



## ETM<sup>®</sup> System

### Knowledge Base Article #ETM6863

## Upgrading to v9.0.3 from v7.1.1 Build 41 or Later of the ETM<sup>®</sup> System on Windows

### Synopsis

This article explains how to upgrade to v9.0.3 from v7.1.1 Build 41 or later of the ETM<sup>®</sup> System on Windows. If you are upgrading from an earlier version, contact SecureLogix Technical Support before beginning the upgrade.

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### IMPORTANT NOTES

- The ETM System supports only 64-bit operating systems; 32-bit systems are no longer supported.
- Ensure that you are running a supported version of Oracle before you continue. Oracle 12c R2, 18c, and 19c (Enterprise or Standard), and 18c XE are supported.
- Upgrade the Management Server/Report Server systems first and then ETM Client systems afterwards.
- Clients from versions prior to v9.0.1 cannot connect to a v9.0.3 Management Server. You must upgrade all remote clients that are prior to v9.0.1 before trying to use them to connect to the upgraded Management Server. Remote clients that are running v9.0.1 will connect to the upgraded Management Server, but it is strongly recommended that you upgrade them to v9.0.3 as soon as possible to support the v9.0.3 features and eliminate incompatibilities.
- You cannot upgrade a UTA Appliance from a version prior to v9.0.2, due to the operating system upgrade. You must uninstall the previous version and then install the v9.0.3 UTA Appliance. Note that the 7.x/9.0.1 UTA Appliance connects to and interoperates with the 9.0.3 Management Server.
- **<INSTALL\_DIR>** is used in these instructions to refer to the directory where the ETM System software is installed. **IMPORTANT:** In this release, the default path has been changed to **C:\apps\SecureLogix\ETM..** Ensure that you change the path on the installer screen to point to your current installation directory when performing the upgrade.

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### Steps

1. **Connect to the database via the Database Maintenance Tool.** Verify that no errors exist before beginning the upgrade. If errors are present, contact SecureLogix Technical Support before you continue. See the *ETM<sup>®</sup> System Administration and Maintenance Guide* for instructions for using the Database Maintenance Tool, if necessary.
2. **Shut down any running ETM System applications.**
  - Close all ETM Client applications.
  - Shut down all ETM Management Server and Report Server instances, using the Windows Services Control Panel.



- If multiple ETM Management Server or Report Server instances are running on the machine, deregister all application instances with the Service Control Manager using the **AppManager.exe** utility as follows:

- Open a command prompt window and change to the ETM Server installation directory.
- Obtain a list of the registered application instances by typing the following at the prompt:

```
AppManager /list /type:both
```

- For each instance ID in the list, type the following command at the prompt:

```
AppManager /remove /type:both /ID:<instance_id>
```

3. **Install the ETM System v9.0.3 software as Administrator.** Run the installer (**setup.exe**) from the software installation media and follow the onscreen prompts. **IMPORTANT:** Ensure that you change the installation path on the installer to point to the directory where the ETM Software is currently installed.

The installer automatically removes the previous version and backs up certain files that may have been user-modified.

- **IMPORTANT** Be sure to upgrade all remote ETM System Clients before trying to use them to connect to the upgraded ETM Server.
- When the ETM Management Server is uninstalled, the following files are automatically backed up from the <INSTALL\_DIR> to the <INSTALL\_DIR>\Backup\MS\_<DATE\_TIME> directory:
  - **delivery.properties**
  - **ETMManagementService.cfg**
  - **npconfig.properties**
  - **smdr.properties**
  - **twms.properties**
  - **\ps\software\_repository\package**—Entire directory, which contains the appliance software packages. The files also remain in the original directory.
  - **\ps\software\_repository\smdr\**—Entire directory, which contains the SMDR parse files. If a file with a default name has been user-modified, it must be restored to the ETM Server <INSTALL\_DIR>\ps\software\_repository\smdr\ directory after upgrade. User-defined files with custom names are not deleted nor overwritten during upgrade and therefore do not need to be restored.
  - **\ps\software\_repository\ini\**—Entire directory, which contains the Dialing Plans. Upon upgrade, the Dialing Plans installed on the Appliances are not deleted, but user-modifications to the Dialing Plans need to be copied to new Dialing Plan file in the <INSTALL\_DIR>\ps\software\_repository\ini\ directory on the ETM Server and then reinstalled on the Spans.
- When the ETM Report Server is uninstalled, the following files are automatically backed up to the <INSTALL\_DIR>\Backup\RS\_<DATE\_TIME> directory:



- **ETMReportService.cfg**
- **twms.properties**

Refer to the *ETM<sup>®</sup> System Installation Guide* for detailed software installation instructions, if necessary. PDFs of all of the ETM System user guides are located on the ETM software installation media in the top-level **Documentation** folder.

