Windows DAG Software Installation Guide

EDM04-37

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Introduction

The DAG software package for Windows contains the latest device drivers for all current Endace accelerated network monitoring DAG cards. It also includes a suite of DAG tools and utilities which may be used for accessing additional functionality or developing custom applications.

Endace Software is supported on some versions of the following operating systems:

- Windows Server 2003 (32-bit and 64-bit)
- Windows Server 2008 (64-bit)

For information on the specific operating system versions supported, please see the *Release Notes* for your software version.

If you are installing on a Unix based operating system, see *EDM04-01 DAG Software Installation Guide* for installation details.

Notes:

- *For information on installing and working with any of these operating systems please refer to the distributor's documentation or the associated website.*
- *The DAG software for Windows is distributed as an* `.msi` *file and is shipped on the Endace Software Installation CD. It is also available to download from the Support section of the Endace website at https://support.endace.com/.*

Applicable DAG software version

This document is applicable to the DAG software release 4.7.0 or greater.

Purpose of this Guide

The purpose of this Installation Guide is to describe the process of installing and configuring the Endace DAG drivers and software in a Windows environment.

For detailed information on installing and configuring the individual DAG cards please refer to the appropriate DAG Card User Guides which are included on the Documentation CD. The DAG Card User Guides may also be downloaded from the Support section of the Endace website at http://www.endace.com.

Custom Applications

The DAG software supports a programming environment which allows you to develop, test and run custom applications using the DAG API which is a native C language Application Programming Interface.

For further information on the DAG API and to obtain a copy of *EDM04-19 DAG Programming Guide* please contact Endace Support at support@endace.com.

Installing DAG software in an EndaceProbe virtual machine

When installing DAG software into an EndaceProbe virtual machine use the instructions specific to operating system. The operating system must already be installed into the virtual machine prior to installing the DAG software.

For details on configuring the virtual machine on the EndaceProbe refer to the applicable virtual machine installation guide.

Related documentation

The follow is a list of related documentation:

- *EDM01-18 DAG 4.5 G2/G4 Card User Guide*
- *EDM01-32 DAG 7.5G2 Card User Guide*
- *EDM01-33 DAG 7.5G4 Card User Guide*
- *EDM01-21 DAG 8.1SX Card User Guide*
- *EDM01-36 DAG 9.2X2 Card User Guide*
- *EDM01-38 DAG 9.2SX2 Card User Guide*
- *EDM01-37 vDAG Card User Guide*
- *EDM04-01 DAG Software Installation Guide*
- *EDM04-19 DAG Programming Guide*

Installing on Windows

Pre-install notes

Before beginning to install theDAG software you should note the following:

- The dagconvert tool requires a dag enabled winpcap to be installed.
  This version of winpcap is available on the install CD and on the Endace support website
- In Windows Server 2008 64-bit, the dagconvert tool requires NPPtools.dll to be installed. This is a component of the Microsoft Network Monitor Driver.
- Installing the DAG `.msi` package with the "/quiet" option does not update the DAG drivers.
- There are a number of shortcut keys on the DAG Devices tool user interface available to the user. The shortcut keys are available in Windows Server 2003 but not in Windows Server 2008.
- Most DAG tools are installed in the 32-bit Program Files folder. However, on 64-bit systems there will be a number of 64-bit tools, such as DAG Devices (dagdevices.exe) , which are stored in the 64-bit program files folder.
- The DAG 8.1SX card must be configured to load the user defined image at boot-time. For further details, refer to *EDM01-21 DAG 8.1SX Card User Guide*.

Install the Software

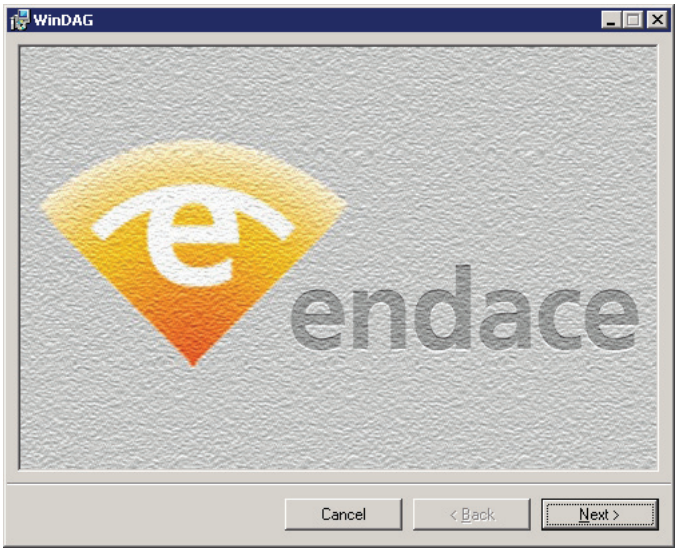
The DAG software for Windows (WinDAG) is supplied as an .msi file.

Notes:

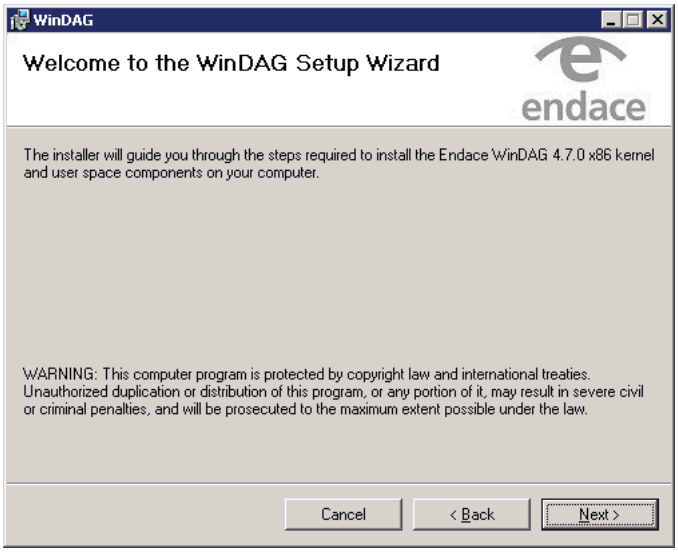
- *You must uninstall (page 12) the existing version before reinstalling a newer version - i.e. you cannot install a version over the top of an existing install. You can repair an existing install. (page 13)*
- *The supplied DAG software contains an msi file for each supported operating system. If you select the incorrect msi file for the current operating system a warning dialog displays.*
- *Updating DAG driver will cause disabled DAG cards to be enabled.*

