

# VOSS Insights Windows Forwarder Install Guide

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# 1. Introduction

VOSS Insights Windows Forwarder (the Forwarder) is an application that runs on a Windows server or workstation and monitors the system activity.

Information is passed along to the primary and/or secondary Forwarder indexing engine.

The Forwarder is an NT service and is supposed to start automatically each time the operating system is started.

The Forwarder is capable of monitoring any activity, either directly by watching for Registry changes, SNMP traps, event logs, Performance counters, and application logs, or indirectly by executing commands and SQL queries for any ODBC compliant database.

## 2. Install Windows Forwarder

To install VOSS Insights Windows Forwarder, run the following file (which is included in the installation package): setup.exe

Setup installs the Visual C++ runtime environment, then proceeds to run setup.msi, which will display all of the installation dialogs, prompting for the target directory as well as the installation locale parameters, IP address of Arbitrator (or Dashboard) and it's port number.

**Note:** If VC++ runtime environment is already installed, there is no need to run setup.exe. In this case, you can execute setup.msi directly.

You can also execute the setup in "silent mode", without displaying the GUI, by running:

The installation includes the Forwarder, the configuration application, and all system components required to make both applications run.

The installation configures the Forwarder as an NT service. All the shortcuts required to launch the configuration application are also created.

The installation collects the minimum amount of information required (i.e. IP address of local monitoring appliance). All the additional information can and should be added later using the configuration program.

The Forwarder is fully functional after the installation and should be up and running when the system is rebooted. It can also be started from the configuration application.

# 3. Configure Windows Forwarder

### 3.1. Overview

The VOSS Insights Windows Forwarder configuration application provides a graphical user interface (GUI) for configuring the Forwarder. All settings are saved and retrieved from the Windows registry.

The current version of the Forwarder has multiple sources of data, including Windows event logs, files and disk space, Windows Registry, Event logs, Performance counters, Windows Services, Database queries, as well as the output of various commands.

The configuration application design reflects these data sources. For example, parameters for configuring the Forwarder are found in the **Forwarder** tab.

The main pane of the application displays the VOSS logo.



You can click an icon in the menu tree to edit any of the settings.



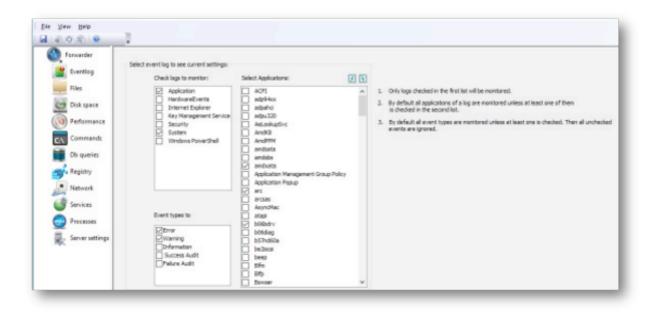
**Note:** The GUI toolbar is activated when any screen displays a list of items (files, commands, queries). You can either use the toolbar buttons or right-click in the list to display a drop-down menu.

### 3.2. Event Logs

The Event logs tab displays all the event logs available on a current system. Those logs that are selected for monitoring are checked.

Forwarder Counties Files Files Disk space Commands Commands Commands Commands Registry Registry Registry Services Processes Processes Services	Select event log to see current settings: Check logs to monitar: Application Intervet Explored Key Management Service Security System Windows PowerShell Elent types to Dror Winning Success Audt Police Audt	Select Applications:  AET Runtime Distribution Service Application Application Application Service Control Cotton Cott	2 <b>3</b> •	<ol> <li>Only legs dieded in the first list will be monitored.</li> <li>By default all applications of a log are monitored unless at least one of them is directed in the second list.</li> <li>By default all event types are monitored unless at least one is checked. Then all unchecke events are ignored.</li> </ol>
---	---	--	--------------	---

You will need to click on a specific event log in the **Check logs to monitor** list to view the selection for that log:



For each log, one or more of the five event types can be selected by checking the appropriate box in the **Event types to monitor** list.

