that is not specified in the "Add Compiler Options" dialog box can be specified when the project setting in NetCOBOL Studio.	NetCOBOL Studio User's Guide - Setting compile options
14	V11.0.0	File processing	High-speed file processing can now be used in the COBOL file access subroutines.	- User's Guide - File Processing
15	V11.0.0	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.	- User's Guide - File Processing
16	V11.0.0	FETCH NEXT/PRIOR Statement support	NEXT and PRIOR can be specified for the embedded SQL FETCH Statement.	Language Reference - FETCH Statement User's Guide - Acquisition of data by FETCH PRIOR statement
17	V11.0.0	IBM DB2 SQLCA compatibility	SQLSTATE, SQLCODE, and SQLERRD included in SQLCA can be compiled.	Language Reference - SQLSTATE/SQLCODE - SQLERRD
18	V11.0.0	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.	User's Guide - High-Speed File Processing

NO.	V/L	Function Name	Content	Location in Manual
19	V11.0.0	Event Log output	The Windows Event Log can be specified as the output destination for DISPLAY statements.	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) - @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)

NO.	V/L	Function Name	Content	Location in Manual
20	V11.0.0	CHECK function suppress option	Runtime options are provided to suppress individual CHECK functions. - nocb - noci - nocl - nocn - nocp	User's Guide - Format of Runtime Options
21	V11.0.0	TRACE function suppress option	Runtime option is provided that suppresses the TRACE function. - nor	User's Guide - Format of Runtime Options
22	V11.0.0	TRACE information file for separate processes	Separate TRACE information files can be generated for different processes to avoid conflicts in writing to the file.	Debugging Guide - Trace Information
23	V11.0.0	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.	Messages - COBOL Error Report Messages
24	V11.0.0	Interactive debug functions in the COPY book	The interactive debugger now can be used in the COPY book.	NetCOBOL Studio User's Guide - Chapter 7 Debugging Function
25	V11.0.0	Suppression of SYSERR of DISPLAY statement	The message output to SYSERR of the DISPLAY statement is suppressed.	User's Guide - @NoMessage(Set to Suppress Runtime Messages)
26	V11.0.0	MARS feature support option	MARS feature of SQL Server is available.	User's Guide - Creating an ODBC Information File - How to define server information

Note

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

1.2 PowerCOBOL

Information described here applies to the following products.

- NetCOBOL Enterprise Edition V11.0.0 for Windows (32bit)

Table 1.3 Outline of additional functionality in PowerCOBOL

NO.	V/L	Function Name	Content	Location in Manual
1	V11.0.0	Excel Connection	The new parameter can now be used for specifying literal string filters in SaveAs Book method.	PowerCOBOL Reference - SaveAsBook Method
2	V11.0.0	CHECK function	Add the value "5 - parameter check" to the CheckItem property of project.	

1.3 PowerFORM

Information described here applies to the following products.

- NetCOBOL Enterprise Edition V11.0.0 for Windows (32bit)

Table 1.4 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	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
4	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
5	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
6	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
7	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
8	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
9	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
10	V11.0.0	UTC (Coordinated Universal Time) support	UTC (Coordinated Universal Time) can be specified.	PowerFORM Runtime Reference - Appendix C. Printer Information File
11	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
12	V11.0.0	Enhanced print features	The Form Descriptor (free frame) can be used.	PowerFORM Runtime Reference - Chapter 4. Extended Functions
13	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?

1.4 J Adapter Class Generator

Information described here applies to the following products.

- NetCOBOL Enterprise Edition V11.0.0 for Windows (32bit)

Table 1.5 Outline of additional functionality in J Adapter Class Generator

NO.	V/L	Function Name	Content	Location in Manual
1	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.	-

1.5 PowerBSORT

Information described here applies to the following products.

- NetCOBOL Enterprise Edition V11.0.0 for Windows (32bit)

Table 1.6 Outline of additional functionality in PowerBSORT

No.	V/L(*1)	Function name	Content	Location in manual
1	V7.0.0 (V11.0.0)	Data format	The Unicode UTF-32 form was supported as data format.	PowerBSORT User's Guide <ul style="list-style-type: none"> - 1.4 Environment variables - 1.6.3 Data format - 1.6.4 Data forms that can be specified in each field - 3.2.17 Input code system option (-q) - 3.2.27 COBOL file index specification option (-X) - 4.2.7.3 icode operand - 4.2.8.10 idxkey operand - 7.5.1 BSRTPRIM structure - 7.5.10 BSIDXKEY structure
2	V7.0.0 (V11.0.0)	Record summation option	The length of data formats that can be specified for the binary file has been enhanced	PowerBSORT User's Guide <ul style="list-style-type: none"> - 1.6.4.2 Data formats that can be specified in the summation field
3	V7.0.0 (V11.0.0)	Record selection option	The length of data formats that can be specified by a literal value has been enhanced.	PowerBSORT User's Guide <ul style="list-style-type: none"> - 1.6.4.3 Data formats that can be specified in the selection field
4	V7.0.0 (V11.0.0)	Record reconstruction option	The length of data formats that can be specified by a literal value has been enhanced.	PowerBSORT User's Guide <ul style="list-style-type: none"> - 1.6.4.4 Data formats that can be specified in the literal value of the reconstruction field

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 (32bit)

2.1.1 Reference format setting in NetCOBOL Studio

Content

SRF and TAB compile option setting is not consistent with the applicable editor setting in V11.0 for Windows (32bit).

Action

To restore the consistency as before V11.0, select "SRF and TAB compile option setting to be consistent with the applicable editor setting" checkbox.

2.1.2 About the change in the linker

In NetCOBOL V11.0.0, the latest linker provided by Microsoft is used. Following are the noticeable points regarding change in the specification of linker.

- Change the code of an external symbol (Unicode from ACP)

The linker (It is called a new linker here after) used with V11.0.0 or later processes the code of an external symbol as Unicode though the linker (It is called an old linker here after) used before V10.5.0 processed the code of an external symbol as ACP.

- Change in C runtime library (MSVCRT.LIB from LIBC.LIB)

With new linker MSVCRT.LIB needs to be specified though with old linker LIBC.LIB was specified for C runtime library.

- Addition of link option (/DYNAMICBASE)

With new linker, /DYNAMICBASE (*1) option is effective by default.

When /DYNAMICBASE is effective while linking, COBOL application program might terminate abnormally during execution.

*1: Address space randomizing(ASLR)

- Deletion of link option (/DEBUGTYPE)

/DEBUGTYPE was deleted from the options that can be specified with the new linker. Therefore, when /DEBUG is specified, /INCREMENTAL becomes effective. When /INCREMENTAL is effective while linking, COBOL application program might terminate abnormally during execution.

- Improvements in warning

When the file name that is outside ASCII range is set to the new linker, new linker outputs warning message (LNK4232).

When the runtime code set of DLL is ACP, there is a possibility that if the DLL name includes the character outside ASCII range, it might not be called correctly. Please make sure that characters of COBOL source file name are within the range of ASCII or specify /OUT as an option while linking, and use the characters within the range of ASCII in the characters of the output file name.

- Change of default link option /SUBSYSTEM

The default of link option/SUBSYSTEM was changed by new linker.

Changes in NetCOBOL V11.0.0

Due to change in linker, following are the changes in specification of NetCOBOL V11.0.0.

- The code of an external symbol is changed.

The compiler changes the code of an external symbol that is output to object program. The compiler in V11.0.0 or later outputs an external symbol of Unicode though the compiler before V10.5.0 output an external symbol of ACP.

- The default of the NetCOBOL development environment is changed.

- C runtime library

MSVCRT.LIB is specified in NetCOBOL V11.0.0 or later though LIBC.LIB was specified in NetCOBOL before V10.5.0.

- Optional default for link

In NetCOBOL V11.0.0 or later, the following options become effective.

- /DYNAMICBASE:NO
- /INCREMENTAL:NO

- NetCOBOL command prompt

NetCOBOL command prompt is used in NetCOBOL V11.0.0 or later though the command prompt of the system is used in NetCOBOL before V10.5.0. The NetCOBOL command prompt sets /DYNAMICBASE:NO and /INCREMENTAL:NO by default.

Impact and Resolution

Please handle the following conditions in the below mentioned ways.

- When the program with an external name(*2) includes character outside ASCII range and the program that calls this
 - Object file made with NetCOBOL before V10.5.0 cannot be linked by a new linker.
 - In V11.0.0 or later, inter-program communication with existing resource(*3) and newer resource(*4) cannot be used.

*2: An external name is as follows.

program-name / class-name / method-name / property-name / the secondary entry point

*3: made with NetCOBOL before V10.5.0

*4: made with NetCOBOL V11.0.0 or later

[Resolution]

When the program with an external name and the program that calls this include the character outside ASCII range, please rebuild these program with NetCOBOL V11.0.0 or later. Please use ASCIICHK.exe when it is not certain whether the program with an external name includes characters outside ASCII range or not. When not certain about the called program, please rebuild all programs with the possibility of calling it.

- When using MAKE file and batch file

The MAKE file and the batch file where the following is described cannot be used in NetCOBOL V11.0.0 or later.

- LIBC.LIB
- /DEBUGTYPE

[Resolution]

Please correct it the MAKE file and the batch file in the following manner.

- Correct "LIBC.LIB" to "MSVCRT.LIB"
- Delete /DEBUGTYPE

- When about 100 DLL or more is included in the application

A phenomenon where Fiber Local Storage(FLS) gets used up occurs when about 100 DLL or more exists in the application that is built with NetCOBOL V11.0.0 or later and it is likely to fail in loading DLL.

[Resolution]

- When DLL is made only in COBOL

Please do not specify "MSVCRT.LIB" when linking, specify option "/NOENTRY" and make DLL.

- When DLL is made by COBOL and C

- When making single DLL

Please do not specify "MSVCRT.LIB" when linking, specify "MSVCRT.LIB" and make DLL. Please recompile specifying "/MD" when C program is compile by option "/MT" of the compiler.

- When making separate DLL

Please do not specify "MSVCRT.LIB" when you make DLL of COBOL, specify option "/NOENTRY" of the link, and make DLL. When create C DLL, please specify compile option "/MD" at the time of compilation.

- When development settings other than NetCOBOL are used

When the development settings other than the development setting (NetCOBOL Studio, project manager, and NetCOBOL command prompt) offered with NetCOBOL V11.0.0 are used, the following options of the LINK command becomes effective by default. As a result, COBOL program might terminate abnormally when executed.

[Resolution]

Please specify link option/DYNAMICBASE:NO and /INCREMENTAL:NO. Or, please use the NetCOBOL development environments.

- Change default link option /SUBSYSTEM

When the following functions are used, the output character string might not be displayed in the window with this link option.

- COBOL Console Window
- Screen Function

[Action]

If you use COBOL console window or screen function, please specify following LINK option when you link main programs.

- When compile option MAIN(WINMAIN) is specified for the main program, it is WinMain type.

When compile option MAIN(MAIN) is specified for the main program, it is main type.

[WinMain type]

/SUBSYSTEM:WINDOWS and 5.01

[main type]

/SUBSYSTEM:CONSOLE and 5.01

- If you use screen function it is possible to display it correctly by specifying environment variable @ScrnSize and changing size of logical screen.

