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Entire Operations Version 5.5.1 Release Notes

Version 5.5.1

February 2020

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1 About this Documentation

Document Conventions

Convention	Description
Bold	Identifies elements on a screen.
`Monospace font`	Identifies service names and locations in the format *folder.subfolder.service*, APIs, Java classes, methods, properties.
Italic	Identifies: Variables for which you must supply values specific to your own situation or environment. New terms the first time they occur in the text. References to other documentation sources.
`Monospace font`	Identifies: Text you must type in. Messages displayed by the system. Program code.
{ }	Indicates a set of choices from which you must choose one. Type only the information inside the curly braces. Do not type the { } symbols.
|	Separates two mutually exclusive choices in a syntax line. Type one of these choices. Do not type the | symbol.
[ ]	Indicates one or more options. Type only the information inside the square brackets. Do not type the [ ] symbols.
...	Indicates that you can type multiple options of the same type. Type only the information. Do not type the ellipsis (...).

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Software AG Documentation Website

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Software AG Empower Product Support Website

If you do not yet have an account for Empower, send an email to empower@softwareag.com with your name, company, and company email address and request an account.

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- Access product documentation, if you have TECHcommunity credentials. If you do not, you will need to register and specify "Documentation" as an area of interest.

- Access articles, code samples, demos, and tutorials.

- Use the online discussion forums, moderated by Software AG professionals, to ask questions, discuss best practices, and learn how other customers are using Software AG technology.

- Link to external websites that discuss open standards and web technology.

Data Protection

Software AG products provide functionality with respect to processing of personal data according to the EU General Data Protection Regulation (GDPR). Where applicable, appropriate steps are documented in the respective administration documentation.

2 Entire Operations Version 5.5.1 Release Notes

These release notes inform you of the enhancements and new features provided with Version 5.5.1 of Entire Operations.

In addition to new or changed functions, each release of Entire Operations is associated with corrections and enhancements of internal functions and text on screens or windows of the CUI or GUI interface.

Unless otherwise indicated, the information in these release notes applies to Version 5.5.1:

- for both Entire Operations (NOP) and Entire Operations GUI Client (OGC),

- on all supported platforms.

This document supersedes and replaces the release notes for Entire Operations Version 5.4.3.

Update Information, January 2020

- New and changed features provided with Cumulative Fix 03 of Entire Operations Version 5.5.1 have been added with the remark "(with Version 5.5.1 CF 03)".

- Cumulative Fix 02 of Entire Operations Version 5.5.1 mainly provides corrections and enhancements of internal functions and text on screens or windows of the CUI or GUI interface. New and changed features are denoted with the remark "(with Version 5.5.1 CF 02)".

- New and changed features provided with Cumulative Fix 01 of Entire Operations Version 5.5.1 have been added with the remark "(with Version 5.5.1 CF 01)".

General System Updates

In addition to new or changed functions, each release of Entire Operations is associated with maintenance corrections and enhancements of internal functions and text fields on screens or windows of the CUI or GUI interface.

Entire Operations Documentation Updates

Entire Operations documentation in HTML and PDF format is provided in the **Documentation** section of Software AG's Empower web site at *http://empower.softwareag.com/* (Empower login required). The documentation is usually updated whenever a new Entire Operations version or cumulative fix (CF) is released.

> **Note:** Due to last-minute documentation updates, it may be possible that the online help that you can invoke directly from the product does not yet contain the latest information. The most up-to-date Entire Operations documentation can always be found in the **Documentation** section of Software AG's Empower web site.

Supported Operating Systems

Entire Operations Version 5.5.1 supports the following operating systems:

- z/OS,

- z/VSE,

- BS2000,

- UNIX/Linux (HP-UX, AIX, Solaris, Redhat, SuSE Linux) and

- Windows (Intel) (managed node only).

For detailed information on the supported operating system versions, see the current Natural *Release Notes* for mainframes, UNIX or Windows.

Supported Browsers

As of Version 5.5.1, Entire Operations GUI Client supports the following browsers:

- Mozilla Firefox Version 60.4.0esr (64-bit) or above

  Only the Extended Support Releases (ESR) of Mozilla Firefox are explicitly supported.

- Microsoft Internet Explorer Version 11 or above.

Prerequisites for the Mainframe

Before you can install Entire Operations on a mainframe system, the following Software AG products must already be installed at your site:

- Adabas Version 8 or above;

- Natural Version 8.2 or above; the Natural installation must include the Software AG Editor component;

- Entire System Server Version 3.6 or above;

- Entire System Server Version 2.1.12 (UNIX/Linux and Windows) or above. Note that you require Entire System Server if you intend to run jobs with job type SAP.

- System Automation Tools Version 3.5.1 or above;

- Natural Security (optional);

- Entire Network (optional); this product is required for any kind of multi-CPU constellation where mainframe and/or UNIX/Linux and/or Windows partners are involved (non-local);

- EntireX Broker Version 7.2.2 for z/VSE (optional);

- EntireX Broker Version 10.3 for z/OS (optional);

- EntireX Broker Version 8.1.1 for BS2000 (optional);

- EntireX Broker is required for any kind of multi-machine constellation if one partner is a UNIX/Linux system or Windows or different UNIX/Linux systems are involved. EntireX Broker is not required if you are running Entire Operations on a UNIX/Linux or Windows platform and controlling the job networks on a mainframe system.

- Entire Connection (optional);

  This product is required for importing or exporting data from or to a PC file or a Natural work file on a PC.