To install the DAG software on a Windows system, complete the following steps:

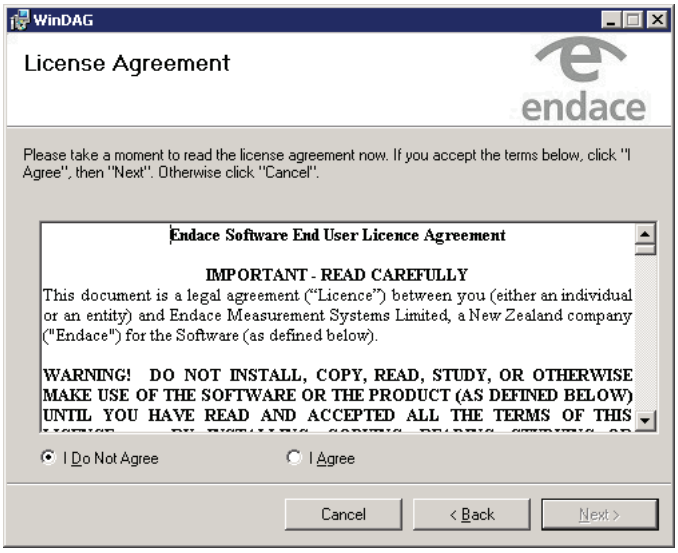
1. Download the DAG software from the Endace support website.
   Or from the supplied CD.
2. Go to the folder that matches your Windows operating system.
3. Run setup.exe.
   The first screen of the DAG Software Setup Wizard displays. The DAG software uses the standard Windows file download and installation process.



4. Click Next to go display the Welcome page.



5. Click Next to read the License Agreement.

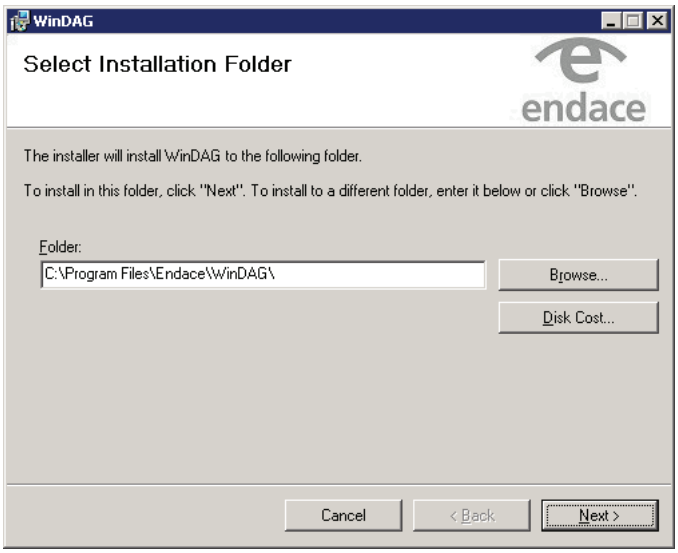


6. After reading the License Agreement, select *I agree* and click Next to display the available installation options.

7. Set the required installation path and click Next.

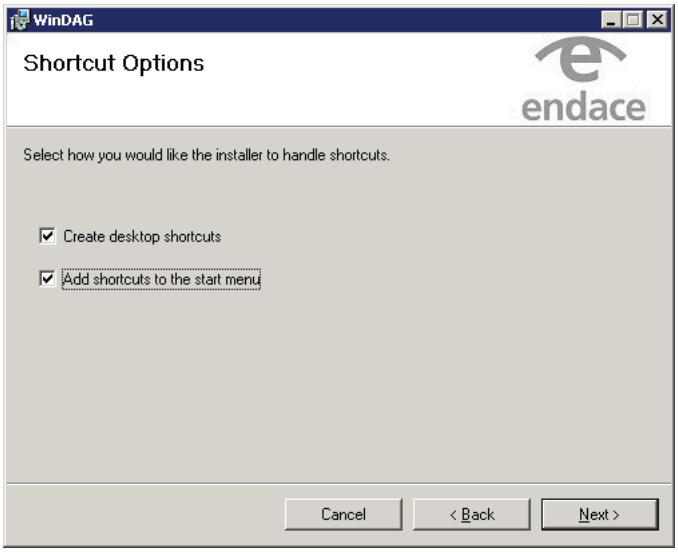
   By default the DAG drivers and tools are installed in *Program Files|Endace|WinDAG*. Endace recommends that you accept the default installation options.

   Note:
   If installing in a 64-bit operating system some components are installed in the Program Files(x86)\Endace\WinDAG *folder.*

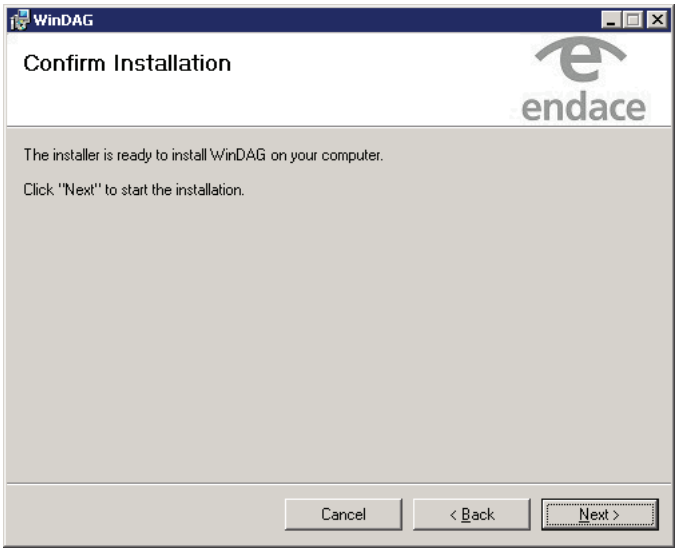


   To check you have enough free disk-space available on the computer, click Disk Cost and a list of available drives and disk space will display. Click OK to close the window.

