Infor Distribution SX.e Administration Guide

Release 11.21.8

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Contents

About this guide

The guide provides information and instructions about tools, scripts, and administrative procedures that are related to the maintenance of Distribution SX.e.

Intended audience

This guide is intended for system administrators who are responsible for the configuration and maintenance of Distribution SX.e.

Related documents

You can find these documents in the product documentation section of the Infor Support Portal:

- *Infor Distribution SX.e Installation Guide for Linux*
- *Infor Distribution SX.e Upgrade Guide for Linux*
- *Infor Distribution SX.e Installation Guide for Windows Server*
- *Infor Distribution SX.e Upgrade Guide for Windows Server*
- *Infor Distribution SX.e Hardware and Software Recommendations Guide*

Online compatibility matrix for Distribution SX.e

To view the minimum software levels that are required for Distribution SX.e components, such as the application and database servers, go to the Infor Support Portal. Select **Environment > Online Compatibility Matrix**, and then specify the product and version to view the applications and versions that are supported.

Contacting Infor

If you have questions about Infor products, go to Infor Concierge at https://concierge.infor.com/ and create a support incident.

The latest documentation is available from docs.infor.com or from the Infor Support Portal. To access documentation on the Infor Support Portal, select **Search > Browse Documentation**. We recommend that you check this portal periodically for updated documentation.

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Chapter 1: Code compilation

This section provides information and instructions about compiling code.

Distribution SX.e builder tool

Use the builder tool to create a procedure library, or `.pl` file, for Distribution SX.e. The builder tool compiles the encrypted source code from the `BUILD_HOME/delivery-zips` folder into the `BUILD_HOME/library/appcode.pl` file. The `appcode.pl` file is then used to run the application.

The builder tool is compatible with both Windows Server and Linux. The builder tool is not compatible with versions of Distribution SX.e before 11.*x*.

This table shows the directories and files that are contained in the builder tool:

Directory or file	Contents
`/build.bat`	Windows-specific script that runs the build process
`/build.sh`	Linux-specific script that runs the build process
`/build.xml`	Ant build file that is used to compile the Distribution SX.e code and build the `appcode.pl` file
`/ant`	Apache Ant code
`/config`	Configuration file that is specific to your system
`/config/maindb.pf`	Parameter file that defines the database, host, and port for the main transaction database
`/config/setenv.bat`	Windows-specific environment variables that are required to run the builder tool
`/config/setenv.sh`	Linux-specific environment variables that are required to run the builder tool
`/config/widb.pf`	Parameter file that defines the database, host, and port for the word index database
`/delivery-zips`	Delivery zip files for Distribution SX.e code

Directory or file	Contents
/delivery-zips/0001-standard_xx_x_x_x.zip	Application source code for standard Distribution SX.e
/pct	PCT – Progress Compiler Tool for Ant
/library/appcode.pl	Procedure library that contains the compiled code, and is used to run the Distribution SX.e application
/library/rptcode.pl	Procedure library that contains the compiled code, and is used to run the reports within the Distribution SX.e application
/logs	Log files that are generated during the build process
/tasksrc	Infor-specific code that is used by the build process
/temp	A temporary work folder that is used during the build process

This table shows the directories that the builder removes and recreates during the build process:

Directory	Contents
/chui-build	The compiled Report Scheduler and report code. This code is archived into the /library/appcode.pl file.
/chui-code	The uncompiled Report Scheduler and report code, which is unzipped from the /delivery-zips/*.zip files.
/gui-build	The compiled Appserver code. This code is be archived into the /library/appcode.pl file.
/gui-code	The uncompiled Appserver code, which is unzipped from the /delivery-zips/*.zip files.

Code delivery

To create a Progress OpenEdge code delivery for the Distribution SX.e application code, create a zip file that contains the new code. Copy the zip file to the delivery-zips subfolder of your build folder. During the build process, the delivery-zips files are unzipped, compiled, and loaded into a memory-mapped procedure library, or a .pl file.

Note: To determine where to put your code, use the 0001-stdsrc_xx_x_x_x.zip file as a guide.

After your code is in the correct folder locations, create a zip file to add to the delivery-zips subfolder of your build folder.