The installation procedure for Entire System Server is described in the Entire System Server documentation.

The installation procedure for System Automation Tools is described in the *System Automation Tools* documentation.

Prerequisites for UNIX/Linux

Before you can install Entire Operations on a UNIX/Linux system, the following Software AG products must have been installed at your site:

- Natural Version 9.1 (or above) for UNIX/Linux;

- Adabas Version 6.6 (or above) for UNIX/Linux.

With Entire Operations Version 5.5.1, the following products will be installed automatically:

- Entire System Server Version 2.1.12 (or above) for UNIX/Linux;

- System Automation Tools Version 3.5.1 or above;

- EntireX Libraries 10.3 Fix 5 (or above). Fix 5 needs to be installed using Software AG Update Manager. The libraries are delivered as a separate component under **Infrastructure** > **Libraries** > **EntireX Libraries** in the Software AG Installer (see the webMethods documentation *Installing webMethods and Intelligent Business Operations Products*).

Prerequisites for Windows GUI Client

Entire Operations GUI Client will run on any Windows platform on which Natural Version 9.1 (or above) for Windows runs.

> **Note:** Make sure the machine on which you are going to run the Software AG Installer contains the latest Windows updates. On Windows Version 8.1 and Windows Server 2012R2, the installation will fail if the Microsoft update KB2919355 is missing.

Entire Operations GUI Client Version 5.5.1 requires the following products:

- Natural Version 9.1 (or above) for Windows. You can use either Natural Development version or Natural Runtime.

  Entire Operations GUI Client runs on any Windows platform on which Natural Version 8.3.6 (or above) for Windows runs.

- Entire Operations Server Version 5.5.1;

- EntireX Libraries 10.3 Fix 5 or above (optional). Fix 5 needs to be installed using Software AG Update Manager. The libraries are delivered as a separate component under **Infrastructure** > **Libraries** > **EntireX Libraries** in the Software AG Installer (see the webMethods documentation *Installing webMethods and Intelligent Business Operations Products*).

Special Considerations

Database ID (DBID) 148 is reserved for Entire System Server and must not be used for any database.

Platforms and Required Middleware

The following products are required to connect the individual platforms:

Online System/Monitor	Job Execution	Connection / Products
mainframe	mainframe (local*)	none
mainframe	other mainframe	Entire Net-Work
mainframe	UNIX/Linux	EntireX Broker
mainframe	Windows	EntireX Broker
UNIX/Linux	UNIX/Linux (local*)	none
UNIX/Linux	other UNIX/Linux	EntireX Broker

Online System/Monitor	Job Execution	Connection / Products
UNIX/Linux	Windows	EntireX Broker
UNIX/Linux	mainframe	Entire Net-Work

* local means that the Entire Operations online system is installed on the same machine on which jobs are executed.

Combinations are also possible. For example, if you want to install the Entire Operations online system on one mainframe and execute jobs on another mainframe and another UNIX/Linux or Windows machine, you would need:

- Entire Net-Work (one for each system to be connected) for connecting to the other mainframe and to UNIX/Linux or Windows, and

- EntireX Broker (on one system) for connecting to UNIX/Linux or Windows.

Compatibility and Migration

- Support for Previous Versions
- Compatibility Check for System Automation Tools Versions
- Data Migration
- Database File Migration
- Application Programming Interface (API) Versions

Support for Previous Versions

Entire Operations Version 5.5.1 is the official replacement for Entire Operations Version 5.4, or earlier versions.

You can view all available Software AG product versions and check the dates when their maintenance ends by visiting the Software AG Empower website at *https://empower.softwareag.com/*:

1. Log in to Empower.

2. Expand **Products & Documentation** in the left menu of the page and select **Product Version Availability**:

Product Version Availability

General Availability (GA), Platform retirement, End of Maintenance (EOM), and End of Sustained Support (EOSS) dates for your products.
View a description of these terms in our Maintenance Policy.
There are some exceptions to the product availability dates shown below. For details of those exceptions, visit this page.

Product Family: [- ▼]

Product Name: [- ▼]
Product Version: [- ▼]
Operating System: [- ▼]   Operating System Version: [- ▼]

Show prior Product Versions: ☐
Sort by Product Version: ⦿ Descending ○ Ascending   Rows per Page: [100]

[SEARCH 🔍]   [CANCEL ✕]

Expand all - Collapse all
Rows 1 - 100 of 12116 | Rows per page: 100 | Too many data selected; Printable Version of below Table is not available

Product Family | Product - Product Version	Version Lifecycle Milestone			
› Operating System and Hardware *	GA	OS Retirement	EOM	EOSS

3. Select the required filter criteria from the drop-down list boxes and click on the **SEARCH** button.

   A list of supported Software AG products that meet the filter criteria is shown. In addition, the end-of-standard-maintenance dates are indicated in the **EOM** column.

   If you mark **Show prior Product Versions**, only product versions that are out of maintenance are listed.

Compatibility Check for System Automation Tools Versions

(with Version 5.5.1 CF 02)

Entire Operations requires the following versions of System Automation Tools (SAT):

■ Entire Operations versions earlier than Version 5.5.1. require System Automation Tools versions earlier than Version 3.5.1.

■ Entire Operations Version 5.5.1 (and above) requires System Automation Tools Version 3.5.1 (and above).

Compatibility check constraints are used to enforce valid version combinations:

■ At the start of an Entire Operations session on a CUI client (NOP),

■ At the start of an Entire Operations session on a GUI client (OGC),

■ At the start of the Entire Operations Monitor.