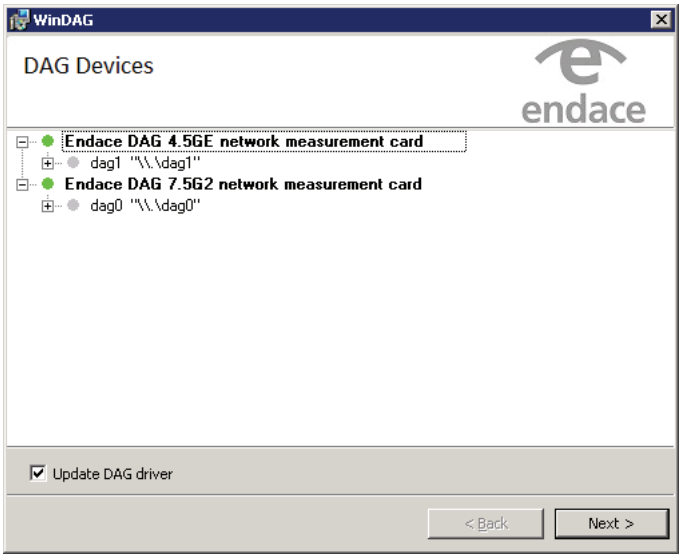
8. Select the required shortcut options and click Next.



9. Confirm the installation by clicking Next.

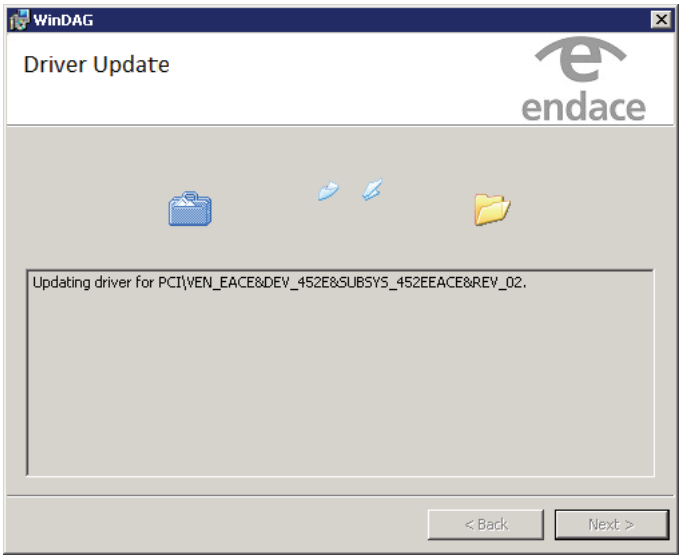


Once the installation is complete the following screen displays.



Note:
The DAG cards are displayed in the order they appear in the registry.

10. If required, click Next to update the installed DAG drivers.



Notes:

- *The driver is updated per device type (DAG card type). So if the system has two DAG 9.2SX2s then only one driver is updated.*
- *Updating DAG driver will cause disabled DAG cards to be enabled.*

11. Once the update is complete, click Close.

Note:
Updating the DAG drivers releases the memory allocated to those DAG cards and then reallocates it. In some cases the requested amount of contiguous memory may no longer be available and it may be necessary to reboot.

The following tools are installed ready for use:

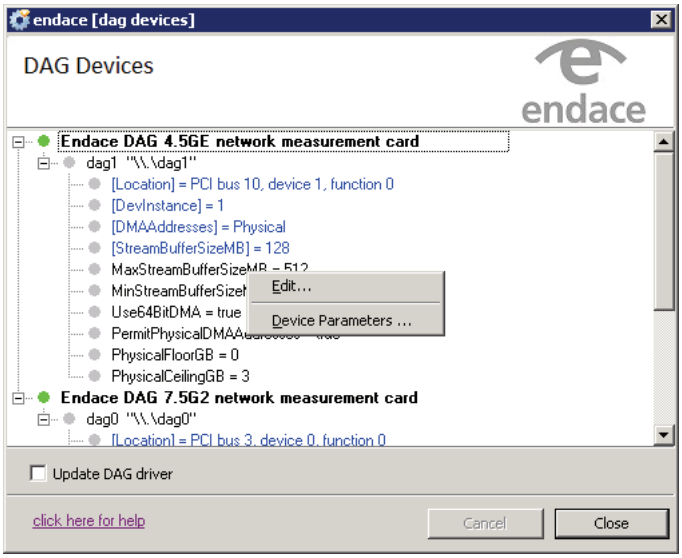
- DAG Devices tool
  The DAG Devices tool enables you to view the DAG cards detected on your system. You can modify the DAG card parameters on an individual basis and update the associated drivers.
  For further details, see DAG Devices (page 18).
- WinDAG Command Prompt
  This tool opens a custom command window which provides an appropriate format for running DAG tools.
  For details, refer to your *DAG Card User Guide*.
- Standard DAG tools
  For details on the installed DAG tools see Supported DAG tools in Windows (page 17).
- Windows only DAG tools
  For details on the installed Windows only DAG tools see Windows only DAG tools.

Configuring DAG card parameters

Using the DAG Devices tool you can configure a series of parameters for each DAG card.

To view and configure the driver status of each DAG card, complete the following steps:

1. Open the DAG Devices application.
   For a detailed description of the DAG Devices user interface, see DAG Devices Description (page 18).



2. Add and alter device parameters as required.
   See the descriptions below.

Editing device parameters

For each installed DAG card you can configure a number of device parameters.

- To add or remove parameters, right-click and select Device Parameters...
  A control window displays listing the available options for this DAG card and operating system. Check or uncheck the required options and press Enter.
- To edit an existing parameter, right-click on the parameter and select Edit....
  The control window displays, listing the current setting for this parameter. Change as required and press Enter.

