

# **TIBCO Substation ES™**

## **Release Notes**

*Software Release 2.10.0*  
*May 2016*

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# TIBCO Documentation and Support Services

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Documentation for this and other TIBCO products is available on the TIBCO Documentation site. This site is updated more frequently than any documentation that might be included with the product. To ensure that you are accessing the latest available help topics, please visit:

<https://docs.tibco.com>

## Product-Specific Documentation

Documentation for TIBCO products is bundled with the software. It is also available on the TIBCO Documentation site at <https://docs.tibco.com/products/tibco-substation-es>. To directly access documentation for this product, double-click the following file:

`TIB_substation_version_docinfo.html`

where this file is shipped with the software package .zip file.

The following documents for this product can be found on the TIBCO Documentation site or after extracting the documentation .zip file:

- *TIBCO Substation ES Concepts*
- *TIBCO Substation ES Installation*
- *TIBCO Substation ES Operations and Administration*
- *TIBCO Substation ES Configuration and Resources*
- *TIBCO Substation ES Messages and Codes*
- *TIBCO Substation ES Release Notes*

The following documents provide additional information and can be found on the TIBCO Documentation site:

- *TIBCO Rendezvous for z/OS Installation and Configuration*
- *TIBCO Rendezvous for z/OS COBOL Reference and TIBCO Rendezvous C Reference*
- *TIBCO Enterprise Message Service User's Guide*
- *TIBCO Enterprise Message Service C & COBOL API Reference*
- *TIBCO Mainframe RED User's Guide*
- *TIBCO Mainframe RED Installation*

## How to Contact TIBCO Support

For comments or problems with this manual or the software it addresses, contact TIBCO Support:

- For an overview of TIBCO Support, and information about getting started with TIBCO Support, visit this site:

<http://www.tibco.com/services/support>

- If you already have a valid maintenance or support contract, visit this site:

<https://support.tibco.com>

Entry to this site requires a user name and password. If you do not have a user name, you can request one.

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TIBCO Community is an online destination for TIBCO customers, partners, and resident experts. It is a place to share and access the collective experience of the TIBCO community. TIBCO Community offers forums, blogs, and access to a variety of resources. To register, go to the following web address:

<https://community.tibco.com>

# New Features

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The following new features have been added to version 2.10.0 of TIBCO Substation ES™.

## Substation ES

- TCP Interface

A new TCP Interface has been implemented to accommodate WebUI requests to direct to Substation ES without using ESB. This also facilitates sign-on authentication to the z/OS host system.

- RED Operational Commands

A number of commands have been implemented to service the Interface for RED.

## Interface for RED

- A new CICS request/reply process has been created without any size limitations on the request or the reply messages. Messages can now be directly sent to an external awaiting program without the use of TSQ or TDQ facilities.
- Changes have been made for trigger processing to use mainframe RED shared buffer pool, which is faster and easier to maintain for both CICS and Substation ES.
- DPL requests now support guaranteed processing without the requirement of RRMS being set in the target CICS region. The limitation of the associated CICS region's having to be in the same LPAR has now been removed.
- Trigger processing now supports Fast (F) and Guaranteed (G) delivery modes. It now supports up to four ESB Interfaces that can simultaneously deliver messages on a round-robin method, which is necessary to support very high throughput of events and messages being delivered from the host system.
- New features and options have been added to the CICS transaction XTUV for viewing Substation and CICS RED activities.

## Interface for IMS

When using the IMS conversational mode, you can now use a transaction to initiate the conversation.

## Changes in Functionality

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There are no changes in functionality in version 2.10.0 of TIBCO Substation ES.



## Deprecated and Removed Features

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The following tables list any features that have been deprecated or removed as of version 2.10.0 of TIBCO Substation ES.

For deprecated features, if relevant, useful alternatives to the deprecated features are listed. Any use of a deprecated feature has to be discontinued because it might be removed in a future release. You have to avoid becoming dependent on deprecated features and become familiar with the suggested alternative features.

### Deprecated Features

No features are deprecated in this release.

### Removed Features

Affected Component	Description	Deprecated in Release	Removed in Release
General Substation and the ESB	Transform-Only Data feature	N/A	2.9.0

# Migration and Compatibility

The following are instructions on how to migrate from a previous release to version 2.10.0 of TIBCO Substation ES.

## Migrating from Release 2.7 and Later

To migrate an earlier TIBCO Substation ES installation to release 2.10.0, you must address the following changes in parameters and members:

- [New and Changed Parameters in Release 2.10.0](#)
- [New and Changed Members in Release 2.10.0](#)

## New and Changed Parameters in Release 2.10.0

In release 2.10.0, some parameter keywords have been changed or added. In addition, some default keyword values or range values have changed. All members are located in the *USERHLQ.INTF* data set.

For additional details, see *TIBCO Substation ES Installation*.