By default, events of checked types are being monitored for all the applications in the system. You can select only those applications that have to be monitored by checking appropriate boxes in the **Select applications** list.

To summarize:

The Forwarder has three levels of configuration for event logs:

- 1. Select only those event logs that are of interest.
- 2. Select only specific event types for each log.
- 3. Select applications for each log.

This granularity is intended to reduce traffic between the Forwarder and the local Arbitrator/Dashboard appliance, and make troubleshooting easier.

### 3.3. Files

The Forwarder can monitor both flat files and named pipes. Each monitored file has to be added using the configuration program by clicking on an **Add** button.

Files already in the system can be reconfigured by right-clicking on a specific line. The pop-up menu, which displays after right-clicking on a line, allows you to remove the file altogether or change its settings.

To stop monitoring a specific file, you don't need to remove it; just uncheck the relevant checkbox.

Forwarder File	Path
🗹 dumbo	El\gctilogs\Tserver
Eventlog jumbo	E:\gctilogs\Tserver
Files simba	E/\gctilogs\Tserver
Statserver_log	E:\gctilogs\Tserver
Disk space Tserver_log	E:\gctilogs\Tserver
Performance Commands	
Db queries	
Registry	
Network	
Services	
Processes	
Server settings	

The same dialog box displays for both *new* and *updated* files.

Forwarder	Lasted assess					
	Logical name:	dumbo				
Eventlog	Monitor file with static name:					
Files		Tt's a named pipe				
Disk space	When configuring the pattern please select directory first.					
Performance	You can the select a file and edit it b			with an asterisk (*).		
Commands	Monitor file with the name pattern:	E-loctions/Teapuer				
	In directory:					
Db queries						
Registry	Report each new line	Report only if line contains any of the keywords:     SendStats     PrintStats     Clear				
Network	Report odd numbered lines					
Services	<ul> <li>Report even numbered lines</li> <li>Whole file</li> </ul>					
Processes	Report if there is no activity in:	5	minutes			
Processes						
Server settings						
	Send data to Arbitrator (prime)		Send data to Art	bitrator (failover)		
	IP address:		IP Address:			
	Port number: 5000		Port number:	5000		
	Connection	•	Connection	UDP •		
	* By default all file data will be sent to	Arbitrator(s) conf	foured on application le	vel.		

- Logical name Should describe the origin of the file. Its contents are completely up to the person configuring the application.
- **Monitor file with static name** click the Browse button adjacent to the field to select the file (even though file name can be typed in). The Browse button provides the opportunity to automatically populate the field with the file name and the directory name.
- Monitor files with name pattern Applies to a situation where the program creates a series of traces (files) in a specific directory, with a specific naming pattern. To configure monitoring of these files, click the Browse button adjacent to the field and select one of the files (it doesn't matter which one). The system tries to find all or the instances of the files with a similar name. The resulting string should be fine tuned by the user. The permanent part of the name should be left intact and the variable part replaced by the \\*.

On this screen you can also choose which lines from the file will be processed. The selection can be applied based on sequential line numbers (all lines, odd lines, even lines), and based on specific keywords found in the line. The first option will handle traces where each line's text description is followed by the line with a hexadecimal representation of data. The line is selected if any of the keywords in the list is found.

To update the File settings, right-click on a file and select Update File:

Remove File Actillary Treaver	Forwarder 🏠	File		Path
Statserver_log Update File :\gctilogs\Tserver	Eventlog Files	iumbo simba	Remove File	:\gctilogs\Tserver :\gctilogs\Tserver

### 3.4. Disk Space

The Disk Space tab displays information about all the logical drives, along with their maximum capacity and current utilization. It allows you to set an acceptable free space limit for each device. The Forwarder raises an alarm once the limit is reached. The free space may be set as either a percent of total capacity or an explicit amount of space in megabytes.

Eile View Help				
Forwarder		Check drives every	I minimu 🗖	
Eventlog		check drives every	1 minutes 🔹	
Files	Name	Total space (MB)	Free space (MB)	Acceptable free space
		463105764	360847620	
Disk space	D:	23165948	2815008	
	E:	668992	0	
(N) Performanc				

The last option on this screen relates to reporting absence of activity in the current file to the local monitoring appliance. There are situations when we can presume that a specific application is malfunctioning if it is not writing anything to the trace. This option would allow us to raise a red flag under these circumstances.

