

AEDT Knowledge Base

This document is the [active] collection of known issues and workarounds for shared user support to the AEDT product line. For additional information and references, see the AEDT Support website.

- <https://aedt.faa.gov>
- E-mail: aedt-support@dot.gov

Frequently Asked Questions

Installation

1. Does AEDT require administrative rights in order to be used?

Yes, AEDT requires administrative privileges for both installation and execution of the software. There is currently no workaround for this as AEDT requires creating and registering Component Object Model (COM) components into the Windows Registry, which Microsoft now requires administrative privileges to perform.

2. How can I upgrade to the AEDT 2d release from a previous AEDT release?

Instructions on how to install AEDT 2d or update to 2d from a previous version of AEDT are documented in Section 5.2 of the Installation Guide.

- Existing user-created studies need to be upgraded to the current version in order to use them in AEDT 2d.
- It is strongly recommended to select the “Backup study and upgrade” option to preserve a copy of the existing study database before upgrading.
- After upgrading a user-defined study, reset and re-run the existing metric results in the study.

3. Can multiple AEDT versions be installed on the same machine?

Starting with AEDT 2c SP2 release, side by side installation is supported. This means you can install AEDT 2c SP2 on a computer that already has an earlier version installed (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.

4. Is AEDT compatible with Windows 8 or Windows 10 Operating Systems?

We have successfully run AEDT on Windows 8, 8.1, and 10. However, more testing is needed before we can officially support those operating systems. At this time, only Windows 7 and Windows Server 2012 are officially supported for AEDT.

On Windows 10 computers, AEDT may fail to start and display “*Failed to create service usandworld102100 MapServer*” error. A workaround is to run AEDT in compatibility mode. To do this, right-click on AEDT, and click *Properties* to open the AEDT Properties dialog. Click *Compatibility* tab and enable *Run this program in compatibility mode for Windows 7*.

5. What version of Microsoft SQL Server does AEDT support?

The support for Microsoft SQL Server 2008 R2 ended with the AEDT 2d release. The supported Microsoft SQL Server version for AEDT 2d is Microsoft SQL Server 2012. The free Express Edition of Microsoft SQL Server 2012 is available for download from the AEDT Support website with your AEDT purchase.

6. Are there any limitations with the SQL Server Express edition?

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

7. Is AEDT compatible with ArcView 10.3 (ArcGIS for Desktop Basic)?

Yes, they can reside on the same machine. AEDT 2d uses ArcGIS Runtime for WPF (version 10.2.5) which runs standalone and doesn't interfere with any other version of ArcGIS.

8. Can AEDT run in a virtual machine (VM)?

Yes, AEDT can run in a VM. The VM can run on any version of Windows on the physical machine as long as the VM software can support Windows 7 and SQL Server 2012.

9. What are the different public releases of AEDT?

Public Release Name	Release Date
AEDT 2a	3/21/2012
AEDT 2a Service Pack 1	6/27/2012
AEDT 2a Service Pack 2	2/15/2014
AEDT 2b	5/29/2015
AEDT 2b Feature Pack 1	7/28/2015
AEDT 2b Service Pack 2	12/22/2015
AEDT 2b Service Pack 3	6/13/2016
AEDT 2c	9/12/2016
AEDT 2c Service Pack 1	12/19/2016
AEDT 2c Service Pack 2	3/13/2017
AEDT 2d	9/27/2017

Database

10. Can an AEDT 2a study database be upgraded to AEDT 2c/2d?

Yes, conversion of AEDT 2a studies to AEDT 2b is supported through the stand-alone AEDT 2a to 2b converter. Please refer to the "Upgrading AEDT 2a Study Database to AEDT 2c" tool on the AEDT Support website, [Downloads page](#). Once a study is upgraded to AEDT 2b study version (1.43.2), upgrade that study in AEDT 2c/2d to upgrade it to the latest AEDT study version.

11. What are the AEDT system database versions for AEDT 2d?

- AIRPORT v 2.16.3
- FLEET v 3.24.4
- STUDY v 1.54.2

The database version information is stored in the dbo.DB_VERSION table of AEDT databases.

12. What versions of the BADA and ANP are used in AEDT?

AEDT 2d uses the Base of Aircraft Data (BADA) 3.13.1 and Aircraft Noise and Performance (ANP) database 2.1.

13. Is it possible to reduce the size of AEDT study database after running the study?

When you run metric results in a study, the database size expands as results are generated and saved to the database. If there are obsolete results in your study, it is possible to shrink the database by deleting them. To do this, first reset and/or delete obsolete metric results; then click Delete Obsolete Results button in AEDT. In SQL Server Management Studio, right-click on the study database, and click *Tasks, Shrink, Database*.

14. Will AEDT have flight profiles already pre-loaded?

Standard SAE-AIR-1845 flight profiles are already pre-loaded.

15. Are SIDs and STARs already loaded?

No, SIDs (Standard Instrument Departures) and STARs (STandard Arrival Routes) are not loaded into the AEDT database.

Receptor Set

16. What is the default height for a grid receptor?

The default height for a grid receptor is 4 feet for noise and 1.8 m for emissions dispersion. These default values cannot be changed.

17. Do I need to enter the receptor elevation?

The user should set the elevation of the receptor. This is typically set to the elevation of the airport, but it could be set at another, user-defined, elevation.

Studies for geographies with significant topography should use terrain data. The receptor elevation is then set to the terrain elevation at the receptor's lat/lon (or x/y). In regions where topography is relatively flat, use of terrain data is not required for environmental studies of FAA actions.

If there is uncertainty in the use of terrain and its potential influence on noise exposure in a specific study, the analyst should coordinate with the appropriate reviewing authority. For more information concerning NEPA studies, please refer to the section on “Use of terrain information” in the [Guidance on Using the Aviation Environmental Design Tool \(AEDT\) to Conduct Environmental Modeling for FAA Actions Subject to NEPA](#) document.

18. What types of terrain data are supported in AEDT?

AEDT supports Grid Float, 3CD, and DEM terrain data types. There is a bug where 3CD terrain files are not automatically converted to grid float format. A workaround is to

- Use GridFloat files instead; or
- Use 3CD files, but directly update the [RUN_OPTIONS] table in the study database. Change the [TERRAIN_FILE_TYPE] column value to 0 (zero), then run metric result.

19. What is a dynamic grid? How is it different from recursive grid in INM?

The benefit of dynamic grid is that the user does not need to know the geographic extent of the region of interest. To use dynamic grid in AEDT, the user defines a small starting grid and the grid is automatically expanded until the desired contour level is closed. The dynamic grid is used to accomplish the same result as the INM recursive grid – improve contour fidelity and resolution and to reduce processing time. The major difference between the recursive grid and the dynamic grid is:

- Starting grid of recursive grid is defined for the final extents of the grid and works inward.
- Starting grid of dynamic grid starts small and expands outward until the desired contour level is closed.

The current limitations of the dynamic grid feature are:

- Annualization weightings are not applied to noise metrics processed with dynamic grids
- User-defined noise metrics are not supported
- Distributed processing cannot be used to run metric results with dynamic grid.
- RunStudy batch tool cannot be used to run metric results with dynamic grid.
- Runtime for running metric results with dynamic grid cannot be estimated.

