

U.S. Department of Transportation Federal Aviation Administration

Aviation Environmental Design Tool (AEDT) Version 2d Service Pack 2 Installation Guide

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1 Installation Introduction

This document provides detailed instructions on how to install and run AEDT 2d Service Pack 2 (SP2). It is important to follow the installation instructions in the order listed below, as Microsoft SQL Server 2012 is a prerequisite for AEDT. Installation components must run locally.

- 1. Install Microsoft SQL Server 2012
- 2. Install AEDT 2d SP2



To install software, the user must have administrative rights to the computer.

2 Technical Assistance

The AEDT Support website, <u>https://aedt.faa.gov/</u>, is the technical support hub for AEDT. Support requests, feedback on bugs, and feature requests should be submitted through this website. The AEDT installer and support resources such as documentation and frequently asked questions (FAQ) are also available on the AEDT Support website. Register on the website to request support or submit feedback on AEDT. Additional options for support include:

- E-mail: <u>aedt-support@dot.gov</u>
- Phone: 617-494-2603

Please include the AEDT Administrative File when requesting technical support. Please refer to Section 4.11.2 in the AEDT User Guide for instructions on generating the Administrative File.

3 System Requirements

System specifications for computers capable of hosting the AEDT 2d application are displayed in Table 3-1. The preferred specifications are listed with suggested minimum requirements where applicable.

	AEDT 2d System Specifications			
	Minimum Preferred		For Running Global Level Studies	
Operating Systems ¹	Microsoft Windows 7 (x64)	Microsoft Windows 7 (x64) or Window Server 2012	Microsoft Windows 7 (x64) or Windows Server 2012	
Processor	Modern dual core processor with 2 GHz or higher clock	Modern many core (>2) processors with 2 GHz or higher clock	Modern many core (>2) processors with 2 GHz or higher clock	
RAM	8 GB	16 GB	64 GB	
Hard Disk Space	100 GB Storage	500 GB Storage	2 TB Storage RAID	
Microsoft SQL Server	SQL Server 2012 Express	SQL Server 2012	SQL Server 2012	
Other Software	Adobe Reader X (v10) or higher	Adobe Reader X (v10) or higher	Adobe Reader X (v10) or higher	

Table 3-1	AEDT	2d System	Requirements
		,	



The supported Microsoft SQL Server version for AEDT 2d is Microsoft SQL Server 2012. The support for Microsoft SQL Server 2008 R2 ended with the AEDT 2d release.



AEDT requires administrative privileges for both 1) installation and 2) execution of the software.



AEDT uses the accelerated map display that is part of the ArcGIS Runtime SDK for WPF in order to achieve performance benefits when displaying map layers. Accelerated display is disabled if the computer's graphics hardware does not meet requirements or when accessing AEDT remotely (e.g. through Remote Desktop). When accelerated display is disabled, map layers may require additional time to load.

¹ Use Windows Update to ensure your computer has the latest priority updates.

The recommended screen resolution is 1920x1080.



It is recommend to include AEDT application as an exception to antivirus run time scan.

3.1 Note for International Users

3.1.1 SQL Server Collation

During the SQL Server installation, select **SQL_Latin1_General_CP1_CI_AS**. Upgrading an older AEDT study database to the latest study version will fail if different collation is used, see Section 5.2.

3.1.2 Windows Region and Language

AEDT supports only "English (United States)" format for the Windows Region and Language.

To change Windows Region and Language:

- 1. Open the Windows Control Panel.
- 2. Click Region and Language.
- 3. In the *Region and Language* dialog box, select "English (United States)" as the *Format*.
- 4. Click OK to save your changes and close the dialog box.

🔗 Region and Language						
Formats Location Keyboards and Languages Administrative						
Format:						
English (United State	s) 🔹					
Date and time form	ats					
Short date:	M/d/yyyy 👻					
Long date:	dddd, MMMM dd, yyyy					
Short time:	h:mm tt 🔹					
Long time:	h:mm:ss tt 🔹					
First day of week:	Sunday					
What does the nota	tion mean?					
Examples						
Short date:	12/3/2015					
Long date:	Thursday, December 03, 2015					
Short time:	11:19 AM					
Long time:	11:19:13 AM					
	Additional settings					
Go online to learn ab	Go online to learn about changing languages and regional formats					
	OK Cancel Apply					

Figure 3-1 Windows Region and Language Dialog Box

3.2 Upgrading from SQL Server 2008 R2 to SQL Server 2012

This section is applicable to users who have been using older AEDT versions with SQL Server 2008 R2. Skip this section if you are a new user or have already migrated to SQL Server 2012.

With the AEDT 2d release, the support for Microsoft SQL Server 2008 R2 ended; and SQL Server 2012 is the only supported SQL Server version. Therefore, existing AEDT study databases on a SQL Server 2008 R2 instance must be migrated to a new SQL Server 2012 instance, if you wish to use them in AEDT 2d.

This section explains two options for upgrading from SQL Server 2008 R2 to SQL Server 2012. Both options assume that SQL Server 2008 R2 (v10.5) is currently used with the existing AEDT installation (e.g. AEDT 2c).

3.2.1 Option 1. Use the Migrate Studies Feature in AEDT 2d **B** Recommended

The *Migrate Studies* feature in AEDT 2d application supports copying studies on a SQL Server 2008 R2 instance to a SQL Server 2012 instance. Using this option is recommended.