### 3.5. Performance Monitoring

The Performance Monitoring tab displays all performance counters currently monitored by the Forwarder. When the configuration application is first launched, the list includes all predefined counters.

Forwarder	-		
Eventlog		Report stats en	very 15 seconds 🗘
Files	Туре	Counter	Instance
No.	Memory Memory	Available MBytes	
Disk space			Add Performance item
V) Performanc			Remove performance item
Commands			
Db queries			

The Performance Monitoring program collects the list of all the counters available and saves them in a list that serves as a basis for adding new counters:

Forwarder					
Forwarder	B-%C1Time ^		Type	Counter	Instance
Eventlog	% Idle Time     OPC Rate		-		
Files	DPCs Queued/sec     H     % Interrupt Time				
Disk space	% DPC Time     interrupts/sec	>			
Performance	% Privileged Time     % User Time	<			
Commands	% Processor Time     Total		-		_
Db queries	- 0,_Total - 0,7				_
Registry	-0,6 -0,5				
* Network	-0,4 -0,3				
Services	-0,2				
Processes	- 0,0 B-Event Tracing for Windows Sessic				
Server settings	Per Processor Network Activity C:     Per Processor Network Interface     Oistributed Routing Table     Netlogon				
	B-Netlogon B-Windows Media Player Metadata				

Click the right-pointing arrow (>) to add a selected counter to the list. Click the left-pointing arrow (<) to

remove it from the list.

### 3.6. Commands

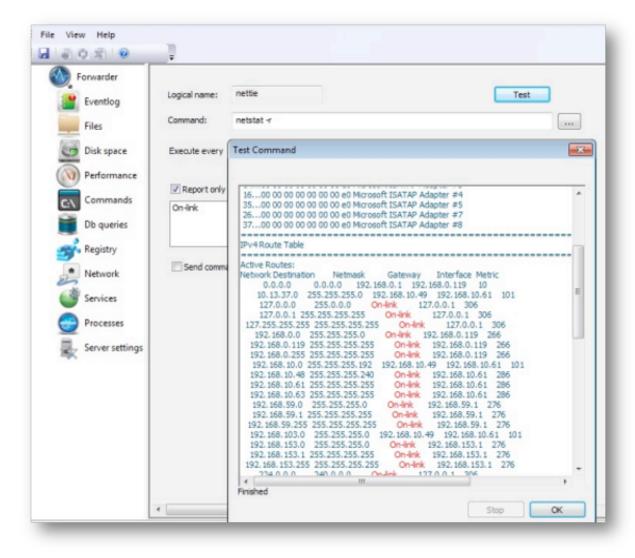
a 🕯 🗘 🛣 🔍		
C: Commands ^	Name	Command
Db queries		Add Command
式 Registry		
Network		
Services		

The image shows the dialog that displays when adding a new command or when modifying an existing command:

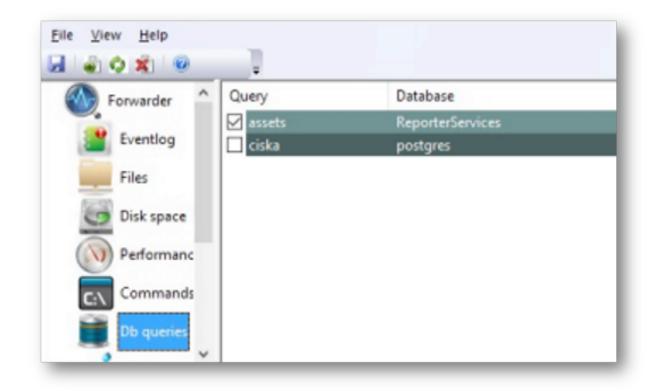
Ele View Help	1				
Forwarder Eventlog Files Disk space Performance Commands Db queries	Logical name: Command: Execute every	bobolink type c'ipoboxipqiout 60 • sec ines containing any of th	ands	Test Cutput is a CSV file First line contains column names Delimiter:	If output is in CSV format and first line contains column names, we will try to format output as <column name=""> : <column value="">. If 'send output one line at a time' is checked resulting data will resemble the SQL query output.</column></column>
Network Services Processes Server settings	Send commi	and output one line at a t	ine	Save Cancel	