20. What is the best practice for defining a starting grid for dynamic grid?

Improperly chosen starting grid and dynamic grid preferences can produce unexpected results and/or long run time. Below are general guidelines. Please note that the dynamic grid settings may need to change depending on study.

For starting grid:

- Use a 2x2 grid (X/Y count = 2)
- Set the resolution to 0.5 nmi (X/Y spacing = 0.5 nmi)
- Place the grid in the airport origin (or centered on runways)

For dynamic grid preference settings:

- Refine level limit = 1
- Minimum closed contour value = 65 dB
- Dynamic grid algorithm = Linear INM Legacy
- Refine tolerance = 0.2 dB

Running the dynamic grid metric result with the above guidelines will produce a low resolution contour, but will provide a starting point for contour size and runtime. It is recommended to review results and adjust the settings as necessary to produce the desired resolution contour. For example, the

refine level limit could be increased to 2 or 3. A large refine level limit and a small tolerance value will result in more grid points and higher-fidelity contours, but a longer run time.

21. Is there a way to define receptor grid sets with airport as the center?

Yes, AEDT supports using offsets for receptor sets with airport as the grid origin.

22. Does AEDT provide an option to define a polar grid?

AEDT does not support the definition and use of polar grids.

23. How can I view and update the RECEPTOR table, LOCATION column?

The RECEPTOR table, LOCATION column is a SQL Server geography type column. The following sample statement can be used view the lat/long/elevation data stored in the LOCATION column.

```
SELECT *
    ,CONVERT(varchar(max),[LOCATION]) as location_point
    ,LOCATION.Lat as lat
    ,LOCATION.Long as long
    ,LOCATION.Z as elevation
FROM [STUDY_INM].[dbo].[RECEPTOR]
```

The following sample statement can be used update the lat/long/elevation data in the LOCATION column:

```
UPDATE [STUDY_INM].[dbo].[RECEPTOR]
SET LOCATION = geography::STPointFromText('POINT(-122.374843 37.619002 11.5)', 4326)
WHERE RECEPTOR_ID=8
```

Noise

24. Can I create a user-defined noise metric in AEDT?

Yes, AEDT supports creating user-defined (custom) noise metrics and using them to generate noise results. However, please note that the following features are not currently supported for user-defined noise metrics:

- Dynamic grid
- Detailed noise report
- Time audible user-defined noise metrics

25. Is it possible to add user-defined spectral noise classes or is there a way to load different spectral data?

AEDT currently does not support adding/importing user-defined spectral data.

26. Why does AEDT use different proxies than the Aircraft Noise and Performance (ANP) Database for certain aircraft?

For example, in AEDT the noise proxy for Dassault F900 is either COMJET or CNA750; but in the ANP v2.1 database, the proxy is EMB14L. AEDT takes guidance from ANP database assignments but does not exclusively rely on those mappings as it aims to find a balance between modeling performance for both noise and emission studies. On the performance side, weight and thrust are

important factors but AEDT operations must accommodate studies scaling from a single airport to global.

27. Is it possible to model noise from other airport sources (GSE, on-road vehicles, APUs, etc.)?

No, those sources are only included for emissions modeling.

Emissions

28. What is the mixing height used in AEDT?

Users have the option to change the mixing height for emissions inventory (3000 ft AFE is the default). For emissions dispersion, mixing height is fixed at 3000 ft; and dispersion is not processed above 3000 ft.

The mixing height values in the Airport database came from the EPA (see link below), however this source is considered outdated and therefore values for the mixing height included in the Airport database are not used in calculations.

<http://www.epa.gov/ttn/scram/mixingheightdata.htm>

29. Can emissions be reported below mixing height by AEDT?

Yes, below mixing height is one of AEDT's standard reporting regimes. AEDT supports flight performance modeling and analysis for runway-to-runway flight tracks and operations.

30. Is AEDT capable of calculating aircraft emissions above mixing height or 3,000 feet AGL?

Yes, fuel burn and emissions are computed for all phases of flight that are modeled in AEDT.

31. Can I run a noise study without running emissions, or vice versa?

Yes, noise and emissions outputs can be run together in one metric result or run independently from each other in separate metric results.

32. Is there a way to get detailed segment-level trajectories?

The following options are available:

- The *Flight Performance Report* – *Flight Segment* tab displays the segment-level flight performance data.
- The *Emissions Report* – *Operations Detail* displays the segment-level emissions data.
- Store the segment-level emissions results to the [RSLT_EMISSIONS_SEGMENT] table in the study database. To populate the [RSLT_EMISSIONS_SEGMENT] table:
 - 1) Close AEDT.
 - 2) Open the *C:\Program Files\FAA\AEDT\FAA.AEE.AEDT.GUI.View.Ribbon.exe.config* file, change the following key to true, and save the file.

```
<add key="EmissionSegmentResultToTable" value="true" />
```
 - 3) Define a metric result, and select “Segment” as the Emissions storage option.
 - 4) Run the metric result. Please note that when this key is set to true, the “Operations Detail” Emissions Report is no longer viewable in the GUI. Saving emissions results to this table only works for the fixed-wing and not helicopters.

Emissions Dispersion

33. What version of AERMOD and AERMET does AEDT use?

AEDT 2d and AEDT 2c SP2	AERMOD version 16216r AERMET version 16216
AEDT 2b FP1, 2b SP2, 2b SP3 AEDT 2c, 2c SP1	AERMOD & AERMET version 14134
AEDT 2b	AERMOD & AERMET version 12345
EDMS 5.1.4	AERMOD & AERMET version 12345

34. How does AEDT work with MOVES results?

The emissions inventory and emissions dispersion results from the EPA MOVES (Motor Vehicle Emission Simulator) can be integrated into AEDT. Please refer to the AEDT User Guide and the “Using MOVES with AEDT” document for more information.

35. Does AEDT support using terrain for emissions dispersion?

For emissions dispersion, AEDT assumes flat terrain and does not support importing terrain data. Terrain is used in noise calculations in AEDT. Note that the terrain settings in the *Definitions* tab are applied to noise calculations only.

36. Can aircraft operations on dispersed tracks be used for emissions dispersion modeling?

Dispersed tracks are not supported for emissions dispersion modeling.

37. Can sensor path operations be used for emissions dispersion modeling?

Sensor path operations are not currently supported for emissions dispersion modeling.

38. Can the Distributed Processing be used to run emissions dispersion metric results?

Distributed processing is not supported for running emissions dispersion metric results.

39. What kind of weather data are needed in order to do emissions dispersion modeling?

Hourly surface weather and upper air weather data are needed to run AERMOD. High fidelity, average, or ISA weather files cannot be used for emissions dispersion. The following raw weather data files can be used:

- Hourly surface weather: CD144, HUSWO, ISHD, SAMSON, SCRAM, TD3280
- Upper air weather: FSL ASCII, TD6201

AERMET will convert the UTC weather data to local time of the airport when the raw weather data is processed to produce two .MET, .SFC, and .PFL files. Before running an emissions dispersion study, make sure that the APT_AIRPORT_ZONEINFO_ZONE table is empty. If this table is populated, AEDT will convert the air operation time (which is in local time) to UTC in order to retrieve weather. For more information, please refer to the “Using Weather Data in AEDT” document (available on the Downloads page of AEDT Support Website).