To migrate by using the Migrate Studies feature in AEDT 2d:

- 1. Install SQL Server 2012 side-by-side with 2008 R2. This will create a SQL Server 2012 instance.
- 2. Install AEDT 2d.
 - During AEDT installation, select the SQL Server 2012 instance (created from the previous step).
- 3. Use the *Migrate Studies* feature in the AEDT 2d application (refer to the instructions in the AEDT User Guide).
- 4. After migration, upgrade AEDT user-defined studies to the most current AEDT study version, see Section 5.3.3.
 - This will copy the AEDT study databases in a 2008 R2 instance to a 2012 instance.
 - You can choose which studies in the 2008 R2 instance to migrate to a 2012 instance.
 - AEDT study databases in the 2008 R2 instance are not removed or replaced.

3.2.2 Option 2. In-Place Upgrade of SQL Server 2008 R2 Instance to SQL Server 2012

This option uses the in-place upgrade feature of the Microsoft SQL Server Installation wizard. The feature allows users to upgrade instances of SQL Server 2008 R2 to SQL Server 2012. All the databases (including any AEDT databases) on the selected SQL Server 2008 R2 instance will be upgraded to SQL Server 2012 version.



When you upgrade SQL Server, the previous SQL Server instance (i.e. 2008 R2) will be overwritten and will no longer exist on your computer. Before upgrading, back up SQL Server databases and other objects associated with the previous SQL Server instance.



If you have a Standard/Developer/Enterprise edition of 2008 R2, use the SQL Server 2012 Installer that is same as or higher than the 2008 R2 edition.

For example, a SQL Server 2008 R2 *Standard* edition cannot be upgraded to 2012 using a SQL Server 2012 *Express* Installer. It must be upgraded using a SQL Server 2012 Standard or higher edition installer.

To upgrade to SQL Server 2012 by using the SQL Server Installation Wizard:

- 1. Run the SQL Server 2012 Installer.
- 2. Click the Upgrade from SQL Server 2005, SQL Server 2008 or SQL Server 2008 R2 option.
- 3. Follow the SQL Server Setup instructions to upgrade a SQL Server 2008 R2 instance to 2012.

🐮 SQL Server Installation Center		×
Planning Installation Maintenance	New SQL Server stand-alone installation or add features to an existing installation Launch a wizard to install SQL Server 2012 in a non-clustered environment or to add features to an existing SQL Server 2012 instance.	
Tools Resources	Upgrade from SQL Server 2005, SQL Server 2008 or SQL Server 2008 R2 Launch a wizard to upgrade SQL Server 2005, SQL Server 2008 or SQL Server 2008 R2 to SQL Server 2012.	,
Options		
SQL Server 2012		

Figure 3-2 SQL Server 2012 Installation Center

- 5. Make sure to select the correct SQL Server 2008 R2 instance that you want to upgrade to 2012.
- 6. After the SQL Server upgrade is complete, upgrade AEDT user-defined studies to the most current AEDT study version, see Section 5.3.3.

4 Installation Package Contents

4.1 Microsoft SQL Server Software

SQL_Server_2012_SQLEXPRWT_x64_ENU.exe – Installer for Microsoft SQL Server 2012 Express and SQL Server Management Studio Express for 64-bit operating systems



•

- The SQL Server Express (a free edition of SQL Server) has the following limitations:
 - Limited to the lesser of one socket or four cores
 - Maximum memory for the database engine is 1 GB
 - Maximum database size is 10 GB per database

4.2 AEDT Software

- Install AEDT 2d SP2.exe Installer for AEDT 2d SP2 application
- Install AEDT 2d SP2 Distributed Processing.exe Installer for AEDT 2d SP2 Distributed Processing service (see Section 5.4)

5 Software Installation

This section contains installation instructions for Microsoft SQL Server 2012, AEDT, and Distributed Processing Service. Instructions for verifying the AEDT database versions and steps to uninstall AEDT are also included.

5.1 Typical Installation Configurations

There are two typical installation configurations for AEDT.

- Standalone configuration: The AEDT GUI application and AEDT databases are all installed on one machine. For this setup, first install Microsoft SQL Server (Section 5.2), then the AEDT application (Section 5.3).
- Client Server configuration: The AEDT GUI application is installed on one or more client (individual) machines and connect to a separate database server where AEDT databases are installed. For this setup:
 - 1) On a SQL Server, install the AEDT application.
 - 2) On a client machine, first install the SQL Server then the AEDT application.
 - 3) Repeat step 2 for additional client machine as needed.



For Client – Server configuration, it is recommended to install the full AEDT (both application and databases) on the database server. It is useful to have the AEDT application on the database server for troubleshooting.



Accessing the same study database simultaneously by more than one user is not recommended.

In addition to the typical installation configurations, a distributed processing configuration can be setup to run metric results across a number of remote servers to reduce processing time, see Section 5.4.

5.2 Install Microsoft SQL Server 2012



The supported Microsoft SQL Server version for AEDT 2d is Microsoft SQL Server 2012. The support for Microsoft SQL Server 2008 R2 ended with the AEDT 2d release.

Microsoft SQL Server 2012 must be installed prior to installing AEDT 2d. Please see Section 3.2 on options for migrating/upgrading from SQL Server 2008 R2 to SQL Server 2012.

The Express Edition installer for Microsoft SQL Server 2012 is included in the AEDT installation package (see Section 4). Instructions on installing the SQL Server 2012 Express Edition are described below. The steps and options may be different for other SQL Server Editions.