Special features have been added to handle the output from commands that produce CSV file types. It is strongly recommended that you select **Send command output one line at a time** for CSV formatted files

since data sent to the Arbitrator server will closely resemble the result of a SQL query. Each command must be tested before it is added to the configuration. To do this, click the **Test** button:



### 3.7. Database Queries



The Forwarder is able to run queries against any ODBC compliant database at defined intervals, and to stream the results of the query to the Arbitrator server.

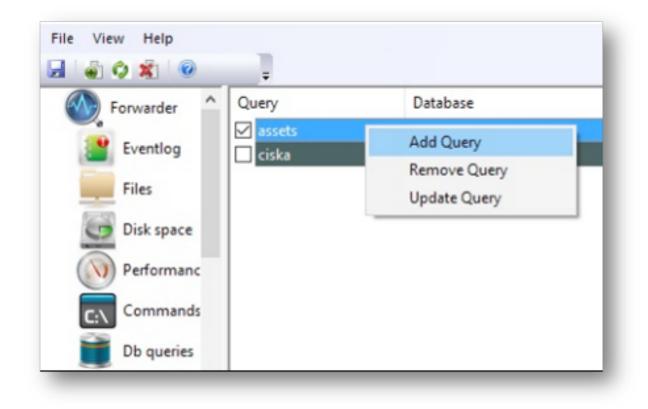
To configure a query, the local system must have an ODBC driver installed and a system DSN configured. The Forwarder has been tested against multiple databases, including Microsoft SQL server, Postgres, and Intersystems Cache.

Since the Forwarder is a 32 bit application it will use 32 bit drivers and related DSN-s that can be checked by executing:

C:\Windows\SysWOW64\odbcad32.exe:

Name	Version	Compan
Microsoft dBase Driver (*.dbf)	6.01.7601.17632	Microsof
Microsoft dBase VFP Driver (*.dbf)	1.00.02.00	Microsof
Microsoft dBase-Treiber (*.dbf)	6.01.7601.17632	Microsof-
Microsoft Excel Driver (* xls)	6.01.7601.17632	Microsof
Microsoft Excel Driver (*xls, *xlsx, *xlsm, *xlsb)	12.00.6650.5000	Microsof
Microsoft Excel-Treiber (*xls)	6.01.7601.17632	Microsof
Microsoft FoxPro VFP Driver (*.dbf)	1.00.02.00	Microsof
Microsoft ODBC for Oracle	6.01.7601.17514	Microsof _
•		•
An ODBC driver allows ODBC-enabled p ODBC data sources. To install new drive program.		

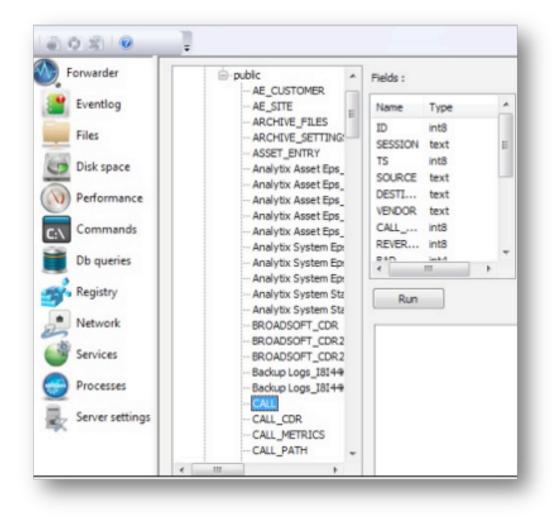
To configure a new query, select Add Query, which displays a list of all existing ODBC data sources:



Choose a data source and click **OK**.

Sele	ect ODBC [	Data Source		×
Pa Pa Ri te	almCoast almierCoast ostgres eAct estsql treme Samp	le Database	2008	
	reme samp	ie Database	2006	
L		OK	Canc	

The system attempts to connect to the database to retrieve information about its tables and views that will be displayed on the following screen in the leftmost window.