2.1.3 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 (JMP0081I-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.

2.1.4 COBOL SAF subroutines

Content

Support for COBOL SAF subroutines is terminated.

Action

Please change from the COBOL SAF subroutine to the COBOL ISAPI subroutine.

2.1.5 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.

2.1.6 Help for the interactive debugger color dialog

Content

In Windows Vista or later, context-sensitive help cannot be displayed from the "View" > "Color" dialog box.

Action

To view this help information, select "Help Topics" from the "Help" menu of the interactive debugger, and refer to the "Color" dialog box in the Help for COBOL Debugger topics.

2.1.7 Registry key for the event logs

Content

In Windows Vista or later, to execute "RegistryKey for Event Log" start Project Manager with an administrator account.

Action

To start Project Manager with an administrator account, select "COBOL Project Manager" from the Windows start menu, click the right button, and select "Run as administrator".

2.1.8 The Help of editor and builder

Content

In Windows Vista or later, the Help is not shown from editor windows and builder window.

Action

To see the Help of editor or builder, select "Help" > "Help Topics" > "Editor" or "Builder" from the menu bar in the Project Manager.

2.1.9 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	PH02265	<p>Under the following conditions, a compilation error may not be generated.</p> <ol style="list-style-type: none">1. Concatenation expression is described in the external name of program, class or method.2. And, one of the following is described at the beginning of the concatenation expression.<ul style="list-style-type: none">- Character constant- National character constant3. And, when one of the following is described in the concatenation expression.<ul style="list-style-type: none">- Hexadecimal character constant- National hexadecimal character constant
2	V10.1.0	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.

*: 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 (32bit)

2.2.1 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.

2.2.2 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 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.

2.2.4 Programs that require administrator authority

In Windows 7 or later, even if a program is executed by the account with administrator privileges, the program may not be executed with administrator privileges because of the User Account Control (UAC). For information on UAC, refer to

<http://msdn2.microsoft.com/en-us/library/aa480152.aspx>

To execute a program as an administrator, make sure that the program has the appropriate settings.

With the increased security in Windows 7 or later, administrator privileges are required for some operations. For example, if a program is directed to output a file to C:\Windows or C:\Program Files, the program will output to C:\Windows or C:\Program Files only if it is run with administrator privileges. If the program is run without administrator privileges, the output will go to:

C:\USERS\USER-NAME\AppData\Local\VirtualStore\Windows

C:\USERS\USER-NAME\AppData\Local\VirtualStore\Program Files



Example

User name:

U01(with administrator authority)

File allocation:

SYS001=C:\Windows\COBFILE.01

SYS002=C:\Program Files\COBFILE.02

File output when the program is executed without administrator authority:

SYS001 C:\USERS\U01\AppData\Local\VirtualStore\Windows\COBFILE.01

SYS002 C:\USERS\U01\AppData\Local\VirtualStore\Program Files\COBFILE.02

File output when the program is executed with administrator authority:

SYS001 C:\Windows\COBFILE.01

SYS002 C:\Program Files\COBFILE.02



2.2.5 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	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	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	PG87250	<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 internal Boolean item to internal Boolean item. 2. Data start position (*) of the sending data item is different from data start position of the receiving data item. 3. [a] + [b] > 32, or [c] + [d] > 32 <ol style="list-style-type: none"> a: Data start position (*) of the sending data item b: The length of sending data item or the length of receiving data item, whichever is smaller. c: Data start position (*) of the receiving data item d: The length of receiving data item 4. The receiving data item is subordinate to the group item.

No.	V/L(*)	P number	Content
			<p>5. Data start position of the receiving data item is not one byte alignment 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. Bit data of sender data item is outside the byte boundary or Byte boundary exist between the start position of the sender's data item of paragraphs 6(*) (bit length till the byte boundary of the first recipient).</p> <p>*: relative bit position in byte</p> <p>Example of Condition 1</p> <pre style="border: 1px solid black; padding: 10px;"> 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> <p>[Condition 2]</p> <ol style="list-style-type: none"> 1. Move from internal Boolean item to internal Boolean item. 2. The sending data item or the receiving data item is referred by the subscript. 3. " The length of receiving data item " > 1 4. It is either the following. <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 5. There is not the data starting location of the receiving data item on byte boundary. 6. "Bit length of sending data item" < " Bit length from bit data start position of first byte of the receiving data item 7. The bit data of the sending data item overlaps the byte boundary, or there is byte boundary between from start position of the sending data item to "Bit length from bit data start position of the receiving side to the first byte boundary" in 6. <p>Example of Condition 2</p> <pre style="border: 1px solid black; padding: 10px;"> 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. </pre>

No.	V/L(*)	P number	Content
			<pre> 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.

2.3 PowerCOBOL

Information described here applies to the following products.

NetCOBOL Enterprise Edition V11.0.0 for Windows (32bit)

2.3.1 SaveAsBook method for Excel Connection

The file list in "Save As" dialog box has been changed in V11.0.0 or later for Windows.

Content

Files that have a different extension from the Excel book name specified as first parameter, are not shown in "Save As" dialog.

Action

Multiple pairs of filename extensions are specified in the file dialog box filter specified as third parameter. For example, "Excel Workbook (*.xlsx)" and "All Files (*.*)" are specified in pairs as follows.

```
"Excel Workbook (*.xlsx),*.xlsx,All Files(*.*),*.*"
```

All files are shown in "Save As" dialog box by selecting "" from extension list.

2.3.2 About the difference in the Multi monitor environment

With the change of the specification of the linker, when an application that is rebuilt in PowerCOBOL V11.0 or later is executed, the display position on the subform changes as follows.

- An application (EXE) that is built in V10.1

In the case that the mainform is displayed on the secondary monitor, when the subform is to be displayed on the primary monitor, it is displayed on the center of the mainform.

- An application (EXE) that is built in V11.0 or later

The subform is always displayed at the screen coordinates that are specified.

When only the DLL is rebuilt, it is the same specification as that of V10.1.

Action

If you need to let the subform be displayed on the center of the mainform, modify the application in the following way.

- Specify the StartUpPosition to "1- Center of Mainform" properties of the subform
- Remove the procedure about moving the screen coordinates if it exists.

2.3.3 Functions enable by starting with an administrator account

To activate the following functions in Windows Vista or later, start PowerCOBOL with an administrator account.

- Create ActiveX controls and add to the system or delete from the system from the context menu of modules.
- Select ActiveX controls and register to the system from "Custom Controls" dialog box of the form editor
- Create a new data source from "Select Data Source" dialog box.
"Select Data Source" dialog box is displayed by selecting "Connect" in "DB Access Control Properties" dialog box.
- Select "ODBC Data Source" and create a new data source.
"ODBC Data Source" is displayed by clicking the right side button of connect string field in ADO Data control property dialog.

Action

To start PowerCOBOL with an administrator account, select "PowerCOBOL" from the Windows start menu, click the right button, and select "Run as administrator".

2.3.4 Create an installer for PowerCOBOL application

Content

An installer created in PowerCOBOL is only supported in OS whose version is supported by PowerCOBOL. For example, the installer created in V10.1.0 is not supported in Windows 8.1.

Action

Create an installer of PowerCOBOL application in OS whose version is supported by PowerCOBOL.

2.3.5 Interchangeable information regarding bug fixes

There is no information on interchangeable information regarding bug fixes.

2.4 PowerCOBOL Runtime Environment

Information described here applies to the following products.

NetCOBOL Enterprise Edition V11.0.0 for Windows (32bit)

2.4.1 Execute programs that require an administrator account

When a program is executed by an administrator in Windows Vista or later, it might not be executed with administrator account. That is because User Account Control (UAC) system is incorporated. For details about UAC, refer to the following.

<https://msdn.microsoft.com/en-us/library/aa480152>

Action

To execute a program with administrator account, set the followings in manifest property page of modules.

- Creating an application manifest
"2: External Files" or "3: Insert"
- Specifying an execution authority
"3: Administrator"

Some operations have to be done with an administrator account. For example, if an application is built under the status that the "0: Create" or "1: Not Create" selected, files are output to neither under "C:\Windows" nor "C:\Program Files". The files are output to the following folder.

In this case, the program ends normally.

- In case that output destination is specified under "C:\Windows".
"C:\USERS\<(User name)\AppData\Local\VirtualStore\Windows"
- In case that output destination is specified under "C:\Program Files".
C:\USERS\<(User name)\AppData\Local\VirtualStore\Program Files

To create a file under "C:\Windows" or "C:\Program Files", execute the program with administrator account.

2.4.2 Alphanumeric data items in an Unicode application

If an incorrect alphanumeric data items are set in an Unicode application and are set in property for VT_BSTR or as argument of VT_BSTR method or event, it has different specifications as follow.

- In Windows Vista or later
The incorrect alphanumeric data items are converted to REPLACEMENT CHARACTER(U+FFFD).
- In the others
The incorrect alphanumeric data items are removed.

2.4.3 Application installer in Windows Vista or later

If the PowerCOBOL runtime system is not installed in Windows Vista or later, the application installer outputs the error message and the installation is canceled.

Action

Install the PowerCOBOL runtime system before installing applications.

2.4.4 Interchangeable information regarding bug fixes

There is no information on interchangeable information regarding bug fixes.

2.5 PowerFORM

Information described here applies to the following products.

NetCOBOL Enterprise Edition V11.0.0 for Windows (32bit)

There is no information on interchangeability.

2.6 J Adapter Class Generator

Information described here applies to the following products.

NetCOBOL Enterprise Edition V11.0.0 for Windows (32bit)

2.6.1 Code conversion when application is executed

Content

The replacement character used has changed when Shift JIS is specified as code set during execution and data that is out of Shift JIS is included in character strings that are got by using GET-STRING-X method or GET-STRING-N method.

- Before V10.1
Normal-width underscore "_"

- After V11.0

If the data before conversion is alphanumeric character, Normal-width underscore.

If the data before conversion is Japanese character, Double-byte underscore.

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.

2.6.2 Error message output when code conversion error occurs

Content

In the conversion of data using the java-lang-String class method (such as GET-STRING-X, GET-STRING-N, NEW-STRING-X and NEW-STRING-N), if the data is incorrect, a code conversion error will occur.

Then, in NetCOBOL V11.0 or later, the following error message is to be output.

```
CHARACTER CODE CONVERSION FAILED. ERRNO:DETAIL
```

Action

Modify incorrect data items to store character codes correctly.

2.6.3 Characters that the results of code conversion are different.

Content

In operation of an application with Shift_JIS, some Unicode characters that are passed to Java have changed as follows.

Shift_JIS	Unicode before V10.1	Unicode after V11
8160	U+301C	U+FF5E
8161	U+2016	U+2225
817C	U+2212	U+FF0D
8191	U+00A2	U+FFE0
8192	U+00A3	U+FFE1
81CA	U+00AC	U+FFE2

Action

Change the setting that is before V10.1 by specifying the following environment variable.

```
COBJNI_CONVERT=SJIS
```

2.7 Data Tools

Information described here applies to the following products.

NetCOBOL Enterprise Edition V11.0.0 for Windows (32bit)

There is no information on interchangeability.

2.8 PowerBSORT

Information described here applies to the following products.