This table shows the different types of Distribution SX.e application code and the subfolder within the zip file in which to place the code:

Application code	Files	Location
Report Scheduler reports and TWL CHUI code	Programs (`.p`)	`chui-code\p`
	Includes (`.i`) and other include file extensions	`chui-code\i`
Database triggers	Trigger code	`gui-code\common`
Common code used by the Appserver and Reports	All file types	`gui-code\common`
Appserver code	All file types	`gui-code\server` and `gui-code\serviceinterface`

This table shows the general structure of the zip file layout:

Subfolder Location	Contents
`chui-code\p`	This folder should not contain subfolders. Any subfolders are ignored during the compile process.
`chui-code\i`	This folder should not contain subfolders. Any subfolders are ignored during the compile process.
`gui-code\common`	This folder should not contain subfolders. Any subfolders are ignored during the compile process.
`gui-code\enums`	Any enumeration class files

`gui-code\server\*`	This folder should contain folders for each module, for example:
	`gui-code\server\ap`
	`gui-code\server\ar`
	`gui-code\server\oe`
	`gui-code\server\shared`

`gui-code\serviceinterface`	Service interface code for the appserver

Naming convention

Caution: Do not edit or change the `0001-stdsrc_xx_x_x_x.zip` file.

The zip files in the delivery-zips folder are unzipped in the order in which they are found by the operating system. We recommend that you follow the existing numeric naming convention so that you can determine the order in which the files are processed.

The standard application code zip file is `0001-stdsrc_xx_x_x_x.zip`. The next zip file that you copy to the delivery-zips folder should start with 0002-*. Continue to increment the number as you copy new files.

You can have the same file with two different numerical prefixes, such as `0001-stdsrc_xx_x_x_x.zip` and `0003-stdsrc_xx_x_x_x.zip`. The file with the greater numerical prefix overwrites the previous version.

Custom code compilation

The Distribution SX.e build process supports custom code compilation. You must create a zip file that contains the custom code for the delivery-zips directory.

See Code delivery on page 9.

During the build process, the standard code and your custom code is compiled into the `appcode.pl` file.

Standard build environment variables

This table shows the standard build options that are configured with the `setenv.sh` script:

Operating system	Option	Purpose
Linux Windows Server	DLC	Points to the base directory where you installed OpenEdge
Windows Server	DLC_CLIENT	Points to the base directory where you installed the OpenEdge 32-bit client. This folder might not exist on the system where you run the builder.
Windows Server	PARAM_VAL	Used to configure the Appserver connection string for the GUI client. The default value is `ConnectParms='-DirectConnect -H <hostname> -S <appserverport>'`. Replace the <*hostname*> and <*appserverport*> with values that are correct for your system.

Advanced build environment variables

This table shows the advanced build options that are configured with the `setenv.sh` script:

Option	Purpose	Default value
THREADS	The build process can run in multi-threaded mode. This option specifies the number of simultaneous threads to use for the build process. The value must be an integer. For optimal performance, do not exceed two times the number of CPU cores on the system.	n/a
JAVA_HOME	Specifies the Java Home or JDK location on your system.	`$DLC/jdk`, which is installed with OpenEdge
HOMEDIR	Specifies the home directory for the build process.	`'pwd'`
ANT_HOME	Specifies the base directory for the ANT code.	`$HOMEDIR/ant/ANT_196`
PCT_HOME	Specifies the base directory for the PCT code.	`$HOMEDIR/pct/v206`
PATH	Specifies the PATH variable for the build process.	`$ANT_HOME/bin:$PATH`
_JAVA_OPTIONS	Specifies any Java options that are required for the build process.	`-Djava.io.tmpdir=temp $_JAVA_OPTIONS`

Compiling the server-side code

1. Run the `$BUILD_HOME/build.sh` script to compile the code.
2. Verify that the build completes without errors. Check the log files that are located in the `$BUILD_HOME/logs` subfolder.
3. Copy the `appcode.pl` and `rptcode.pl` library files from the `$BUILD_HOME/library` folder into the `$RD_HOME/library` folder.

Chapter 2: Administrator tools

This section includes information and instructions about support and database maintenance utilities.

Caution: The utilities are intended for Infor Support and Infor Services to use for performance tuning, migration, or troubleshooting. They may require additional modification, configuration, and knowledge of Distribution SX.e beyond the scope of this document. We recommend that you have two database backups if you must recover your database after running these utilities.

These utilities are support utilities:

- Distribution Utilities Install Tool (DUIT)
- Database Archive Restore Tool (DART) for Linux
- Database Archive Restore Tool (DART) for Windows Server

The Progress OpenEdge after-imaging (AI) utility is a database maintenance utility.