Keyword	Status	Required	Value
<b>Substation Initialization Member (SXSSIP\$1)</b>			
STACK-NAME	New in 2.8.0	Optional	TCP/IP stack name
STGSIZE-MAX	New in 2.9.0	Optional	4000 to 200000
<b>Substation Administration Interface (SXSIADM)</b>			
HEARTBEAT-COMMAND	New in 2.8.0	Optional	Console Commands
LOG-REMOTE	New in 2.8.0	Optional	Y/N
<b>Substation EMS ESB (SXSIEMS1)</b>			
SERVICE-SUSPEND	New in 2.9.0	Optional	Y/N
WORKERS-EOT	New in 2.8.0	Optional	5 to 40
<b>Substation EMS ESB (SXSIRV1)</b>			
RVDQ-IDENTITY	New in 2.8.0	Optional	0 to 3
RVDQ-MEM-LIMIT	New in 2.8.0	Optional	0 to 3
RVDQ-MSG-LIMIT	New in 2.8.0	Optional	0 to 3
RVDQ-SCHEDULER	New in 2.8.0	Optional	0 to 3
RVDQ-WORKERS	New in 2.8.0	Optional	0 to 3
SERVICE-SUSPEND	New in 2.9.0	Optional	Y/N

Keyword	Status	Required	Value
WORKERS-EOT	New in 2.8.0	Optional	5 to 40
<b>CICS Interface (SXCINTF)</b>			
HVS-BATCH-YN	Renamed as HVS-BATCH in 2.8.0.	Optional	Y/N
HVS-BATCH-SIZE	New in 2.8.0	Optional	5 to 2048
TRCLVL-HVS	New in 2.8.0	Optional	0 to 3
<b>RED Interface (SXCIRE)</b>			
AMSG-BUFFER-64	Renamed as AMSG-BUFF64-YN in 2.9.0	Optional	Y/N
CMSG-BUFFER-SZ	Renamed as CMSG-BUFFLEN in 2.9.0	Optional	1024 to 500000
CMSG-BUFFER-64	Renamed as CMSG-BUFF64-YN in 2.9.0	Optional	Y/N
CMSG-CICS-WAIT	New	Optional	5 to 60
CMSG-CHECK-STG	New	Optional	0 to 10000
P#-AMSG-BUFFERS	Renamed as POOL#-AMSG-BUFFERS in 2.9.0	Optional	5 to 50000
P#-AMSG-BUFFER-SZ	Renamed as POOL#-AMSG-BUFFLEN in 2.9.0	Optional	256 to 500000
P#-AMSG-NAME	Renamed as POOL#-AMSG-NAME in 2.9.0	Optional	RED target member name
P#-AMSG-PACING	Renamed as POOL#-AMSG-PACING in 2.9.0	Optional	0 to 5000000
P#-AMSG-TRCLVL	Renamed as POOL#-AMSG-TRCLVL in 2.9.0	Optional	0 to 5
P#-AMSG-WORKERS	Renamed as POOL#-AMSG-WORKERS in 2.9.0	Optional	0 to 40
SMSG-BUFFER-SZ	Renamed as SMSG-BUFFLEN in 2.9.0	Optional	1024 to 500000

Keyword	Status	Required	Value
<b>IMS Interface (SXIINTF)</b>			
OTMA-SMEM	New in 2.9.0	Optional	<i>smem</i>
TIMEOUT-SYNC	New in 2.9.0	Optional	1 to 120 seconds
TRCLVL-TRIG	New in 2.7.0	Optional	0 to 3
WAIT-OTMA	New in 2.9.0	Optional	10 to 500 in hundredths of seconds
WAIT-TRANS-TO	New in 2.9.0	Optional	1 to 3000 in hundredths of seconds

### New and Changed Members in Release 2.10.0

The following are new and changed members used within the Substation ES installation and runtime environment. If the original installed data sets are retained, the original members are not replaced, and the members of the CNTL, JCL, and PROC libraries must be copied by the installer from the sample data sets.

Library	Member	Description	Status
JCL	SSLCODES	Authorize the EMS client job to execute system SSL modules.	New in 2.9.0
	SSLGCERT	Generate the client certificate.	New in 2.9.0
	SSLRACFA	Define RACF profiles for those system SSL modules which require signature verification.	New in 2.9.0
	SXCASME0	Compile suppress CICS messages exit.	New in 2.9.0
	SXIJICVS	IMS conversational IVP program.	New in 2.9.0
	SXWXMLUI	Configuration file extract utility for WebUI	New
	SXXCSDUP	RED CICS CSD resources.	New in 2.9.0
	TIBSSES	Substation startup.	JCL Updated
INTF	SXCIRE0	CICS RED Interface.	New in 2.9.0
	SXSIRVR	RV ESB Interface for RED.	New in 2.9.0
	SXSITCP	TCP Interface	New
CNTL	SXCSDARD	CICS RED CSD resource definitions.	New in 2.9.0
	SXCSDURD	CICS RED CSD required definitions.	New in 2.9.0

## Migrating from Release 2.6

To migrate an earlier TIBCO Substation ES installation to release 2.10.0, you must address these changes from version 2.6.0:

- [Transformer Configuration File Conversion in Release 2.7.0](#)
- [Parameter Keyword Changes](#)

Additionally, see the notes on [Migrating from Release 2.7 and Later](#).

### Transformer Configuration File Conversion in Release 2.7.0

The configuration file structures have changed for Substation ES release 2.7.0 and later.

This release includes a utility that can assist the conversion of configuration files used in release 2.6.0 to the requirements of 2.7 and later.

If you are migrating from a release earlier than 2.6.0, you must convert your configuration file to 2.6.0 before using the utility:

- If migrating from software release 2.1 through 2.5, see [Migrating from Release 2.1 through 2.5](#).
- If migrating from software release 2.0, see [Migrating from Release 2.0](#).
- If migrating from software release 1.x, see [Migrating from Release 1.x](#).