Note:

- *Any changes will not take effect until the DAG driver restarts, which is normally after a reboot.*
- *Changes can also be enforced by selecting the "update DAG driver" option in DAG Devices, although this can fall victim to memory fragmentation when acquiring DMA memory for a DAG card.*
- *Depending on your version of Windows, some options may not be available.*

The available parameters are:

Device parameter	Description
[Location]	Displays the physical location details of the DAG card, including: • the PCI bus number. • Device number • Function ***Note:*** *This parameter cannot be edited. Displayed for reference only.*
[DevInstance]	Displays the device instance that uniquely identifies for this DAG card on this system. This value may differ for a DAG card if the system is rebooted. Is used with the -d option used in the DAG tools. ***Note:*** *This parameter cannot be edited. Displayed for reference only.*

[DMAAddresses]	Displays how the stream buffer memory was allocated: • Logical - the driver has used a DMA adapter to allocate a logically (bus) contiguous stream buffer. • Physical - the driver has used low level APIs to allocate a physically contiguous stream buffer. ***Notes:*** • *This parameter cannot be edited. Displayed for reference only.* • *This parameter is not applicable for vDAGs.*
[StreamBufferSizeMB]	Displays the amount of memory allocated to this DAG card. This option displays in one of three colors: • blue - healthy - there is enough memory available. • orange - there is less than 16 MB of memory available on the system. • red - the driver could not allocate any DMA memory for this device. ***Note:*** *This field cannot be edited. Displayed for reference only.*
[VirtualDevice]	Displayed when the driver detects as running in a virtual machine. This displays for both: • vDAGs or • physical DAG cards that are mapped through to the virtual machine. ***Note:*** *This field cannot be edited. Displayed for reference only.*
MaxStreamBufferSizeMB	Enables the user to specify the *maximum* amount of system memory (in megabytes) that will be allocated to accommodate all stream buffers. Must be greater than or equal to *MinStreamBufferSizeMB*. In all versions of Windows (32-bit and 64-bit) there is a limit on the size of the stream buffer. It must be less than 1024MB. An error message will display if the set value is too large. The range is 8 to 2048 MB. The default is 128 MB. ***Note:*** *This parameter is not applicable for vDAGs.*
MinStreamBufferSizeMB	Enables the user to specify the *minimum* amount of system memory (in megabytes) that will be allocated to accommodate all stream buffers. Must be less than or equal to *MaxStreamBufferSizeMB*. The range is 8 to 2048 MB. The default is 16 MB. ***Note:*** *This parameter is not applicable for vDAGs.*
Use64BitDMA	Enables the user to specify whether 64-bit DMA should be used for transfers. Determines the location of the stream buffer: • Set to **True** if you would want the stream buffer location to lie anywhere within the 64-bit address space. • Set to **False** if you would want the stream buffer location to lie within the lower 4 GB. The default is "false" (32-bit DMA). This option changes color if other settings for this DAG card conflict. ***Note:*** *This parameter is not applicable for vDAGs.*

PermitPhysicalDMA Addresses	Enables the user to specify whether to use raw physical memory for DMA transfers rather than the standard Windows DMA adapter. This is an option for advanced users. When enabled it can give you greater control over where the memory is allocated. Consider using this option if you have trouble acquiring sufficient memory using the standard DMA adapter. • Set to **True** to use raw physical allocation. This gives you greater control over where and how the memory is allocated but is also architecture dependent. If you are reasonably certain that your system equates physical addresses with logical (bus) addresses then you can use this option. Allow you to specify PhysicalCeilingGB, PhysicalFloorGB and PhysicalNUMANode. • Set to **False** to use the Windows DMA adapter. The default is False. ***Note:*** • *The driver will override your request if it detects that logical addresses differ to the physical addresses. You can verify how the memory was allocated by checking the value of DMA Addresses.* • *This parameter is not applicable for vDAGs.*
PhysicalFloorGB	Enables the user to specify the lowest allowable memory address (in gigabytes) for physical allocations. Instructs the driver not to allocate physical memory *below* this address (in Gigabytes). Can be used as an alternative method of NUMA node selection on Windows Server 2003. The separate dagsrat tool can be used to help you identify the appropriate memory regions. For further details, see dagsrat (page 20). The range is 0 to 1024 GB. The default is 0 GB. **Color changes** • When the *PermitPhysicalDMAAddresses* option is set to **false**, this option is not used and gray's out. • When the *Use64BitDMA* option is set to **false** and this option is set to a value greater than 4 GB it will display in red. ***Note:*** • *If you select a value greater than 4 GB then make sure you have also specified the use of 64-bit DMA.* • *This parameter is not applicable for vDAGs.*
PhysicalCeilingGB	Enables the user to specify the highest allowable memory address (in gigabytes) for physical allocations. Instructs the driver not to allocate physical memory *above* this address (in Gigabytes). Can be used as an alternative method of NUMA node selection on Windows Server 2003. The separate dagsrat tool can be used to help you identify the appropriate memory regions. For further details, see dagsrat (page 20). The range is 0 to 1024 GB. There is no default value. The value set for each DAG card is determined by the system. **Color changes** • When the *PermitPhysicalDMAAddresses* option is set to **false**, this option is not used and gray's out. • When the *Use64BitDMA* option is set to **false** and this option is set to a value greater than 4 GB it will display in either orange or red. ***Note:*** • *If you select a value greater than 4 GB then make sure you have also specified the use of 64-bit DMA.* • *This parameter is not applicable for vDAGs.*

PhysicalNUMANode	Available in Windows Server 2008 only. Enables the user to specify the desired NUMA node for physical allocations. Instructs the driver to allocate physical memory on the specified NUMA node. Only available on Windows Server 2008. The default is "not specified". **Color changes** • When the *PermitPhysicalDMAAddresses* option is set to **false**, this option is not used and gray's out. ***Notes:*** • *Ensure you do not specify conflicting values for the PhysicalFloorGB and PhysicalCeilingGB – best to have those at 0 and maximum respectively.* • *On NUMA architectures the daginf tool can be used to identify the node that the stream buffer was actually allocated on.* • *A similar behavior can be accomplished through the settings for the physical ceiling and floor.* • *This parameter is not applicable for vDAGs.*

Updating the Software

From time to time Endace may release updates to the DAG software.