Incompatible versions cause start failures and an error message similar to the following occurs and is written to the SYSOUT file of the Entire Operations Monitor:

```
EOR2598 - SAT Version >= 3.4.1 required for NOP 5.4.3
```

Data Migration

The data migration from Entire Operations Version 5.4.3 to Version 5.5.1 is performed as part of the migration process.

The data migration can be run any time manually by using a Natural batch JCL:

```
LOGON SYSEOR
DMDRIV-P
FIN
```

Internal control records prevent repeating of already completed migration steps.

Database File Migration

This following migration steps are only required if you migrate data from an Entire Operations Version earlier than Entire Operations Version 5.5.1:

≫ **To migrate data from Entire Operations Version 5.4.3 to Version 5.5.1**

1   Unload the old database files and load the new database files by using the import/export functions.

Or:

Adapt the old Entire Operations System File 1 for use with Entire Operations Version 5.5.1. Some data fields have larger field lengths and some descriptors have been released or added.

2   If you want to keep your log data: Adapt the System Automation Tools log file for use with System Automation Tools Version 3.5.1.

Or:

On UNIX: If migration is required, it is performed automatically within the guided installation.

Application Programming Interface (API) Versions

The API versions remain the same as in Entire Operations Version 5.4.3.

📄   **Notes:**

1. Parameters reserved for future use in a previous Entire Operations version may be used in Entire Operations Version 5.5.1.

2. Parameters with names like `-NETWORK-VERSION` or `-SYMTAB-VERSION` have been used since Entire Operations Version 5.4.3. Please refer to the descriptions of *Versioning of Job Networks* and *Versioning of Symbol Tables* in the *User's Guide* documentation.

3. For several APIs, new return codes were added. Please check the description of the *API Routines* in the *User's Guide*.

Only the latest versions of APIs should be used for new development. These are documented in the section *API Routines* in the *User's Guide*. Starting with the next Entire Operations version, older APIs will be supported for the two previous versions only. The existence of an older API routine in the Natural SYSEOR system library does not imply that it is still supported.

Most API routines contain a version number as the seventh character of their name. For example, in this Entire Operations version the Log API is NOPULW9N. The previous version NOPULW8N is still supported for a limited time.

Code Page Setting

Software AG recommends that you run the Natural environments for the Entire Operations Monitor, the Entire Operations character interface and the Entire Operations RPC server with enabled code page support. For the required Natural parameter settings, see the Natural parameters `CFICU` and `CP` described in the Natural *Parameter Reference* documentation.

If code page support is enabled, user exits and macro JCL defined in Entire Operations can use the Natural system variable `*CODEPAGE` (see the Natural *System Variables* documentation) which determines the current code page for correct code page conversion, for example, with the Natural `MOVE ENCODED` statement.

The Entire Operations Monitor tasks log the current code page setting during startup. In the Entire Operations character interface, the current code page setting is shown by the `TECH` direct command (see the *Direct Commands* documentation).

When using the `CFICU` and `CP` parameters, they must be set to the same values for the Entire Operations Monitor, the Entire Operations character interface and the Entire Operations RPC server.

Solved Problems

All solved problems of Entire Operations Version 5.4.3 are included in this release.

New and Changed Features

New and changed features in Entire Operations Version 5.5.1 are summarized in the following section:

- Installation/Setup: Changes to LFILE Assignments
- Extended Log for Accounting Data
- Support for Password Phrases for Logons to z/OS Nodes
- Support for Long Passwords for Logons to BS2000 Nodes
- New Monitor Defaults Option to Suspend Entire Operations Functions
- New Default Settings for User Node Access
- Resource Allocation Option to Exclude Temporary Dummy Jobs
- No Job Restrictions for Resource Allocation
- New User Access Rights for Active Prerequisite Resources
- Renamed User Access Option for JCL Editing
- Schedule Dependencies with Exact Month and Day of the Year
- New Scheduling Option: Calendar Day or Workday Later for Start and Deadline Times
- Job Scheduling: History Elapsed Times for Multiple Active Jobs
- Retention Period for Single Networks
- Retention of Active Conditions
- Changed Retention Periods for OGC Import/Export Requests and Reports
- Network Master: Copying Defaults to Jobs with User ID
- Support for Long Symbol Values
- Increased Maximum Value for Multiple-Value Symbols
- Import/Export: Increased Maximum Size for Multiple-Value Fields for Symbol Masters
- Reserved Symbols Provided as UNIX and Windows Environment Variables
- Reserved Symbol for Epilog Scripts on UNIX and Windows
- New Predefined Symbols for Escape Character Replacements
- Nested Symbols in CMDLINE-job
- Usable Symbol Tables: Version of Active Network Listed
- Job Input Condition: Symbol Check in Active or Master Symbol Tables
- End-of-Job Action: Mandatory Fields for Correct Message Sending
- End-of-Job Action: Message Sending Node Improved
- Total Run Number Removed to Improve Performance
- API Parameter Definitions Enhanced for more Flexibility
- API NOPUNX1N: Large Buffers Allowed for UNIX and Windows Files
- API NOPUSY6N Replaced by NOPUSY7N