### Migrating from Release 2.6

Follow these instructions if your current installation of TIBCO Substation ES is software release 2.6.0.

Follow these steps to convert the configuration file:

1. Install TIBCO Substation ES release 2.10.0, as documented in the *TIBCO Substation ES Installation* guide.

Substation ES is delivered in the form of a module for independent installation. Your existing Substation ES installation does not have to be removed or modified.

2. Run the JCL member, either SXCCFDEF or SXICFDEF (depending on whether your interface is for CICS or IMS). This JCL creates a named release 2.10.0 configuration file.



The JCL is located in the <USERHLQ>.JCL library.

3. Edit the JCL member SXSCFC26 in the Substation ES 2.10.0 installation.
  - a. In the EXPORT step, update the filename on the CONFIG DD Name to specify the name of your Substation ES version 2.6 configuration file. This step exports the contents of the Substation ES 2.6 configuration file to a sequential file.
  - b. In the IMPORT step, change the filename on the IMPORT DD Name statement to specify the name of the sequential file created in [step a](#).

Ensure that the filename of the CONFIG DD Name points to the named release 2.7.0 configuration file created in [step 2](#).

For details on the utilities, see "Configuration File Utilities" in *TIBCO Substation ES Configuration and Resources*.

4. Execute the JCL member SXSCFC26. This JCL member converts the Substation ES 2.6 configuration file to a version 2.7.0 configuration file. Your existing applications have to execute without changes after the export and import have completed.

## Migrating from Release 2.1 through 2.5

Follow these instructions if your current installation of TIBCO Substation ES is software release 2.1 through 2.5.

In these instructions, your installation of TIBCO Substation ES, release 2.1 through 2.5, is referred to as your existing Substation ES installation. These steps convert your existing Substation ES configuration file for use with release 2.7.

1. Install TIBCO Substation ES release 2.7.0, as documented in the *TIBCO Substation ES Installation* guide.

Substation ES is delivered in the form of a module for independent installation. Your existing Substation ES installation does not have to be removed or modified.

2. Run the JCL member, either SXCCFDEF or SXICFDEF (depending on whether your interface is for CICS or IMS). This JCL will create a named release 2.6.0 configuration file.



The JCL is located in the <USERHLQ>.JCL library.

3. Edit the JCL member SXSCFC24 in the Substation ES 2.7.0 installation.
  - a. In the EXPORT step, update the filename on the CONFIG DD Name to specify the name of your existing Substation ES installation configuration file (version 2.1 through 2.5). This step exports the contents of the Substation ES configuration file to a sequential file.
  - b. In the IMPORT step, change the filename on the IMPORT DD Name statement to specify the name of the sequential file created in [step a](#).  
 Ensure that the filename of the CONFIG DD Name points to the named release 2.6.0 configuration file created in [step 2](#).
4. Execute the JCL member SXSCFC24. This JCL member converts your Substation ES configuration file to a version 2.6 configuration file.
5. Convert the new version 2.6 configuration file to 2.7. These steps are covered in depth in [Migrating from Release 2.6](#).

## Migrating from Release 2.0

Follow these instructions if your current installation of TIBCO Substation ES is software release 2.0.

In these instructions, your installation of TIBCO Substation ES release 2.0 is referred to as your existing Substation ES installation. These steps convert your existing Substation ES configuration file for use with release 2.7.

1. Install TIBCO Substation ES release 2.7.0, as documented in the *TIBCO Substation ES Installation* guide.

Substation ES is delivered in the form of a module for independent installation. Your existing Substation ES installation does not have to be removed or modified.

2. Run the JCL member, either SXCCFDEF or SXICFDEF (depending on whether your interface is for CICS or IMS). This JCL will create a named release 2.1.0 configuration file.



The JCL is located in the <USERHLQ>.JCL library.

3. Edit the JCL member SXSCFC21 in the Substation ES 2.7.0 installation.
  - a. In the EXPORT step, update the filename on the CONFIG DD Name to specify the name of your existing Substation ES version 2.0 configuration file. This step exports the contents of the Substation ES configuration file to a sequential file.

- b. In the `IMPORT` step, change the filename on the `IMPORT DD Name` statement to specify the name of the sequential file created in [step a](#).

Ensure that the filename of the `CONFIG DD Name` points to the named release 2.1.0 configuration file created in [step 2](#).

4. Execute the JCL member `SXSCFC21`. This JCL member converts your Substation ES configuration version 2.0 file to a version 2.1 configuration file.
5. Convert the new 2.1 configuration file to 2.6.

These steps are covered in depth in [Migrating from Release 2.1 through 2.5](#).

6. Convert the 2.6 configuration file to 2.7.

These steps are covered in depth in [Migrating from Release 2.6](#).

## Migrating from Release 1.x

Follow these instructions if your current installation of TIBCO Substation ES is software release 1.x.

In these instructions, your installation of TIBCO Substation ES release 1.x is referred to as your existing Substation ES installation. These steps convert your existing Substation ES configuration file for use with release 2.7.

1. Install TIBCO Substation ES release 2.7.0, as documented in the *TIBCO Substation ES Installation* guide.

Substation ES is delivered in the form of a module for independent installation. Your existing Substation ES installation does not have to be removed or modified.