ASIF (AEDT Standard Input File)**40. Is there a tool for producing ASIF files?**

Legacy INM/EDMS studies can be imported into AEDT from the AEDT user interface. Also, external converter tools for converting INM/EDMS studies to ASIF are provided with AEDT installation. Please refer to the Appendix C – External Converter Tools in the AEDT User Guide for more information. Manual editing of the ASIF file may be necessary in order to successfully import the file.

41. Can I import a Noise Integrated Routing System (NIRS) study into AEDT?

The NIRS to ASIF (NIRS2ASIF) Converter tool can convert a NIRS study into ASIF format, which can then be imported into AEDT. The NIRS2ASIF Converter tool is available on the AEDT Support website, [Downloads page](#).

42. Can an AEDT study be exported to ASIF format?

Individual aircraft examples can be exported from the *Equipment* tab but complete study contents cannot be exported as one unit.

43. Is there a sample ASIF file?

A set of sample ASIF XML files are located in the installation directory under *C:\Program Files\FAA\AEDT\Examples*

44. How can I validate an ASIF XML file?

ASIF schema is defined by the series of XML schema definition files (.XSDs) located under *C:\Program Files\FAA\AEDT\Examples*. Use the AEDT *Study* tab > *Import* > *ASIF* or the *Study* tab > *Partial Import* functions to validate a given ASIF data set. Validation errors will be reported in the AEDT log file.

45. Does AEDT use the <speed> value under the <trackNode> element in ASIF?

AEDT will ignore speed input except when associated with sensor path points outside the terminal area (i.e. above 10,000 feet AFE for the departure portion of the sensor path; above 6,000 feet AFE for the arrival portion) or fixed point profiles.

Data Import/Export**46. What is the format of the NMPlot grid file (.grd) used in the Metric Result Import/Export feature?**

The AEDT grid file is based on the ASCII version of the NMGF (Noise Model Grid Format). Please note that not all the NMGF specifications are supported by AEDT. The NMGF is documented here: <http://wasmerconsulting.com/nmgf.htm>

AEDT supports the following NMGF data point specifications: DPAL, GRID, and SUBG. In the DPAL section, locations must be specified in longitude and latitude. AEDT does not support using Cartesian coordinates to specify locations for the DPAL data point specification.

47. When using the “Save as Shapefile” feature, are there any restrictions in naming the map layer?

When exporting to shapefile, remove any characters that are not alphanumeric character or an underscore. The following Esri FAQ page summarizes the problem:

<http://support.esri.com/cn/knowledgebase/techarticles/detail/23087>

48. Do GIS layers need to be defined in decimal degrees or UTM before importing into AEDT or does AEDT project an imported layer in other coordinates?

Either projection (UTM or lat/lon) can be used, but NAD83 or WGS84 datum is required.

49. Are there any capabilities to import from or export to CAD files?

No. However external converters may be available to do the conversions as needed. Note that currently, ESRI does have an "ArcGIS for AutoCAD" product, and other third party conversion tools may also be available as well.

50. Is there a way to generate the Population Exposure Report for airports outside of US?

The Population Exposure Report only works with the US Census data. For international users, one possible option is to generate and export noise contours from AEDT as a shapefile, then overlaying that against population data in a separate GIS tool.

Another option is to use the population point receptors in AEDT. The sample study, STUDY_NIRS, has metric results #1 and #2 which use population receptors. Run the metric result #1 and view the receptor set layer attributes – noise level and population count at each receptor point are displayed.

Creating population point receptors in the AEDT GUI is not supported, but they can be imported via ASIF. A sample ASIF file is below – it has two location points with population count (<count>). The stateFips, countyFips, blockId, and bnaId fields do not need to be filled.

```
<AsifXml xmlns:AsifXml="http://www.faa.gov/ASIF" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
version="1.2.10" content="receptorSets">
  <receptorSet>
    <name>sample_popCentroids</name>
    <centroid>
      <stateFips>0</stateFips>
      <countyFips>0</countyFips>
      <blockId>0</blockId>
      <bnaId>0</bnaId>
      <latitude>37.615769</latitude>
      <longitude>-122.388223</longitude>
      <elevation>11</elevation>
      <count>77</count>
    </centroid>
    <centroid>
      <stateFips>0</stateFips>
      <countyFips>0</countyFips>
      <blockId>0</blockId>
      <bnaId>1</bnaId>
      <latitude>37.614407</latitude>
      <longitude>-122.382968</longitude>
      <elevation>11</elevation>
    </centroid>
  </receptorSet>
</AsifXml>
```

```
<count>88</count>
</centroid>
</receptorSet>
</AsifXml>
```

After you import the population receptor into AEDT, it will be displayed in the *Define Metric Results* wizard, *Choose Receptor Sets* screen.

Weather

51. For average annual weather, does AEDT take the weather data of the closest airport for modeling aircraft performance?

AEDT uses the International Standard Atmosphere (ISA) model to lapse weather data of the closest airport at different flight altitudes.

52. Is a study boundary required when using high fidelity weather data?

A rectangular study boundary is required in order for AEDT to process RUC/RAP, GEOS, or NCAR weather. It is not required for using the MERRA-2 or WRF weather. The study boundary should be larger than the flight tracks being modelled (usually 100 nmi beyond the track). A study boundary can be created by clicking the *Edit* button in the *Metric Results* tab, *Study Boundary* ribbon group.

53. Why does my flight fail using high fidelity weather when it was flown successfully using average annual weather?

When high fidelity weather is used, some operations may fail because they are not able to fly the specified path under certain atmosphere conditions.

54. Is it possible to create user-defined weather in AEDT?

Yes, see the *Definitions* tab > *Weather*.

55. Can AEDT accept GRIB1/2 weather data?

While AEDT supports certain specific data products that are in the generic GRIB format, those data products (RUC and RAP) that are available are in the U.S./North American geographical space only.

56. Does AEDT support RAP data?

Rapid Refresh (RAP) data is the next-generation version of the RUC and officially replaced RUC in May 2012. AEDT supports RAP (13 km and 20 km horizontal resolution). Note that the grid and covered region may be different between RUC and RAP. The following document describes the differences between RUC and RAP in detail. <http://ruc.noaa.gov/pdf/RAPbrief.NCEP-Dir-20Mar2012.pdf>

Sensor Path

57. Does AEDT do any internal smoothing of radar track inputs to eliminate altitude aberrations?

AEDT does smooth and filter altitude and speed values given in input trajectory data specifically for sensor path operations. Geographic location information from the input trajectory data is not changed. The smoothing and filtering process is as follows:

- 1) Discard points that exceed the BADA global longitudinal acceleration limit.

- 2) Discard points that exceed the BADA global normal acceleration limit.
- 3) Perform exponential smoothing of the remaining altitude and speed values in the forward and reverse directions.
- 4) Points are reduced to locations where acceleration or climb angle is within the range of 130% to 70% of the average.