- New API NOPUSY7N: Access Entire Operations Symbols
- New Accounting Facility for Collecting Monitor Function Data
- Accounting Data Functions Renamed
- SYSOUT Line Limit Settings
- Changes to Return Codes for Input Condition User Exits (ICO)
- Active Jobs: Reasons for Temporary Dummy Execution
- Improved Message for Successful Subnetwork Runs
- Receiver Renamed to Recipient
- Cross-References: Report and Menu Sequence Changed
- Cross-References: Refined Search for JCL Usage Reports
- Copying Objects from a Secondary System File no longer Supported
- Utility for Owner Deletion Replaced
- End-of-Job Action: Text and File Attachments for Messages
- End-of-Job Action: Symbol Setting Window Rearranged (NOP only)
- Mass Update for Files Passed to Entire Output Management (NOP only)
- Node Selection Options for Network Lists (NOP only)
- Enhanced Copy Function for Entire Operations Objects (NOP only)
- Active Job Conditions: Filtering Result Lists by Run Numbers (NOP only)
- New Browse Command to View Sources and Settings (NOP only)
- Mass Update for User Node Access (NOP only)
- Changes to the System Services Menu (NOP only)
- List of Active Jobs now Available for Next Network Starts (NOP only)
- Filter for List of Current Network Versions (OGC only)
- Symbol Table: Improved Information for Where Used Function (OGC only)
- Mass Update for Execute if Temporary Dummy (OGC only)
- Global Object Filter for Users (OGC only)
- Alternative Desktops for User Sessions (OGC only)
- Ruler Provided in Editor Window (OGC only)
- New Reports for Monitor Performance Analyses (OGC only)
- New Scheduling Function for Single Networks (OGC only)
- New Hyperlink Option for Network and Job Descriptions (OGC only)
- Enhanced Reporting Function (OGC only)
- Enhanced Import/Export Function (OGC only)
- Append to Export File Renamed to Export (OGC only)

Installation/Setup: Changes to LFILE Assignments

The following changes have been made to the logical system files (LFILEs) used by Entire Operations:

- LFILE (85): The name of the file assigned to this LFILE has changed from LFILE 085 to NOP Account-Data.

- LFILE (173): This LFILE is no longer delivered.

- LFILE (215): This LFILE is now assigned to the file NOP-LOG-SELECT-1.

You can use the Natural system command SYSPROF to view all LFILE assignments in your current Natural environment.

Extended Log for Accounting Data

Additional fields have been defined for the DDM EOR-LOG-SELECTION-1 to support selection of additional log data using LFILE 215 (see *Installation/Setup: Changes to LFILE Assignments*.

For more information, see *Selection File - Format 1* in the *User's Guide*.

Support for Password Phrases for Logons to z/OS Nodes

In addition to passwords of up to 8 characters, the **Logon Node** function for z/OS nodes now also supports the use of password phrases that can be in the range from 9 to 32 characters.

For more information, see the description of the **Password** field in *Fields: Logon Node* the *User's Guide*.

Support for Long Passwords for Logons to BS2000 Nodes

The **Logon Node** function for BS2000 nodes now also supports the use of long passwords of up to 32 characters.

For more information, see the description of the **Password** field in *Fields: Logon Node* the *User's Guide*.

New Monitor Defaults Option to Suspend Entire Operations Functions

The **Monitor Defaults** administration function now provides the option to suspend Entire Operations functions (for example, network activation and job submission) for selected owners, networks and jobs. This helps to reduce the workload after disaster recovery.

For more information, see *Defining Filters to Suspend Entire Operation Functions* in the *Administration* documentation.

New Default Settings for User Node Access

The user maintenance function now provides the following new options to define default settings for node access in a user profile:

- Specification of a default node user ID for node logon.
- Specification of a default node user ID for automatic node logon in order to browse JCL and/or SYSOUT.

For more information, see *Defining Node Default User IDs* in the *Administration* documentation.

For changes to multiple user profiles, see also *Mass Update for User Node Access (NOP only)*.

Resource Allocation Option to Exclude Temporary Dummy Jobs

(with Version 5.5.1 CF 03)

The new **Allocation Mode** option can be used to determine whether the resource defined as a prerequisite for a job is allocated when the job executes as a temporary dummy job.

The allocation mode set is indicated in a list of prerequisite or allocated resources that can be displayed for a job master or job active, and in an active usage list that can be displayed for a resource.

As a consequence, the resource API column (previously, column **A**) of the active resource usage list has been renamed to **API**.

For more information, see *Columns and Fields: Prerequisite Resource Definitions* in the *User's Guide*.

No Job Restrictions for Resource Allocation

(with Version 5.5.1 CF 01)

Any job restrictions on the resource allocation feature have been removed. Resources can now be allocated for all types of jobs (including DUM/**Dummy Job**) and all kinds of temporary dummy jobs.

For information on resources, see *Use of Resources and Resource Allocation* in the *User's Guide*.

New User Access Rights for Active Prerequisite Resources

(with Version 5.5.1 CF 01)

The **Monitoring Functions** settings of the user profile can now be used to define different access rights for active prerequisite resources.

As a consequence, the default setting for **Resource Usage** has changed to read access (R) only for a general user.

For more information, see **Active Prerequisite Resources** and **Resource Usage** under *Monitoring Functions* in the *Administration* documentation.

Renamed User Access Option for JCL Editing

(with Version 5.5.1 CF 01)

The **Active JCL definition** option of the **Monitoring Functions** settings of the user profile has been renamed to **Active JCL editing**.

See also **Monitoring Functions** in the *Administration* documentation.