2. Run the JCL member, either `SXCCFDEF` or `SXICFDEF` (depending on whether your interface is for CICS or IMS).

This JCL will create a named release 2.0.0 configuration file.



The JCL is located in the `<USERHLQ>.JCL` library.

3. Edit the JCL member `SXSCFC20` in the Substation ES 2.7.0 installation.
  - a. In the `EXPORT` step, update the filename on the `CONFIG DD Name` to specify the name of your existing Substation ES version 1.x configuration file. This step exports the contents of the Substation ES configuration file to a sequential file.
  - b. In the `IMPORT` step, change the filename on the `IMPORT DD Name` statement to specify the name of the sequential file created in [step a](#).
 

Ensure that the filename of the `CONFIG DD Name` points to the named release 2.0.0 configuration file created in [step 2](#).
4. Execute the JCL member `SXSCFC20`. This JCL member converts your Substation ES configuration version 1.x file to a version 2.0 configuration file.
5. Convert the new 2.0 configuration file to 2.1. These steps are covered in depth in [Migrating from Release 2.0](#).
6. Convert the 2.1 configuration file to 2.6. These steps are covered in depth in [Migrating from Release 2.1 through 2.5](#).
7. Convert the 2.6 configuration file to 2.7. These steps are covered in depth in [Migrating from Release 2.6](#).

## Parameter Keyword Changes

Some parameter keywords have been changed or added in Release 2.7.0. Either update to use the versions of these members that are included with the latest product release, or update your existing members using to the information provide here.

Keyword	Status	Required	Value
<b>Substation Initialization Parameters (SXSSIP\$1)</b>			
CONSOLE-TYPE=W	Removed		
WORKERS-EOT	New	Optional	2-20
<b>Substation Administration Interface (SXIADM)</b>			
ESB-INTF-ID	New	Optional	<i>intf-id</i>
HEARTBEAT-SERVICE	New	Optional	<i>Service-Name</i>
HEARTBEAT-INTERVAL	New	Optional	0-300 Seconds
<b>CICS Interface Member (SXCINTF)</b>			
HVS-BATCH	New	Optional	Y/N
HVS-WORKERS	New	Optional	0-4
<b>IMS Interface Member (SXIINTF)</b>			
TRIG-SYNC	New	Optional	SXITSYNC
<b>Substation EMS ESB member (SXSIEMS1)</b>			
SSL-REQ	Removed		
SSL-YN	Removed		
SSL-PASSWORD	Removed		
SSL-IDENTITY-DDN	Removed		
SSL-KEY-DDN	Removed		
START-WAIT	Removed		
<b>Substation EMS ESB member (SXSIRV1)</b>			
RV-EQ-POLICY	New	Yes	2
RV-EQ-MAX-EVENTS	New	Yes	20000
START-WAIT	Removed		



## Migrating to Release 2.6.0

For upgrading from releases before 2.5.0, refer to the instructions in this section for installing release 2.5.0 and perform the necessary upgrades to that release.

### Transformer Configuration File Conversion in Release 2.6.0

The configuration file structures have changed for Substation ES release 2.6.0. You must export all of the entities of the configuration file to a sequential file using the 2.6.0 configuration file export utility. You can then import them to the newly allocated and defined configuration file using the 2.6.0 configuration file import utility.

Use the following steps for converting the configuration file:

1. Complete the Substation ES release 2.6.0 installation.
2. Ensure the JCL (SXCCFDEF or SXICFDEF) has executed successfully. This job creates and populates the release 2.6.0 file.
3. Edit the JCL member SXSCFEXP and update the filename on the CONFIG DD Name to the name of your Substation ES release 2.2.x or higher configuration file.
4. When the modifications have been made, execute the JCL. This JCL member exports the contents of the Substation ES 2.2.x or higher configuration file to a sequential file.
5. Populate the Substation ES release 2.6.0 configuration file using the import utility, specifying the newly created sequential file. To do this, edit the JCL member SXSCFIMP.
  - a. Change the filename on the IMPORT DD Name statement to that of the sequential file created in [Step 3](#).
  - b. Ensure that the filename of the CONFIG DD Name points to the release 2.6.0 configuration file created in [Step 2](#).

For details on the utilities, refer to Chapter 3, Configuration File Utilities, in *TIBCO Substation ES Configuration and Resources*.

6. Submit the SXSCFIMP JCL for execution. Your existing applications have to execute without changes after the import has completed.

### System Startup and Initialization Parameter Changes in Release 2.6.0

In release 2.6.0, some parameter keywords have been changed or added. In addition, some default keyword values or range values have changed. All members reside in the <USERHLQ>.CNTL data set.

For additional details, see *TIBCO Substation ES Installation*.