Distribution Utilities Install Tool

Use the Distribution Utilities Install Tool (DUIT) to install LINUX/Linux tools, such as SXDL and DART. During installation, `DUIT.tar` is located in the `$RD_HOME/support` directory. To use DUIT, unzip `DUIT.tar` in the same directory. Use the duit script in the `$RD_HOME/support` directory to run DUIT.

Database Archive Restore Tool for Linux

After Database Archive Restore Tool (DART) is installed through DUIT, you can run DART. Use the dart script in `$RD_HOME/support` to retrieve data that is archived through Distribution SX.e.

Running DART for Linux

1 Select **`1) Restore Archived Data`**.

2 Specify this information:

- Directory In Which To Restore Archived Database
- Directory To Search For Archive Files
- Archive Database Name

3 Specify **`Yes`**.

4 Select **`File(s) to Restore`**.

5 Press **Go (F1)**.

File names are listed on the screen as they are restored.

6 After all files are restored, exit DART.

Database Archive Restore Tool for Windows Server

DART for Windows Server is similar to DART for LINUX.

Running DART for Windows Server

1 To launch DART from the environment prompt, specify `Cd ..\support\dart Dart.bat`.

2 Run DART.

See Running DART for Linux on page 13.

Progress OpenEdge after-imaging

See information about Progress OpenEdge after-imaging in these sources:

- Progress website: See information about enabling and disabling the feature
- *Infor Distribution SX.e Hardware and Software Recommendations Guide*

SXe error logs

If the system is not operating correctly or the web client displays error messages, use SXe logs to troubleshoot. The logs contain information about the errors that occur within the application, not errors that occur within the Progress application or database.

The .NET application writes errors from the main .NET application and the Distribution SX.e web client to the same log. These loggers are available:

- SXe logger

  Logs error messages from the user interface and on the web server
- Performance logger

  Logs the duration of calls to the Service Interface layer
- Api logger

  Logs incoming calls to the Rest endpoints on the web server

These log levels are valid for the Performance and Api loggers:

- Off
- Info
- Trace

The default log level for the Performance and Api loggers is Off. Change the log level to Info or Trace for short amounts of time to troubleshoot issues. If you set a logger to Info, the log includes method, URL, and query parameters. If you set a logger to Trace, the log includes method, URL, query parameters and the requested body.

These log levels are valid for the SXe logger. The levels are shown in hierarchical order, based on level on detail included in the log.

1 Off
2 Fatal
3 FatalException
4 Error
5 ErrorException
6 Warn
7 Info
8 Debug
9 Trace

The log level for the SXe logger is typically set to Off, Error, Info, or Trace. The default log level is Error. When you specify a log level, the information from the higher-ranking levels are also included. For example, when the log level is Error, the information for the FatalException and Fatal levels is also included in the log.

When you work with Infor Support to resolve an issue, they will recommend which log level to specify for a logger.

The logs are located in the Logs folder in the main web application folder on the IIS server, where the `web.config` file is located. The logs for each day are in separate folders within the Logs folder. The name of the logs follow this naming convention:

- SXe log files

  `DefaultTenant-{company number}.txt`
- Performance log files

  `DefaultTenant-{company number}-Perf.txt`
- Api log files

  The naming convention depends on these minLevel values:

- If the minLevel value is Info

  `DefaultTenant-{company number}-ApiLogP.txt`

- If the minLevel value is Trace

  `DefaultTenant-{company number}-ApiLogF.txt`

Note: Logs from company 0 are a result of logging that occurred before a company number was established.

See Troubleshooting on page 35.

Chapter 3: Customized functions

Each release of Distribution SX.e includes changes to standard functions. If you customized Distribution SX.e reports, menus, and error messages, you must determine if the changes affect your customizations.

The system setups for reports, menus, and error messages are maintained in these functions:

- **SA Administrator Options-System-Report Items**
- **SA Administrator Options-System-Menu Items**
- **SA System Error Message Setup**

If you customized any of these system setups, run the **SA Metadata Diff Report** to identify the modified functions. Review the Release Notes for Distribution SX.e to determine if those reports, menus, or error messages were changed.

Note: If you have customized a function, contact the Infor software integration team before to upgrading Distribution SX.e for assistance in merging your customized code.