- NetCOBOL Enterprise Edition V11.0.0 for Windows (32bit)

2.8.1 Interchangeable information regarding bug fixes

Here, it explains bug fixes corrected by PowerBSORT V7 and later version in which the operation of the PowerBSORT changes in the following tables.

Table 2.3 Interchangeable information on bug fixes of PowerBSORT

No.	V/L (*1)	P Number	Content of change
1	V6.0.0	PG76059	<p>Under the following conditions, PowerBSORT may cause result error, infinite loop or abnormal termination.</p> <ol style="list-style-type: none"> 1. The bsort command, the bsortex command or the BSORT function is used. 2. And, sort function is used. 3. And, the text file CSV format or text file TSV format is used. 4. And, the record summation option or the record selection option for the output files is specified. 5. And, the summation field or selection field is enclosed with a double quotation.
2	V6.0.0	PG76539	<p>Under the following conditions, PowerBSORT may cause result error or abnormal termination.</p> <ol style="list-style-type: none"> 1. The bsortex command is used. 2. And, the text file CSV format or text file TSV format is used. 3. And, the record reconstruction option for the output files is used.
3	V6.0.0	PH05442	<p>Under the following conditions, PowerBSORT cannot correctly check whether the reconstruction field and the selection field exist in the record.</p> <p>As a result of an error in usage or implementation, the output may produce unpredictable or abnormal results.</p> <ol style="list-style-type: none"> 1. The bsortex command is used. 2. The record format is the following. <ul style="list-style-type: none"> - Binary file variable-length record form (-record recform=var), or - Text file fixed field specification (-record recform=txtfix) 3. Two output file information options (-output) or more are specified. 4. The following options are specified by two output file information options (-output) or more. <ul style="list-style-type: none"> - Record reconstruction option (-output reconst=...) - Record selection option (-output include=.../omit=.../case=...) 5. The field in the record is specified for a reconstruction field for the record reconstruction option (form of "pos.len" or "pos.END"). 6. The maximum position of the reconstruction field specified by each output file information option (-output) is different. or, The maximum position of the selection field specified by each output file information option (-output) is different.

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

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 (32bit)

Table 3.1 Program fix list for the NetCOBOL Development Environment

No.	V/L(*)	P number	Content
1	V10.1.0	PG63211	<p>The compiler terminates abruptly during compilation.</p> <p>[Condition]</p> <p>If a level 02 or above item that is subordinate to the detail report group is specified for the GENERATE statement.</p> <p>Notes:</p> <p>As per the specification, it is the rule that data name to be specified to GENERATE statement should be "Detail report group" (Language reference 6.4.21 GENERATE statement).</p> <p>The "Detail report group" is the report group where the TYPE clause is specified with DETAIL or DE specified to it, this TYPE clause can only be written in 01 level (Language Reference 5.7 Report group description entry' Syntax Rules 1 and 5.7.8 TYPE clause)</p> <p>Therefore GENERATE statement specified with data name with level 02 or above as shown in condition has violated the specification, in right manner it should be compilation error.</p>
2	V10.1.0	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	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.</p> <p>*2: COBOL compiler returns return codes other than 0-3 without outputting the compiler message.</p>
4	V10.1.0	PG86728	<p>Under the following conditions, the compiler outputs an unjustified compile message.</p>

No.	V/L(*)	P number	Content
			<p>The interface for method 'mmmmm' must conform to that of the overridden method. Method 'mmmmm' is ignored.</p> <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.
5	V10.1.0	PG88107	<p>Under the following conditions, COBOL compiler terminates abnormally and outputs the following message.</p> <pre>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)</pre> <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
6	V10.1.0	PG88615	<p>Under the following conditions, the compiler outputs an unjustified compile message (JMN1477I-I).</p> <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>
7	V10.1.0	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.,

No.	V/L(*)	P number	Content
			<p>2. And, the COBOL program is being created from the Pro*COBOL program of 1 above using the INSDBINF command,.</p> <p>3. And, the COBOL program created in 2 above is compiled by specifying compile option "NUMBER".</p> <p>Or [condition 2]</p> <p>1. The COBOL program (including the embedded SQL) is being pre-compiled after option "-g" is specified in the sqlpcob command of Symfoware.</p> <p>2. And, the COBOL program created in 1 above is compiled by specifying compile option "NUMBER".</p>
8	V10.1.0	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> <p>1. The KEY IS specification of the OCCURS clause is being described.</p> <p>2. And, the data name specified in 1 above is at a variable position in the records.</p>
9	V10.1.0	PG81806	<p>When all of the following conditions are met during compilation of the COBOL program, the COBOL compiler terminates abnormally.</p> <p>1. Any of the following statements is described.</p> <ul style="list-style-type: none"> - CALL STATEMENT - CANCEL STATEMENT - INVOKE STATEMENT - STRING statement/UNSTRING statement specified with a CSV-FORMAT <p>2. And, the statement in 1 above is being described in the conditional statement.</p> <p>3. And, the hierarchy (*1) of the conditional statement in 2 above is more than 180.</p> <p>*1: In the following code, hierarchy 1 is the EVALUATE statement and hierarchy 2 is the COMPUTE statement.</p> <div style="border: 1px solid black; padding: 5px; margin: 10px 0;"> <pre> EVALUATE WHEN COMPUTE ON SIZE ERROR CALL END-COMPUTE END-EVALUATE </pre> </div> <p>However, depending on the amount of computer memory, there may be no abnormal termination.</p>
10	V10.1.0	PG97391	<p>During the execution of the COBOL program the value is not correctly set to the item written to RETURNING phrase of the CALL statement.</p> <p>[Condition]</p> <p>1. Compile option OPTIMIZE(*)is effective.</p> <p>2. And, internal program exist in the program.</p> <p>3. And, identifier is specified in the CALL statement.</p> <p>4. And, in the CALL statement of RETURNING phrase of (3) following item are specified.</p> <ul style="list-style-type: none"> - Items of 1,2,4,8 bytes

No.	V/L(*)	P number	Content
			<ul style="list-style-type: none"> - Index data item - Pointer data item - Object reference <p>5. And, in the CALL statement of (3) ON EXCEPTION/NOT ON EXCEPTION or ON OVERFLOW is specified.</p> <p>6. And, when the CALL sentence of (3) calls the external program at run time.</p> <p>*:NOOPTIMIZE is default option.</p>
11	V10.1.0	PG98620	<p>Under the following conditions when compiling, the COBOL program terminates abnormally without giving an error message.</p> <ol style="list-style-type: none"> 1. Compiler option OPTIMIZE is specified (*1). 2. And, the CALL statement in which the called program is specified in the identifier is described. 3. And, the USING phrase in the CALL statement of 2. 4. And, the RETURNING phrase in the CALL statement of 2. 5. And, pointer data item is set or referred to. 6. And, an internal program exists. 7. And, when the USING phrase is omitted in the header of the Procedure Division of 6. <p>*1: The compiler option default value differs based on the OS on which product is installed.</p> <ul style="list-style-type: none"> - For Solaris, Linux(x86/x64/IPF) default is OPTIMIZE. - For Windows(x86/x64/IPF) default is NOOPTIMIZE.
12	V10.1.0	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.

No.	V/L(*)	P number	Content
			<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 data-bbox="555 551 1406 719"> 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> <pre data-bbox="555 826 1406 1016"> 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>
13	V10.1.0	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.
14	V10.1.0	PH00165	<p>Under the following conditions, when dependency analysis is performed in NetCOBOL Studio, NetCOBOL Studio might terminate abnormally.</p> <p>[Condition 1]</p> <ol style="list-style-type: none"> 1. A COBOL source file where compile error occurs is created. 2. And, when a file is dragged and dropped in or copy into another project, the length of the file pass characters in destination is more than 260. <p>Or,</p> <p>[Condition 2]</p> <ol style="list-style-type: none"> 1. The variable format is specified for the reference format of a COBOL source file. 2. And, when dependency analysis is performed from the context menu in the "Dependency" view. Or, when a project is imported. 3. And, the COBOL source is in the following condition.

No.	V/L(*)	P number	Content
			<p>3-1. Each of the following COPY statements is described.</p> <p>3-1-1. The text name is specified in the COPY statement.</p> <p>3-1-2. And, there is no definition for the COB_LIBSUFFIX environment variable. Or, the COB_LIBSUFFIX environment variable is "None".</p> <p>3-1-3. And, the characters length of the text name is more than 256.</p> <p>Or,</p> <p>3-2-1. The text name is specified in the COPY statement.</p> <p>3-2-2. And, the COB_LIBSUFFIX environment variable is specified with any other "None".</p> <p>3-2-3. And, the sum of the characters length of the text name and the value length of the COB_LIBSUFFIX environment variable are more than 259.</p> <p>Or,</p> <p>3-3-1. The text name is specified in the COPY statement.</p> <p>3-3-2. And, the library name is not specified with IN/OF in the COPY statement.</p> <p>3-3-3. And, the LIB compile option is specified.</p> <p>3-3-4. And, the characters length of the text name is more than 255.</p> <p>Or,</p> <p>3-4-1. The text name is specified in the COPY statement.</p> <p>3-4-2. And, the characters length of the text name is more than 260.</p> <p>Or,</p> <p>3-5-1. The COPY statement with the XMDLIB/XFDLIB phrase is specified in the library name.</p> <p>3-5-2. And, the characters length of the text name is more than 256.</p> <p>Or,</p> <p>3-6-1. The text name is specified in the COPY statement.</p> <p>3-6-2. And, the library name is specified with IN/OF in the COPY statement.</p> <p>3-6-3. And, the COB_LIBSUFFIX environment variable is specified with any other "None".</p> <p>3-6-4. And, the characters length of the text name is more than 260.</p> <p>Or,</p> <p>3-7-1. The length of the class name of the COBOL class repository is more than 256.</p> <p>3-7-2. Or, the length of the class name of the class definition of the COBOL class repository is more than 256.</p>
15	V10.1.0	PH01579	<p>Under the following conditions, the COBOL compiler terminates normally without generating an error message.</p> <p>1. A paragraph name or section name is specified in the USING phrase of CALL statement.</p>
16	V10.1.0	PH01938	<p>Under the following environment and conditions, a part of letters in a COBOL source file are converted to "?" when it is sent to a remote server from NetCOBOL Studio.</p> <p>[Environment]</p> <p>Remote server OS is Windows(x64).</p>