58. Are there any requirements for sensor path points?

- Sensor path operations in AEDT require at least two points in the terminal area (below 10,000 ft AFE) at both ends of the flight.
- Consecutive sensor path points at the same geographic location can lead to the NaN (not a number) exception.

59. Which fields are required or optional for the <sensorPath> element in ASIF?

- The <speed> field is specified as an optional element in the ASIF schema, but it is necessary in order to import the ASIF file.
 - The <speed> field in each <sensorNode> is used in calculation, but only above 10,000 ft AFE on the departure end and 6,000 ft AFE on the arrival end – i.e. only in the BADA regime.
 - Below that altitude, the calculations are handled via the same SAE AIR 1845 mechanism used for altitude controls. So input altitudes are followed, but speeds are defined by the corresponding ANP procedure chosen for the particular flight operation, not the speeds given for each sensorNode.
- The <messageTime> field is not used in the calculation, and it does not need to be adjusted.
- The <thrust> values are ignored. AEDT calculates its own thrust values which represent the thrust required to fly the smoothed and filtered input data as determined by the SAE AIR 1845 model at altitudes within the terminal area and BADA at altitudes outside the terminal area.

Fixed Point Profiles**60. Are there any requirements for using fixed point profiles?**

In order to get correct noise output from AEDT, the units for user-defined fixed point profile thrust values must match those for the corresponding NPD data for the aircraft type being modeled. For large commercial aircraft, this is generally net corrected thrust per engine in pounds.

When importing fixed-point profiles via ASIF, the point number must start at 1 and the numbers must be consecutive.

61. Can I model runway-to-runway operations using fixed point profiles?

No, this is not supported in AEDT. Only single-airport operations (i.e. just an arrival or just a departure) are supported using fixed point profiles.

62. Are flight operations using fixed point profiles affected by weather?

No, the fixed point profiles are always completely insensitive to atmospheric conditions/weather. The flight operations using fixed point profiles will follow your input location, speed, altitude, and thrust data exactly to calculate flight performance.

User-Defined Aircraft

63. What are the steps to create a new user-defined flight profile for an aircraft?

In order to add a new flight profile to an existing system aircraft, you must create a user-defined aircraft. To do this:

- 1) In AEDT, go to the *Equipment* tab, *Aircraft*.
- 2) Select the aircraft you'd like to modify and click *Copy* button.
- 3) Enter a suffix and click *Save*.
- 4) Select the new aircraft and click *Export Aircraft* button. The aircraft data is exported as an ASIF file.
- 5) Delete the new aircraft.
- 6) Open the exported ASIF file.
 - a. Under the <anpProfileSet>, copy one of the existing <profile> section and paste it.
 - b. Modify the section and edit the profile properties to define a new profile.
 - c. Repeat the steps a and b to define additional profiles as needed.
 - d. Refer to the [ASIF Reference guide](#) for ASIF schema documentation.
- 7) Save the ASIF file.
- 8) In *Equipment* tab, click *Import Aircraft* button and select the ASIF file.
- 9) The new aircraft is listed in the *Equipment* tab.

Aircraft Substitution

64. What is the helicopter substitution list for AEDT?

The following table contains the helicopter substitution list for AEDT. This list is based on the latest substitution list in INM Version 7.0d. This information is provided to assist users in selecting appropriate helicopter substitutions for those helicopters that are not in the AEDT database.

Helicopter Name	Description	Substitution Helicopter
SA316	Aerospatiale Alouette III	SA350D
SA313B	Aerospatiale SA 313B Alouette II	B206L
SA315B	Aerospatiale SA-315B	SA350D
AS-350	Aerospatiale SA-350 Astar (AS-350)	SA350D
SA360C	Aerospatiale SA-360C	SA365N
SA365C3	Aerospatiale SA-365C3	SA365N
A109N	Agusta A-109N	B429
A109E	Agusta A-109 E	A109
A109C	Agusta A-109C	A109
A109K2	Agusta A109K2	A109
A109LUH	Agusta A-109LUH	A109
A119 MKII	Agusta A109-MKII	A109
A109S	Agusta A109S	A109
A109SP	Agusta A109SP	A109
A119	Agusta A119	A109
AB139	Augsta/Bell 139	SA330J
B206L-1	Bell 206L-1 Long Ranger	B206L
B206L-3	Bell 206L-3 Long Ranger	B206L
B206L-4	Bell 206L-4 Long Ranger	B206L
B206L-4 STC	BELL 206L-4 STC00036SE	B206L
B206L-4T	Bell 206L-4T Long Ranger	B206L
Bell 214B-1	Bell 214B-1	B212
B222B	Bell 222B	B222
B222U	Bell 222U Fxd Skd Gear	B222
B230	Bell 230 Fxd Skd Gear	B222
B230	Bell 230 RTR WHL GR	B222
B407	Bell 407 / Rolls-Royce 250-C47B	B407

Helicopter Name	Description	Substitution Helicopter
B412EP	Bell 412 EP	S76
B412	Bell 412 HP	S76
B412SP	Bell 412 SP	S76
B427	Bell 427 (Light)	B427
B47G2	Bell 47 G2	R44
B47G4	Bell 47 G4	R44
Bell OH-58A Kiowa	Bell OH-58A Kiowa	B206B3
AH-64 Apache	Boeing AH-64 Apache	S70
MD600N	Boeing MD 600N	MD600N
MD900	Boeing MD 900	MD600N
MD520N	Boeing MD520N	MD600N
BO105LSA-1	Boelkow BO-105 LS A-1	BO105
EH101/300/500	EH Industries EH101/300/500	S65
EH110/510	EH Industries EH110/510	S65
Enstrom 280 FX	Enstrom 280 FX	R44
E 280C	Enstrom 280C	R44
E 280FX/F-28F	Enstrom 280FX/F-28F	R44
E 480	Enstrom 480	H500D
E 480B	Enstrom 480B	H500D
F28C	Enstrom F28C	SC300C
F28F	Enstrom F28F	SC300C
E TH28/480	Enstrom TH28/480	H500D
BK 117A1	Eurocopter 117A1	B429
BK 117A3	Eurocopter 117A3	B429
BK 117A4	Eurocopter 117A4	B429
BK 117B1	Eurocopter 117B1	B429
BK 117B2	Eurocopter 117B2	B429
BK 117B2C	Eurocopter 117B2C	B429
BK 117C1	Eurocopter 117C1	B429
BK 117C1+	Eurocopter 117C1+	B429
BK 117C1C	Eurocopter 117C1C	B429
BK 117C2	Eurocopter 117C2	B429
AS 332L2	Eurocopter AS 332L2	S70
AS 350 B1	Eurocopter AS 350 B1	SA355F
AS 350 B2	Eurocopter AS 350 B2	SA355F
AS 350 B3	Eurocopter AS 350 B3	SA355F
AS 350 BA	Eurocopter AS 350 BA	SA355F
AS 350 BB	Eurocopter AS 350 BB	SA355F
AS 355F1R	Eurocopter AS 355 F1R	SA355F
AS 355F	Eurocopter AS 355F	SA355F
AS 355F1	Eurocopter AS 355F1	SA355F
AS 355F2	Eurocopter AS 355F2	SA355F
AS 355FR2	Eurocopter AS 355FR2	SA355F
AS 355N	Eurocopter AS 355N	SA355F
AS 355NP	Eurocopter AS 355NP	SA355F
AS 365 N2	Eurocopter AS 365N2	SA365N
AS 365N3	Eurocopter AS 365N3	SA365N
BK 117B2	Eurocopter BK 117B2	B429
EC 120	Eurocopter EC 120	SA341G
EC130B4	Eurocopter EC-130B4	EC130
EC130T2	Eurocopter EC-130T2	EC130
EC135	Eurocopter EC-135	EC130
EC135 (CDS)	Eurocopter EC-135 (CDS)	EC130
EC135T1 (CDS)	Eurocopter EC-135 (CDS)	EC130
EC135 (CDS/CPDS)	Eurocopter EC-135 (CDS/CPDS)	EC130
EC135T1 (CDS/CPDS)	Eurocopter EC-135 (CDS/CPDS)	EC130
EC135P1	Eurocopter EC-135P1	EC130