SA Metadata Diff Report

After you upgrade Distribution SX.e, run the **SA Metadata Diff Report**. Compare the differences in your current system setup records to these baseline records in the new version of Distribution SX.e:

- SASSR report records
- SASSE error message records
- SASSM report menu records
- PV-SASSM WebUI menu records

To run the **SA Metadata Diff Report**, you must use these baseline files for the upgrade version of Distribution SX.e to compare differences between your data and the new data:

- `sassr.d`
- `sasse.d`
- `sassm.d`
- `pv-sassm.d`

The baseline files are in the `\database\metadata` folder of the `SX.enterprise_Full_Release_x_x_x_x.zip` file.

The report generates an HTML file that highlights the differences between the system setup records. The report includes this information:

- SASSR, SASSE, SASSM and PV-SASSM records that exist in your current database, but not in the baseline files
- New reports that do not exist in your database

Use the report to identify this information:

- Instances where you made a change to a report title, range, or option, menu item, or error message
- Custom or modified reports for your company
- Changes or additions that were made to reports in the new release of Distribution SX.e

Use this information to make changes to your revised system setup records after upgrading to avoid any conflicts with Distribution SX.e updates.

Comparing metadata differences after an upgrade

1. Sign in to your live environment that is not upgraded.
2. Select **System Administrator > SA Reports > Reports > System Administrator - Metadata Diff**.
3. Select **New > One Time**.
4. On the **Options** page, specify the location of the baseline files in the **Location of metadata files** field.
5. Specify **d** in the **(E)xport or (D)iff** field.
6. Specify an email address to which to send the report.
7. Set the background and foreground colors for the matching (Normal) data and for the differing (Diff) data. You can change the default colors to any standard HTML colors.
8. Click **Next**, and then click **Save**.
9. Open the email attachment to review the differences.

Chapter 4: Audit System implementation

This section provides information and instructions about implementing Audit System.

Note: Audit System was previously called Audit Manager.

Dictionary and audit triggers

You must generate the dictionary schema change and new audit code for the tables and fields that you set up for auditing in **SA Audit Processing Administration**.

Complete these procedures before generating dictionary and audit triggers:

1. Set up audit flags in **SA Administration Audit Processing Program Generation**.
   See information about setting audit flags in the online help.
2. Specify the Delta Directory and Generate Directory in **SA Administrator Options-System-Options**.
   The `auditchg.df` file is created in the Delta Directory.

Generating dictionary and audit triggers

1. Select **System Administrator > Administration > Audit Processing**.
2. Click **Search** to show all tables.
3. Click **Generate All**.
4. Click **OK**.
5. Click **OK** after you receive notification that includes this information:
   - The dictionary change that is contained in the `auditchg.df` file must be applied with exclusive access to the database.
   - The audit programs must be copied to the appropriate delivery-zips folders.

Dictionary and audit trigger installation

When you install triggers, you activate new audit fields and deactivate fields that have been deselected for auditing. Install triggers to activate your changes even if you are only deactivating fields. Because this procedure requires exclusive use of the database, apply the changes after standard business hours.

Installing dictionary and audit triggers

These instructions to apply to both Linux and Windows Server databases.

1. Verify that all users are disconnected from the database.
2. Verify that all processes have been halted on the database.
3. On the server where Progress OpenEdge is installed, access the OpenEdge Database Administration tool.
4. Verify that you are connected to the Distribution SX.e database.
5. Load the `auditchg.df` file that was generated in **SA Audit Processing Administration**.
6. Copy the `0005-audit-auto-gen.zip` file from the temporary generation directory to the `$BUILD/delivery-zips` directory.

   Note: You must change the 0005 in the name of the zip file to a different value.

   See Naming convention on page 8.
7. Run the build script to compile the code.
8. Move the new `appcode.pl` into place for the database server.
9. Remove the existing schema cache files on all servers and clients.

   Note: You must perform this step to ensure that the new audit triggers capture data. You must perform this step even if you are turning off the audit triggers. The schema cache files are automatically recreated during the next log in.

Script and cache file updates

Run the `audit.start` script to start Audit System and process the new audit information into the audit records.

Chapter 5: Scripts

This section provides information about the scripts that are used in Distribution SX.e.

Distribution SX.e scripts

This table shows the Linux scripts that are located in the `/rd/opsys` folder. The same scripts are available for Windows environments, with a `.ps1` extension.

Note: When you copy a powershell script from server to server, you may be required to unblock the scripts. See KB article 1912073 on the Infor Support Portal.