No.	V/L(*)	P number	Content
			<p>[Condition]</p> <ol style="list-style-type: none"> 1. MS932 is specified as the encoding form of the text file in COBOL project created in NetCOBOL Studio. 2. And, a server name that Shift_JIS is specified as the encoding form of the source file is set in "Remote Development" preferences dialog box. 3. And, the server name of 2 is used for remote development of the COBOL project of 1. 4. And, the COBOL source file includes any of the following letters. <ul style="list-style-type: none"> - 0x8160(Shift_JIS) (WAVE DASH) - 0x8161(Shift_JIS) (DOUBLE VERTICAL LINE) - 0x817C(Shift_JIS) (MINUS SIGN) - 0x8191(Shift_JIS) (CENT SIGN) - 0x8192(Shift_JIS) (POUND SIGN) - 0x81CA(Shift_JIS) (NOT SIGN) - 0xFA55(Shift_JIS) (FULLWIDTH BROKEN BAR) 5. And, the COBOL source file is sent to the server using any of the following functions for remote development in NetCOBOL Studio. <ul style="list-style-type: none"> - Create a Makefile - Build - Rebuild
17	V10.1.0	PH02032	<p>Under the following conditions, while compiling the COBOL program, at times regarding the continuation line of the literal the compiler generates the following message.</p> <div style="border: 1px solid black; padding: 5px; margin-bottom: 5px;"> <p>JMN1022I-S The ending quotation mark of the literal is missing. The characters at the end of Area B are assumed to be a literal.</p> </div> <div style="border: 1px solid black; padding: 5px; margin-bottom: 5px;"> <p>JMN1021I-S The continuation line of the literal must have a hyphen in the indicator area and must start with a quotation mark. The continuation of the literal is assumed.</p> </div> <ol style="list-style-type: none"> 1. REPLACE statement is used. 2. When there is the following description in of the range(*1) where replacement is done by REPLACE statement of 1). <ol style="list-style-type: none"> a) COPY statement is used. b) The character(*2) ahead of the COPY statement of (a) is not one of the following characters. "(", ")", ";" and "." c) Continuation of lines of the nonnumeric literal(*3) is described after the COPY statement of (a). d) Continuation of lines of the COBOL words(*4) is not described between the COPY statement of (a) and the continuation lines of the nonnumeric literal of (c). <p>*1: Until the next REPLACE statement appears or the end of the compilation unit *2: The space and the comment line are excluded</p>

No.	V/L(*)	P number	Content
			<p>*3: Nonnumeric literal, hexadecimal nonnumeric literal, national nonnumeric literal or boolean literal</p> <p>*4: PICTURE character-string or COBOL words excluding national language user-defined word</p>
18	V10.1.0	PH02168	<p>Under the following conditions, while compiling the COBOL program the following error message is generated.</p> <div style="border: 1px solid black; padding: 5px; margin-bottom: 5px;"> <p>JMN1479I-S The concatenation expression is too long. A literal is created using the first parts of the expression so that it does not exceed the maximum length.</p> </div> <div style="border: 1px solid black; padding: 5px; margin-bottom: 5px;"> <p>JMN0124I-U This source file has an invalid character. (substep-name=JMNxxx, line-number=nn.) The compilation is terminated.</p> </div> <ol style="list-style-type: none"> 1. Encoding of COBOL source is UTF-8. And, 2. Concatenation expression is described for National character constants (*1) 3. When the number of characters concatenated at 2 are 54-80 characters. <p>(*1) Including named constants and symbolic constant.</p>
19	V10.1.0	PH02265	<p>Under the following conditions, a compilation error may not be generated.</p> <ol style="list-style-type: none"> 1. Concatenation expression is described in the external name of program, class or method. 2. And, one of the following is described at the beginning of the concatenation expression. <ul style="list-style-type: none"> - Character constant - National character constant 3. And, when one of the following is described in the concatenation expression. <ul style="list-style-type: none"> - Hexadecimal character constant - National hexadecimal character constant
20	V10.1.0	PH02733	<p>Under the following conditions, the last character of the class name or interface name of a COBOL source code that is generated by the java2cob command might become a hyphen, and the following error message be generated.</p> <div style="border: 1px solid black; padding: 5px; margin-bottom: 5px;"> <p>JMN1123I-S An invalid word '-' was found. The invalid word and any following code is ignored until the next valid paragraph, section or division.</p> </div> <p>[Condition]</p> <ol style="list-style-type: none"> 1. The 28th character of a Java class name (*) that generates an adapter class is a period or a dollar sign. 2. The 28th character of a Java interface name (*) that generates an adapter class is a period or a dollar sign. <p>* : The package name is excluded.</p>
21	V10.1.0	PH02992	<p>Under the following conditions, a part of letters of path that is set as an operand of a compile option (like LIB compiler option) are converted to "?", and a build error occurs because the correct file path is not referred.</p> <p>For example, in case of the path that is set as an operand of LIB compile option, the following error occurs because the COBOL library file is not read.</p>

No.	V/L(*)	P number	Content
			<pre>JMN1057I-S An I/O error occurred while processing the COBOL library text. Processing of the library text was terminated.</pre> <p>[Condition]</p> <ol style="list-style-type: none"> 1. Japanese double-byte letters are used path that is set as an operand of a compile option. 2. And, any of the following letters are used in the path. <ul style="list-style-type: none"> - 0x8160(Shift_JIS) (WAVE DASH) - 0x8161(Shift_JIS) (DOUBLE VERTICAL LINE) - 0x817C(Shift_JIS) (MINUS SIGN) - 0x8191(Shift_JIS) (CENT SIGN) - 0x8192(Shift_JIS) (POUND SIGN) - 0x81CA(Shift_JIS) (NOT SIGN) - 0xFA55(Shift_JIS) (FULLWIDTH BROKEN BAR)
22	V10.1.0	PH03188	<p>Under the following conditions, the characters of file path in a COBOL project are corrupted, and the following phenomena [Phenomenon 1] or [Phenomenon 2] might occur.</p> <p>[Phenomenon 1]</p> <p>When the letters of source file path set in source folder are corrupted, the source files are skipped to build.</p> <p>[Phenomenon 2]</p> <p>Build error occurs because the compiler or the linker is not able to find the reference files. For example, when the literal string set to LIB compiler options are corrupted, library file are not read correctly and the following messages is output.</p> <pre>JMN1057I-S An I/O error occurred while processing the COBOL library text. Processing of the library text was terminated.</pre> <p>[Condition]</p> <ol style="list-style-type: none"> 1. Other than ASCII code are used in letters that are in the file path or folder path specified for setting COBOL project. 2. And, when the COBOL project of 1 above is imported into a workspace.
23	V10.1.0	PH04722	<p>Under the following conditions, it might fail in building a COBOL project with the following message displayed in the "Problem" view in NetCOBOL Studio.</p> <pre>Target "cobol_buildtool-clean" does not exist in the project "XXX". It is used from target "clean build".</pre> <p>(XXX means a COBOL project name.)</p> <p>[Condition]</p> <ol style="list-style-type: none"> 1. The type of dynamic link libraries is selected as TARGET type. 2. And, when the COBOL project 1 is imported into the workspace. 3. And, when the COBOL project name of 2 is changed from [Rename] of the context menu in the [Navigator] view.

No.	V/L(*)	P number	Content
24	V10.1.0	PH05002	<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=JMN645, modulename=SA64RTXT, detailcode=6427, line-number=0)</p> </div> <p>When there are both of the following ALPHABET clause of SPECIAL-NAMES paragraph:</p> <ul style="list-style-type: none"> - An ALPHABET clause in which function-name(CODE-n) has been specified - An ALPHABET clause in which EBCDIC or literal phrase has been specified
25	V10.1.0	PG80311	<p>Under the following conditions, when a file is dragged and dropped in the "Dependency" or "Structure" view in NetCOBOL Studio, it might be deleted.</p> <p>[Condition]</p> <ol style="list-style-type: none"> 1. When a COBOL project is opened in the COBOL perspective in NetCOBOL Studio. 2. And, a file in any of the following virtual folders is dragged in the "Dependency" or "Structure" view. <ul style="list-style-type: none"> - the "Source Files" folder - the "Other Files" folder 3. And, the file is dropped in the area of any other than folders of the "Dependency" or "Structure" view.
26	V10.1.0	PG80826	<p>Under the following conditions, the monitoring data items might not be used because of waiting status in the remote debug function of NetCOBOL Studio.</p> <p>[Condition]</p> <ol style="list-style-type: none"> 1. PROGRAM-ID includes lowercase letters. 2. And, in NetCOBOL Studio, ALPHAL and NOALPHAL compile option and specified in the COBOL Project including the COBOL source program of 1 by any of the following combinations. <ul style="list-style-type: none"> - For local build: ALPHAL or not specified For remote build: NOALPHAL - For local build: NOALPHAL For remote build: ALPHAL or not specified 3. And, when the COBOL Project of 2 is debugged. 4. And, a data item defined in the COBOL source program of 1 is added to the "Watch" view.
27	V10.1.0	PG70346	<p>Under the following conditions, when the directory is selected clicking "Browse" button by "Project > Remote Development > Server directory" of NetCOBOL Studio, an improper error message "Cannot open file "{0}"because specified path is invalid." might be displayed.</p> <ol style="list-style-type: none"> 1. The user's access authority refusal is set to the directory of the server used by remote development. 2. The Remote Development page is opened from the property of the project remote to be developed.

No.	V/L(*)	P number	Content
			<p>3. The server is selected from the combobox of "Server".</p> <p>4. Click "Browse" button, the directory in 1 is selected and click "OK" button.</p>
28	V10.1.0	PG70339	<p>Under the following conditions, Waiting time continues for 20 minutes or more when COBOL source program is opened with NetCOBOL Studio.</p> <p>1. The following character strings are described in a library name, a data name, a constant character string, or a part of constant character string in COBOL source program as a noncontiguous token.</p> <ul style="list-style-type: none"> - PROGRAM-ID - CLASS-ID - METHOD-ID
29	V10.1.0	PG79738	<p>Under the following conditions, NetCOBOL Studio might be down while being debugged with the message "javaw.exe has terminated abnormally." output in messages dialog box.</p> <p>[Condition]</p> <ol style="list-style-type: none"> 1. NetCOBOL product development package for Windows is installed. 2. When a COBOL program is debugged. 3. And, the program of 2 includes a CALL statement. 4. And, the subprogram called by the CALL statement of 3 is different file from the program of 3. 5. And, when the subprogram is debugged by using "Step Into" from the line of CALL statement in the program of 4. 6. And, when the operations from 2 to 5 are done repeatedly. <p>*1: The incidence depends on the memory state.</p>
30	V10.1.0	PG72245	<p>Under the following conditions, the build fails when a local build is executed while effectively set with NetCOBOL Studio for remote development.</p> <ol style="list-style-type: none"> 1. COBOL project is created by NetCOBOL Studio. 2. Precompiler link information for the project is set (Property > Build Tools > Precompiler). 3. Server information for the project is set (Property > Remote Development). 4. Precompiler link information for remote development is never set (Project > Remote Development > Makefile Creation > Option setting > Precompiler) 5. The project is built.
31	V10.1.0	PG71240	<p>Under the following conditions, INSDBINF command outputs the following message mistakenly.</p> <div style="border: 1px solid black; padding: 5px; margin: 10px 0;"> <p>Line number control information and file name control information cannot be correctly output. Check the input file or the command option.</p> </div> <ol style="list-style-type: none"> 1. Pro*COBOL is used. 2. Key word (*) with which Pro*COBOL develops is described in the input source of Pro*COBOL. 3. "/" or "D" is described in indicator area of the line in 2 and it is assumed comment line. <p>* : SQL statement, Pseudo-type data, etc.</p>