Helicopter Name	Description	Substitution Helicopter
EC135P2	Eurocopter EC-135P2	EC130
EC135P2 (CPDS)	Eurocopter EC-135P2 (CPDS)	EC130
EC135P2+	Eurocopter EC-135P2+	EC130
EC135T1	Eurocopter EC-135T1	EC130
EC135T2	Eurocopter EC-135T2	EC130
EC135T2+	Eurocopter EC-135T2+	EC130
EC155B	Eurocopter EC-155B	SA365N
EC155B1	Eurocopter EC-155B1	SA365N
EC225LP	Eurocopter EC-225LP	S70
EC635T1	Eurocopter EC-635T1 (CPDS)	EC130
EC635T2+	Eurocopter EC635T2+	EC130
EC135T2(CPDS)	Eurocopter EC-T2 (CPDS)	EC130
MD500C	Hughes MD500 C	H500D
K-1200	Kaman K-1200 (2 Interneshing Main Rotors)	B427
KA32A11BC	Kamov KA-32A11BC	S70
Kawasaki BK-117	Kawasaki BK-117	B429
UH72	Lakota - EC145 mili version	B429
MD500N	McDonnell Douglas MD-500N	H500D
SW4	PZL Swidnik SW-4	SA350D
W3A	PZL Swidnik W-3A	SA330J
W3AS	PZL Swidnik W-3AS	SA330J
R22BETA	Robinson R22 Beta	R22
R22MARINER	Robinson R22 Mariner	R22
S269C-1	Schweizer 260C-1 (Upturned Exhaust and Diff.)	SC300C
S269C	Schweizer 269C (Includes Muffler & Resonator)	SC300C
S269C	Schweizer 269C (Includes Muffler)	SC300C
S269C	Schweizer 269C (Upturned Exhaust)	SC300C
S269D(Conf. A)	Schweizer 269D (Config. A)	H500D
S269D(330SP)	Schweizer 269D(330SP)	H500D
S300C	Schweizer 300C (1)/ Upturned Exhaust	SC300C
S300C	Schweizer 300C (2)/ Includes Muffler	SC300C
S300C	Schweizer 300C (3)/ Muffler & Resonator	SC300C
S330	Schweizer 330 / Allison 250-C20 Turboshaft	H500D
S269D/330	Schweizer S269D/330	H500D
S76A+	Sikorski S-76A+	S76
S76B	Sikorski S-76B	S76
S-76C+	Sikorski S-76C+	S76
S64-F	Sikorsky S-64-F	S65
S-76A STC 568NE	Sikorsky S-76A STC 568NE	S76
S-76C	Sikorsky S-76C	S76
S92	Sikorsky S-92	S70

Miscellaneous

65. Does AEDT model military aircraft?

Yes, any military aircraft for which data are available (INM has historically included NOISEMAP aircraft) can be modeled. AEDT supports calculating fuel consumption and emissions for military aircraft (and aircraft with thrust type = “other”).

66. Does AEDT model military aircraft with afterburner mode?

In AEDT, the current method of calculating fuel flow for military aircraft (the only aircraft with afterburners) is based on the ICAO Engine Emissions Databank (EDB) data. The EDB data do not include afterburner operations. To account for those engines which have an afterburner mode, AEDT splits the fuel and emission data into two entries in the database; one entry is a non-afterburner mode

and the other is an afterburner mode. Only the takeoff data – where afterburner mode is used – are different between the entries. Aircraft which use afterburner operations should use the engine which has the afterburner designation “(w/AB)” at the end of the engine model name. To correctly use afterburner operations for noise, fuel consumption, and emissions, a profile with an afterburner mode must be used and the engine type associated with the aircraft must also have the afterburner designation.

An INM study which has aircraft that use afterburner procedures will not import those aircraft as having afterburners assigned as their engine type. ASIF import picks up the operation with the afterburner correctly, but not the engine type; so the afterburner data for noise is retained, but the fuel consumption and emission data are lost.

67. What are the default vector tracks available for each airport in the Create Aircraft Operation wizard?

Default arrival and departure vector tracks are automatically created by AEDT for each runway end in the airport.

68. How can I construct a vector track?

A vector track can be created through ASIF import or in the AEDT 2d user interface.

69. Does AEDT support circuit tracks?

AEDT does not support circuit tracks. Please use a touch & go track instead. To do this:

- 1) Create a touch & go track in the airport designer. Instructions on how to do this can be found in the "Exercise_CreateCustomTracks.pdf" file in the [Downloads page](#) of the AEDT Support website.
- 2) Create a new aircraft operation and select Circuit as the operation type. Assign the previously defined touch & go track to the operation.
- 3) Create an annualization and metric result using the aircraft operation and run the metric result.

70. There are no pattern (touch & go or circuit) profiles for helicopters in AEDT. How can I model helicopter pattern (touch & go or circuit) operations in AEDT?

Helicopter circuit operations can be modeled as overflights. This requires 1) creating overflight tracks; and 2) creating a user-defined helicopter with overflight profiles. AEDT does not automatically connect the ends of the departure leg and the arrival leg, so it requires knowing where the helicopter is on the track so the profile and the track remain coordinated for the operation. The departure, level, and arrival modes (in all their different variants) can all be used in overflights.

71. What time standard does AEDT assume for operations?

AEDT assumes that all date time values for operations are in local times, not UTC (Universal Time Coordinated).

72. How do I generate the administrative file (.bak) for my AEDT study?

In order for the AEDT technical support team to better assist you, we will typically need a copy of your study's administrative file so that we can reproduce your issue. An administrative file package is

a zip file that contains a backup of the study database (.bak file) and various log files. To generate administrative file, first open your study, go to the *Study* tab > *Study Maintenance* and click the “Generate Administrative File” button.

73. What are the different types of airspeed metrics and how are they used in AEDT?

The different types of airspeed metrics are as follows:

- Groundspeed – the magnitude of the entire aircraft velocity vector with respect to the ground.
- Calibrated airspeed – the indicated airspeed of an aircraft, corrected for position and instrument error.
- True airspeed – the airspeed of an aircraft relative to undisturbed air.