#### Substation Administration Member (SXSIADM)

Keyword	Status	Required	Value
TRCLVL-OPS	New	No	0 – 5

#### Substation Rendezvous ESB Member (SXSIRV1)

Keyword	Status	Required	Value
RVDQ-YN	New	No	N, Y



**Important:** Review v2.5 updates in [Migrating to Release 2.5.0](#).

### Substation EMS ESB Member (SXSIEMS1)

Keyword	Status	Required	Value
SSL-YN	New	No	N, Y

### CICS Interface Member (SXCINTF)

Keyword	Status	Required	Value
TRIG-TRCLVL	Deprecated		Version 2.0
TRCLVL-TRIG	Replacement	No	Since v2.2
DPL-CONNECT	New	No	SPECIFIC/GENERIC
D-NODENAME	New	No	SXCSSDPL
HVT-G-WORKERS	New	No	0 – 10
HVT-R-WORKERS	New	No	0 – 4
TRIG-HVT-GDQ	Deprecated		Version 2.6
TRIG-HVT-RDQ	Deprecated		Version 2.6

There are no changes to the following members:

- Substation Initialization Interface Member (SXSSIP\$1)
- Substation Startup Member (SXSSSP\$1)
- IMS Interface Member (SXIINTF)

## New and Changed Members in Release 2.6.0

The following are new and changed members used within the Substation ES installation and runtime environment. If the original installed data sets are retained, the original members are not replaced, and the members of the CNTL, JCL and PROC libraries must be copied by the installer from the sample data sets.

Library	Member	Description	Status
JCL	SXSCFDEF	Define configuration	Replaced
	SXCCFDEF	Define configuration for CICS	New
	SXICFDEF	Define configuration for IMS	New
	TIBSSES	Substation Startup JCL	Updated
CNTL	SXSIXFRE	EMS ESB Interface	Renamed to SXSIEMS1

Library	Member	Description	Status
	SXSIXFRR	Rendezvous ESB Interface	Renamed to SXSIRV1
	SXSKEYS	Product key	Deprecated

You must update your Substation ES startup JCL or procedure with that provided in version 2.6. The changes that have to be inserted are as follows:

```
//TIBLEMSG DD SYSOUT=*
//TIBUOESB DD SYSOUT=*
//TIBUOMSG DD SYSOUT=*
//TIBUOSXC DD SYSOUT=*
```



If you do not insert the preceding changes, it might result in an end-of-job dump.

## Migrating to Release 2.5.0

For upgrading from releases prior to 2.4.0, refer to the instructions in this section for installing release 2.4.0 and perform the necessary upgrades to that release.

There are no configuration file changes when migrating to release 2.5.0 from 2.4.0.

## System Startup and Initialization Parameter Changes in Release 2.5.0

In release 2.5.0, some parameter keywords have been changed or added. In addition, some default keyword values or range values have changed. All members reside in the <USERHLQ>.CNTL data set.

For additional details, see *TIBCO Substation ES Installation*.

### Substation Initialization Member (SXSSIP\$1)

Keyword	Status	Required	Value
SKEY-MEMBER	Deprecated		

### Substation Startup Member (SXSSSP\$1)

Keyword	Status	Required	Value
LOG2-SYSLOG	New	No	Default 0

### Substation ES Transformer (SXSIXFRE)

Keyword	Status	Required	Value
ERROR-MSG-TYPE	New	No	Default (M)
UFLDS-FORMAT	New	No	Default (1)
EMS-DMQ-NAME	New	No	Default (none)

### IMS Interface Member (SXIINTF)

Keyword	Status	Required	Value
BUFF-GROUP	New	No	Default (8)
BUFF-SRB	New	No	Default (64)
BUFF-TRANS	New	No	Default (20)
BUFFLEN-GROUP	New	No	Default (2048)
BUFFLEN-SRB	New	No	Default (4096)
BUFFLEN-TRANS	New	No	Default (4096)
If you are going to use the existing Substation ES .CNTL members, delete the following parameters:			
BUFF-CMDS	Removed		
BUFF-GRP-NTFY	Removed		
BUFF-TRANS	Removed		

There are no changes to the following member:

- CICS Interface Member (SXCINTF)

### New and Changed Members in Release 2.5.0

The following are new and changed members used within the Substation ES installation and runtime environment. If the original installed data sets are retained, the original members are not replaced, and the members of the CNTL, JCL and PROC libraries must be copied by the installer from the sample data sets.

Library	Member	Description	Status
CNTL	SXSKEYS	Secure key no longer required.	Deprecated

### Migrating to Release 2.4.0

For upgrading from releases prior to 2.3.0, refer to the instructions in this section for installing release 2.3.0 and perform the necessary upgrades to that release.

There are no configuration file changes when migrating to release 2.4.0 from 2.3.0.

## System Startup and Initialization Parameter Changes in Release 2.4.0

In release 2.4.0, some parameter keywords have been changed or added. In addition, some default keyword values or range values have changed. All members are located in the <USERHLQ>.CNTL data set.

### Substation Initialization Member (SXSSIP\$1)

Keyword	Status	Required	Value
SNAPSHOT-YN	New	No	Defaults (N)
SNAPSHOT-NUM	New	No	

### Substation ES Transformer (SXSIXFR[E / R])

Keyword	Status	Required	Value
EMS-USE-PROP	New	No	Defaults (N)

### CICS Interface Member (SXCINTF)

Keyword	Status	Required	Value
TRIG-HVT (old) TRIG-HVT-GDQ (new)	Renamed	No	Defaults (N)
TRIG-HVT-REL	New	No	Defaults (N)
TRIG-GMQ (old) TRIG-GDQ (new)	Renamed	No	Defaults (N)
TRIG-RMQ (old) TRIG-RDQ (new)	Renamed	No	Defaults (N)
QNAME-DMQ	Removed		
QNAME-TGMQ (old) QNAME-TGDQ (new)	Renamed	No	Defaults (SXQG)
QNAME-TRMQ (old) QNAME-TRDQ (new)	Renamed	No	Defaults (SXQT)

### IMS Interface Member (SXIINTF)

Keyword	Status	Required	Value
TRIG-REL-NAME (old) TRIG-RDQ-NAME (new)	Renamed	No	

Keyword	Status	Required	Value
TRIG-GUA-NAME (old)	Renamed	No	
TRIG-GDQ-NAME (new)			

### Substation Startup Member (SXSSSP\$1)

Keyword	Status	Required	Value
SNAPSHOT-YN =N	New	No	Create and initialize snapshot
SNAPSHOT-NUM =100	New	No	Number of entries to snap

There are no changes to the Substation Secure Keys member (SXSKEYS).