No.	V/L(*)	P number	Content
32	V10.1.0	PG71241	<p>Under the following conditions, INSDBINF command outputs the following message mistakenly.</p> <div data-bbox="555 322 1406 427" style="border: 1px solid black; padding: 5px;"> <p>Line number control information and file name control information cannot be correctly output. Check the input file or the command option.</p> </div> <ol style="list-style-type: none"> 1. Pro*COBOL is used. 2. The line feed code of the input source file of Pro*COBOL is a LF 3. "EXEC SQL" and other statements in EXEC SQL statement are described separately for two lines or more. <div data-bbox="616 622 1406 757" style="border: 1px solid black; padding: 5px;"> <p>Example)</p> <pre>EXEC SQL INCLUDE INCFILE END-EXEC</pre> </div>
33	V10.1.0	PG71243	<p>Under the following conditions, INSDBINF command outputs the following message mistakenly.</p> <div data-bbox="555 851 1406 898" style="border: 1px solid black; padding: 5px;"> <p>Include file is not found.</p> </div> <ol style="list-style-type: none"> 1. Pro*COBOL is used. 2. There is an INCLUDE statement in the program. 3. The specification of the include file is enclosed with the quotation (single quotation or double quotation) and specified. <p>or</p> <ol style="list-style-type: none"> 1. Pro*COBOL is used. 2. There is an INCLUDE statement in the program. 3. The include file is specified without the extension path. <div data-bbox="616 1290 1406 1424" style="border: 1px solid black; padding: 5px;"> <p>Example 1)</p> <pre>INCLUDE D:\INCLUDE_DIR\INCF</pre> <p>Example 2)</p> <pre>INCLUDE ..\INCLUDE_DIR\INCF</pre> </div> <ol style="list-style-type: none"> 4. Extension of the include file is specified by the -S option of INSDBINF command.
34	V10.1.0	PG71244	<p>Under the following conditions, INSDBINF command outputs the following message mistakenly.</p> <div data-bbox="555 1565 1406 1612" style="border: 1px solid black; padding: 5px;"> <p>Include file is not found.</p> </div> <ol style="list-style-type: none"> 1. Pro*COBOL is used. 2. There is an INCLUDE statement in the program. 3. INCLUDE and the include file name are described in a separate line, and it changes line just behind character string INCLUDE. <div data-bbox="616 1805 1406 2029" style="border: 1px solid black; padding: 5px;"> <p>Example)</p> <pre>EXEC SQL INCLUDE ▼ INCFILE END-EXEC</pre> <p>▼ : Line Feed Code</p> </div>

No.	V/L(*)	P number	Content
35	V10.1.0	PG72054	<p>Under the following conditions, INSDBINF command outputs the following message mistakenly.</p> <div data-bbox="555 320 1406 427" style="border: 1px solid black; padding: 5px;"> <p>Line number control information and file name control information cannot be correctly output. Check the input file or the command option.</p> </div> <ol style="list-style-type: none"> 1. Pro*COBOL is used. 2. EXEC SQL statement in the input source of Pro*COBOL is described separately for two lines or more. 3. EXEC SQL statement in 2 includes the line of 5 columns or 6 columns (*). <p>- Example 1 (The line of 5 columns)</p> <div data-bbox="655 669 1406 927" style="border: 1px solid black; padding: 5px;"> <pre> -----+-----1-----+-----2-----+-----3-----+-----4 000090 EXEC SQL 000100 SELECT ENAME FROM EMP 00011▼ 000120 WHERE ESAL > 3000 000130 END-EXEC ▼ : Line Feed Code </pre> </div> <p>- Example 2 (The line of 6 columns)</p> <div data-bbox="655 992 1406 1249" style="border: 1px solid black; padding: 5px;"> <pre> -----+-----1-----+-----2-----+-----3-----+-----4 000090 EXEC SQL 000100 SELECT ENAME FROM EMP 000110▼ 000120 WHERE ESAL > 3000 000130 END-EXEC ▼ : Line Feed Code </pre> </div> <p>* : Line Feed Code is not counted.</p>
36	V10.1.0	PG68785	<p>Junk characters may occur within compiler messages under the following conditions:</p> <p>[Condition]</p> <ol style="list-style-type: none"> 1. At the runtime code set is Unicode(*1). And, 2. Program which generates compile messages is compiled and, 3. If the word that caused the error is national hexadecimal nonnumeric literal. <p>(*1) In case of Windows-based products, it is applicable when compile option RCS(UCS2) or RCS(UTF16) is specified. In case of Solaris/Linux, it is applicable when locale is Unicode(LANG=*.UTF-8).</p>
37	V10.1.0	PG67603	<p>In case of following occurrence condition, invalid compile error is generated during compilation (*1)(*2).</p> <p>[Condition]</p> <ol style="list-style-type: none"> 1. At the runtime code set is Unicode(*3). And, 2. Line sequential file exist. And, 3. File record has 2 or more level of group items (*4). Or identifier name specified in the FROM of WRITE statement has 2 or more level of group items (*4). And 4. Group items of (3) are composed of only national item or national edited item. <p>(*1) Following compile message is generated.</p>

No.	V/L(*)	P number	Content
			<p>JMN5159I-S If the runtime code set of national data is Unicode, the line sequential file record cannot have both national and non-national items.</p> <p>(*2) If WRITE statement with FROM specified is written, following compile error message is generated.</p> <p>- .NET</p> <div data-bbox="592 488 1406 622" style="border: 1px solid black; padding: 5px;"> <p>JMN3514I-S When compile option RCS(UTF8-UCS2) or RCS(SJIS-UCS2) is specified, group item @1@ which contains a national item and other items cannot be specified in a WRITE statement with a line sequential file.</p> </div> <p>- Solaris/Linux</p> <div data-bbox="592 689 1406 824" style="border: 1px solid black; padding: 5px;"> <p>JMN3516I-S If the runtime code set of national data is Unicode, group item @1@ which contains a national item and other items cannot be specified in a WRITE statement with a line sequential file.</p> </div> <p>- Windows</p> <div data-bbox="592 891 1406 994" style="border: 1px solid black; padding: 5px;"> <p>JMN3473I-S When compile option RCS(UTF16) is specified, group item @1@ which contains a national item and other items cannot be specified in a WRITE statement with a line sequential file.</p> </div> <p>(*3) In case of Windows-based products, it is applicable when compile options RCS(UCS2) or RCS(UTF16) is specified. In case of Solaris/Linux, it is applicable when locale is Unicode(LANG=*.UTF-8).</p> <p>(*4) Example of 2 level of group items is shown.</p> <div data-bbox="555 1171 1406 1305" style="border: 1px solid black; padding: 5px;"> <pre>E.g.) 01 A. 02 A1. 03 A11 PIC N. 03 A12 PIC N.</pre> </div> <p>1 level group items as shown below does not corresponds with the occurrence condition.</p> <div data-bbox="555 1373 1406 1476" style="border: 1px solid black; padding: 5px;"> <pre>01 A. 02 A1 PIC N. 02 A2 PIC N.</pre> </div>
38	V10.1.0	PG66674	<p>The compile message (JMN1073I-S or JMN1104I-S) notifying that there is no program name paragraph at the time of compilation is generated under the following circumstances:</p> <p>[Condition]</p> <ol style="list-style-type: none"> 1. The external program that specifies 31 bytes or more national program-name or program-name literal are defined, And, 2. The internal program that specifies (1) and till 30 bytes same national program-name or program-name literal is defined.
39	V10.1.0	PG77383	<p>Under the following conditions, the execution results are incorrect.</p> <ol style="list-style-type: none"> 1. The compilation option OPTIMIZE is valid. (*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 does not have decimal-part.

No.	V/L(*)	P number	Content																		
			<p>4. The numeric edited data item specifies only zero suppression for the edit (Only '9', 'Z', and '*' are used for PICTURE character-string).</p> <p>5. Before the statement in 2 (*2), there is a statement that sets data item (or intermediate result) to packed decimal item.</p> <p>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 :</p> <table border="1" data-bbox="614 474 1404 846"> <thead> <tr> <th data-bbox="614 474 1093 555">Data item (or intermediate result)</th> <th data-bbox="1093 474 1404 555">Packed decimal item</th> </tr> </thead> <tbody> <tr><td data-bbox="614 555 1093 600">2</td><td data-bbox="1093 555 1404 600">3</td></tr> <tr><td data-bbox="614 600 1093 645">4</td><td data-bbox="1093 600 1404 645">5</td></tr> <tr><td data-bbox="614 645 1093 689">6</td><td data-bbox="1093 645 1404 689">7</td></tr> <tr><td data-bbox="614 689 1093 734">8</td><td data-bbox="1093 689 1404 734">9</td></tr> <tr><td data-bbox="614 734 1093 779">10</td><td data-bbox="1093 734 1404 779">11</td></tr> <tr><td data-bbox="614 779 1093 824">12</td><td data-bbox="1093 779 1404 824">13</td></tr> <tr><td data-bbox="614 824 1093 869">14</td><td data-bbox="1093 824 1404 869">15</td></tr> <tr><td data-bbox="614 869 1093 913">16</td><td data-bbox="1093 869 1404 913">17</td></tr> </tbody> </table> <p>7. The data item in 5.(or intermediate result) and the packed decimal item in 2 don't have the decimal-part.</p> <p>*1 : NOOPTIMIZE is the default.</p> <p>*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																				
40	V10.1.0	PG64051	<p>The compiler terminates abruptly during compilation (*1) under the following conditions:</p> <p>[Condition]</p> <ol style="list-style-type: none"> <li data-bbox="587 1137 991 1160">1. In-line method invocation exists. And <li data-bbox="587 1189 1417 1245">2. LENGTH OF special register is specified for argument of in-line method invocation. <p>(*1)</p> <ul style="list-style-type: none"> <li data-bbox="587 1317 1394 1391">- .NET "Problem has occurred, F5FGCBL.exe needs to close." message box is displayed. <li data-bbox="587 1413 1394 1487">- Windows "Problem has occurred, COBOL32.exe needs to close." message box is displayed. <li data-bbox="587 1509 1129 1583">- Solaris "Segmentation exception (core dumped)" is generated. <li data-bbox="587 1606 1023 1680">- Linux "Segmentation error" message is generated. <p>Notes:</p> <p>Identifier must be SELF, EXCEPTION-OBJECT, NULL, a class name specified in the REPOSITORY paragraph, or a data item defined in the FILE, WORKING STORAGE, or LINKAGE section. (Language reference 11.3.3.2 In-Line Method Invocation)</p> <p>Therefore description shown in occurrence conditions are in violation of the syntax rules, in right manner it should be compilation error.</p>																		
41	V10.1.0	PG74245	<p>Under the following conditions, the compilation terminates abnormally.</p> <ol style="list-style-type: none"> <li data-bbox="587 1966 1129 1989">1. PROCEDURE division has 10,000-line (*) or more. <li data-bbox="587 2011 858 2033">2. Object specifier is used. 																		