Microsoft SQL Server Management Studio (SSMS) Express is also installed as part of the installation. SQL Server Management Studio is a graphical management tool that allows for configuration and management of Microsoft SQL Server, including backing up and restoring databases and running SQL queries.

To install Microsoft SQL Server 2012 Express Edition:

- 1. Double-click the *SQL_Server_2012_SQLEXPRWT_x64_ENU.exe*.
- 2. Click *Run* if prompted to *Run* or *Cancel*.
- 3. The *SQL Server Installation Center* window will automatically launch when the files have finished extracting.
- 4. Click the *Installation* link on the left side of the window.
- 5. Click the appropriate installation option. Click the *New installation or add features to an existing installation* option unless upgrading from an older version.



Figure 5-1 SQL Server Installation Center – Installation Menu

6. SQL Server 2012 Setup will automatically run *Setup Support Rules* which will identify potential installation issues.

7. License Terms: Read the terms and check the box that reads I accept the license terms. Click Next.



Figure 5-2 SQL Server 2012 Setup – License Terms

8. *Product Updates*: Check the box to include the SQL Server product updates. Click *Next*.



Figure 5-3 SQL Server 2012 Setup – Product Updates

9. SQL Server 2012 Setup will automatically run Install Setup Files.

- 10. *Feature Selection:* The list of features will be different depending on the SQL Server Edition. Select the following features (additional features are optional). Click *Next*.
 - Database Engine Services
 - SQL Server Replication
 - Full-Text and Semantic Extractions for Search
 - Management Tools Basic

.

🐮 SQL Server 2012 Setup						
Feature Selection						
Select the Express features to in	stall.					
Setup Support Rules Feature Selection Installation Rules Instance Configuration Disk Space Requirements Server Configuration Database Engine Configuration Error Reporting Installation Configuration Rules Installation Progress Complete	Eeatures: Instance Features Solution Services Full-Text and Semantic Extractions for Search Reporting Services - Native Shared Features Solut Server Data Tools Documentation Components Management Tools - Basic Solution Connectivity SDK LocalDB Redistributable Features	Feature description: Installs only the components that you use to view and manage the documentation for SQL Server 2012. By default, the Help Viewer component uses the online library. After installing SQL Server, you can use the Help Library Manager component to download documentation to your local computer. Prerequisites for selected features: Already installed: Microsoft .NET Framework 4.0 Windows PowerShell 2.0 Microsoft Visual Studio 2010 Shell				
	Select All Unselect All Shared feature directory: C:\Program Files\Micros Shared feature directory (x86): C:\Program Files (x86)\W	soft SQL Server\				
	< Back	Next > Cancel Help				

Figure 5-4 SQL Server 2012 Setup – Feature Selection

11. *Instance Configuration:* When installing the Express Edition, the "Named instance" option is selected by default. Select the desired instance option. If *Named instance* is selected, change the named instance name as needed. Click *Next*.

📸 SQL Server 2012 Setup					- • •
Instance Configuration	•				
Specify the name and instance	ID for the instance of SQL	Server. Instance ID	becomes part of th	e installation path.	
Setup Support Rules	🔘 Default instance				
Feature Selection Installation Rules	Named instance:	SQLEXPRESS			
Instance Configuration					
Disk Space Requirements Server Configuration	Instance ID:	SQLEXPRESS			
Database Engine Configuration	Instance root directory:	C:\Program Files\I	Microsoft SQL Serve	er\	
Error Reporting Installation Configuration Rules Installation Progress	SQL Server directory:	C:\Program Files\1	Microsoft SQL Serve	r\MSSQL11.SQLEXPR	ESS
Complete	Installed instances:				
	Instance Name 1	Instance ID	Features	Edition	Version
			< Back	Next > Can	cel Help

Figure 5-5 SQL Server 2012 Setup – Instance Configuration

1

The SQL Server instance selected in this step should also be selected when installing AEDT (see Figure 5-19). For example, if "Default instance" is selected in this step, select the "(local)" instance when installing AEDT. If "Named instance" is selected, select the "(local)\[named instance]" when installing AEDT.

12. *Server Configuration*: In the *Service Account* tab, the default settings work in most cases. Change the settings if necessary.



Figure 5-6 SQL Server 2012 Setup – Server Configuration, Service Accounts Tab

13. *Server Configuration*: Click the *Collation* tab and confirm that "SQL_Latin1_General_CP1_CI_AS" is selected. Click *Next*.

The default collation may be different for international users.

SQL_Latin1_General_CP1_CI_AS must be selected or upgrading an older AEDT study database to the latest study version will fail.