For details of the new release, read the accompanying release notes and documentation prior to installing.

If you have a support contract with Endace you can access updates using your Support account login at http://www.endace.com.

Windows

To update the DAG software on a Windows system, complete the following steps:

1. Uninstall the existing DAG software.
   See Uninstalling the Software (page 12).
2. Install the new version of DAG software.
   See Install the Software (page 3).

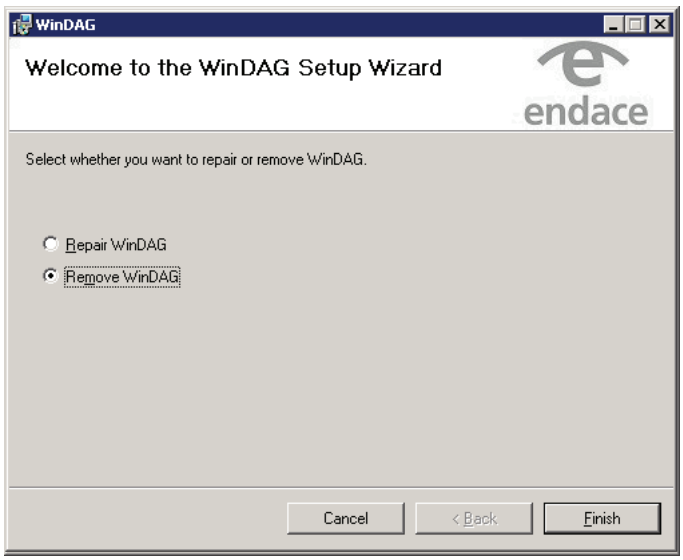
Note:
Updating DAG driver will cause disabled DAG cards to be enabled.

Uninstalling the DAG Software

You can uninstall the DAG software in one of the following ways:

Note:
Uninstalling the DAG software does not uninstall the DAG drivers.

- Windows Server 2003
  Using Control Panel > Add or Remove Programs.
  Select the WinDAG application and select Remove.
- Windows Server 2008
  Using Control Panel > Programs and Features.
  Select the WinDAG application and select Remove.
- Using daguninstall tool.
  Run this tool from the command prompt and follow the on-screen instructions.
- Using the installer.
  a. Locate the supplied DAG software.
  b. Go to the folder that matches your Windows operating system.
  c. Run setup.exe.
  A screen similar to the following displays:



  d. Select *Remove WinDAG* and click Finish.
  The DAG drivers are unloaded.
  e. Click Close to exit.

Uninstalling the DAG drivers

You can uninstall the DAG drivers using the Windows Device Manager.

- Right-click on the DAG card and select Uninstall.

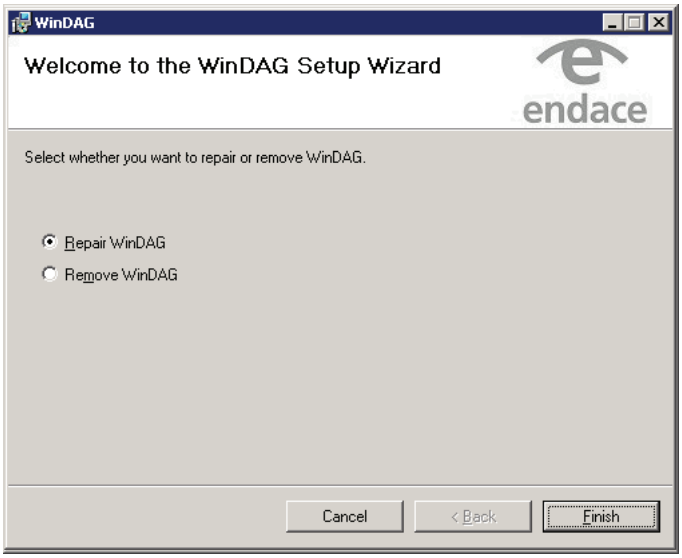
Note:

- *Uninstalling the DAG drivers does not uninstall the DAG software.*
- *Using this method deletes the configured device parameters.*

Repairing the DAG Software

You can repair the DAG software files in the event that one or more becomes corrupted for any reason.

1. Locate the supplied DAG software.
2. Go to the folder that matches your Windows operating system.
3. Run setup.exe
   A screen similar to the following displays:



4. Select *Repair WinDAG* and click Finish. The existing files are overwritten.
5. Click Close to exit.

Non-operational DAG cards

If the driver for a DAG card fails to load it is non-operational. It displays as a solid red dot in the DAG Devices tool.

A non-operational driver is quite often caused by insufficient resources. The driver cannot allocate sufficient memory for the stream buffers. This can occur when the memory in your system has become too fragmented, or you have requested too much memory.