Schedule Dependencies with Exact Month and Day of the Year

The **Schedule Dependency Definition** function now provides the option to specify the exact month and day of the year (for example, February 28) for executing a network, job and/or an input condition. This is a useful alternative to specifying a relative period, which involves the risk that the day calculated for network execution is skipped, for example, in leap years.

For more information, see *Fields: Schedule Dependency Definition* in the section *Schedule Maintenance* in the *User's Guide*.

New Scheduling Option: Calendar Day or Workday Later for Start and Deadline Times

The days later that can be defined for start and deadline times of a network schedule or job schedule can now be classified as a calendar day or a workday that refers to a linked calendar.

For more information, see *Defining a Network Schedule* and *Defining Scheduling Parameters for a Job* in the *User's Guide*.

For the corresponding syntax enhancements used for the network and job definitions in the Entire Operations object import/export files, see *OBJECT=NETWORK-MASTER* and *OBJECT=JOB-MASTER* in the *Import/Export Functions* documentation.

Job Scheduling: History Elapsed Times for Multiple Active Jobs

(with Version 5.5.1 CF 01)

The **History Elapsed Time** table of the **Scheduling Parameters** page now also holds data for multiple active job runs. Therefore, the number of table entries in the CUI window has been increased to 20.

For more information, see *Fields: Scheduling Parameters* in the **User's Guide**.

Retention Period for Single Networks

You can now specify a retention period for a single network, in addition to the default retention periods you can specify in the Entire Operation defaults. The retention period sets a minimum time for retaining the network (if activated) in the active database.

For more information, see the **Retention period for network** option described in the *User's Guide*.

Retention of Active Conditions

(with Version 5.5.1 CF 01)

You can now specify a deactivation mode for active conditions for a single network, in addition to the default retention period for active conditions you can specify in the Entire Operation defaults. The deactivation mode determines when active conditions are removed from the active database.

For more information, see the **Deactivation mode for active conditions** described in the *User's Guide*.

Changed Retention Periods for OGC Import/Export Requests and Reports

The retention period for data generated for import/export requests and reports from Entire Operations GUI Client has changed to the period that applies to active jobs (default of 2 days). Before, the period for standard logs (default of 7 days) applied.

Older import/export requests and reports listed in the **Import/Export** and **Reporting** windows of Entire Operations GUI Client are automatically deleted after this period or when the next database cleanup is performed.

Network Master: Copying Defaults to Jobs with User ID

The **Copy Defaults** option of the network maintenance function has changed: the default for **Modification User** is now set to A (all) to ensure that any copy operation identifies the user who copied the defaults. This option setting is generally preferable.

See also *Applying Network Defaults to Jobs (Mass Update)* in the *User's Guide*.

Support for Long Symbol Values

The symbol maintenance function has been enhanced to support symbol values of up to 120 characters.

See also *Fields: Symbol Modification* and *Fields: Input Condition Symbol Value* in the *User's Guide*.

Increased Maximum Value for Multiple-Value Symbols

The maximum number of values that can be defined for multiple-value symbols has been increased to 150 values.

See also *Defining Multiple Symbol Values* in the *User's Guide*.

Import/Export: Increased Maximum Size for Multiple-Value Fields for Symbol Masters

The import/export functions for symbol masters now support a maximum of 120 values and 150 occurrences for multiple-value fields.

For more information, see the fields `VALUE` and `MULT-VALUE` in the section *OBJECT=SYMBOL-MASTER* in the *Import/Export Functions* documentation.

Reserved Symbols Provided as UNIX and Windows Environment Variables

UNIX and Window environment variables can now be specified as reserved symbol names by using the Natural text object NOPVS001 supplied in the SYSEORU system library.

As a result, the length limits of relevant preserved symbol names have been increased as indicated in *Table of Predefined Symbols* in the *User's Guide*.

For more information, see *Reserved Symbols for UNIX and Windows Environment Variables* in the *User's Guide*.

Reserved Symbol for Epilog Scripts on UNIX and Windows

(with Version 5.5.1 CF 01)

The new reserved symbol `NOP-EPILOG-execution_node` is provided to execute epilog scripts for jobs submitted on UNIX or Windows nodes.

For more information, see *Reserved Symbol for Epilog Scripts (UNIX and Windows)* in the *User's Guide*.

New Predefined Symbols for Escape Character Replacements

The new predefined symbols `P-ESC-ACT` and `P-ESC-SUB` can be used to replace current activation and submission escape characters during job activation and/or submission.

For more information, see `P-ESC-ACT` and `P-ESC-SUB` in *Table of Predefined Symbols* in the *User's Guide*.

Nested Symbols in CMDLINE-job

Additional information regarding the handling of nested symbols in a `CMDLINE-job` symbol is now provided in the section *Command Line Passing to Shell Scripts in Entire Operations* in the *User's Guide*.

Usable Symbol Tables: Version of Active Network Listed

The table returned by the **Usable Symbol Tables** function now also contains a column that indicates the version (if available) of an active network which uses a listed symbol table.

See also *Listing Usable Symbol Tables* in the *User's Guide*.

Job Input Condition: Symbol Check in Active or Master Symbol Tables

The job input condition function for symbol checks now provides the option to specify whether active symbol tables or master symbol tables are used for symbol checks.

For more information, see the new **Symbol instance** option, described in *Fields: Input Condition Symbol Value* in the *User's Guide*.

End-of-Job Action: Mandatory Fields for Correct Message Sending

The fields provided to send a message after job termination are now checked for completeness to assure correct processing. If you leave a mandatory field blank, you cannot save the message definition.