🐮 SQL Server 2012 Setup		- • ×
Server Configuration		
Specify the service accounts an	d collation configuration.	
Setup Support Rules Installation Type License Terms Feature Selection Installation Rules Instance Configuration Disk Space Requirements Server Configuration Database Engine Configuration Error Reporting Installation Configuration Rules Installation Progress Complete	Service Accounts Collation Database Engine: SQL_Latin1_General_CP1_CI_AS Latin1-General, case-insensitive, accent-sensitive, kanatype-insensitive, width-insensitive for Unicode Data, SQL Server Sort Order 52 on Code Page 1252 for non-Unicode Data	Customize
	< Back Next > Cancel	Help

Figure 5-7 SQL Server 2012 Setup – Server Configuration, Collation tab

14. Database Engine Configuration: Select the desired authentication mode. Click Next.

📸 SQL Server 2012 Setup		×			
Database Engine Confi Specify Database Engine auther	guration tication security mode, administrators and data directories.				
Setup Support Rules Feature Selection Installation Rules Instance Configuration Disk Space Requirements Server Configuration Database Engine Configuration Error Reporting Installation Configuration Rules Installation Progress Complete	Server Configuration Data Directories User Instances FILESTREAM Specify the authentication mode and administrators for the Database Engine. Authentication Mode Windows authentication mode Mixed Mode (SQL Server authentication and Windows authentication) Specify the password for the SQL Server system administrator (sa) account. Enter password: Confirm password: Specify SQL Server administrators Squee Server administrators Add Current User Add Remove	-			
< Back Next > Cancel Help					

Figure 5-8 SQL Server 2012 Setup – Database Engine Configuration

- 15. Error Reporting: It is not necessary to select any of the options. Click Next.
- 16. Installation Progress: The progress bar and status will update until the installation is complete.



Figure 5-9 SQL Server 2012 Setup – Installation Progress

17. *Complete:* The final screen will confirm that the installation was successful. Click *Close* to close the *Setup* window.



Figure 5-10 SQL Server 2012 Setup – Complete

18. Close the SQL Server Installation Center window by clicking the X in the top right corner.

5.3 Install AEDT 2d SP2

Follow the instructions below to install AEDT 2d SP2. To install the AEDT application, the user must have administrative rights to the computer.



What is side-by-side installation?

Side-by-side installation is supported starting with AEDT 2c SP2.

AEDT can be installed side by side with an older AEDT release (e.g., 2c SP1, 2c, 2b SP3). The AEDT databases from two different versions can be installed on the same database server, but on two separate SQL Server instances. Create a new SQL Server instance before proceeding with side-by-side installation of AEDT.

Side-by-side installation supports installing newer AEDT version when an older AEDT version is already installed. It does not support installing an older AEDT on top of newer AEDT version.

5.3.1 Install AEDT 2d SP2



Microsoft SQL Server 2012 must be installed prior to installing AEDT 2d SP2.

To install AEDT 2d SP2 application and databases:

- 1. To start the installer, double-click the Install AEDT 2d SP2.exe file.
- 2. If the User Account Control dialog box appears, click Yes.



Figure 5-11 User Account Control Dialog Box

- 3. The setup wizard for AEDT will open. The following software is required to install AEDT. If they are not already installed, the setup wizard will initiate installation of the required software.
 - Microsoft .NET Framework 4.6.1
 - Microsoft Visual C++ 2010 SP2 Redistributable Package (x86)
 - Microsoft Visual C++ 2008 SP2 Redistributable Package (x64)
 - Microsoft Visual C++ Redistributable for Visual Studio 2015 Update 3 (x64)

Accept the license agreements and click *Install* to install the required software.

4. The setup wizard will display the welcome screen. Click *Next*.



Figure 5-12 AEDT Setup Wizard – Welcome

5. Read the license terms and click *I accept the terms of the license agreement*. Click *Next*.

🚳 AEDT 2d SP2 Setup	×			
End-User License Agreement	6			
Please read the following license agreement carefully	CV			
License Agreement	^			
By agreeing to this licensing agreement the End User accepts the terms ar conditions listed below governing the use of the AEDT Application and th use of the ESRI Licensed Material embedded in the AEDT Application.	nd ne			
AEDT Term License				
The use of the Aviation Environmental Design Tool (AEDT) Software an Reference Date (together referred to as the 'AEDT Application') is governed	nd 🗸			
\odot I accept the terms in the License Agreement				
\bigcirc I \underline{d} o not accept the terms in the License Agreement				
Advanced Installer				
< Back Next > Ca	ancel			

Figure 5-13 AEDT Setup Wizard – License Agreement

- 6. If an older AEDT version is already installed, the following screen will be displayed (Figure 5-14).
 - Click Yes to remove the existing version and install AEDT 2d SP2. The same settings of the existing AEDT version will be used for AEDT 2d SP2 (SQL Server instance, installation folder, and data folder).
 - Click *No* to install AEDT 2d SP2 alongside with older AEDT version.

Click *Next* to continue.



If SQL Server 2008 R2 was used with the existing AEDT version, do not click *Yes* in this step. Click *Cancel* to stop the AEDT 2d SP2 installation, uninstall the existing AEDT version, then restart the AEDT 2d SP2 installation. During AEDT 2d SP2 installation, select a SQL Server 2012 instance.



This screen is not displayed if an AEDT versions older than 2c SP1 is already installed (e.g., 2c or 2b SP3). Side-by-side installation can be still performed by selecting a different SQL Server instance in subsequent step.

۲	AEDT 2d SP2 Setup	x
	Upgrade Older Versions Search and upgrade older versions of AEDT 2d SP2.	\odot
	The Setup Wizard can search for older versions and remove them. Do you want to remove those versions? • Yes, <u>r</u> emove older versions.	
	\bigcirc No, install side by side with other versions.	
	< Back Next > C	ancel

Figure 5-14 AEDT Setup Wizard – Upgrade Older Versions

- 7. Select the *Custom* setup type.
 - Complete: installs all the AEDT components to default locations
 - *Custom*: allows users to customize which AEDT component(s) to install and change the locations where the software is installed



The default installation locations are:

- AEDT installation folder C:\Program Files\FAA\AEDT
- AEDT data folder C:\AEDT

If there are files in the default locations at the time of installtion, new folders will be created and named based on the AEDT version.