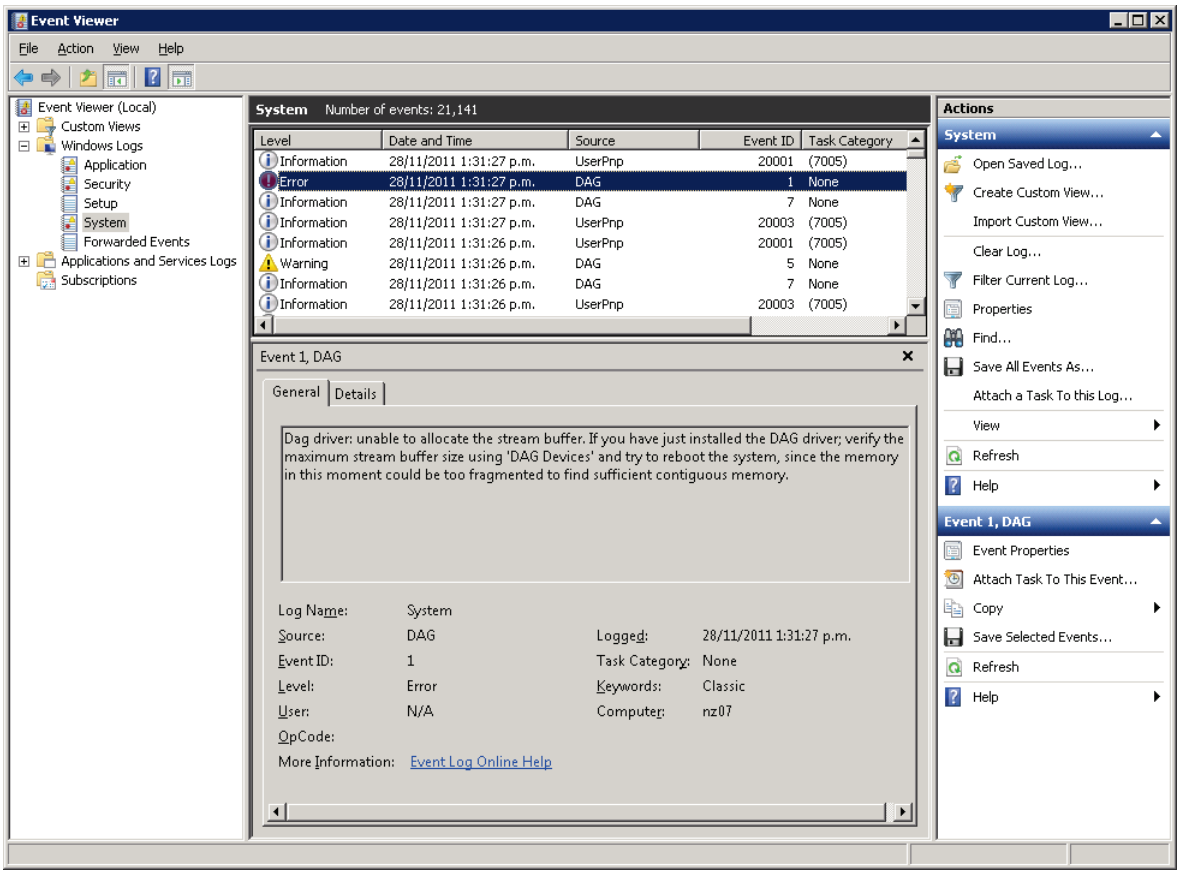
If you have a non-operational driver scan for errors or warnings in the system event log. Correct any issues then restart your computer.

If you find that the driver is not operational, check there are no errors or warnings in the Windows system event log (page 14).

If no errors or warnings were logged then check the device status using the Windows Device Manager (page 15). It is possible that you have a corrupt installation where Windows was unable to load the driver for security reasons. Try uninstalling (page 12) and reinstalling (page 3) the software.

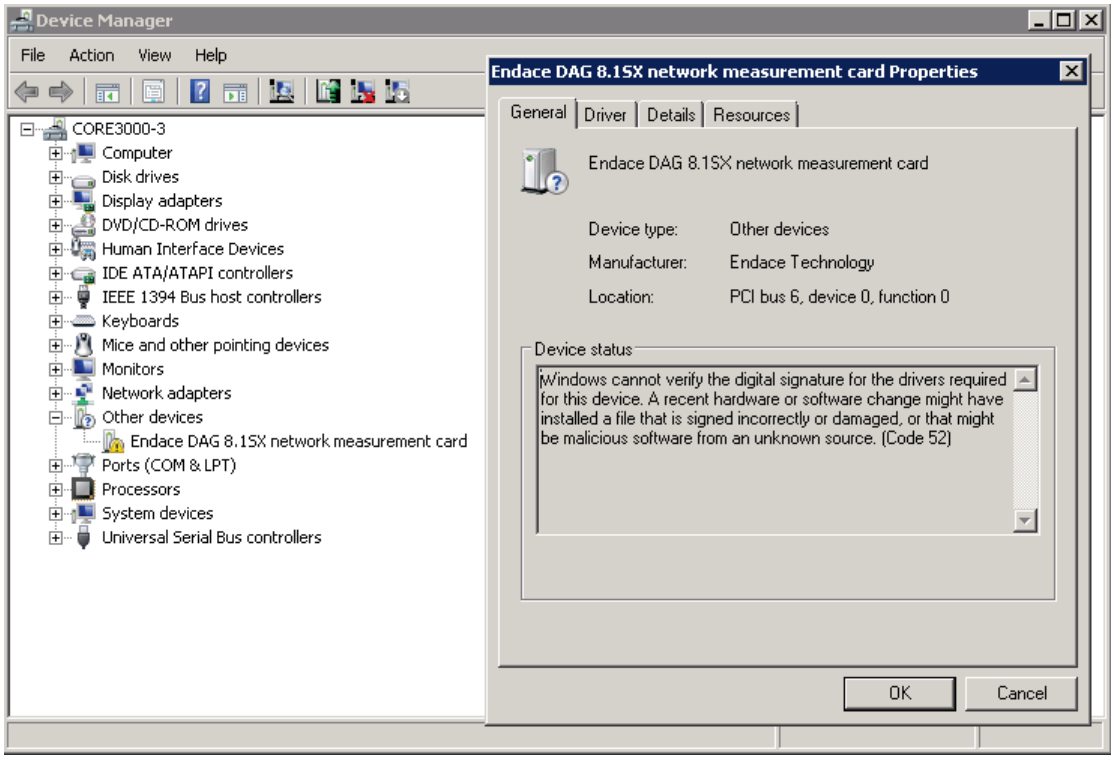
Windows system event log

If the DAG driver is non-operational check the Windows Event Viewer (eventvwr.exe) for further details. It will help you identify any errors and warnings associated with the configuration of the DAG cards.



Windows Device Manager

If the DAG driver is non-operational you can gain further information by using the Windows Device Manager.



Notes:

- *If you uninstall a DAG card using the Windows Device Manager, all associated parameters are removed from the registry.*
- *Use the Windows Device Manager to disable DAG cards if required.*

Configuring DAG cards

Differences between Windows and Linux installs

With the following few exceptions, everything about using the DAG software and API in the Linux and Windows environments are the same:

- The registry editing capabilities of DAG Devices replaces the functionality of Linux's dagmem and dagload.
- winpcap replaces libpcap.
- In Windows, dagclock operates differently from the Linux equivalent.
- Only DAG tools applicable to the supported DAG cards are available in this release. For a list of supported tools see the following list.