For more information on mandatory fields, see *Defining Notification Messages* in the *User's Guide*.

End-of-Job Action: Message Sending Node Improved

Evaluation of the message sending node has been improved:

- (with Version 5.5.1 CF 01)

  The display of a node in numeric (N) format now works properly for a message sending node (see also *Other Settings - Display Options for Lists* in the *Administration* documentation).

- (with Version 5.5.1 CF 02)

  The node definition used for message sending can contain a symbol (for a usable node number) that is prefixed with the activation escape character.

  For more information, see the field **Node** and the **Use symbol as node** option (OGC only) described in *Fields and Columns: Message and Message Recipients*) and the section *Symbols in Node Definitions* in the *User's Guide*.

Total Run Number Removed to Improve Performance

The total number of active job runs is no longer indicated in the **#Run** column of a network list window (see the *User's Guide*). It has been replaced by the **Runs** column which shows an asterisk (*) when one or more active runs exist.

The benefit (if any) of knowing the exact number of runs does not justify the many database calls required to calculate this number.

API Parameter Definitions Enhanced for more Flexibility

(with Version 5.5.1 CF 03)

The parameter definitions of the following API subprograms have been enhanced for more flexible `CALLNAT` program calls.

API NOPUAC5N - Activate Job Networks or Jobs:

Parameter	New Option/Change
RC	BY VALUE RESULT Additionally, the format/length has changed from N3 to N4.
DBENV	BY VALUE OPTIONAL
OWNER	BY VALUE
NETWORK	BY VALUE
NETWORK-VERSION	BY VALUE OPTIONAL
SYMTAB	BY VALUE OPTIONAL
SYMTAB-VERSION	BY VALUE OPTIONAL

Parameter	New Option/Change
RUN	BY VALUE RESULT

API NOPULW9N - Write Messages to System Automation Tools Log:

Parameter	New Option
P-TASK-ID	BY VALUE
P-MESSAGE-CODE	BY VALUE
P-MESSAGE	BY VALUE
P-DBENV	BY VALUE OPTIONAL
P-OWNER	BY VALUE OPTIONAL
P-NETWORK	BY VALUE OPTIONAL
P-NETWORK-VERSION	BY VALUE OPTIONAL
P-RUN	BY VALUE OPTIONAL
P-JOB	BY VALUE OPTIONAL
P-JOB-ID	BY VALUE OPTIONAL
P-USE-NAT-MSG-CACHE	OPTIONAL

API NOPUMI1N - Set/Reset Text Milestones in Master and Active Jobs:

Parameter	Changed Option
P-JOB	BY VALUE OPTIONAL (before: BY VALUE RESULT OPTIONAL)

APIs of previous Entire Operations versions are compatible and must not be changed.

For more information, see *Available Entire Operations API Routines* in the *User's Guide*.

API NOPUNX1N: Large Buffers Allowed for UNIX and Windows Files

API NOPUNX1N has been enhanced to define large buffers that can contain data of extensive files from a UNIX or Windows environment.

For more information, see *NOPUNX1N: Entire System Server Calls to Access UNIX and Windows Files* in the *User's Guide*.

API NOPUSY6N Replaced by NOPUSY7N

API NOPUSY6N (Access Entire Operations Symbols) is obsolete and no longer supplied. It has been replaced by API **NOPUSY7N**.

New API NOPUSY7N: Access Entire Operations Symbols

This API is an updated version of API NOPUSY6N. In addition to the features previously supplied with NOPUSY6N, it provides a new function to read symbols and symbol values with recursive resolution from an active symbol table.

For more information, see NOPUSY7N in the *User's Guide*.

New Accounting Facility for Collecting Monitor Function Data

You can use the new Monitor Accounting facility to collect data from Entire Operations Monitor tasks and functions performed by the Monitor and exits called by the Monitor. This can help you identify potential bottlenecks and improve the performance of the Monitor.

The accounting data collected can be analyzed by using the new report types provided by Entire Operations GUI Client: See *New Reports for Monitor Performance Analyses (OGC only)*.

For more information, see *Monitor Accounting* in the *Administration* documentation.

Accounting Data Functions Renamed

All **Accounting Data** screens and windows have been renamed to **Accounting Information**.

This affects the reporting and accounting information functions.

See also *Viewing Job/Network Accounting Information* and *Reporting* in the *User's Guide*.

With Version 5.5.1 CF 03, in addition, the **Job Accounting/Job Accounting Data** option of the reporting functions provided for user maintenance has been renamed to **Accounting Information** (see also *Reporting Functions* in the *Administration* documentation).

SYSOUT Line Limit Settings

SYSOUT Line Limit Option Moved to Default Setting (4) - NOP only
   The **SYSOUT Line Limit** option is now contained on the **Default Setting (4)** screen. It used to be on the **Default Setting (2)** screen.

New SYSOUT Line Limit Option for Job Interruption on BS2000
   A new SYSOUT line limit option is provided to interrupt jobs during End-of-Job checking on BS2000 systems when the limit is reached.

For more information, see the SYSOUT options in *Defaults for Network Options* in the *Administration* documentation.

Changes to Return Codes for Input Condition User Exits (ICO)

Return codes are now handled differently if set for job input conditions with DUM references for user exits of the type ICO. For details, see *Return Code Settings for an Input Condition User Exit* in the section *Input Condition with User Exit* in the *User's Guide*.