To customize the installation locations, choose the *Custom* option.

🙆 AEDT 2d SP2 Setup		×
Choose Setup Type Choose the setup ty	pe that best suits your needs	
	Complete Install the full version of the AEDT 2d SP2 application. Custom Select and install specific components of the AEDT 2d SP2 application.	
Advanced Installer	< Back Install	Cancel

Figure 5-15 AEDT Setup Wizard – Setup Type

8. Select the features to install. If you are unsure what to select, leave all the features checked. Click *Next* to continue.



Figure 5-16 AEDT Setup Wizard – Custom Setup

9. Select the folder where AEDT will be installed. Click *Next* to continue.

🐵 AEDT 2d SP2 Setup	—		×
Select Installation Folder			
This is the rolder where AEDT 20 SP2 will be installed.			∇
To install in this folder, click "Next". To install to a different folder, ente "Browse".	er it bel	ow or clicł	< c
Folder:			
C:\Program Files\FAA\AEDT 2d SP2\ V		Browse.	
Advanced Installer	_		
< Back Next		Car	ncel

Figure 5-17 AEDT Setup Wizard – Installation Folder

10. Select the data folder. Click *Next* to continue.



Please make sure to specify a folder path without any spaces. For example, change C:\AEDT 2d SP2 to C:\AEDT2dSP2

AEDT 2d SP2 Setup	×
Select the Data Folder	6
This is the folder where the data files will be installed.	
To install in this folder, click "Next". To install to a different folder, ent "Browse".	er it below or click
Folder:	
C:\AEDT2dSP2\	Browse
Advanced Installer	
< Back Next	Cancel

Figure 5-18 AEDT Setup Wizard – Data Folder

11. Select the desired database server instance from the drop-down menu or type the name of the server in the *Server* field. Click *Next*. The installer will connect to the database server and advance to the next step.



Please make sure to select a SQL Server 2012 instance in this step.

🙆 AEDT 2d SP2 Setu	ıp			×
SQL Database				6
Configure SQL Co	onnection			C.
Server:	(local)			~
Connect using:				
Windows aut	thentication			
🔘 SQL server a	authentication			
Username:				
Password:				
Advanced Installer —				
		< Back	Next	Cancel

Figure 5-19 AEDT Setup Wizard – SQL Database



The following error message (Figure 5-20) is displayed under the following circumstances:

- The selected SQL Server instance already has AEDT system databases and sample databases (see Section 5.5 for the list). In this case, manually delete the AEDT system and sample databases and continue with the installation. *or*
- Side-by-side installation was selected and the same SQL Server instance that is already in use by older version of AEDT was selected. In this case, select a different SQL Server instance.



Figure 5-20 AEDT Setup Wizard – Server in Use Error

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12. Click *Install* to start the installation. The installation progress will be displayed.



Figure 5-21 AEDT Setup Wizard – Ready to Install

13. Click *Finish* when installation is complete.



Figure 5-22 AEDT Setup Wizard – Installation Complete

- 14. A shortcut is created on the Desktop with the name: AEDT 2d SP2.
- 15. In SQL Server Management Studio, check the SQL Server instance where AEDT 2d SP2 databases are installed.
 - Verify that the all AEDT system and sample databases were installed.

If any are of the system databases are missing, manually restore it using a SQL Server backup file is located in the *DatabaseBackups* folder. For example, C:\Program Files\FAA\AEDT 2d SP2\DatabaseBackups

16. AEDT 2d SP2 is ready for use.



AEDT Setup will start Microsoft Distributed Transaction Coordinator (DTC) service if it is not already started on the computer. The DTC provides services designed to ensure successful and complete transactions.

To check DTC settings on your computer:

- 1. Click the Windows Start button. In the "Search programs and files" text box, enter "services.msc".
- 2. Find the service, *Distributed Transaction Coordinator*, and double-click on it.
- 3. If the *Startup type* is set to *Manual*, change it to *Automatic*.
- 4. Click the *Log On* tab. The "Log on as" should be set to *Network Service*. To change to Network Service, select the "This account" option, then click *Browse*.
- 5. In the "Enter the object name to select" field, enter "Network Service", then click OK.
- 6. Restart the service.

5.3.2 Migrate User-Defined AEDT Study Databases

If there are any user-defined AEDT study databases on a SQL Server 2008 R2 instance, the *Migrate Studies* feature in AEDT 2d application can be used to migrate them to a SQL Server 2012 instance. Follow the instructions in the AEDT User Guide to migrate AEDT study databases.



The migration process does not upgrade the AEDT study version. After migration, upgrade user-defined studies to the most current version, see Section 5.3.3.

5.3.3 Upgrade User-Defined AEDT Study Databases

AEDT 2d supports upgrading studies from study database version 1.43.1 up through and including one version prior to the current version. Follow the instructions in the AEDT User Guide to update a user-defined AEDT study database to the latest version.

5.4 **Optional** – Install AEDT Distributed Processing Service

Installing the AEDT Distributed Processing Service is optional. The AEDT Distributed Processing Service is also known as the Taskmaster (TM) Service.