File	Description
`admin.start`	Starts the Progress OpenEdge Admin server
`audit.start`	Starts the Audit System process
`autodrop.start`	Starts the TWL Autodrop process
`conv.launch`	Launches the required upgrade conversion programs
`database.backup`	Performs a Progress OpenEdge backup of the specified database to the `BACKUP_DIR` location. It also performs the verification of the backup files created by the backup utility.
`rfclient.launch`	Launches TWL client for RF gun
`shipper.start.sh`	Starts the Shipper poller process
`*dart`	Runs the Database Archive Restore Tool. The support files must first be installed through DUIT. See Distribution Utilities Install Tool on page 13.
`*duit`	Runs the Distribution Utilities Install Tool
`ibcrfclient.launch`	Launches Integrated Barcode client for RF gun
`setenv.sh`	Sets up the required environment variables

File	Description
library.move	Copies the appcode.pl file from $BUILD_HOME/library to $RD_HOME/library This script does not copy the new library if any batch processes, such as Report Scheduler, is running.
rsshut.sh	Shuts down the Report Scheduler
rsstart.sh	Starts the Report Scheduler
rptrun.sh	Used by the Report Scheduler when executing a report
rptrunptx.sh	Used by the Report Scheduler when executing a PTX job
user.disconnect	Disconnects a user from the databases
slafidrd.sh slafifrd.sh slafiprd.sh slafithdr.sh slafitrd.sh	Used by the Product Import function within Distribution SX.e

Note: Most scripts that were used before Distribution SX.e version 11.0 are incompatible with version 11.*x*.

PF files

This table shows the parameter files that are located in the /rd/opsys folder:

File	Description
connect.pf	Used by the batch processes to connect to the Distribution SX.e databases
launch.pf	Used by the batch processes to set the OpenEdge client parameters

Shipping pollers

Linux and Windows databases use the shipper.start script to start all shipping pollers.

See the *Infor Distribution SX.e Shipping Interface Administration Guide* for information about using multiple pollers.

Custom environments

Do not rename or modify standard scripts. Copy the standard scripts, and then apply your changes to the copy.

Caution: Scripts with a `.sh` extension are launched by Distribution SX.e. If you rename or modify these scripts, Distribution SX.e may fail to run.

If you create custom scripts, do not save them in the `$RD_HOME` directory. This directory is removed and replaced during the next upgrade.

Third-party scripts must be located in the operating system path statement to execute.

Chapter 6: Elasticsearch customization

You can customize these components of Elasticsearch-based searches:

- The format of search results that display in autocomplete fields and facets
- The format of search results that display on the global search page
- Hyperlinks that are associated with the search results that display on the global search page

Autocomplete and global search display formats

You can customized the values that are displayed in the autocomplete drop-down box and the global search page. The customizations that you apply to autocomplete display formats also apply to facets.

You can change the display format in **SA Table Code Value Setup**. You use the standard table and field names from the Distribution SX.e database to determine the format of the output.

To obtain the table and field names, you can use the SX Dictionary Help tool. It is available on the Infor Download Center. You may be required to purchase the SX Dictionary Help separately.

In the **Description** field in **SA Table Code Value Setup**, you must place the table and field names in curly brackets. When a search is conducted, values from the fields replace the table and field names that are within the curly brackets. If a value is blank, the space that is allocated for the value is left blank.

You can also add spaces and characters in the **Description** field. They are displayed as entered.

This is an example of the global search format for apsv:

```
{vendno} - {name} (Location: {city}, {state})
```

This is an example of the output:

2164 - Grandview Plumbing Distributors (Location: Colorado Springs, CO)

Records for default search formats are included in standard Distribution SX.e. The format is in lowercase letters and the repository is typically an acronym.

For some tables, you can specify calculated fields in the **Description** field. This list shows the calculated fields and the associated tables:

- `icenh`: calc_descrip

If you use calc_descrip[1] or calc_descrip[2], then the description is taken from one of three tables, based on this hierarchy. If you use descrip[1] and descrip[2], the description is taken from `icenh`.

1. `icenh`
2. `icsp`
3. `icsc`

- `icsw` and `icsec`: calc_qtyavail
- `poeh`: calc_totlineamt, calc_totinvamt, and calc_totrcvamt

Table joins in display formats

You can use information from other tables in the display formats. You must include the table name and the field name in curly brackets.

To use an array or extended field, use square brackets with the index number of the array.

