



## ETM<sup>®</sup> System

### Knowledge Base Article #ETM346 Rev B

## Upgrading to v9.0.0 Build 22 from v7.1.1 Build 41 or Later of the ETM<sup>®</sup> System on Linux

### Synopsis

This article explains how to upgrade to v9.0.0 Build 22 from v7.1.1 build 41 or later of the ETM<sup>®</sup> System on Linux. If you are upgrading from an earlier version, contact SecureLogix Technical Support before beginning the upgrade.

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### IMPORTANT NOTES

- Ensure that you are running a supported version of Oracle before you continue. Oracle 12c R2, 18c, and 19c (Enterprise or Standard) are supported.
- Upgrade the Management Server/Report Server systems first and then ETM Client systems afterwards.
- You cannot upgrade a UTA Appliance from a previous version to v9.0.0, due to the operating system upgrade. You must completely uninstall the previous UTA Appliance and then install the v9.0.0 UTA Appliance. Note that the 7.x UTA Appliance connects to and interoperates with the 9.0.0 Management Server.
- `<INSTALL_DIR>` is used in these instructions to refer to the directory where the ETM System is installed. ETM System RPMs install the applications under `/opt` and the installation directory cannot be changed.

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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 Guide* for instructions for using the Database Maintenance Tool, if necessary.
2. **Back up the ETM System directory.** The entire directory is replaced during upgrade, meaning customized properties and configuration files are overwritten upon upgrade. These must be manually restored from backup during upgrade on Linux.
3. **Shut down any running ETM System applications.** See the Appendix in this document for instructions for starting, stopping, and viewing the status of the applications.



4. **Uninstall the previous 7.1.x version of software and then install the ETM System v9.0.0 software.** Refer to the Appendix of this document for detailed software uninstallation and installation instructions.
  - **IMPORTANT** Be sure to upgrade all remote ETM System Clients before trying to use them to connect to the upgraded ETM Server.
5. **Restore custom configuration files.**
  - Use a tool such as **CompareIt** to identify customization in the backed-up **.properties**, **.cfg**, and **.ini** files. Copy those changes from the previous files into the newly installed files so that any updates in the files are retained. **DO NOT** copy over the new files, because they contain new settings for this release.
    - **delivery.properties**
    - **ETMManagementServer.cfg**
    - **npconfig.properties**
    - **smdr.properties**
    - **twms.properties**
    - **ETMReportServer.cfg**
    - **ETMDBMaintTool.cfg**
    - **ETMSystemConsole.cfg**
    - **/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.
6. **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 if you are running 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.

## 7. **Connect to the database.**

**IMPORTANT** If you are applying this update to a system that requires the new TNS Names connection string format, continue with “Updating the Database to Allow Use of a TNS Names Connection String” on page 4 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.)

## 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.
- 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 previous version and then install and configure the v9.0.0 UTA Appliances.** Note that the existing UTA Appliances will connect to the v9.0.0 Management Server, giving you time to complete the upgrade without taking all of them out of service at once. After you install the 9.0 UTA Appliance, you can import the configuration from the 7.x Appliance. Optionally, you can choose to continue using the existing 7.x UTA Appliances if you do not want to install the 9.0.0 version. However, **DO NOT** attempt to push the 9.0 Appliance package to UTA Appliances of a previous version. If you erroneously attempt to push the 9.0 package to a 7.x UTA Appliance, it will fail to process the package and continue running its current software version.

## 10. **Upgrade the Card software (Not on UTA).** After the Cards connect to the Server, install the included 7.1.90 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:** Do not attempt to upgrade the Card software on an existing UTA Appliance of a previous version. You must first completely uninstall the 7.1.x UTA Appliance and then install the 9.0.0 UTA Appliance if you want to upgrade to the v9.0 UTA Appliance..

*\*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 inline SIP application:**
  - **For graduated SIP software upgrades, Call Recording functionality requires components to be upgraded in a specific order**— If you want to upgrade one SIP Appliance proxy component first and let it run for an extended amount of time before upgrading the other proxy component, then the Signaling Proxy should be upgraded first to ensure media continues to be anchored. This is not an issue if both components are upgraded in a timely manner.
  - **When installing software on a UTA or inline SIP 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. **Update the CCMI file.** Download the new CCMI file from the SecureLogix website, place it the ETM Directory, and import the new CCMI file: [https://support.securelogix.com/ccmi\\_login.htm](https://support.securelogix.com/ccmi_login.htm)
12. **Remove backup files.** When the upgrade is complete and the ETM System is verified to be operating correctly, 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 9.0.0b22 on a system that already requires the new connection string format, and also when immediately going to the new connection string format (such as when migrating to a new database that only allows the new format). If you are applying this update to 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 1-6 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 8 above.

### Current Software Versions:

- ETM Client and Server applications—9.0.0 Build 22
- Appliance packages:
  - UTA—9.0-12
  - All other Appliance types\*—7.1.90

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



## Appendix

### Uninstalling and Installing the ETM® System on a 64-Bit Linux Server

#### Before You Begin

1. When you install and configure your Linux platform, allocate space for the ETM applications under **/opt**. ETM RPMs are installed under **/opt** and the installation directory cannot be changed.
2. The JVM switch **java.awt.headless=true** is not supported, although most application functions appear to be unimpaired in such a configuration. For a supported configuration and especially to enable the Server to save reports to the tree in Usage Manager, install the **xorg-x11-server-Xvfb** package for RedHat or CentOS.

Three installation (RPM) files are included for the Linux ETM Server installation:

- **etm-esc-<version-build>.x86\_64.rpm** – ETM System Console only
- **etm-ms-<version-build>.x86\_64.rpm** – ETM Management Server only
- **etm-rs-<version-build>.x86\_64.rpm** – ETM Report Server only

#### To uninstall and Install the ETM applications

Execute the following sequence of steps to uninstall and then install each required RPM (not order-dependent):

1. Log in as **root** user.
2. Change to the directory containing the new RPM files. Files are installed in the **/opt/SecureLogix/ETM** directory with the exception of the Service-specific files, which are installed in the **/etc/init.d** directory. The installation directories cannot be changed.
3. Determine whether previous RPMs are installed by typing: `rpm -qa |grep -i etm-`
  - If RPMs exist, remove them by typing: `rpm -e <rpm_name>` where **<rpm\_name>** is one of **etm-esc**, **etm-ms**, or **etm-rs**.
4. Install each required RPM by executing the command, `rpm -ivf <complete_rpm_file_name>`

Files are installed in the **/opt/SecureLogix/ETM** directory with the exception of the Service-specific files, which are installed in the **/etc/init.d** directory. The installation directories cannot be changed.

5. Use the **chkconfig** command (`chkconfig -level 345 <servicename> on`) or the Services GUI to set the Management Server (**ETMMS**) and Report Server (**ETMRS**) services to start automatically when the system is started.

**IMPORTANT** Be sure to upgrade all remote ETM System Clients before trying to use them to connect to



the upgraded ETM Server.

## Starting, Stopping, and Viewing Status of the Applications

### To start/stop/view status of the ETM applications

1. Log in as **root** user.
2. Change to the **/opt/SecureLogix/ETM** directory.
3. Use the following commands:
  - To start the Database Maintenance tool, type:  

```
./ETMDBMaintTool
```
  - To start the ETM System Console, type:  

```
./ETMSystemConsole
```
  - ETM Management Server commands are:  

```
service ETMMS {start | stop | status}
```
  - ETM Report Server commands are:  

```
service ETMRS {start | stop | status}
```

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