AEDT uses distributed computing to provide the ability to run metric results across a number of remote servers to reduce processing time. A distributed processing system is a collection of computers that communicate through a computer network. Up to fifty remote servers running the Distributed Processing service can be networked to a single AEDT client computer running AEDT application. The AEDT application need only be installed on the AEDT client. On the remote servers, the AEDT Distributed Processing Service need to be installed. If a study references terrain and/or weather files, the necessary files must be placed on all remote servers in the same location specified in the *Definitions* tab on AEDT client. The specified file location must be exactly the same for all remote servers.

Each remote server receives a batch of flight operation information from the AEDT client, processes it, returns the resulting data, and awaits the next batch. The AEDT client assigns batches to the remote servers sequentially, as each remote server becomes available.

There are two installation configurations for distributed processing:

- Standalone configuration: AEDT databases reside on the AEDT client computer (see Figure 5-23 where S1, S2, S3, S4, S5, and S6 represent remote servers), or
- Client Server configuration: The databases reside on a separate database server (see Figure 5-24, where S1, S2, S3, S4, S5, and S6 represent remote servers). This configuration reduces memory consumption on the AEDT client due to SQL Server processing. The AEDT client relays all necessary information to the remote servers. The remote servers do not communicate directly with the separate database server.



Figure 5-23 Distributed Processing



Figure 5-24 Distributed Processing with Separate Database Server

5.4.1 Setup AEDT Client

- 1. Install the entire AEDT system on the AEDT client, including Microsoft SQL Server, AEDT 2d SP2, and AEDT databases. See sections 5.2 and 5.3.
- 2. Verify that the AEDT client can run a study successfully. This is an important verification step. If AEDT is not operational on a single machine, AEDT will not operate in distributed processing mode.

5.4.2 Setup Taskmaster Servers Running Distributed Processing Service

Repeat the following instructions for each remote server that is being utilized for distributed processing.



AEDT Setup will start Microsoft Distributed Transaction Coordinator (DTC) service if it is not already started on the computer. The DTC provides services designed to ensure successful and complete transactions. The DTC service needs to be running on both client and server(s).

To install AEDT distributed processing service:

- 1. To start the installer, double-click the Install AEDT 2d SP2 Distributed Processing.exe file.
- 2. If the User Account Control dialog box appears, click Yes.



Figure 5-25 User Account Control Dialog Box

3. The Setup Wizard for AEDT will open. Click Next.



4. Read the license terms and click *I accept the terms of the license agreement*. Click *Next*.

-	
، 🎯	AEDT 2d Distributed Processing Setup
E	ind-User License Agreement
	Please read the following license agreement carefully
	License Agreement
	Ŭ
	By agreeing to this licensing agreement the End User accepts the terms and conditions listed below governing the use of the AEDT Application and the use of the ESRI Licensed Material embedded in the AEDT Application.
	<u>AEDT Term License</u>
	The use of the Aviation Environmental Design Tool (AEDT) Software and Reference Data (together referred to as the (AEDT Application) is governed
	I accept the terms in the License Agreement
	\bigcirc I do not accept the terms in the License Agreement
Adv	anced Installer
	< Back Next > Cancel

Figure 5-27 AEDT Setup Wizard – License Agreement

5. Specify the user account that will be used to start the AEDT distributed processing service. You can use an existing user account or create a new user account. Click *Next*.



The user account for the AEDT Distributed Processing Service can be either a local user or a network user.



The user account for the AEDT Distributed Processing Service must be added to the local *Administrators* group. Please see Step 11 below.

AEDT 2d Distributed Processing Setup	- ×
Distributed Processing Service Specify existing or new user account to start the Distributed Processing service	
Use an existing user account to start the Distributed Processing service or create a new user account?	
Existing User Account	
O New User Account	
Advanced Installer	
< <u>B</u> ack Next >	Cancel
igure 5-28 AEDT Setup Wizard – Specify Existing Or New Us	er Accoun

6. **Existing User Account:** Enter user name, domain, and password of an existing user account. Click *Next.* Verifying the account information may take a while.

🧐 AEDT 2d Distributed Processing Setup	×
Logon Information Specify the existing user account used to start the Distributed Processing service.	R
	1981-13
Domain:	
Password:	
Advanced Installer	el

Figure 5-29 AEDT Setup Wizard – Specify Existing User Account

7. Create New User: Enter user name and password for a new local user account. Click Next.

AEDT 2d Distributed Processing Setup	×
Create New User Create the local user account used to start the Distributed Processing service	C
User Name:]
Password:	
Password:	
Advanced Installer	Cancel

Figure 5-30 AEDT Setup Wizard – Create New User

The password for the local user account must meet the password policy requirements on the local machine. Otherwise, the distributed processing service installation will fail.

AEDT 2d D	istributed Processing	×
	Unable to create user account or group 's the local machine. Error Code: 2245. The password does not meet the password policy requirements. Check the minimum password length, password complexity and password history requirements.	
	ОК	

Figure 5-31 AEDT Setup Wizard – Unable To Create User Account Error

8. Click Install to start the installation. The installation progress will be displayed.



Figure 5-32 AEDT Setup Wizard – Ready to Install

9. Click *Finish* when installation is complete.



Figure 5-33 AEDT Setup Wizard – Installation Complete

10. The AEDT Distributed Processing Service is installed and automatically started. The files to support the service are installed under C:\Program Files\FAA\AEDT 2d SP2 Distributed Processing



The Distributed Processing Service logs are written to the **aedt_TmService.log** under C:\AEDT\Logs folder.