The way these types of airspeeds are used in AEDT are as follows:

- Inputs:
 - Sensor path point (radar track) – groundspeed
 - Fixed-wing procedure step – calibrated airspeed
 - Fixed-point profile point – groundspeed
 - Rotary-wing procedure step – groundspeed
- Outputs:
 - Vertical rotary-wing trajectory segment – horizontal component of groundspeed (which equals zero)
 - Any other trajectory segment – groundspeed

74. What are the different types of taxi times in AEDT and how are they used?

In AEDT, there are three different ways for modeling taxi time:

- Taxi time at the airport layout level
- Taxi time at the flight level (AIR_OPERATION table).
 - This is used only when the “Enable flight-based taxi times” preference is checked.
 - Entering and viewing the flight taxi time in the GUI is not supported. It can be populated via ASIF import or SQL.
- Dynamically calculated taxi time based on Delay & Sequencing model

When using Delay & Sequencing model to calculate taxi time, users must zero out the airport layout taxi time and uncheck the “Enable flight-based taxi times” preference setting. Otherwise, users will be adding up all three types of taxi-times.

75. Do building created in the AEDT airport layout designer have effect on noise or dispersion results?

The buildings created in the AEDT airport layout designer do not have any effect on sound propagation or dispersion results. However, you can coarsely synthesize buildings in terrain files if you want to model some line-of-sight blockage (noise shielding) effects due to buildings. Please note that this is a non-standard use of AEDT, and it would need to be reviewed and approved by FAA in order to include it in a FAA-funded project.

Error Messages

76. What is the cause of the following MSDTC error in aedt.log?

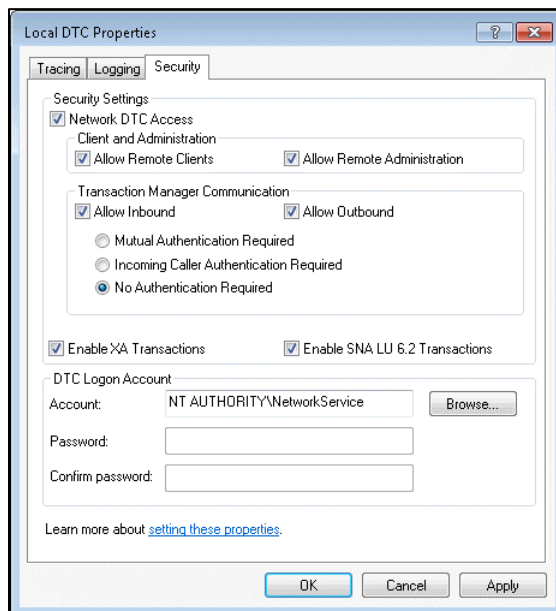
“Network access for Distributed Transaction Manager (MSDTC) has been disabled. Please enable DTC for network access in the security configuration for MSDTC using the Component Services Administrative tool.”

This error indicates that the Microsoft Distributed Transaction Coordinator (MSDTC) is not enabled. The MSDTC service must be enabled on both the database server and on client computers.

To enable MSDTC:

- 1) Click Start, click Run, type “dcomcnfg” and then click *OK* to open *Component Services*.
- 2) In the console tree, expand *Component Services*, expand *Computers*, expand *My Computer*, and then expand *Distributed Transaction Coordinator*.
- 3) Right click *Local DTC*, and click *Properties* to display the *Local DTC Properties* dialog box.
- 4) Click the *Security* tab and click the following options:
 - Network DTC Access.
 - Allow Remote Clients and Allow Remote Administration.
 - Allow Inbound and Allow Outbound.
 - No Authentication Required
 - Enable XA Transactions
- 5) Click *OK*.

Reference: <https://msdn.microsoft.com/en-us/library/dd327979.aspx>



77. The “Cannot load Counter Name data because an invalid index ” was read from the registry” exception message is displayed when I start AEDT. How can I resolve this?

Exception: System.InvalidOperationException: Cannot load Counter Name data because an invalid index ” was read from the registry.

at System.Diagnostics.PerformanceCounterLib.GetStringTable(Boolean isHelp)

This error indicates that Windows Performance counter registry settings are corrupt. Follow the steps below to rebuild the performance counter settings.

- 1) Go to Windows Start, type cmd.
- 2) Right-click on cmd.exe and click Run as administrator.
- 3) At the command prompt, type LODCTR.exe /R and press enter.
- 4) You should get this message: "Info: Successfully rebuilt performance counter setting from system backup store".
- 5) Run AEDT to confirm that it starts successfully.

78. What is the cause of the following error in aedt.log when I run a metric result?

“Message = Could not allocate space for object 'dbo.EVENT_RESULTS'. 'PK_EVENT_RESULTS' in database '[STUDY_NAME]' because the 'PRIMARY' filegroup is full. Create disk space by deleting unneeded files, dropping objects in the filegroup, adding additional files to the filegroup, or setting autogrowth on for existing files in the filegroup.”

The Express Edition (free version) of Microsoft SQL Server 2008 R2 and 2012 has a database size limit of 10 GB. This error indicates that the 10 GB size limit has been reached.

79. What is the cause of the following error in aedt.log when I try to generate a noise contour?

*“! Exception Message: ERROR 010328: Syntax error at or near symbol ,.
ERROR 010267: Syntax error in parsing grid expression.
Failed to execute (ASCIIToRaster).”*

The Esri service used to make contours is not able to parse periods (.) correctly. Please remove any period (.) or space from your AEDT study name and make sure that the study name is at least five characters long.

80. What is the cause of the “FPPM requires a procedural profile, not a fixed point profile” error in aedt.log?

This error can occur in two situations:

- When using altitude controls for an aircraft with fixed point profiles.
- When using sensor path for an aircraft with fixed point profiles.

Possible solutions:

- Disable all altitude controls for the affected track;
- Re-assign the affected operations to a different track which does not include altitude controls;
or
- Substitute an aircraft that contains procedural profiles.

81. What is the cause of the following error in aedt.log when I run an emissions dispersion metric result?

“Message = both zero and twentyfour hour exists in C:\AEDT\DATA\[User name]\[Study name]@[SQL Server Instance Name]\Output_Files; StackTrace = at FAA.AEE.AEDT.Weather.EDMSWeatherModule.FindShiftHour() at FAA.AEE.AEDT.Weather.EDMSWeatherModule.InitCache()”

This error message indicates that the weather data files contains missing data. The weather data for all 24 hours in a day must be specified.

82. What is the cause of the following error in aedt.log when I run an emissions dispersion metric result?

“FAA.AEE.AEDT.EmissionsDispersion.EmissionsDispersionProcess - Execution Timeout Expired. The timeout period elapsed prior to completion of the operation or the server is not responding. at FAA.AEE.AEDT.DataAccessModule.ResultsAccess.ResultsIterator`1.GetResultsByContext”

This error message indicates that retrieving results from the database is taking longer than the default timeout (30 seconds). To increase the timeout value, go to *Study* tab, *Preferences, Database*; then edit the “Data context timeout (sec)” setting.