This is an example of icsp fields within the icsw display format:

```
{prod} - {icsp.descrip[1]} {icsp.descrip[2]}
```

These table joins are available for use in the display formats:

- Table apss: apsv
- Table aret: arsc, arss
- Table arss:arsc
- Table contacts: contacts-roles
- Table icenh: icsd
- Table icsw: icsp, icsd
- Table oeeh: arsc, icsd
- Table poeh: apsv
- Table vaeh: icsd
- Table wteh: (shiptowhse)-icsd and (shipfmwhse)-icsd

  Specify **`shiptowhse`** as the table name for information for the ship to warehouse. Specify **`shipfmwhse`** as the table name for information for the ship from warehouse.

  This is an example:

  {wtno}-{wtsuf} – {shiptowhse.name} – {shipfmwhse.name}

Customizing display formats

These instructions are specific to global search formats. To customize autocomplete formats, select **`Search (Autocomplete)`** from the **Table List** in **SA Table Code Value Setup**.

1. Select **System Administrator > Setup > Table Code Value**.
2. Select **`Search (Global)`** from the **Table List**.
3. Select the record to change, and then click **Edit**.

4 Specify the format.
5 Click **Save**.

Global search results links

You can customize the hyperlinks that are displayed for each global search results. The global search links are set up in **SA Table Code Value Setup**.

You create links in Search (Links Setup) records and then associate the links with entities in Search (Links) records. Search (Links) records determine what function opens when a user clicks a link. Default links setups and links are included in standard Distribution SX.e.

Note: You must be familiar with the Distribution SX.e code and JavaScript programming to create or modify a links setup or links record. You must know the Angular state name of menu functions and the associated parameters, and the name of the repositories. If you are not familiar with the information that is required for the records, we recommend that you engage Infor Consulting Services.

Creating an available link for global search results

1 Select **System Administrator > Setup > Table Code Value**.
2 Select **`Search (Links Setup)`** from the **Table List**.
3 Click **New**.
4 Specify these values:

State
Specify the Angular state name of the menu function.

Label
Specify the name of the menu function. This value is the link that is displayed on the global search results page.

5 Specify the parameters associated with the state.
6 Click **Save**.

Associating a link with a global search result

1 Select **System Administrator > Setup > Table Code Value**.
2 Select **`Search (Links)`** from the **Table List**.
3 Click **New**.
4 Specify this information:

Repository
Specify the name of the repository where the information about the entity is stored.

Description
Specify a description for the repository.

5 Click **Save**.

6 To associate a link with the repository that is specified on the record, move a link from the **Available Links** list to the **Selected Links** list.

7 Click **Save**.

Appendix A: Troubleshooting

This section describes actions that you can perform to solve Distribution SX.e issues.

Audit information does not display in SA Administration Audit System Inquiry

Cause: The Audit System program is not running.

Solution: Check the `audit.pid` file in your `$RD_HOME/tmp` folder to verify that the Audit System is running.

If Audit System seems to be running, check the replicte table to determine if raw data is created. The replicte table temporarily stores raw audit data. The `audit.p` processes the raw data from the replicte table to the audit table. Raw data in the replicte table indicates that the audit flags and triggers are set up, but the Audit System is not running.

If the Audit System is not running, run the `audit.start` script.

System records are updated with server time

Cause: System records are updated with the server time for transactions recorded in a different time zone.

Solution: By default, Distribution SX.e records dates and times of transactions, such as the various types of order documents, transactions, GL postings, shipments, and receipts, based on the server's time. If you have multiple locations across the continent that share a common computer system, all transactions are recorded using the time of the primary server. If your company requires that business transactions be recorded based on the local date and time, you can change a system option to use the user's time zone to record transaction dates and times in the user's local time.

Select the **Use Client Time Zone to Load Date/Time on System Records** option in **SA Administrator Options-System-General** to activate this feature. When this feature is activated, the Time Zone is obtained from the user's Windows' session Date/Time settings. If Daylight Savings Time (DST) applies

in the user's locality, the DST offset is recorded on the user's **SA Operator Setup** record so that the correct date and time is used when recording transactions.

Transactions created before you select the option are not changed to reflect the client date and time zone.

System records do not reflect the correct time after change to or from Daylight Savings Time

Cause: If the **Use Client Time Zone to Load Date/Time on System Records** option in **SA Administrator Options-System-General** is not selected, system records are timestamped using the date and time from your Progress Application Server for Open Edge (PASOE). When Daylight Savings Time (DST) begins in March or ends in November, the PASOE does not update internal processing time to reflect the time shift until it is restarted.