- 11. Add the user account for the AEDT Distributed Processing Service to the local *Administrators* group. Otherwise, using distributed processing to run metric results with terrain will not work.
 - a. Click the Windows Start button, and enter "lusrmgr.msc".
 - b. The Local Users and Groups dialog opens.
 - c. Click the *Groups* on the left pane.
 - d. Double-click on the Administrator group to open it.
 - e. Add the user account for the AEDT Distributed Processing Service to the Administrators group.
 - f. Click OK to save your changes.

💀 lusrmgr - [Local Users and Grou	ps (Local)\Groups]	
File Action View Help		
🗢 🔿 📶 ដ	?	
Local Users and Groups (Local)	Name	Description
Users	Access Control Assistance Operators	Members of this group can remotel
Groups	Administrators	Administrators have complete and
	🞥 Backup Operators	Backup Operators can override sec
	🜆 Certificate Service DCOM Access	Members of this group are allowed
	🜆 Cryptographic Operators	Members are authorized to perform
	🕌 Distributed COM Users	Members are allowed to launch, act

Figure 5-34 Local Users and Groups dialog

- 12. To view the AEDT 2d SP2 Distributed Processing Service:
 - a. Click the Windows Start button, and enter "services.msc".
 - b. The Services dialog opens.
 - c. Find the "AEDT 2d SP2 Distributed Processing Service".



Figure 5-35 Services dialog

5.5 Manage AEDT Databases

The following AEDT system databases are installed as part of the complete AEDT installation. After installing AEDT, open the SQL Server Management Studio from the *Start* menu, *All Programs*, *Microsoft SQL Server 2012*, *SQL Server Management Studio* and verify that all the AEDT system databases are listed.

- · AIRPORT
- FLEET
- STUDY
- STUDY_DULLES
- STUDY_IFSET
- STUDY_INM
- STUDY_NIRS
- STUDY_PVD
- STUDY_WXYZ

5.5.1 Verify AEDT System Database Versions

- 1. Open SQL Server Management Studio from the *Start* menu, *All Programs, Microsoft SQL Server* 2012, *SQL Server Management Studio*.
- 2. In the *Connect to Server* dialog box, enter or select the appropriate SQL Server instance name, then click the *Connect* button.
- 3. From the *File* menu, select *Open, File.*
- 4. Navigate to C:\Program Files\FAA\AEDT\Script Files\InstallCheckDBversions.sql and select Open.
- 5. Click the *Execute* button located on the toolbar.
- 6. Check the database versions displayed in the *Results* tab.

5.5.2 Backup SQL Server Database

- 1. Open SQL Server Management Studio from the *Start* menu, *All Programs, Microsoft SQL Server* 2012, *SQL Server Management Studio*.
- 2. In the *Connect to Server* dialog box, enter or select the appropriate SQL Server instance name then click the *Connect* button.
- 3. In the *Object Explorer*, select the study database of interest.
- 4. Right-click on the database, and select Tasks, Back Up... to open the Back Up Database dialog box.
- 5. Verify that the *Backup type* is set to *Full*.
- 6. If an entry has already been added to the *Destination* field, select the entry and click the *Remove* button.
- 7. Click the Add button to open the Select Backup Destination dialog box.
- 8. Click the ... button and browse to the desired location for storing the backup file.
- 9. Enter the desired file name in the File Name field, including the .bak extension. Click OK.
- 10. Click OK to close the Select Backup Destination dialog box.
- 11. Click *OK* to back up the database. A confirmation message will be displayed if the backup was successful.

🧾 Back Up Database - STUDY_[DULLES			- • •	
Select a page	🔄 Script 🔻 🎼 Help				
Uptions	Source				
	Database:		STUDY_DULLES		
	Recovery model:		SIMPLE		
	Backup type:		Full		
	📃 Copy-only Backup				
	Backup component:				
	Oatabase				
	Files and filegroups:				
	Backup set				
	Name:	STUDY_DULI	ES-Full Database Backup		
	Description:				
	Backup set will expire:				
Connection	After:	0	🚔 days		
Server:	🔘 On:	5/19/2015			
localhost	Destination	Diak	T		
Connection:	CAProgram Files/FAAAFDTAD	ustabaee®aekupe\			
I View connection properties	C. VEOgrafit Files VEAA VALDET VD	alabaseb ackups v	Study_DOLLES.Bak	Add	
				Remove	
Progress					
Ready				Contents	
A ^{db} A	L				
			ОК	Cancel	

Figure 5-36 Microsoft SQL Server Management Studio – Back Up Database Dialog Box

5.5.3 Restore SQL Server Database

The SQL Server backup files (.bak) of the AEDT system databases are located in *C:\Program Files\FAA\AEDT\DatabaseBackups*.

- 1. Open SQL Server Management Studio from the *Start* menu, *All Programs, Microsoft SQL Server* 2012, *SQL Server Management Studio*.
- 2. In the *Connect to Server* dialog box, enter or select the appropriate SQL Server instance name then click the *Connect* button.
- 3. Right-click on the Databases folder, and select *Tasks, Restore, Database...* to open the *Restore Database* dialog box.
- 4. Select the *Device* radio button, then click the ... button to open the *Specify backup* devices dialog box.
- 5. Click the Add button. Browse to the location of the previously stored backup file, and click OK.
- 6. Click *OK* to close the *Specify backup* devices dialog box.
- 7. Select the *Restore* checkbox for the backup file.
- 8. Select the *Options* page from the left side of the *Restore Database* dialog box.
- 9. Check the Overwrite the existing database (WITH REPLACE) option.
- 10. Click *OK* to restore the database. A confirmation message will be displayed if the restore was successful.