- User programs that used HVT copybooks or header files in 2.3.0 have to use the 2.4.0 layouts, and programs have to be recompiled.
- A configuration file opened using 2.4.0 panels can no longer be used by a 2.3.0 system.

## New and Changed Members in Release 2.4.0

The following are new and changed members used within the Substation ES installation and runtime environment. If the original installed data sets are retained, the original members are not replaced, and the members of the CNTL, JCL and PROC libraries must be copied by the installer from the sample data sets.

Library	Member	Description	Status
C	SXC3I012	IVP example using TSQ Method of Invocation	New
	SXC3I013	IVP example using Storage Pointer Method of Invocation	New
	SXC3I032	HVT Publisher	Changed
COB	SXCCI012	IVP example using TSQ Method of Invocation	New
	SXCCI013	IVP example using Storage Pointer Method of Invocation	New
	SXCCI014	IVP example using Container Method of Invocation	New
	SXCCCI032	HVT Publisher	Changed
H	SXCHSTG1	Header file for Storage Pointer Method	New
	SXCHTDQW	Header file for HVT	Changed
COPY	SXCCSTG1	Copy Book for Storage Pointer Method	New
	SXCCTDQW	HVT copy book	Changed



Programs using the copybook SXCCTDQW or the header file SXCHTDQW must be recompiled; the length of the **SERVICE** field has been increased to 40 characters, as well as some of the offsets of other fields.

## Migrating to Release 2.3.0

For upgrading from releases prior to 2.2.0, refer to the instructions in this section for installing release 2.2.0 and perform the necessary upgrades to that release.

There are no configuration file changes when migrating to release 2.3.0 from 2.2.0.

## System Startup and Initialization Parameter Changes in Release 2.3.0

In release 2.3.0, some parameter keywords have been changed or added. In addition, some default keyword values or range values have changed. All members are located in the <USERHLQ>.CNTL data set.

### IMS Interface Member (SXIINTF)

Keyword	Status	Required	Value
COMMIT-MODE	New	Yes	Defaults (1)
TRIG-NUM	New	Yes	Defaults (5)
TRCLVL-OTMA	New	No	Defaults (0)
TRCLVL-TRIG	New	No	Defaults (0)
TRIG-REL-NAME	New	Yes	Defaults (SXITRG\$R)
TRIG-GUA-NAME	New	Yes	Defaults (SXITRG\$G)

### CICS Interface Member (SXCINTF)

Keyword	Status	Required	Value
TRIG-HVT	New	No	Defaults (Y)
TRIG-ORD	New	No	Defaults (N)
RR-MAXSIZE	New	No	Defaults (8192)
QNAME-ORD	New	No	Defaults (SXQ0)
HVT-WORKERS	New	No	Defaults (4)
D-NODENAME	Removed		
TRIG-MAXSIZE	Removed		
EXCI-OPEN	Removed		
QNAME-EMQ	Removed		
QNAME-ORD	Removed		

There are no changes to the following parameter keywords:

- Substation Startup (SXSSSP\$1)
- Substation Initialization (SXSSIP\$1)
- Substation Secure Keys (SXSKEYS)
- Substation ES Transformer (SXSIXFR[E / R])

## Migrating to Release 2.2.0

If you are upgrading from a 2.x.x release to 2.2.0, You must first contact TIBCO Software () and request a new license key.

To convert the configuration file to release 2.2.0 from 2.0.0, refer to [Transformer Configuration File Conversion in Release 2.1.0](#).

There are no configuration file changes when migrating to release 2.2.0 from 2.1.0.

## New and Changed Members in Release 2.2.0

The following are new and changed members used within the Substation ES installation and runtime environment. If the original installed data sets are retained the original members are not replaced and the members of the CNTL, JCL and PROC libraries must be copied by the installer from the sample data sets.

Library	Member	Description	Status
JCL	SXUCSER	Changed JCL to add DDNAME TIBKEYS to reference license key member.	Altered

## Migrating to Release 2.1.0

For upgrading from release 1.1.0, 1.2.0, 1.30 and 2.00, begin by referring to the release notes for those releases before installing release 2.1.0.

To convert the configuration file to release 2.1.0 from 2.0.0, refer to [Transformer Configuration File Conversion in Release 2.1.0](#).

## System Startup and Initialization Parameter Changes in Release 2.1.0

In release 2.1.0, some parameter keywords have been changed or added. In addition, some default keyword values or range values have changed. All members reside in the <USERHLQ>.CNTL data set.