Solution: Restart the PASOE after the time shift occurred, which is 2:00 AM, in the time zone where the server is located. We also recommend that you restart your Internet Information Service (IIS) server. Do not enter any transactions until after you have performed the restart.

Additional information is required to resolve application errors

Cause: The standard error logs do not contain enough information for you or your support representative to identify the cause of an error.

Solution: You can use the SXe, Performance, or Api loggers to generate detailed trace level logs. Due to the technical nature of the information, the trace level logs are usually interpreted by a programmer.

Note: You can specify log levels other than trace. A support representative can recommend which log level to specify for a logger.

See SXe error logs on page 13.

Use these instructions to change the log level of a logger to generate a trace level log:

1. In the `web.nlog` folder, use a text editor to open the configuration file.
2. In the `<rules>` section, change the minLevel value for the appropriate logger to Trace. For example, change this line:

   ```
   <logger name=”SxeLogger” minlevel=”Error” writeTo=”Std” />
   ```

   To this:

   ```
   <logger name=”SxeLogger” minlevel=”Trace” writeTo=”Std” />
   ```

3 To trigger the errors again, allow users to continue working in the application to produce a log file with sufficient information for debugging.

4 Access the log in the Logs folder in the main web application folder on the IIS server, and attempt to resolve the error.

   If you work with Infor Support, you can zip the folder and then send it to your support representative to review and troubleshoot the issue. You can also attach the .zip file to a support issue that you created in the Infor Support Portal.

   Errors that are displayed in the web client interface only include an Error ID. The trace level log for the SXe logger contains the actual error. Use the Error ID to determine what a user was doing in the application when the error occurred.

5 After trace level logs are no longer required, change the minLevel back to its original level to preserve disk space and improve performance.

Records missing from search results

Cause: The records are not indexed correctly.

Solution: Check the system status log to verify that the Elastic Scheduler, a utility that replicates data from Distribution SX.e to Elasticsearch, is running. The Elastic Scheduler generates a log message every 60 seconds. The messages are saved to the logs directory for your instance of the Progress Application Server for Open Edge (PASOE), such as `/rd/tomcat/logs`. Each message contains the host name, ip address, and the status of the scheduler (master or not), for example:

```
[WARN ] 2020-10-29 17:44:40.269 [scheduling-1] ElasticScheduler - System
heart beat [\{hostname}][\{ipaddress}] isMaster[\{true OR false}]
```

If the Elastic Scheduler is not running, then contact Infor Support for assistance.

Additional information is required to resolve Report Scheduler and Elasticsearch errors

Cause: Standard logs do not contain enough information to identify the cause of the Report Scheduler or Elasticsearch errors.

Solution: You can generate trace level logs. Typically, the logs are stored in the print directory specified in **SA Company Setup**. The file name for a Report Scheduler log is `rptsch.`*`YYYYMMDD`*`.log`, for example, `rptsch.20171027.log`. The file name for an Elasticsearch log is `elastic.`*`YYYYMMDD`*`.log`.

Use these instructions to set up the business rules that generate trace level logs. You must set up a rule for both Report Scheduler and Elasticsearch.

1 Select **System Administrator > Setup > Business Rule**.

2 Select **New**.
3 Specify this information:

Category
Specify **`Legacy`**.

Rule
Specify **`Legacy - logginglevel`**.

Global
Specify **`yes`**.

Document Handler
Specify **`config`**.

Direction
Select **`None`**.

Node Name
Specify **`Infor.WebUI`**.

Attribute Name
For Report Scheduler, specify **`rptschlogging`**.
For Elasticsearch, specify **`eslogging`**.

Rule Type
Specify **`logginglevel`**.

Rule Value
To turn logging off, specify **`0`**. To turn logging on, specify **`1`**. You can specify **`2`** or higher for additional logging, but we do not recommend it.

4 Click **Save**.

Additional information is required to resolve report errors

`Cause`: Standard logs do not contain enough information to identify the cause of errors that occur when a report is run.

`Solution`: Activate full Progress OpenEdge client logging to generate a clientlog file. The clientlog file is stored in `LOG_DIR` folder for seven days. The file name is `cl.<guid>.log`. Because the file name does not identify which report the clientlog is associated with, do not generate clientlogs for report that is run often. If too many clientlogs are generated, you might experience difficulty in determining which file was generated by which report.