🍢 Restore Database - STUDY_DULLE	S							
🕕 Ready								
Select a page	Script 🔸	[Help						
General								
Prices	Source -							
Options	Date	abase:						-
	O Dev	ice:	C \ D					
		C:\Progr	am File	s\FAA\AEDT\DatabaseBackups\S	TUDY_DULLES.bak			
		Database:	STUDY_I	DULLES				•
	Destinatio	on						
	Datab		STUDY I	OULLES				•
	Datab	ase.						
	Restor	e to:	The last	backup	taken (Thursday, May 25, 2017 12	2:45:46 AM	Timeli	ne
	Restore p	lan						
	Backup	sets to restore:						
	Restore	Name	Component	Туре	Server	Database	Position	First L
		STUDY_DULLES	Database	Full	L-US-3710\SQLSERVER2008R2	STUDY_DULLES	1	7074(
Connection								
View connection properties Progress								
Oone Done	•	III				Verif	y Backup I	► Media
					ок	Cancel	He	lp

Figure 5-37 Microsoft SQL Server Management Studio – Restore Database Dialog Box

5.5.4 Delete SQL Server Database

AEDT study databases can be deleted in the SQL Server Management Studio. Exit the AEDT application before deleting an AEDT study database.

- 1. Open SQL Server Management Studio from the *Start* menu, *All Programs, Microsoft SQL Server* 2012, *SQL Server Management Studio*.
- 2. In the *Connect to Server* dialog box, enter or select the appropriate SQL Server instance name then click the *Connect* button.
- 3. In the *Object Explorer*, select the database of interest.
- 4. Right-click on the database, and select *Delete* to open the *Delete Object* dialog box.
- 5. The "Delete backup and restore history information for databases" checkbox is selected by default. Change this setting as desired.
- 6. Select the "Close existing connections" checkbox.
- 7. Click *OK* to delete the database and close the dialog box.

Select a nage						
😭 General	Script 👻 🚺 He	lp				
	Object to be deleted					
	Object Name	Object Type	Owner Stat	us Message		
	STUDY_INM	Database	ADD			
Connection						
S						
Jocalhost						
Connection:						
View connection properties						
rogress						
	•		au			
Ready	Delete backup ar	nd restore history informa	tion for databases			
Wash P	Close existing cor	nnections				
					_	

Figure 5-38 Microsoft SQL Server Management Studio – Delete Object Dialog Box

5.6 Steps to Uninstall AEDT

Before uninstalling AEDT, save desired files from the AEDT data folder (e.g., C:\AEDT) and from the study output directories – C:\AEDT\DATA\[User name]\[Study name]@[SQL Server Instance Name]\Output_Files in a different location.

To uninstall AEDT:

1

- 1. Navigate to Start, Control Panel, and select Programs and Features.
- 2. Select AEDT 2d SP2 from the program list and click Uninstall.
- 3. If the User Account Control dialog box appears, click Yes.



4. The Setup Wizard will open. Click *Next* to continue.



Figure 5-40 AEDT Setup Wizard

5. Click the *Remove* button to continue.



Figure 5-41 AED1 Setup Wizard – Remove Installation

6. Click the *Remove* button to uninstall AEDT from the computer.

lead AEDT 2d Setup
Remove AEDT 2d
You have chosen to remove the program from your computer.
Click "Remove" to remove AEDT 2d from your computer. If you want to review or change any of your installation settings, click "Back". Click "Cancel" to exit the wizard.
Advanced Installer
<pre>Abovanced installed</pre>

Figure 5-42 AEDT Setup Wizard – Remove

- The installer will prompt to delete the Census data files. This refers to the Census data folder used for the Population Exposure Report (default location is C:\AEDT\demographics_module), and not the ACS data folder used for the Environmental Justice (default location is C:\AEDT\environmentaljustice_module).
 - Click Yes to remove the Census data folder.
 - Click *No* to preserve the Census data folder.



Figure 5-43 AEDT Setup Wizard – Delete Census Data Files Dialog

- 8. The status bar will display an estimated time to finish removing the program.
- 9. When the uninstallation is complete, click the *Finish* button to exit the Setup Wizard.
- 10. Check the following folders and manually delete them as necessary.
 - AEDT installation folder e.g., C:\Program Files\FAA\AEDT or C:\Program Files\FAA\AEDT 2d SP2
 - AEDT data folder e.g., C:\AEDT or C:\AEDT 2d SP2
- 11. Check the SQL Server instance and verify that the AEDT system and sample databases were removed.
 - a. Open SQL Server Management Studio from the *Start* menu, *All Programs, Microsoft SQL Server 2012, SQL Server Management Studio.*
 - b. In the *Connect to Server* dialog box, enter or select the appropriate SQL Server instance name then click the *Connect* button.
 - c. In the *Object Explorer*, expand the Databases folder and confirm that the AEDT system and sample databases are no longer listed. If the AEDT system databases remain, delete them.



If you receive the "Error opening installation log file. Verify that the specified log file location exists and is writable" message when uninstalling AEDT, log off and log in again. This is a known issue with Windows installer.