#### 4. **Restore custom configuration files.**

- Use a tool such as **CompareIt** to identify customization in the backed-up **.properties**, **.cfg**, and **.ini** files listed in step 2. Copy those changes into the newly installed files so that any updates in the files are retained. Do not copy over the new files, because they may contain new settings for this release.
- **SMDR parse file**—Copy the custom SMDR parse file(s) to the **<INSTALL\_DIR>\ps\software\_repository\smdr** folder (*not necessary if the files had custom names, since they were not overwritten nor deleted*).

#### 5. **Copy the database driver and required jar files to required locations.** Copy the database driver that corresponds to the version of Oracle you are running from the Oracle installation to each of the following ETM System installation directories. Also copy the **oraclepki.jar**, **osdt\_cert.jar**, and **osdt\_core.jar** files to these directories on systems using Oracle 12.2.

- The ETM Server.
- Any remote Report Server.
- Any remote ETM Database Maintenance Tool.

Remote ETM System Consoles do not require the driver file.

#### 6. **Connect to the database.**

**IMPORTANT** If you are upgrading a system that requires the TNS Names connection string format, and it has not previously been configured for that system, continue with “Updating the Database to Allow Use of a TNS Names Connection String” on page 5 before continuing. If the system can use the “quick connect” string for the upgrade, those steps are not needed, and you can continue with the steps below.

- a. Start the **ETM Database Maintenance Tool** and connect to the Database.
- b. You are prompted to upgrade the database. Click **Yes**. (If any errors occur while upgrading the database, note the error and call Technical Support at the number at the bottom of this article.)
- c. Right-click the data instance the ETM Server uses and click **Set as Default**. (Not necessary if you returned the backed up **twms.properties** file to the **<INSTALL\_DIR>**, since that information is already included in the file.)

#### 7. **Recreate multiple Management Server and Report Server instances, if these are used.** If multiple instances of the Management Server and Report Server are in use, use the **AppManager** utility to recreate the instances removed in Step 1. Refer to “Creating Multiple Application Instances” in the *ETM<sup>®</sup> System Technical Reference* for detailed instructions.



- If multiple instances were in use before the upgrade, the instance-specific **twms.properties** files were not changed nor deleted and therefore should require no modification. Recall that the values in the global **twms.properties** file are used unless explicitly overridden by a value in the instance-specific file; therefore, any new fields in the global file are implemented in the instances. If a specific instance needs a different value, specify that value in the instance-specific file. If all instances need a different value, you can change it once in the global file and it will apply to all instances.
8. **Start the ETM System applications and verify operation.** Perform the following for each set of Server instances:
    - a. Start the ETM Server and Report Server. Check for errors in the **error** and **server-fatal.log** files. The **server-fatal.log** is stored in the root of the **<INSTALL\_DIR>** and is only present if the ETM Server terminates unexpectedly. The error logs are stored in the **<INSTALL\_DIR>\ps\errors** directory.
    - b. If no errors appear, start the ETM System Console, log in to the Server, and then open the Performance Manager.

**Important:** Remote Clients from versions prior to v9.0.1 cannot connect to a v9.0.3 Management Server. You must upgrade all remote clients that are prior to v9.0.1 before trying to use them to connect to the upgraded Management Server. Remote clients that are running v9.0.1 will connect to the upgraded Management Server, but it is strongly recommended that you upgrade them to v9.0.3 as soon as possible to support the v9.0.3 features and eliminate incompatibilities.
    - c. Verify that all Cards have reconnected and no errors are present. If errors are present, contact SecureLogix Technical Support for assistance before continuing.
  9. **Uninstall any existing UTA Appliances of a version prior to v9.0.2 and then install and configure the v9.0.3 UTA Appliances.** The UTA Appliance is the same version for v9.0.3 as v9.0.2. Note that the v7.1.x/9.0.1 UTA Appliances will connect to the v9.0.3 Management Server, giving you time to complete the upgrade without taking all of them out of service at once. After you install the v9.0.3 UTA Appliance, you can import the configuration from the 7.1.x/9.0.1 Appliance. Optionally, you can choose to continue using the existing 7.1.x/9.0.1 UTA Appliances if you do not want to install the 9.0.3 version.
  10. **Upgrade the Card software (Not on UTA).** After the Cards connect to the Server, install the included appliance software packages on all SIP, TDM, and dedicated CRC\* Appliances (if they are not already running that version) using the software installation mechanism in the GUI. See the *ETM<sup>®</sup> System Administration and Maintenance Guide* for instructions for installing Card software. You can view the progress of the upgrade in the **Status Tool** and **Diagnostic Log**.