### Substation Secure Keys (SXSKEYS)

Keyword	Status	Required	Value
SXS	Active	Yes	TIBCO supplied
All other product codes	Removed		

### Substation ES Transformer (SXSIXFR[E / R])

Keyword	Status	Required	Value
START-WAIT	New	No	180
DAEMON SERVICE NETWORK TPORT-NAME	Removed		



### CICS Interface Member (SXCINTF)

Keyword	Status	Required	Value
TRIGGERS TRIG-RMQ	Renamed		Defaults (N)
TRIG-GMQ	New	No	Defaults (N)
QNAME-TRMQ TRIG-TDQNAME	Renamed	No	Defaults (SXQT)
QNAME-TGMQ	New	No	Defaults (SXQG)
TRIG-TRCLVL	Renamed	No	Defaults (0)

There are no changes to the following:

- Substation Startup (SXSSP\$1)
- Substation Initialization (SXSSIP\$1)
- IMS Interface Member (SXIINTF)

### New and Changed Members in Release 2.1.0

The following are new and changed members used within the Substation ES installation and runtime environment. If the original installed data sets are retained the original members are not replaced and the members of the CNTL, JCL and PROC libraries must be copied by the installer from the sample data sets.

Library	Member	Description	Status
JCL	SXJGENSL	General sender or listener using EMS	New
	SXJGIELS	General error listener using EMS	New
	SXSCFC20	Converts v1.x config file to v2.0 config file	New
	SXSCFC21	Converts v2.0 config file to v2.1 config file	New
CNTL	SXJPERLS	EMS transport parameters for error listener	New
	SXSIXFRE	Transformer Interface SIP for EMS	New
	SXSIXFRR	Transformer Interface SIP for RV (previously SXSIXFR)	Renamed

### Transformer Configuration File Conversion in Release 2.1.0

The Substation ES Transformer configuration file has changed to support TIBCO EMS. Release 2.1.0 includes a utility that converts a V2.0.0 configuration file to a version 2.1.0 format. You must export all the entities of the configuration file to a sequential file. When the export is successful, you can import them to the newly allocated and defined configuration file.

The following steps are a guideline for converting the configuration file:

1. Complete the Substation ES release 2.1.0 installation.

2. Ensure the JCL (SXSCFDEF) has executed successfully.  
This job creates and populates the release 2.1.0 file.
3. Edit the JCL member SXSCFC21 and update the filename on the CONFIG DD Name to the name of your Substation ES release 2.0.0 configuration file.
4. When the modifications have been made, execute the JCL.  
This JCL member exports the contents of the Substation ES 2.0.0 configuration file to a sequential file.
5. Populate the Substation ES release 2.1.0 configuration file using the import utility, specifying the newly created sequential file. To do this, edit the JCL member SXSCFIMP.
  - a. Change the filename on the IMPORT DD Name statement to that of the sequential file created in [Step 3](#).
  - b. Ensure that the filename of the CONFIG DD Name points to the release 2.1.0 configuration file created in [Step 2](#).

For detailed information regarding the utility, refer to describing utilities in *TIBCO Substation ES User's Guide*.
6. Submit the SXSCFIMP JCL for execution.

Your existing applications have to execute without changes after the import has completed; however, you must make alterations if you intend using TIBCO EMS.

## Migrating to Release 2.0.0

For upgrading from release 1.1.0, 1.2.0, 1.30, begin by referring to the release notes for those releases before installing release 2.0.0.

To convert the configuration file to release 2.0.0 from 1.2.0 and 1.3.0, refer to [Transformer Configuration File Conversion in Release 2.0.0](#).

## System Initialization Parameters Change in Release 2.0.0

The following table lists System Initialization Parameters (SIP) changed for 2.0.0.

Keyword	Status	Required	Value
SUBSTATION-ID	New	Yes	Defaults
UFLDS-PREFIX	New	Yes	Defaults
SKEY-MEMBER	New	Yes	SXSKEYS

## New and Changed Members in Release 2.0.0

All PDS member names, and CICS and IMS resource names were changed in release 2.0.0. The names conform to a product code structure, where SXS, SXG, SXC, SXI and SXT are the major product codes.

Refer to *TIBCO Substation ES Installation* for a full list and description of the Substation ES product codes.

## Transformer Configuration File Conversion in Release 2.0.0

The configuration file structure and the file type have changed for Substation ES release 2.0.0.

Release 2.0.0 includes a utility that can assist the conversion of configuration files used in release 1.2.0 and 1.3.0 to the requirements of 2.0.0.

You export all the entities of the configuration file of previous versions. When the export is successful, you can import them to the newly allocated and defined configuration file.

The following steps are a guideline for converting the configuration file:

1. Complete the Substation ES release 2.0.0 installation.
2. Ensure the JCL (SXSCFDEF) has executed successfully.  
This job creates and populates the release 2.0.0 file.
3. Edit the JCL member SXSCFCVT and change the filename on the CONFIG DD Name to the name of the Substation ES release 1.2.0 or 1.3.0 configuration file.
4. When the modifications have been made, execute the JCL.  
This JCL member exports the contents of the Substation ES 1.2.0 or 1.3.0 configuration file to a sequential file.
5. Populate the Substation ES release 2.0.0 configuration file using the import utility and specifying the newly created sequential file. To do this, edit the JCL member SXSCFIMP.
  - a. Change the filename on the IMPORT DD Name statement to that of the sequential file created in [Step 3](#).
  - b. Change the filename on the IMPORT DD Name statement to that of the sequential file created in [Step 2](#).

For more information regarding the utility, refer to describing utilities in *TIBCO Substation ES User's Guide*.