See also *Parameters Used for Different Call Places* in the section *Common User Exit Parameter Data Area NOPXPL-A* in the *User's Guide*.

Active Jobs: Reasons for Temporary Dummy Execution

The active job definition now provides a **Temporary Dummy due to** that indicates the reason why a job executed as a temporary dummy job. For possible reasons, see the field description in *Fields: Maintenance Job Active* in the *User's Guide*.

For OGC only: The reason for a temporary dummy execution is also indicated in the active job symbol in the network diagram as described in *Explanations of Diagram Symbols* in the *User's Guide*.

Improved Message for Successful Subnetwork Runs

When a job of the type subnetwork (NET) ends successfully (for example, after finding a NET-END condition or not finding a NET-END-NOTOK condition), Entire Operations now returns the message Subnetwork ended ok, instead of Sub-Nw terminated.

Receiver Renamed to Recipient

The term "receiver" has been replaced by the term "recipient" in all relevant Entire Operations functions (for example, Global Messages for Events) and online help texts. This changed does not affect any field names used as syntax keywords for import and export operations.

Cross-References: Report and Menu Sequence Changed

Symbol Search by Value Renamed
The report type **Symbol Search by Value** has been renamed to **Symbol and Symbol Value Search**. See also *Types of Cross-Reference Reports* in the *User's Guide*.

Changed Sequence of Menu Items (NOP only)
The sequence of items in the **Cross-References** menu has changed (see *Cross-References* in the *User's Guide*). As a result, the option number assigned to a menu item may have changed.

Cross-References: Refined Search for JCL Usage Reports

The name qualifier that can be used to select a range of files or libraries for cross-reference reports about JCL usage, can now also contain more than one leading or trailing asterisk (*) wildcard.

See also the **File/Natlib** field described in *Fields and Columns: Cross-References* in the *User's Guide*.

Copying Objects from a Secondary System File no longer Supported

It is no longer possible to copy Entire Operations objects by using a secondary (alternate) system file as the source file. The logic constructs required to enhance the copy function does not support secondary files.

See also *Enhanced Copy Function for Entire Operations Objects (NOP only)*.

Utility for Owner Deletion Replaced

The OW-DEL-P utility is no longer available. It was used to delete an owner and all related references.

Its functionality is covered by the `P-OWNER-NEW = ==DELETE==` option of the OW-MB--P utility.

For more information, see *Mass Change of the Owner and Owner Deletion* in the *User's Guide*.

End-of-Job Action: Text and File Attachments for Messages

The **Message and Message Recipients** option of the End-of-Job (EOJ) actions function now allows additional message text and file attachments for e-mails.

For more information, see *Defining Notification Messages* in the *User's Guide*.

End-of-Job Action: Symbol Setting Window Rearranged (NOP only)

The fields provided in the **Symbol Setting** window have been rearranged for more comfortable handling.

See also *Defining Actions for Symbol Value Modification* in the *User's Guide*.

Mass Update for Files Passed to Entire Output Management (NOP only)

The `N002045A` program supplied in the Natural SYSEOR system library provides the option to set the flag **Pass SYSOUT to Entire Output Management** and perform a bulk update of files to be passed to Entire Output Management.

Node Selection Options for Network Lists (NOP only)

You can now filter a network list according to a specified node number, a node name or a range of names.

For more information, see *Listing all Network Definitions* and *Listing Active Job Networks* in the *User's Guide*.

Enhanced Copy Function for Entire Operations Objects (NOP only)

The screens provided to copy networks, jobs, schedules and symbol tables (for example, the **Job Master Definition Copy** screen) have been enhanced for easier handling. The source fields of an object selected for copying are now, for example, write-protected to avoid wrong input and corresponding error messages.

For more information, see the following sections in the *User's Guide*:

- *Copying Job Network Definitions*
- *Copying Job Definitions*
- *Copying Schedule Definitions*
- *Copying Master Symbol Tables*

Active Job Conditions: Filtering Result Lists by Run Numbers (NOP only)

You can now also specify a run number as a filter criterion for the conditions listed on an **Active Job Conditions** screen. The list then displays the conditions for the specified run only.

See also *Listing Active Conditions* in the *User's Guide*.

New Browse Command to View Sources and Settings (NOP only)

A new `B` (Browse) line command is now available on several list screens to view sources and object definitions in read-only mode instead of edit mode. This clearly distinguishes display from modify functions and avoid inadvertent changes.

Users with read-only permissions can still perform modify or edit functions but are only authorized to view text.

The following are examples of where the browse command is available.

Browse Source from a Job List
Displays the JCL or Natural source for a job listed on a maintenance or active jobs screen (see *Listing Jobs* in the *User's Guide*).

Browse End-of-Job Event Definition
Displays a job event definition selected from the **End-of-Job Checking + Actions** screen (see *Defining and Managing End-of-Job (EOJ) Checking and Actions* in the *User's Guide*).

Browse User Definition and Profile
Displays the profile of a user selected from the **User List** screen of the **User Maintenance** function (see *Listing Users* in the *Administration* documentation).

Mass Update for User Node Access (NOP only)

The new NOPUNA-P utility provides the option to add or update multiple users for node access.

For more information, see *Mass Update for User Access to Nodes* in the *User's Guide*.

For corresponding changes of the user maintenance function, see *New Default Settings for User Node Access*.

Changes to the System Services Menu (NOP only)

The new **Monitor accounting** facility has been added as a new option to the **System Services Menu** (*Administration* documentation). Therefore, the menu items were reordered and the option number assigned to an item may have changed.