**IMPORTANT:** You cannot upgrade the Card software on an existing UTA Appliance of a version prior to v9.0.2 to the v9.0.3 package. (The UTA Appliance is the same version for v9.0.3 as v9.0.2.) You must first completely uninstall the previous UTA Appliance and then install the 9.0.3 UTA Appliance if you want to upgrade to the v9.0.3 UTA Appliance. You can, however, upgrade the software on deployed 7.1.x UTA Appliances to the 7.1.90 package, if they are not already running that version.

\*Does not apply to the EOL 1060.



**IMPORTANT:**

- It is imperative that you do not reboot or power cycle the Card while the software is being downloaded until the upgrade and software installation is complete. The Card automatically reboots when the upgrade is complete. If you believe the Card has become unresponsive, be certain that 15 minutes have elapsed since you began and call SecureLogix Technical Support. Do not manually power cycle or reboot the Card.
- **IMPORTANT Information about upgrading UTA and the SIP Proxy application:**
  - **SIP Proxy TCP response handling:** TCP response handling is configurable, depending on whether an SBC/proxy expects TCP response messages to be delivered on its predefined port, or whether the ETM SIP Proxy sends TCP response messages to the source port used in the request message packet. While reusing the TCP connection is the desired behavior according to the RFC, some SBCs/proxies running older versions of their software may expect TCP responses to be returned to their predefined port. This behavior is configurable via an ETM Command to suit the given SBC/proxy. It defaults to **ephemeral**.

**To configure/view TCP response message handling, use the following ETM Commands on the Signaling Proxy:**

```
set tcp response [ephemeral|configured]
show tcp response
```

- **When installing software on a UTA Appliance**, additional steps are required compared to other appliance models. You first push the software package to the Call Processor at the Card level, which then makes it available on the signaling and media proxy nodes. You must then activate the new software on each of the proxy nodes.

For instructions, see the *ETM<sup>®</sup> System Administration and Maintenance Guide*.

11. **Remove backup files.** When the upgrade is complete and the ETM System is verified to be operating correctly, both manually and automatically created backup directories can be deleted to free the hard drive space they use.

**Updating the Database to Allow Use of a TNS Names Connection String**

These steps are needed when upgrading to v9.0.3 on a system that requires the TNS connection string format where it has not previously been configured, and also when immediately going to the TNS connection string format (such as when migrating to a new database that only allows this format). If you are upgrading a system where you can use the “quick connect” string to install and configure the Database, or upgrading a system that does not use the TNS Names format, these steps are not required.

**To update the Database to use the TNS Names format connection string**

1. Perform Steps 1-5 above.
2. Connect to the Database Instance in SQL Plus, and issue the `describe parent_db;` command. Output similar to the following appears:

```
SQL> describe parent_db;
```

Name	Null?	Type
------	-------	------



```
-----  
PARENT_ID          NOT NULL VARCHAR2 (1024)  
IP_ADDR            NOT NULL VARCHAR2 (255)  
PORT               NOT NULL NUMBER  
INSTANCE_NAME      NOT NULL VARCHAR2 (255)  
SCHEMA_NAME        NOT NULL VARCHAR2 (255)
```

SQL>

**3. Issue these commands:**

```
SQL> ALTER TABLE PARENT_DB ADD ( custom_connection_string VARCHAR(255) NULL  
);
```

Table altered.

```
SQL> ALTER TABLE PARENT_DB ADD ( use_custom_connection_string CHAR(1) DEFAULT  
'0' NOT NULL );
```

Table altered.

**4. Issue the describe parent\_db; command again. The new format below is displayed:**

```
SQL> describe parent_db;
```

```
Name          Null?    Type  
-----  
PARENT_ID     NOT NULL VARCHAR2 (1024)  
IP_ADDR       NOT NULL VARCHAR2 (255)  
PORT          NOT NULL NUMBER  
INSTANCE_NAME NOT NULL VARCHAR2 (255)  
SCHEMA_NAME   NOT NULL VARCHAR2 (255)  
CUSTOM_CONNECTION_STRING          VARCHAR2 (255)  
USE_CUSTOM_CONNECTION_STRING      NOT NULL CHAR (1)
```

SQL>

- 5. Connect to the Database Instance in the Database Maintenance Tool using the new connection string. It will ask if you want to change the format of the connection string from the old format to the new format. Click **Yes**. It will then say the database is out of date and needs to be updated Click **Yes**. After the validation completes, the Database is updated and ready for use. (If any errors occur while upgrading the database, note the error and call Technical Support at the number at the bottom of this article.)**



6. Right-click the data instance the ETM Server uses and click **Set as Default**. (Not necessary if you returned the backed up **twms.properties** file to the **<INSTALL\_DIR>**, since that information is already included in the file.)
7. Continue with Step 7 above.

#### Current Software Versions:

- ETM Client and Server applications—9.0.3 Build 19
- Appliance packages:
  - UTA—9.0-61
  - SIP Proxy—9.0-208
  - All other Appliance types\*—7.1.90

*\*Does not apply to the EOL 1060.*

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