6. Submit the JCL for execution.

Your existing applications have to execute without changes after the import has completed, but the names of the imported entities can have changed during the import.



If you have multiple Back-End systems you must update all recipe and trigger definitions, assigning them to the correct Back-End system or Interface.

## Migrating from Release 1.x

When you upgrade from release 1.0 to a later release, it is good practice to replace all Substation ES System Initialization Parameters (SIP) members. The new Substation ES startup sample JCL (TIBSSES) has to be used as well. Extensive changes have been made to the SIP members to accommodate the enhancements made for the current release. If you choose not to replace the SIP members, refer to the table listed below to view the changes that must be applied manually to your existing parameters.

## Closed Issues

The table lists closed issues in version 2.10.0 of TIBCO Substation ES.

Key	Summary
SSES-1149	<p>(Critical) If Substation ES started up and the CICS Interface region was not active, when the CICS region eventually started, Substation reconnected but the CICS Interface admin task did not execute.</p> <p>This issue has been resolved.</p>
SSES-1139	<p>After sending a number of large records around the 40K size and then using the CICS Request/Reply process, the request reported an invalid length error.</p> <p>This has been corrected, and the EXCI call sets the lengths correctly now. The maximum length for DPL requests using a DFHCOMMAREA is 32507.</p>
SSES-1131	<p>When using MOI 9, CICS Interface assigned the wrong length internally.</p> <p>It only happened when multiple size inputs had a range less or greater than 32K. The result in the SXC3102W message in the Substation logger was incorrect.</p>
SSES-1130	<p>When a TEXT type field was missing from an MAP input message, Substation ES initialized the entire field with low values by default.</p> <p>This fix corrects the default value to be spaces.</p>
SSES-1117	<p>If there was an excessive number of recipes and/or triggers and the <b>SUSPEND</b> or <b>RECOVER</b> command took a long time, a timeout occurred to the command. Recipes were normally over 300-500 depending on a machine.</p> <p>This fix increases the wait time so that the command can be completed normally.</p>
SSES-1091	<p>IMS Interface returned the 0 length messages when data was present. This was a timing issue when multiple concurrent conversational messages were processed.</p>
SSES-1088	<p>When IMS ICAL service added the resource name RESPONSE to the beginning of the reply message, the reply message was sent back to the IMS application.</p>
SSES-1087	<p>For RV ESB Interface, when the <b>DISPATCHER</b> parameter was set to N, the recipe service started listeners for ESB Interface causing dispatcher queues to be showed as full.</p>
SSES-1085	<p>For GA service request, when providing a wrong IMS transaction ID or a RACF error, IMS Interface could not complete Nack in OTMA.</p>
SSES-1084	<p>The Substation ES logger did not support the <b>SPIN</b> and <b>FREE</b> parameters when it was specified in Substation startup JCL.</p> <p>The solution is to only specify one <b>LOGDSK-DDN</b> and <b>TRCDSK-DDN</b> parameter in USERHLQ. INTF (SXSSSP\$1) when using the <b>SPIN</b> and <b>FREE</b> parameters together on TIBLOGPR DDName.</p>
SSES-1083	<p>When using "G" triggers that required segmentation, if SXCQWRIT got an error on writing to the TDQ, partial trigger messages were left on the Queue. This caused a memory overlay in SSES HVT_G processing.</p>

Key	Summary
SSES-942	<p>The SXG1420E Thread Creation Error Name message was displayed in the Substation logger when z/OS was confused because many threads starting concurrently.</p> <p>This has now been fixed by retrying the thread create function internally.</p>
SSES-936	<p>If you shut down HUB before shutting down Substation ES, it caused the Substation ES RED interface to abend.</p>
SSES-934	<p>If you issued DISCONN /CONN, ESB, INTF during the RED interface Triggers processing, it caused an SA03 abend.</p>
SSES-901	<p>ISPF panel option 10 reported the wrong error when converting a copybook with a duplicate field name.</p>
SSES-187	<p>The request and reply facility, when initiated by CICS, could not use a container to support a request larger than 32K. Replies could always be larger than 32K.</p>

## Known Issues

The table lists known issues in version 2.10.0 of TIBCO Substation ES.

Key	Summary/Workaround
SSES-935	<p><b>Summary:</b> This version of Substation ES does not support more than one RED interface connecting to the same CICS region.</p> <p><b>Workaround:</b> None.</p>
SSES-927	<p><b>Summary:</b> The Substation ES methods of invocation 10, 11, and 12 cannot support multi-execution of application resources in the CICS region.</p> <p><b>Workaround:</b> None.</p>
1-7ZVJWR	<p><b>Summary:</b> When configuring Substation ES to communicate with a Rendezvous daemon, you specify the host name or host IP address in the transport entity extensions configuration. If an erroneous IP address is specified, it will cause Substation ES toabend at shutdown or termination time without successfully connecting to the host.</p> <p><b>Workaround:</b> Use a host name or ensure that the host IP address is valid (if an erroneous host name is specified, the TCP/IP connection module will be able to handle this error in an appropriate manner).</p>
1-6RB5VF	<p><b>Summary:</b> Support for Substation CICS Method of Invocation (MOI) where messages can be written to CICS-defined files (files defined as a CICS resource are classified as CICS files) is not implemented yet.</p> <p><b>Workaround:</b> None.</p>