Supported DAG tools in Windows

The following is a list of the DAG tools supported under the Windows operating system.

• dagbits	• dagdetect	• dag_irigb	• dagsort
• dagcat-setup	• dagfilter-loader	• dagpps	• dsm_loader
• dagclock #	• dagflood	• dagreset	
• dagconfig	• daggen	• dagrom	
• dagconvert	• daginf	• dagsnap	

Notes:

- *# - These DAG tools operate differently from the Unix equivalent.*
- *dagdetect runs automatically each time the WinDAG Command Prompt window opens.*

- *For further details about these DAG tools, refer to the* DAG Card User Guide *applicable to the DAG card you are using.*

Windows only DAG tools

The following DAG tools are available only within the Windows environment:

- DAG Devices - replaces the functionality of dagmem and dagload.

  For further details see DAG Devices (page 18).
- dagsrat - an information tools that allows the user to view the ACPI Static Resource Affinity Table if it exists on the system where the tool is run.

  For further details, see dagsrat (page 20).
- daguninstall - Correctly uninstalls the dag software (forcing it if necessary).

Accessing DAG tools in Windows

Once the DAG software is installed you can start to use the DAG tools via a command prompt.

Windows Server

To access a command prompt in the Windows Server operating system(2003 or 2008), use the WinDAG Command Prompt tool. This tool opens a command window in the appropriate directory. The window is configured to display a wider than normal command window with orange text.

WinDAG Command Prompt

The WinDAG Command Prompt tool opens a custom command window which enables you access to the supported DAG tools. It opens in the directory containing the DAG tools.

When the WinDAG Command Prompt tool opens it:

- provides a wider command window in order to see the DAG tool outputs.
- automatically displays details about the installed dag> cards.

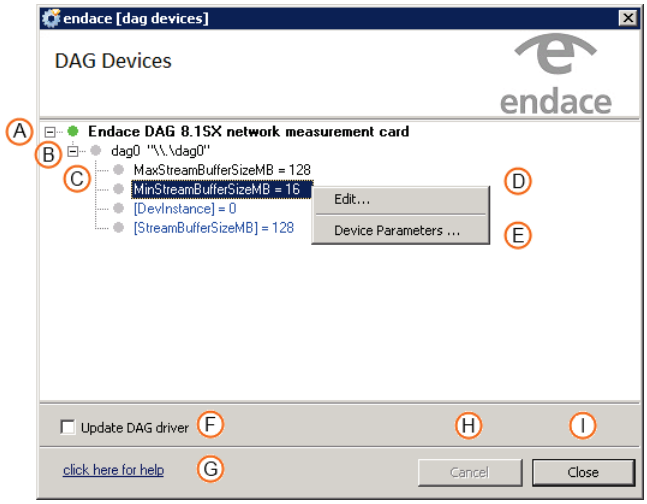
Note:
The DAG tools use the Unix style operands, i.e. they use "-" instead of "/".

DAG Devices

The DAG Devices tool allows user editing of the Windows Registry entries that are used by the DAG drivers. It enables you to view and modify the DAG card parameters on an individual basis and update/restart the driver. Any changes do not take effect until the DAG driver restarts, which is normally after a reboot if you did not elect to update the driver.

In general, the registry editing capabilities of the DAG Devices tool replaces the functionality of Linux's dagmem and dagload in Windows operating systems.

Note:
Only applicable when the host operating system is Windows.



	Description
A	The highest level of the tree displaying all DAG cards detected on your system. **Dot color** / **Description** Green: Indicates the driver associated with this DAG card is installed, updated and operational. Yellow: Indicates the driver associated with this DAG card has not been updated and/or installed. Red: Indicates the driver associated with this DAG card is installed and updated but is not operational. This means the driver has failed to start. For further details see Non-operational DAG cards (page 14).
B	The second level of the tree showing the DAG card device IDs for the system. If a DAG card is not operational and the system cannot determine the device ID it will show "<?>".
C	The third level of the tree shows the device parameters of the selected DAG card. Right click on any of these to bring up the context menu. Items shown between square parentheses are informational only and cannot be edited. Parameters that are not used when other parameters are disabled may appear grey. For further details, see Editing device parameters (page 8).
D	The Edit... option enables you to edit the selected device parameter. For further details, see Editing device parameters (page 8). ***Note:*** *vDAG parameters cannot be edited as vDAG resources are configured on the EndaceProbe.*
E	The Device Parameters... option enables you to add and remove device parameters. For further details, see Editing device parameters (page 8). ***Note:*** *vDAG parameters cannot be added or removed as vDAG resources are configured on the EndaceProbe.*
F	Check this option to update the DAG drivers for all listed DAG cards. Each time you update the DAG drivers any existing DAG drivers are stopped. Use this option with care as it can lead to system memory fragmentation. If system memory fragmentation has occurred reboot the computer.

G	Click to open the online help.
H	The Cancel button is only enabled when you have selected to update the DAG driver. It allows you to cancel the DAG driver updated.
I	Close / Next button. Close button - closes the application. Next button - starts the DAG driver update.

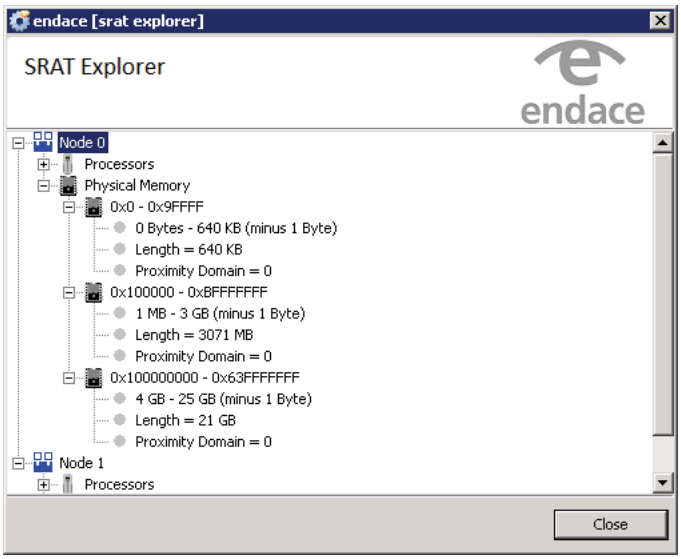
dagsrat

dagsrat allows the user to view the ACPI Static Resource Affinity Table if it exists on the system where the tool is run.