AEDT 2d Known Issues

1. Uninstalling AEDT when another application is connected to the AEDT databases leaves any connected databases on the server. As a workaround, delete the databases manually using Microsoft SQL Server Management Studio. (12194)
2. After closing a study in the AEDT application, Microsoft SQL Server still maintains a connection to the database for several minutes. To delete a study database, exit from the AEDT application first; then delete the desired database in the Microsoft SQL Server Management Studio. (18027)
3. User settings from prior installations may not be removed exhibiting behavior such as failed contour generation (old filename for contouring gpk). Manually delete the file C:\AEDT\DATA\[User name]\user_settings.json where [User name] is the Windows account name under which the user is working.
4. “Unable to upgrade study” error will be displayed during the study upgrade process if a study contains a non-aircraft equipment group. Delete the non-aircraft equipment groups from a study before upgrading it. (4967)
5. Aircraft equipment groups cannot be used to assign tracks to operations. User’s only access to Operation Group Percent Distribution processing is through direct SQL injection of AIR_OPERATION table. (1731)
6. Flight profiles are not editable when creating a user-defined aircraft in Equipment tab. Use ASIF import in order to create a new aircraft with different flight profiles. (21323)
7. Deleting user-defined helicopter is not supported in the Equipment tab. This will be fixed in the next AEDT release. (669)
8. Opening multiple emissions reports may show data from a different report. To avoid this issue, open only one emissions report at a time. (21322)
9. In the Speciated Organic Gases tab in the Emissions Report, repeatedly converting units may produce inconsistent values in the report. (21329)
10. If you get a “timeout expired” error when generating an emissions report, a workaround is to:
 - 1) In Study tab, Database Preferences, increase the “Datacontext timeout” setting (e.g. 300 seconds).
 - 2) Generate the “Operation Summary” emissions report first.
 - 3) Generate the “Operation Group Summary” emission report.
11. Some airframe/engine combinations from EDMS 5.1.4.1 system data are incongruent with AEDT and are reported “bad data integrity” errors during EDMS study import. To correct, import the aircraft as user-defined aircraft. (21179)
12. When an EDMS study containing grid receptor sets is converted to AEDT, the rendering of receptor locations will be slightly mismatched between EDMS and AEDT. This is because in AEDT the origin of the grid receptor is in the south-west corner, while EDMS uses the offsets based on the center of the grid. A workaround is to:
 - 1) Incorporate the grid and the discrete receptors in the EDMS study into an AERMOD.INC file.
 - 2) In AEDT, go to Study tab, Preferences, Emissions Dispersion.
 - 3) Check the “Use AERMOD receptor grid” option and reference the .INC file from step 1 in the “File with AERMOD receptor grid” option. This makes the application ignore the receptor set assigned to the emissions dispersion metric result, and forces using the specified AERMOD grid receptor. The INC file can contain both grid and discrete receptors.

13. The INM to ASIF Converter (INM2ASIF.exe) does not convert system aircraft with user modified properties (i.e. added a custom profile, but still used the same system aircraft name). A workaround is to rename the aircraft with a unique name so that the Converter recognizes it as a user-defined aircraft.
14. The INM to ASIF Converter (INM2ASIF.exe) does not convert user-defined helicopters and user-defined military aircraft in an INM study. (942)
15. Airports with an expiration date set to a past date may not import via ASIF. A workaround is to change the expiration date in the Airports database.
16. A helitaxi track imported via ASIF will be listed in the Airports Details pane, however it will not be displayed on the map as part of the airport layout layer. To view the helitaxi track on map, view tracks in the Metric Results tab. (21029)
17. After a partial ASIF import, the application does not refresh. Restart the application to view the imported data. (671)
18. Weather import does not take into account Airport Layout Start date. Manually confirm that the dates for weather data being used are after the start date of the associated airport layout. (8386)
19. Processing of high fidelity weather data is not thread-safe. To compensate, set the “NumberOfThreads” key to 1 in C:\Program Files\FAA\AEDT\FAA.AEE.AEDT.GUI.View.Ribbon.exe.config file. (21287)
20. Flight operations specifying cruise altitude above the highest allowable specified aircraft altitude are processed. Manually confirm cruise altitude on the operation against the BADA cruise altitude limit. (6676)
21. AEDT is unable to process 3CD terrain files. A workaround is to use GridFloat files instead. (929)
22. An AEDT generated shapefile cannot be imported into Google Earth Pro. (21979)
23. Noise contours may be displaced on the map (i.e. does not align with the receptor set) if the X and Y spacings are not the same. (22072)
24. When applying Delay & Sequencing, air operations based on operational profiles with “Operation Count” values that are small, e.g. less than one operation per scenario duration, are subject to a quantization error in the assignment of the operation time.
25. Emissions dispersion metric results created in previous AEDT version (e.g., AEDT 2c or AEDT 2b) cannot be run in AEDT 2c SP1. A workaround is to copy the existing dispersion metric result and create a new one. (3237)
26. Dispersed tracks are not supported for emissions dispersion modeling.
27. On a low resolution computer screen, the bottom portion of the Edit Operations wizard cannot be accessed. (3113)
28. In order to generate results for vertical fuel tanks, users must create user-defined vertical fuel tank and provide parameters. (3097)
29. Dynamic grid noise metric results created in previous AEDT version fails to run in AEDT 2c SP1/SP2. A workaround is to run the following script. (3051)

```
UPDATE [enter_study_name].dbo.JOB_RUN_OPTIONS
SET PERSIST_EMISSIONS_EVENT_RESULT=1,
    PERSIST_PERFORMANCE_EVENT_RESULT=1
WHERE JOB_ID = (enter_metric_result_ID)
```

30. For user-defined noise metrics, the following features are not currently supported:
- Dynamic grid
 - Detailed noise report
 - Time audible user-defined noise metrics
31. The C-weighted noise metric results (CDNL, CEXP, LCMAX, and TALC) are not calculated for helicopter operations on dispersed tracks. (4850)
32. The Population Exposure Report fails to run if the Census data are stored under a directory with spaces. This is due to a known issue with Esri – it does not accept spaces in path names. A workaround is to store the Census data in a folder without spaces.
33. Delete all records from the TAXI_NETWORK_LINKS table after:
- 1) Modifying the taxi network in the study; and/or
 - 2) Upgrading an older study to the latest version

This table gets populated when a dispersion metric result is run with Delay & Sequencing. The existing records in this table become invalid after taxi network is updated or after study database is upgraded. Invalid records in this table will generate the following error message in aedt.log. Empty the TAXI_NETWORK_LINKS table and rerun the dispersion metric result.

```
FAA.AEE.AEDT.EmissionsDispersion.EmissionsDispersionProcess -  
  at System.Collections.Generic.Dictionary`2.get_Item(TKey key)  
  at FAA.AEE.AEDT.EmissionsDispersion.ResultsExtractor.EDResultExtractor.GetTaxiEmissions  
(DateTime time, EmissionsMeasureType type)  
  at  
  FAA.AEE.AEDT.EmissionsDispersion.ResultsExtractor.EDResultExtractor.GetTotalTaxiEmissions  
(EmissionsMeasureType type)
```