List of Active Jobs now Available for Next Network Starts (NOP only)

The **Next Start Times** window and the **Next scheduled Network Starts** screen of the **Network Maintenance** function now provide the new line command A (Active Jobs) to list all active jobs for a selected network run.

For more information, see *Displaying Next Network Starts - Single Network* and *Displaying Next Network Starts - System-Wide* in the *User's Guide*.

Filter for List of Current Network Versions (OGC only)

(with Version 5.5.1 CF 03)

The **Filter** function now provides the option to reduce the number of network versions shown in the tree view or in a **List** window to a single (current) network version.

For more information, see *Listing Current Network Versions Only* in the *User's Guide*.

Symbol Table: Improved Information for Where Used Function (OGC only)

The **Type** column of the **Where used Symbol Table** and **Active Usage Symbol Table Active** windows now indicates whether a job master, job active, network master/version or network active is associated with a listed symbol table. This complies with the information provided on the corresponding column on a CUI screen. The Def. and Run column entries are no longer shown.

See also *Columns: Symbol Table Usage* in the *User's Guide*.

Mass Update for Execute if Temporary Dummy (OGC only)

The new **Mass update** function can be used to modify the setting of the **Execute if temporary dummy** option for multiple job masters selected in a list window or network diagram.

For more information, see *Changing Execute if Temporary Dummy Settings for Multiple Jobs* in the *User's Guide*.

Global Object Filter for Users (OGC only)

The filter settings in a user profile now also provide the option to specify a global filter that overrides any other filters set by the user. The objects you can specify for global filtering include network masters and networks active, symbol table masters, calendars, schedules and resource masters.

For more information, see *Filter* in the *Administration* documentation.

Alternative Desktops for User Sessions (OGC only)

The **My Desktop** option has been enhanced to use between different desktop customization settings for an Entire Operations session.

For more information, see *Using Alternative Desktops* in the *User's Guide*.

Ruler Provided in Editor Window (OGC only)

The source editor now provides a new toggle function to show or hide a vertical ruler in the editor window. In addition, the ruler display can be set in the **GUI General** options of the user profile.

For more information, see *Starting an Edit Session* (*User's Guide*) and *GUI General* (*Administration* documentation).

New Reports for Monitor Performance Analyses (OGC only)

The **Reporting** function provides the following new types of reports:

- A **Monitor Tasks and Functions Overview** report that shows data collected from performed Monitor tasks and called Monitor functions in an interactive diagram with task time table (see the *User's Guide*).

- A **Monitor Tasks and Exits Overview** report that shows data collected from performed Monitor tasks and called Monitor exits in an interactive diagram with task time table (see the *User's Guide*).

Prerequisites for report generation:

- Monitor accounting must be enabled to collect Monitor data: See *New Accounting Facility for Collecting Monitor Function Data*.

- The **Monitor accounting** option must be enabled in the **Reporting Functions** in the user profile (see the *Administration* documentation) to generate the new reports.

The new reports can also be generated in batch mode by using the new report types `AC1` and `AC2`: see *Command - Object: Reports - Name: Add* in the *User's Guide*.

New Scheduling Function for Single Networks (OGC only)

The new **Define Scheduling** context function is now available for a network master listed in the object workspace. This function is used to add, modify and delete schedule definitions for a selected network.

Define Scheduling replaces the maintenance options previously provided on the **Scheduling** page of a network. The **Scheduling** page now only contains protected fields for information only.

For more information, see *Defining a Network Schedule* in the *User's Guide*.

New Hyperlink Option for Network and Job Descriptions (OGC only)

You can now enter a URL address in the long description for a master network, job master or an End-of-Job event. The URL can then be used as a hyperlink to open the page associated with the address.

For more information, see the following sections in the *User's Guide*:

- *Long Description - Documenting Your Networks*
- *Writing and Viewing Online Documentation for a Job*
- *Viewing Long Descriptions of Active Jobs*
- *Creating and Viewing Online Documentation for Events*

Enhanced Reporting Function (OGC only)

The **Reporting** function provides the following new features:

- An option is provided to regenerate a report using the same (or modified) properties settings of a previously generated report.

  For more information, see *Generating or Regenerating Online Reports* in the *User's Guide*.
- The properties settings used for generating a report are now indicated in the new **Properties** column of the **Reporting** window.
- The **Delete** command can now be used to delete multiple reports selected in the **Reporting** window.

Enhanced Import/Export Function (OGC only)

The **Import/Export** function provides the following new features:

■ An option is provided to repeat an import or export operation using the same (or modified) properties settings of a previously processed import or export request.

   For more information, see *Repeating an Import or Export Operation* in the *Import/Export Functions* documentation.

■ The properties settings used for repeating an import or export operation are indicated in the new **Properties** column of the **Import/Export** window.

■ The **Delete** command can now also be used to delete multiple requests selected in the **Import/Export** window.

Append to Export File Renamed to Export (OGC only)

The **Append to export file** function in a maintenance window has been renamed to **Export** to avoid misinterpretations. The settings exported from a maintenance window are only appended if a Natural library object (not a file) is used as the target destination.

See also *Exporting Current Settings* in the *Import/Export Functions* documentation.

Dropped Features

The following features are discontinued and no longer supported in Entire Operations Version 5.1.1:

Discontinued Support for Con-nect Interface

The Entire Operations interface to Con-nect is no longer supported. It is no longer possible to send messages to Con-nect.