Contact Infor Support for assistance with troubleshooting the errors.

Use these instructions to set up the business rule that generates the clientlog for one or more reports. After you create the business rule, clear the **Rule Value** field to stop clientlog generation.

1. Select **System Administrator > Setup > Business Rules**.
2. Select **Create**.
3. Specify this information:

   Category
   Specify **`Legacy`**.

   Rule
   Specify **`Classic - logginglevel`**.

   Global
   Specify **`yes`**.

   Document Handler
   Specify **`config`**.

   Direction
   Specify **`none`**.

   Node Name
   Specify **`Infor.WebUI`**.

   Attribute Name
   Specify **`rptschlogging`**.

   Rule Type
   Specify **`configsetting`**.

   Rule Value
   Specify the report acronym. To list multiple reports, use a comma as the delimiter, for example, **`sarse,arrcm,glrf`**.

BOD data is not flowing properly

`Cause`: A problem is preventing the flow of BOD data to ION.

`Solution`: Set up the IONLogging business rule to generate these trace logs that you can use to resolve data flow issues:

- `ioninit.`*`YYYMMDD`*`.log`

  This log file includes information about BODs that are generated when you run the **SA ION Initial Load Report** to provide data to an integrated application.

- `ionin.`*`YYYMMDD`*`.log`

  This log file includes information about inbound BOD traffic.

- `ionout.YYYMMDD.log`

  This log file includes information about outbound BOD traffic.

After you complete an integration, you can also use OneView in Infor ION to identify the cause of data flow issues.

See the *Infor Distribution SX.e Configuration Guide for Infor Operating Service*.

Use these instructions to set up the IONLogging business rule to generate trace level logs:

1. Select **System Administrator > Setup > Business Rule**.
2. Select **New**.
3. Specify this information:

   Category
   Select **`CONV`**.

   Rule
   Select **`Classic - logginglevel`**.

   Document Handler
   Specify **`config`**.

   Node Name
   Specify **`Infor.WebUI`**.

   Attribute Name
   Specify **`IONLogging`**.

   Rule Value

   Specify **`trace`**.

   Optionally, specify **`info`** to log only informational messages. Leave the field blank to deactivate ION logging.

4. Optionally, specify a description, such as **`ION BOD Logging`**.
5. Click **Save**.

Infor Ming.le times out because of inactivity

Even if a user is active in Distribution SX.e, an inactivity warning can display in Infor Ming.le. The user can be signed out.

`Cause`: User activity in Distribution SX.e is not recognized in Infor Ming.le because the inactivity time-out value for Distribution SX.e is not set up in the `web.config` file.

`Solution`: Retrieve the ION Grid values for the `UserActivityCookieDomain` and `UserActivityCookieName` from System Configuration in Infor Operating Service. Use the values to update these IFS Mingle CE Epoch Cookie settings in the `web.config` file:

- `<add key="Infor.Mingle.CE.Last.Activity.DomainName" value=".mydomain.com"/>`
- `<add key="Infor.Mingle.CE.Last.Activity.CookieName" value="useractivity_cookie"/>`

Note: The time-out value for an Infor Ming.le session is set at 10 hours and cannot be changed. The time-out value for the Infor Ming.le idle session ranges from 10 to 470 minutes. You can change this value in Infor Ming.le Security Administration.

See the Infor Ming.le online help.

Database performance is not optimal

`Cause`: The database may require tuning.

`Solution`: If directed by Infor Support, run the **SA Generate PROMON Information Report** to run the Progress Monitor tool (PROMON). The report generates details of the currently running database such as locked transactions, memory usage, and performance metrics. An experience database administrator must interpret the results of the report.

Accessing the debug mode

You can run Distribution SX.e with unminified JavaScript source code for debugging. In the unminified JavaScript code, you can set breakpoints and step through it line by line.

To access to the debug mode, you must have access to the **Extensions** menu. Access is controlled by the **Extension Access Level** field on your **SA Operator Setup** record.

1. Click the **More . . .** button in the application menu bar.
2. Select **Extensions > Tools > Debug Mode**.

   The application might load slowly because the source code is not condensed and optimized by the minify process. This alert is displayed when you access the unminified source code:

   ```
   You are running unminified source code. This is intended for debugging purposes.
   ```
3. To exit the debug mode, select **Extensions > Tools > Standard Mode**.