34. In Equipment tab, Non-Aircraft screen, only the 1990 emissions factors from the STN_GSE_EF table are displayed for Ground Support Equipment (GSE). (4373) Emission factors for GSEs are stored in the STN_GSE_EF and the STN_GSE_NONROAD_COEFF tables:
- When manufacture year of GSE is provided, the emissions factors in the STN_GSE_NONROAD_COEFF table are used.
 - When manufacture year of GSE is not provided, the emissions factors in the STN_GSE_EF table are used. User-defined GSE factors are also saved to this table.
35. Uninstalling AEDT 2d may delete AEDT system and sample databases from a wrong SQL Server instance. This could happen if AEDT 2d databases were installed on a named SQL Server instance (e.g., (local)\sqlexpress2012) instead of a default instance (e.g., (local) or localhost). After uninstallation, open the Microsoft SQL Server Management Studio, and manually delete the databases if they were not removed. (4223)
36. Dynamic grid is not supported for overflight operations (i.e. no airport is associated with the overflight track). A workaround is to insert a row into the SCENARIO_AIRPORT_LAYOUT table. This table links a metric result (scenario) with an airport layout. (4898)
37. A receptor set that consist of both grid-type receptors and point-type receptors is not supported for noise metric result. (4917) Running such a receptor set in a noise metric result will generate the following error message in aedt.log.

*FAA.AEE.AEDT.BusinessLogicLayer.RunStudyLog - AMM failed in one of its AddGrid methods.
Source = FAA.AEE.AEDT.AccumulatedMetrics; Message = Grid Sizes Not Equal;*

38. Partial runway to runway sensor path flights are not supported in the current AEDT version. A note will be added to the AEDT User Guide, Appendix K Sensor Path Import Tool.
39. The Sensor Path Import (SPI) tool requires the Microsoft System CLR Types for SQL Server 2008 R2 on the computer. If this prerequisite is not installed, running the SPI tool throws the "Unable to load DLL *SqlServerSpatial.dll* : The specified module could not be found." error. (4951)

To install the Microsoft System CLR Types for SQL Server 2008 R2:

- 1) Go to <https://www.microsoft.com/en-us/download/details.aspx?id=26728>
 - 2) Click Download.
 - 3) Check 1033\x64\SQLSysClrTypes.msi and click Next
 - 4) Download the msi file, then install it.
40. In the FLT_APU table, the column description for APU EF units are incorrect. It should say kg/hr instead of g/kg. This bug will be fixed in the next AEDT release. (1358)
 41. In Create Annualization wizard, the Noise Altitude Cutoff field is incorrectly labeled as AFE (ft). It should say "MSL (ft)". This bug will be fixed in the next AEDT release. (4852)
 42. Setting the serialization type to DATA_CONTRACT in the FAA.AEE.AEDT.GUI.View.Ribbon.exe.config file does not work in the AEDT 2d release. Only the BINARY serialization type is supported. This bug will be fixed in the next AEDT release. (4933)
 43. The departure/approach displaced threshold values for runway ends are switched in the Airport database (APT_RWY_END table, DSP_THR_APP column and DSP_THR_TKO column). This is a data issue and will be fixed in the next AEDT release. (2762)
 44. When you use the Copy Aircraft Operation and change the operation type, it gets stuck in the Choose Tracks step. Please use the Create Aircraft Operation instead. This bug will be fixed in the next AEDT release. (4969)
 45. On Windows 10 computers, AEDT may fail to start and display the following error. Windows 10 is not officially supported for use with AEDT; however, some users have had success running AEDT in compatibility mode. To do this, right-click on AEDT, and click *Properties* to open the *AEDT Properties* dialog. Click *Compatibility* tab and enable *Run this program in compatibility mode for Windows 7*.

Exception: ESRI.ArcGIS.Client.Local.LocalServerException: Failed to create service usandworld102100 MapServer. Worker process 'usandworld102100_host' exited while attempting to service request (attempt 1 of 1)

46. In the AEDT Study version 1.54.2 (bundled with AEDT 2d release), the 7378MAX aircraft are not mapped to an appropriate engine. Executing the below query in SQL Server Management Studio will map the aircraft to LEAP-1A26 engine which is more appropriate. This will be fixed in the next AEDT release.

```
use [enter_study_name]
update [dbo].[FLT_EQUIPMENT] set engine_id = 2002 where equip_id = 4128
update [dbo].[FLT_EQUIPMENT] set engine_id = 2002 where equip_id = 4129
```

47. The INM to ASIF Converter (INM2ASIF.exe) does not convert the <param3> field of procedure steps for user-defined aircraft in an INM study. A workaround is to fill in the missing <param3></param3> element in the ASIF or to populate the values in the FLT_ANP_AIRPLANE_PROCEDURES table. This will be fixed in the next AEDT release. (5081)
48. In the ASIF schema documentation, the <thrustSet> field under <anpProfilePoint> has incorrect description. It should say "lbs or % max thrust" instead of "klbs or % max thrust". This will be fixed in the next AEDT release. (4485)
49. When multiple AEDT versions are installed on the same computer (e.g., AEDT 2c SP2 and AEDT 2d), upgrading an older study to the latest study version may not work. When the study upgrade fails, the following error message is logged to the aedt.log: *"ConvertToCurrent() exception: The restore point name cannot be found in the .bak file!"* (4112)
50. The Create Aircraft Operations wizard crashes if the selected aircraft has both fixed point profile and procedural profiles for operation type. A workaround is to only define one type of profile (either fixed or procedural) per operation type. This will be fixed in the next AEDT release. (5171)
51. When overflight is selected as operation type, the Create Aircraft Operations wizard displays arrival profiles instead of overflight profiles (even when user-defined overflight profiles are available). This will be fixed in the next AEDT release.
52. The "Export noise metric result" feature (which exports noise results into NMPLLOT grid format) is not supported for dynamic grid. A workaround is to create a new metric result and assign the flattened receptor set that was produced by the metric result with dynamic grid. Run the new metric result, and then use the "Export" feature (5494).
53. Adding a vector track can crash AEDT if the runway end's elevation is null. A workaround is to enter elevation value for the runway ends (5497).
54. When operational profiles (instead of assigning specific operation time) are used in the Create Aircraft Operation wizard, AEDT does not set the operation count to one for new operations. A workaround is to update the OP_COUNT column in the AIR_OPERATION table. This will be fixed in the next AEDT release (5521).
55. If there are more than one blank line at the end of PFC and SFL weather files, then AERMOD step of emissions dispersion metric result run will fail with the following error message in aedt.log: *FAA.AEE.AEDT.EmissionsDispersion.EmissionsDispersionProcess - Input string was not in a correct format.* This will be fixed in the next AEDT release (5556).
56. If AEDT study name contains any space, AERMOD will generate fatal error messages. This is because AEDT uses the study name to name the AERMOD input files; and AERMOD is unable to process space in the input file name.
57. Generate Administrative File functionality is unable to create a database backup file if the study database is located on a remote database server (5592).

58. The 2016 American Community Survey (ACS) data is not supported for the Environmental Justice functionality in AEDT 2d. Supported ACS data includes 2011, 2012, 2013 and 2014 ACS 5 year estimate (5596).