No.	V/L(*)	P number	Content
			<p>* : 10,000 lines or more are standards. There is a possibility to be generated by 10,000 lines or less according to the writing of the program, too. However, if it is not tens of thousands of lines or more if it is a program of a standard form that does not write two or more sentences in one line, the possibility of terminating abnormally is extremely low.</p>
42	V10.1.0	PG72507	<p>When the compile option THREAD(SINGLE) is specified, an abnormal execution result might be generated. When compile option THREAD(MULTI) is specified, abnormal termination or an execution abnormal result might also be generated.</p> <p>[Condition]</p> <p>1. In the COBOL program calculation of fixed point attribute exists where digits(*1) of intermediate results will become 28 digits.</p> <p>-- NetCOBOL Language Reference Start --</p> <p>*1: The number of digits of the intermediate result is determined by the number of digits of the variable that is used for the calculation. The digit number for the intermediate result can be requested by the following calculations.</p> <ul style="list-style-type: none"> - Addition <p>Number of digits of the intermediate result = MAX(Number of digits in the integer part of the Summand, Number of digits in the integer part of the Addend) + MAX(Number of digits in the decimal part of the summand, Number of digits in the fractional part of the Addend) + 1</p> - Subtraction <p>Number of digits of the intermediate result = MAX(Number of digits in the integer part of the minuend, Number of digits in the integer part of the meiotic) + MAX(Number of digits in the decimal part of the minuend, Number of digits in the decimal part of the meiotic) + 1</p> - Multiplication <p>Number of digits of the intermediate result = Number of digits of the multiplicand + Number of digits of the multiplier</p> - Division <p>Number of digits of the intermediate result = Number of digits in the integer part of the dividend + MAX(Decimal part reference digits(*2), Number of digits in the decimal part of the dividend - Number of digits in the decimal part of the divisor)</p> <p>*2: All operands in arithmetic statements and arithmetic expressions (including destination items) are used. Use the maximum number of digits in the decimal part operand as the reference number of digits in the decimal part. However, when using arithmetic statements and expressions, floating-point data items and any operands used as an exponent in an exponent or division divisor and as function arguments should be excluded. When ROUNDED is specified in the destination, increase the number of digits in the decimal part of the destination item and use that result for the destination item. If no operand is used to determine the reference number of digits in the decimal part, 0 is used as the reference number of digits in the decimal part.</p> <p>-- NetCOBOL Language Reference End --</p> <p>An example of computing the intermediate result where it will become 28 digits is shown below.</p> <ul style="list-style-type: none"> - 18-digit integer and a decimal point below is the addition of decimal with 9 digits <pre style="border: 1px solid black; padding: 5px;"> 01 DATA11 PIC S9(18) . 01 DATA12 PIC S9(18) . 01 DATA13 PIC S9(9)V9(9) . : </pre>

No.	V/L(*)	P number	Content
			<pre data-bbox="596 237 1401 331"> COMPUTE DATA11 = DATA12 + DATA13 *> Addition of Integer 18 digits and decimal nine- digit </pre> <p data-bbox="596 349 1420 443">In the above example, during addition there is a possibility that increase in digits could occur, in the intermediate result 28 digits of area is reserved, 19 digits for integer part and 9 digits for decimal part.</p> <p data-bbox="580 465 1123 492">- Multiplication of 10-digit integer and 18-digit integer</p> <pre data-bbox="596 510 1401 730"> 01 DATA21 PIC S9(18). 01 DATA22 PIC S9(10). 01 DATA23 PIC S9(18). : COMPUTE DATA21 = DATA22 * DATA23 *> Multiplication of 10-digit integer and 18-digit integer </pre> <p data-bbox="596 748 1420 810">In the above example, during multiplication in the intermediate result 28 digits of area is reserved.</p> <p data-bbox="580 833 1420 891">- 10-digit integer and 10 digit integer and decimal point below is the multiplication of decimal points having 8 digits</p> <pre data-bbox="596 909 1401 1128"> 01 DATA31 PIC S9(18). 01 DATA32 PIC S9(10). 01 DATA33 PIC S9(10). 01 DATA34 PIC SV9(8). : COMPUTE DATA31 = DATA32 * DATA33 * DATA34 *> Multiplication of 10 digit 10 digit and 8 digit </pre> <p data-bbox="596 1146 1420 1209">In the above example, area reserved for intermediate results during the first multiplication is 20 digits, 28-digit during the second multiplication.</p> <p data-bbox="564 1232 1203 1258">Please see below for more information on the intermediate results.</p> <ul data-bbox="580 1281 1420 1496" style="list-style-type: none"> - "NetCOBOL Vxx.xx COBOL Language Reference Appendix D Intermediate Results" - "NetCOBOL for Windows Vxx.xx Language Reference Appendix D Intermediate Results" - "NetCOBOL for Linux Vxx.xx COBOL Language Reference Appendix D Intermediate Results"
43	V10.1.0	PG78440	<p data-bbox="564 1518 1203 1545">Under the following conditions, the execution results are incorrect.</p> <ol data-bbox="596 1568 1420 1966" style="list-style-type: none"> <li data-bbox="596 1568 1420 1630">1. The BINARY(BYTE) or BINARY(WORD, MLBOFF) compiler option is specified, along with <li data-bbox="596 1653 1420 1966">2. The following intrinsic functions: <ul data-bbox="628 1697 893 1966" style="list-style-type: none"> <li data-bbox="628 1697 660 1724">[A] <li data-bbox="644 1747 852 1774">- FUNCTION MAX <li data-bbox="644 1796 836 1823">- FUNCTION MIN <li data-bbox="644 1845 868 1872">- FUNCTION MEAN <li data-bbox="644 1895 884 1921">- FUNCTION MEDIAN <li data-bbox="644 1944 868 1971">- FUNCTION RANGE <p data-bbox="628 1989 660 2016">[B]</p>

No.	V/L(*)	P number	Content
			<ul style="list-style-type: none"> - FUNCTION ANNUITY - FUNCTION NUMVAL - FUNCTION NUMVAL-C - FUNCTION RANDOM <p>3. The arguments of the function in 2) above are fixed point of 9 digit or less.</p> <p>4. The number of the arguments in [A] above is 4 or more.</p>
44	V10.1.0	PG63990	<p>In the following environment and conditions, at run time, the SEARCH statement execution result is incorrect (* 1).</p> <p>(*1) The result will be any one of either a) or b). However with 0 search will have normal results.</p> <p>a) In spite of satisfying the WHEN condition, procedure specified in WHEN condition is not executed.</p> <p>b) In spite of not satisfying the WHEN condition, procedure specified in WHEN condition gets executed.</p> <p>[Condition]</p> <ol style="list-style-type: none"> 1. SEARCH statement (SEARCH ALL) exists. And 2. Multiple conditions are specified to WHEN of SEARCH statement, or, A multi-dimensional index is specified in the key item of WHEN phrase. And, 3. To the left-hand side (key item) of the condition, any of the following USAGE items is mentioned. And, <ul style="list-style-type: none"> - COMP-5 (Also include those that were considered by the compile option ASCOMP5) - BINARY-CHAR UNSIGNED - BINARY-SHORT - BINARY-LONG - BINARY-DOUBLE 4. If to the right-hand side (the comparison object item) of the conditions, a floating-point item or floating-point constant is mentioned.
45	V10.1.0	PG67763	<p>In the following environment and conditions, during the compilation by the COBOL compiler, the compilation processing is aborted.</p> <p>[Condition]</p> <ol style="list-style-type: none"> 1. In the Procedure division of the source program, CLOSE statement is mentioned immediately after the DISPLAY statement. And, 2. In the DISPLAY statement of (1) UPON is specified, and NO ADVANCING is not specified. And, 3. In the end of DISPLAY statement of (1) period is not given. And, 4. Compile option NUMBER is specified, or CLOSE statement of (1) is included through COPY library. And, 5. Regarding the CLOSE statement of (1) [COPY qualification-value](*1), when it is expressed in hexadecimal of 2 bytes, it becomes a particular value (*2). <p>(*1) Regarding [COPY qualification-value], please refer to the NetCOBOL User's Guide of each product.</p>

No.	V/L(*)	P number	Content
			<ul style="list-style-type: none"> - For other than NetCOBOL for .NET Please refer to the section of "Source Program Listing". - In case of NetCOBOL for .NET Please refer to "NetCOBOL User's Guide for .NET" > "Reference" > "Compiler options/compile options" > "NUMBER". Will be applicable to those which are expressed as "special numbers" "label". <p>(*2) Corresponding value differs for products.</p> <ul style="list-style-type: none"> - For other than Solaris > If the second half of 1 byte is X "0D" 13 > X"000D" 269 > X"010D" 525 > X"020D" - In case of Solaris version > If the first half of 1 byte is X"0D"(3328~3583) 3328 > X"0D00"
46	V10.1.0	PG69138	<p>In case of following environment, occurrence condition, during execution COBOL program terminates abruptly.</p> <p>[Condition]</p> <ol style="list-style-type: none"> 1. There is a SORT or MERGE statement with the USING or GIVING phrase. And, 2. In USING or GIVING phrase specified at (1), Relative file of sequential access with the RELATIVE KEY clause is specified. And, 3. Relative file of (2) is not an EXTERNAL specified file. And, 4. RELATIVE KEY clause data item of (2) is not a data item defined in the LINKAGE section. And, 5. OPEN statement of the relative file of (2) is not executed before SORT or MERGE statement of (1) is executed.
47	V10.1.0	PG73470	<p>Under the following conditions, the message (JMN9333I-W (STD)Number of USING phrase in CALL statement must not exceed 5.) is output at the compilation time.</p> <ol style="list-style-type: none"> 1. The compilation option FLAGSW(STDM) or FLAGSW(STDI) is valid. 2. There is a USING phrase in CALL statement. 3. The number of parameters specified for USING are 5 or less, and identifier. 4. One or more reference modification or subscript is specified for identifier in 3. 5. The identifier is specified to reference modification or subscript in 4. 6. The total number of identifier in 3 and 5 is 6 or more.
48	V10.1.0	PG68532	<p>When debugging an executable file in interactive debugger which was created as per the following occurrence conditions, interactive debugger failed and debugging cannot be started.</p> <p>[Condition]</p> <ol style="list-style-type: none"> 1. The libraries are included in the COPY statement with REPLACING phrase. And, 2. The last token of the last line of the included library is a nonnumeric literal closed with quotes. And, 3. There is no period or separator immediately after the nonnumeric literal of (2), quote of the nonnumeric literal is at the right end of Area B. And,

No.	V/L(*)	P number	Content
			4. The compile option TEST is specified.
49	V10.1.0	PG77217	<p>Debugging cannot begin because interactive debugger terminates abnormally when the execute form file made on the following conditions is debugged with interactive debugger.</p> <ol style="list-style-type: none"> 1. Library is included in a program using COPY statement. 2. The included COPY library is only PROCEDURE DIVISION header. 3. The program is compiled specifying the compilation option TEST.
50	V10.1.0	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.
51	V10.1.0	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>
52	V10.1.0	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>
53	V10.1.0	PG83344	<p>Under the following conditions, the INSDBINF command terminates abnormally, or the</p>

No.	V/L(*)	P number	Content
			<p>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. 3. The national character (3byte character) is described in COBOL source program.
54	V10.1.0	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> <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.
55	V10.1.0	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>

*: 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 (32bit)

Table 3.2 Program fix list for the NetCOBOL Runtime Environment

No.	V/L(*)	P number	Content
1	V10.1.0	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	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.
3	V10.1.0	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.
4	V10.1.0	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.
5	V10.1.0	PH00632	<p>Under the following conditions, when COBOL application does the error diagnosis by the diagnostic function, "JMW0013I-W" message is output and the dump file is not made.</p> <ol style="list-style-type: none"> 1. When COBOL application is executed, the application error or execution error at U level (JMP0009I-U,JMP0010I-U,JMP0370I-U) are generated. 2. The diagnostic function is started. 3. There are ten dump files that are the upper limit in the dump file making folder.
6	V10.1.0	PH04053	<p>An error code 13 (detail code 10109 or 11004) may occur with the application communication routine "COBCI_OPEN" under the following conditions:</p> <p>[Environment]</p> <p>Operating on Windows Server 2012, Windows Server 2012 R2 or Windows 8, Windows 8.1.</p> <p>[Condition]</p>