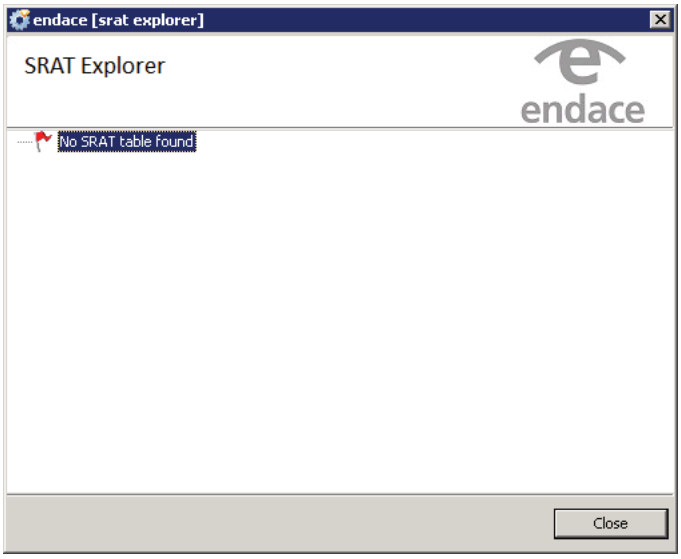
It identifies regions of memory and their relationship to a NUMA node.

It is useful on Windows Server 2003 because the user cannot specify the NUMA node for the stream buffer. They can however, alter the ceiling and floor for physical allocations in order to target a specific NUMA node. The dagsrat tool assists the user in identifying the appropriate regions of memory.

If the system is able to determine the NUMA code for the stream buffer, a screen similar to the following displays:



If the system is **unable** to determine the NUMA code for the stream buffer, a screen similar to the following displays:



Note:
The dagsrat tool is not applicable to vDAGs.

Support

This section describes how to access Endace Support for your Endace product.

Existing support documentation

To start, we recommend you visit the Endace Support website at https://support.endace.com/.

If you have a support contract with Endace you can login using your support username and password which provides access to the secure area of the website. The website contains the latest versions of software, user manuals, and release notes.

For more information about the Endace Support Package, or how to obtain (or change) your secure support website login details, please contact support@endace.com.

Endace Support is available 24 hours, 7 days.

Updates

Many problems can be resolved by updating your software or firmware. Updates are also available on a regular basis from the Endace Support website at https://support.endace.com/.

Further support

If your query is not answered by the existing documentation, or if the issue is not resolved by an update, feel free to raise a Support Case via the Endace Support website https://support.endace.com/.

If you have a **critical issue**, please call. See Contact Details (page 23).

Requesting assistance

To request assistance from Endace support, complete one of the following:

- If you have successfully installed the DAG software on a Linux based system (except FreeBSD):
  a. Run the Support Script (page 22) to gather system and DAG Card setting information.
  b. Attach the output file to an email containing the Required information (page 22) and a Severity level (page 23).
  c. Send the email to support@endace.com.
- If you have an alternative operating system or your DAG software has not been installed successfully:
  a. Fill out the Support Request Form (page 23).
  b. Submit the form.

Support script

To help gather important information on your system and DAG Card configuration, a tool is included in your DAG software. This tool can only be used on Linux based systems (except FreeBSD) and collects the following information:

- Installed DAG card(s)
- DAG card configuration(s)
- Operating system/kernel version
- Motherboard/RAM

To run this tool, use this command from the install location:

```
sh dag-stats.sh
```

This tool outputs a file called `dag-test.log` to the current directory.

Note:
Please check the contents of `dag-test.log` *and remove any information which you feel is sensitive.*

Required Information

The following information is always required by Endace Support when creating a Support Case:

1. Product description and serial number.
2. Your name.
3. Your email address.
4. Your phone number(s).
5. Your organization.
6. Your organization's full address, including physical and postal information, courier delivery information, region and country.
7. Detailed description of the query / issue.
8. Detailed description of your product environment.
9. System dump or logfile.
10. Severity level.

Severity levels described

A severity level is always required by Endace Support when submitting a Support Request. Please remember to add a severity level to every Support Request. The following list describes each of the severity levels.

Severity 1: Critical

Short Description: **Service completely unavailable (production networks only).**

Full Description: The Endace product is completely unavailable and there is no workaround. Service needs to be restored immediately.

Severity 2: High

Short Description: **Severely degraded service.**

Full Description: The Endace product is severely degraded and there is no workaround, the product performance is at unacceptable levels.

Severity 3: Medium

Short Description: **Performance impaired.**

Full Description: System performance is degraded, with a workaround in place. Operational performance of the product is impaired but acceptable.

Severity 4: Low

Short Description: **General assistance.**

Full Description: The customer requires assistance on the use of the Endace product, but the issue does not affect service.

This severity level is appropriate if the customer requires assistance on installation, configuration, feature requests, general capability and product questions.

Endace Support will endeavor to resolve the problem as quickly as possible. If a workaround can be achieved in a short time, it will be applied, and the priority of the case lowered while Endace Support works on implementing a more permanent solution.

Note:
Reports subsequently made available about the case will reflect the priority of the case at the time of ***closing****, and not the priority of the case when it was raised.*

Support request form

Endace has an on-line form that assists in gathering information for your support request.

The URL is: https://support.endace.com/RequestAssistance.aspx

Contact details

Endace contact details:

Email:	support@endace.com
USA:	1866 558 4936
UK:	0800 028 9321
Australia:	1800 144 708
New Zealand:	+64 9 366 3442
Website:	https://support.endace.com/

Version History

Version	Date	Reason
1	December 2011	First release, based on EDM04-01

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