No.	V/L(*)	P number	Content
			<ol style="list-style-type: none"> 1. Inter communication between simple applications is used. And 2. Subroutine "COBCI_OPEN" is called from multiple processes at the same time.
7	V10.1.0	PH04922	<p>The following message may be displayed while debugging your COBOL application: [Example: Debugging sample program "SALES" of PowerFORM]</p> <div style="border: 1px solid black; padding: 2px;"> <p>SALES: SALES.EXE - Entry Point Not Found</p> </div> <div style="border: 1px solid black; padding: 2px;"> <p>* The procedure entry point Iser32.CharNextExa could not be located in the dynamic link library api-ms-win-downlevel-user32-11-1-0.dll</p> </div> <div style="border: 1px solid black; padding: 2px;"> <p>[OK]</p> </div> <ol style="list-style-type: none"> 1. The operating system is Windows 7. 2. Internet Explorer version is 10. 3. The dll importing DLL of MinWin(*). <p>*: It is dll where file name originates in "api-ms-win".</p>
8	V10.1.0	PG72597	<p>The execution of WRITE AFTER ADVANCING PAGE does not become effective at COBOL program execution time in the following conditions (*1).</p> <ol style="list-style-type: none"> 1. It is coordinated with external file handler in the line sequential file. And, 2. WRITE statement of the AFTER ADVANCING PAGE specification is executed immediately after the execution of OPEN statement corresponding to 1. <p>*1 This phenomenon depends on the specification of cooperating external file handler.</p>
9	V10.1.0	PG77099	<p>Under the following conditions, the execution environment variable @CBR_SSIN_FILE=THREAD does not 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>
10	V10.1.0	PG79650	<p>Under the following conditions, the call of method fails and outputs the following message.</p> <div style="border: 1px solid black; padding: 2px;"> <p>JMP0221I-U ERROR OCCURRED IN '*' OF THE METHOD INVOCATION. 'BIND'</p> </div> <p>*: The garbled method name is output.</p> <ol style="list-style-type: none"> 1. The class definition (method) is called from the program definition. 2. Compile option RCS (UCS2,LE) or RCS (UTF16,LE) is specified. 3. When the method name specified for the INVOKE statement is multi bytes character.
11	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. <p style="padding-left: 40px;">- READ statement</p>

No.	V/L(*)	P number	Content
			<ul style="list-style-type: none"> - WRITE statement - REWRITE statement - DELETE statement - START statement <p>3. The execution of I/O statement failed.</p> <p>* : It does not correspond when BSAM is specified.</p>
12	V10.1.0	PG73242	<p>Under the following conditions, at execution time, the following message is output and COBOL application terminates.</p> <div style="border: 1px solid black; padding: 5px; margin: 10px 0;"> <p>"Fatal Application Exit insufficient storage available. MSGNO=65535 ERR=9d"</p> </div> <ol style="list-style-type: none"> 1. The alias associated with function-name SYSERR is described in DISPLAY statement. 2. The output destination of DISPLAY statement is a standard error output or a file (file specified for @MessOutFile). 3. The environment variable @CBR_SYSERR_EXTEND is not specified. 4. The (1024*n+1) byte of the data specified for the DISPLAY sentence is LOW-VALUE(X"00"). (n=0,1,~)
13	V10.1.0	PG73288	<p>Under the following conditions, the log information of web subroutine is not output to the log file.</p> <ol style="list-style-type: none"> 1. The Web subroutine is used. 2. Compile option RCS (UCS2,LE) or RCS (UTF16,LE) is specified. 3. The log information output of the Web subroutine is set to the environment variable.
14	V10.1.0	PG64106	<p>Under the following conditions, the mistake is found in the execution result of the table search of SEARCH statement (SEARCH ALL).</p> <ol style="list-style-type: none"> 1. SEARCH statement (SEARCH ALL) exists. And, 2. Two or more conditions are described in the WHEN specification of the SEARCH statement or, the subscript specified for the key item of the WHEN specification is multi-dimensional. And, 3. The item of either of the following USAGE is described in the subject of condition (key item). And, <ul style="list-style-type: none"> - COMP-5 (The one considered by compiler option ASCOMP5 is included). - BINARY-SHORT - BINARY-LONG - BINARY-DOUBLE 4. When you describe the floating-point item or the floating-point constant in the object of condition (object of comparison item).
15	V10.1.0	PG75429	<p>Under the following conditions, the input file becomes 0 bytes and the message of "0 Records were restored." is output in the execution of the indexed file recovery function.</p> <ol style="list-style-type: none"> 1. Either of the following indexed file recovery function is executed. <ul style="list-style-type: none"> - Recovery Command of COBOL File Utility - File recovery command(cobfrcov)

No.	V/L(*)	P number	Content
			<ul style="list-style-type: none"> - Indexed File Recovery Function <p>2. Index file recovery function will generate error when the file specified as index recovery file corresponds to either of the following.</p> <ul style="list-style-type: none"> - The file is being accessed by COBOL program, etc. - The file is not an index file.
16	V10.1.0	PG77518	<p>Under the following conditions, the COBOL program terminates abnormally(EXCEPTION_ACCESS_VIOLATION)</p> <ol style="list-style-type: none"> 1. A COM client function is used 2. When the COM client is called again in the same process(*) after runtime environment closes. <p>*: For details</p> <p>2-1-1. The program is compiled by single thread.</p> <p>2-1-2. The COBOL application is called from the other language.</p> <p>2-1-3. When COBOL application is called again after all COBOL applications end in the process.</p> <p>or</p> <p>2-2-1. The program is compiled by multi thread.</p> <p>2-2-2. After calling JMPCINT4, when JMPCINT2 is called again and COBOL application is called.</p>
17	V10.1.0	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>
18	V10.1.0	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

No.	V/L(*)	P number	Content
			<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>
19	V10.1.0	PG84270	<p>Under the following conditions, the SQL statement fails and outputs the following message.</p> <p>SQLSTATE=S1010</p> <p>SQLCODE=0</p> <p>SQLMSG=[Microsoft][ODBC Driver Manager]Function sequence error.</p> <ol style="list-style-type: none"> 1. It connects to the Database with ODBC by using the remote database access function. 2. The FETCH sentence is executed. 3. The COBOL program compiled by the COBOL97 V40L20 or before version compiler is executed. <p>*: The occurrence frequency depends on the state of the memory.</p>
20	V10.1.0	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;"> <p>System error occurred. code = 0x44</p> </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-filename.
21	V10.1.0	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 <ul style="list-style-type: none"> a: Data starting location (*) of the sending data item b: The length of sending data item or the length of receiving data item, whichever is smaller. c: Data starting location (*) of the receiving data item d: The length of receiving data item 4. The receiving data item is subordinate to the group item. 5. Data starting location of the receiving data item is not byte boundary of the group item in 4. 6. "Bit length of sending data item" < " Bit length from bit data starting location on the receiving side to the first byte boundary " 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>*: relative bit position in byte</p> <p>Example of Condition 1</p>

No.	V/L(*)	P number	Content
			<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> <p>[Condition 2]</p> <ol style="list-style-type: none"> 1. Move from the internal Boolean item to the internal Boolean item. 2. The sending data item or the receiving data item is referred by the subscript. 3. "The length of receiving data item" > 1 4. It is either the following. <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 5. There is not the data starting location of the receiving data item on byte boundary. 6. "Bit length of sending data item" < "Bit length from bit data starting location on the receiving side to the first byte boundary " 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>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"11111110-00000000" END-IF. </pre>

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

3.3 PowerCOBOL Development Environment

Information described here applies to the following products.

- NetCOBOL Enterprise Edition V11.0.0 for Windows (32bit)

Table 3.3 Program fix list for the PowerCOBOL

No.	V/L(*)	P number	Content
1	V10.1.0	PH01836	<p>Under the following conditions, when the program with tens of thousands of lines, PowerCOBOL might fail in building and terminate abnormally.</p> <p>[Condition]</p> <ol style="list-style-type: none"> 1. Event procedures are written in PowerCOBOL. 2. And, the number of lines for event procedures is tens of thousands of lines.*1 <p>*1: The number of lines depends on a way of writing of MOVE statement to access a property, INVOKE statement to call a method, and any other statements. This error might be occur if the number of lines of the .PRC file which is generated when the project built is more than 40 thousand.</p>
2	V10.1.0	PH03380	<p>Under the following conditions, it might be fail in compiling with the following message output.</p> <div style="border: 1px solid black; padding: 5px; margin: 5px 0;"> <pre>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=@1@, module-name=@2@, detail-code=@3@, linenumber=@4@)</pre> </div> <p>[Condition]</p> <ol style="list-style-type: none"> 1. The sqlpcob command of Symfoware Server is available in the pre-compiler settings. 2. And, SQL statements are written as event procedures in PowerCOBOL. 3. And, the module is built on each of the following modes. <ul style="list-style-type: none"> - "Debug Mode" is selected. - "Release Mode" is selected and, "Use Diagnostic Function" is selected. 4. And, the following letters do not exit after "END-EXEC" statement at the end of SQL statements. <ul style="list-style-type: none"> - Separator Period - Separator Space followed by Separator Comma - Separator Space followed by Separator Semicolon 5. And, the next line of the "END-EXEC" statement of 4 is a comment line. 6. And, column 12 in the next line of the comment line of 5 is space. 7. And, any statements are written at 13 column or later in the line of 6. 8. And, the same statement with that of 7 is written after the line of 7.*1 <p>*1: Whether the level of the compile error is U depends on where the event procedures are developed in the COBOL program. If the level of the compile error is not U, object files are generated correctly. However, it might fail in stopping at break point or Step Into execution.</p>
3	V10.1.0	PH03539	<p>Under the following conditions, PowerCOBOL terminates abnormally.</p> <p>[Condition]</p> <ol style="list-style-type: none"> 1. A COMPUTE statement is written in event procedures.

No.	V/L(*)	P number	Content
			<p>2. And, a COMPUTE statement is followed by a COBOL reserved word.</p> <p>3. And, when the project is built or rebuilt in PowerCOBOL.</p>
4	V10.1.0	PH04704	<p>The following issues may be encountered under certain specific conditions while debugging PowerCOBOL programs:</p> <ul style="list-style-type: none"> - A data item cannot be detected by the debugger. - Failure to stop at a defined break point or Step Into execution, or, incorrect line positions are reported by the diagnostic function. (*) <p>* : The diagnostic function can be used in V5.0 or later.</p> <p>[Condition]</p> <ol style="list-style-type: none"> 1. The sqlpcob command of Symfoware Server is available in the pre-compiler settings. 2. And, SQL statements are written as event procedures in PowerCOBOL. 3. And, SQL statements of 2 are written in each of the following way. <ul style="list-style-type: none"> - SQL statements are multiline. - Separator letters (*) do not exit after "END-EXEC" statement at the end of SQL statements, and the next line of SQL statements is a comment. 4. And, the module is built on each of the following modes. <ul style="list-style-type: none"> - "Debug Mode" is selected. - "Release Mode" is selected and, "Use Diagnostic Function" is selected. <p>* : A space is excluded.</p>

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

3.4 PowerCOBOL Runtime Environment

Information described here applies to the following products.

- NetCOBOL Enterprise Edition V11.0.0 for Windows (32bit)

There is no information on the program correction.

3.5 PowerFORM

Information described here applies to the following products.

- NetCOBOL Enterprise Edition V11.0.0 for Windows (32bit)

Table 3.4 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. $(S - L + (N * 5)) \bmod 256 = 255$ <p>where:</p> <p>S is the sum of data length.</p> <p>L is data length of last field in record list.</p> <p>N is the field count.</p>

No.	V/L(*)	P number	Content
			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	Printer output or output preview may print out the characters longer than the value of Field Length under the following condition: <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.
3	V10.1.0	PG69450	Print or print preview may occasionally fail with error code 18 or 21, with the following detail codes: <p>* 18-42d1-00000005-00000000</p> <p>* 21-02b6-00000005-00000000</p> <p>* 18-0011-00000005-00000000</p> under the following condition: <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	NetCOBOL uninstaller will not remove the files used by PowerFORM RTS under the following condition: <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	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: <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 equation true. <p>"FLOOR((File_Size_In_Bytes MOD 65536) / 1024) * 1024 > Maximum_Size_Of_The_Log_Per_Job[MEFTLOGSIZEP]"</p>
6	V10.1.0	PG84734	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: <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	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>[Condition 1]</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
			<p>2. Printer resolution value is less than 1440. And,</p> <p>3. 1440 can be divided by the resolution value (e.g.. 300dpi). And,</p> <p>4. Vertical or horizontal size of the image is 1px.</p> <p>Or,</p> <p>[Condition 2]</p> <p>1. Use the form definition with one or more bitmap fields. And,</p> <p>2. Printer resolution value is greater than 1440. And,</p> <p>3. Vertical or horizontal size is less than or equal to the result of dividing the resolution by 1440.</p>
8	V10.1.0	PG95043	<p>Despite the printability of the max 99999 of pages, the pages more than #1000 won't be actually printed out under the following conditions:</p> <p>1. Display the print dialog box with the following settings:</p> <ul style="list-style-type: none"> - Set MEFTDLG environment variable to "Y". or, - Set SETPRTDIALOG in Print Information File to "2" or "3". <p>2. And, Specify the value more than or equal to 1000 for the range of pages in the print dialog box.</p>

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

3.6 J Adapter Class Generator

Information described here applies to the following products.

- NetCOBOL Enterprise Edition V11.0.0 for Windows (32bit)

Table 3.5 Program fix list for the J Adapter Class Generator

No.	V/L(*)	P number	Content
1	V10.1.0	PG79372	<p>Under the following conditions [condition 1], when the java2cob command is executed, a program terminates abnormally with the following message output.</p> <p>"To help protect your computer, Windows has closed this program."</p> <p>[condition 1]</p> <p>1. Interstage Studio is not installed.</p> <p>2. And, FUJITSU JDK/JRE included in Interstage Application Server is installed.</p> <p>3. And, when the java2cob command is executed from the system console (command prompt window).</p> <p>And also, under the following conditions [condition 2], when an application using the J adapter class generator is executed, it is broken execution with the following message output.</p> <p>"There was a failure in the initialization of JavaVM. Please verify that environment variable PATH and COBJNI_CLASSPATH) is set correctly, and that JDK/JRE is correctly installed."</p> <p>[condition 2]</p> <p>1. Interstage Studio is not installed.</p> <p>2. And, FUJITSU JDK/JRE included in Interstage Application Server is installed.</p> <p>3. And, when an adapter class library (DLL) is created used by the java2cob command.</p>

No.	V/L(*)	P number	Content
			<p>4. And, when an application that uses the adapter class of 3 is created.</p> <p>5. And, when the application of 4 is executed.</p>
2	V10.1.0	PH04723	<p>Under the following environment and conditions, a character string that is returned from a Java class is converted into the alternative character "?" when the getStringX method or getStringN method of the java.lang.String class is used.</p> <p>[Environment]</p> <p>NetCOBOL for Windows is installed in any other Windows locales except for Japanese.</p> <p>[Condition]</p> <ol style="list-style-type: none"> 1. ASCII code is used when an application that uses an adapter class is run. 2. And, when any of the following characters are gotten by using a method of the java.lang.String class. <ul style="list-style-type: none"> - cent sign: U+00A2 - pound sign: U+00A3 - not sign: U+00AC

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

3.7 Data Tools

Information described here applies to the following products.

- NetCOBOL Enterprise Edition V11.0.0 for Windows (32bit)

There is no information on the program correction.

3.8 PowerBSORT

Information described here applies to the following products.

- NetCOBOL Enterprise Edition V11.0.0 for Windows (32bit)

Table 3.6 Program fix list of PowerBSORT

No.	V/L (*1)	P number	Content of change
1	V6.0.0	PG76059	<p>Under the following conditions, PowerBSORT may cause result error, infinite loop or abnormal termination.</p> <ol style="list-style-type: none"> 1. The bsort command, the bsortex command or the BSORT function is used. 2. Sort function is specified. 3. The text file CSV format or text file TSV format is specified. 4. The record summation option or the record selection option for the output files is specified. 5. The summation field or selection field is enclosed with a double quotation.
2	V6.0.0	PG76539	<p>Under the following conditions, PowerBSORT may cause result error or abnormal termination.</p> <ol style="list-style-type: none"> 1. The bsortex command is used. 2. The text file CSV format or text file TSV format is specified. 3. The record reconstruction option for the output files is specified.

No.	V/L (*1)	P number	Content of change
3	V6.0.0	PG74094	<p>Under the following conditions, PowerBSORT outputs the error message "Invalid option (-P) is specified." and terminates abnormally. Or, PowerBSORT loops infinitely.</p> <ol style="list-style-type: none"> 1. The bsort command is used. 2. Process definition file option (-P) is specified. 3. The specification of "Keys=" of the process definition file is illegal.
4	V6.0.0	PG76748	<p>Under the following conditions, PowerBSORT terminates abnormally. (*1)</p> <ol style="list-style-type: none"> 1. The application is made by using PowerBSORT OCX or the BSORT function. Or, the bsort command and the bsortex command were copied from the installation folder to other folders or the short cut is made. 2. The PROGRAM folder in the PowerBSORT installation folder is not included in environment variable PATH. 3. The Btrieve filesystem is specified for the input file system or the output file system. <p>*1: The following error messages are output.</p> <p>When PowerBSORT OCX is used, "Error in the specification of the file system."</p> <p>Other cases, "Error occurred in file system(F3BEBTRV.DLL)."</p>
5	V6.0.0	PG76750	<p>Under the following conditions, PowerBSORT terminates abnormally. (*1)</p> <ol style="list-style-type: none"> 1. The application is made by using PowerBSORT OCX or the BSORT function. 2. Btrieve product that is newer than Btrieve 6.15J is used. 3. The Btrieve filesystem is specified for the output file system. <p>*1: The following error messages are output.</p> <p>When PowerBSORT OCX is used, "The error occurred while opening the file."</p> <p>Other cases, "Error occurred during file (*2) open.(1)"</p> <p>*2: file name</p>
6	V6.0.0	PG84172	<p>Under the following conditions, PowerBSORT outputs the error message "A necessary PowerBSORT working area cannot be secured." and terminates abnormally.</p> <ol style="list-style-type: none"> 1. Sort function is specified. 2. The input file system is a native file system of the system. 3. The input file is a binary file. 4. The input record length is very large. 5. The size of the input file is a small.
7	V6.0.0	PG90774	<p>Under the following conditions, PowerBSORT outputs the error message "First/last option is specified without summation/suppress function." and terminates abnormally.</p> <ol style="list-style-type: none"> 1. The bsortex command is used. 2. The suppress operand (suppression option) of -summary option is specified. 3. The first operand or last operand of -summary option is specified. 4. The fifo operand of -option option is specified.
8	V6.0.0	PH05442	<p>Under the following conditions, PowerBSORT cannot correctly check whether the reconstruction field and the selection field exist in the record.</p> <p>As a result of an error in usage or implementation, the output may produce unpredictable or abnormal results.</p>

No.	V/L (*1)	P number	Content of change
			<ol style="list-style-type: none"> 1. The bsortex command is used. 2. The record format is the following. <ul style="list-style-type: none"> - Binary file variable-length record form (-record recform=var), or - Text file fixed field specification (-record recform=txtfix) 3. Two output file information options (-output) or more are specified. 4. The following options are specified by two output file information options (-output) or more. <ul style="list-style-type: none"> - Record reconstruction option (-output reconst=...) - Record selection option (-output include=.../omit=.../case=...) 5. The field in the record is specified for a reconstruction field for the record reconstruction option (form of "pos.len" or "pos.END"). 6. The maximum position of the reconstruction field specified by each output file information option (-output) is different. or, The maximum position of the selection field specified by each output file information option (-output) is different.

*1: 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.

Development Environment

- When you use NetCOBOL Studio, Project Manager or PowerCOBOL, 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
- FORM Overlay Option
- MeFt/Web
- SIMPLIA TF-EXCOUNTER
- SIMPLIA MF-STEP COUNTER
- SIMPLIA DF-COBD OC
- SIMPLIA VF-FILECOMP

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
Data Converter	SIMPLIA TF-MDPORT
Data Editor	SIMPLIA TF-LINDA

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.



See

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

- Specify the font name by an English name.



See

.....
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.



See

.....
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.



See

.....
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.



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

- MAPFONT (Map font names)
-

4.4.5 SIMPLIA TF-MDPORT

There are following functional differences compared with TF-MDPORT when you use Data Converter.

- Latin alphabet characters and the code pages are supported in Data Converter, but proprietary character codes (e.g. Fujitsu JEF, IBM Kanji) and multi-byte character codes except for UNICODE (e.g. SJIS, EUC) are not supported.
- Item definition cannot be automatically generated from the C language include files.
- Data Converter does not provide DDL generate function.
- Command operands, date and time are not logged to the event log when you execute in batch mode.
- The related resources created by TF-MDPORT cannot be used for Data Converter.
- "YPS include specifications" cannot be specified for a type of the format file.
- It does not support that co-operation with Interstage Charset Manager.
- No functional differences compared with TF-MDPORT but the execution file name specified by the batch mode is different.
- No functional differences compared with TF-MDPORT but the extension of the conversion instruction file is different.
- No functional differences compared with TF-MDPORT but Operators specified by the data component selection are different.

4.4.6 SIMPLIA TF-LINDA

There are following functional differences compared with TF-LINDA when you use Data Editor.

- Multi-byte character codes except for UNICODE (e.g. SJIS, EUC) are not supported.
- Host Data Conversion Tool cannot be used.
- The related resources created by TF-LINDA cannot be used for Data Editor.
- "YPS include specifications" cannot be specified for type of the format file.
- It does not support co-operation with Interstage Charset Manager.
- No functional differences compared with TF-LINDA but operators specified by the data component selection are different.