You can extend tables and views to see the database architecture. The tree structure will depend on the database layout and schemas (when applicable). Clicking on a table or view displays all the fields and their types:

	-broadsoft_odr_vers A -broadsoft_odr_vers	Fields :	SQL statement:						
Eventiog Files Files Disk space Disk space Commands Commands Dis queries Registry Registry Network Services Processes Eventses Server settings	<ul> <li>ankasitat (NUO)</li> <li>ank</li></ul>	Name Type A computer workar site workar site workar site workar site workar site workar op.rst vandar op.st Rum Rum Rum Rum Rum Rum Rum Rum Rum Rum	03.117 VM2008R2 03.117 Avaya	Avana W HOME W North Building W	o, system Indons 32 Pro Indons Serve Indons 57 US	pland duts duts duts duts	profile agitorific.cfg agent.cfg dHUL>	command getprofile getprofile getprofile dBLL>	ond_eci 0 1 0 0
		6							

The SQL statement should be typed in the third window. Clicking **Run** triggers an execution of the statement and displays the result of the query.

There are three options for executing the SQL query:

- 1) every "xxx" seconds as defined on configuration screen above
- 2) only once (which may be used to import large amount of data)
- 3) based on a schedule that can be configured by pressing the "Schedule" button

The first screen allows you to choose the schedule mode:

002					× _
Forward					
Eventk	When would	d you like query to b	e executed ?		
Files	Daily	() Weekly	() Monthly		
Disk sp					
Perfor					
C:\ Comm					
Db que					
<sub> Registr</sub>					in
Netwo					
Service					
Proces				a Banda - Manda a	Cruzi
Server				< Back Next >	Cancel

When using a daily schedule, the query is executed starting at the date and time selected, and repeated the same time every n days, based on the configuration:

	Daily schedule:				
Start	3/14/2016		3:38:43 PM	A V	
Repeat	every 1	days			
				< Back Fini	sh Cancel

	Weekly sched	ule:			
Start	3/14/2016		3:39:23 PM	A.	
Repeat	every	wee	ks		
Mor	day 🔲 Tues	day 🕅 Wednes	day 📄 Thursday	Friday	
			day 📄 Thursday	Friday	
		day 🔲 Wednes ] Sunday	day 📄 Thursday	Friday	
			day 🔲 Thursday	Friday	
			day 🔲 Thursday	Friday	
			day 🔲 Thursday	Friday	

When using a weekly schedule, the query executes on the days of the week selected:

When using a monthly schedule, you can select months and dates of the month:

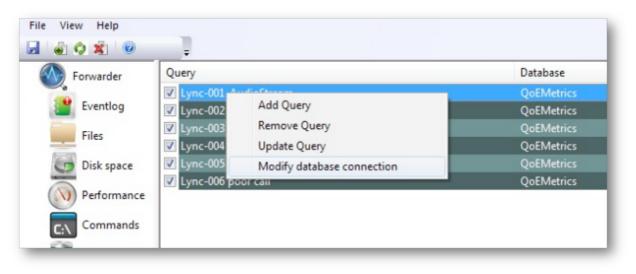
	Monthly schedule:					
Start	/14/2016		3:39:58 PM	A V		
Months		•				
Days		•				
				< Back	Next >	Cance

Monthly schedule:			
Start 20/2016	7:00:00 PM	(2)	ere;
	Cales		
Manth *	2 2 2	17 25 28 28 19 27	
Z January		19 27 20 28	
April	5 13 6 14 7 25	20 28 21 29 22 30 23 31	
May		8	
		,	
			aritem
		< gask Pinish Cancel	
Server settings	- Guildentert_RANDOH. - Rites -	74 Wdbouery_assets_Av 75 Wdbouery_assets_Av	
	4 <u>8</u> 1	6 Badop Logs_fiter 7 broadspft_cdr_vension	BACKUP_STATUS*
		A hundraft als reacted	
		Records :38	
	Query should be executed every	30 econds Query Logical	unitresult to 100 records

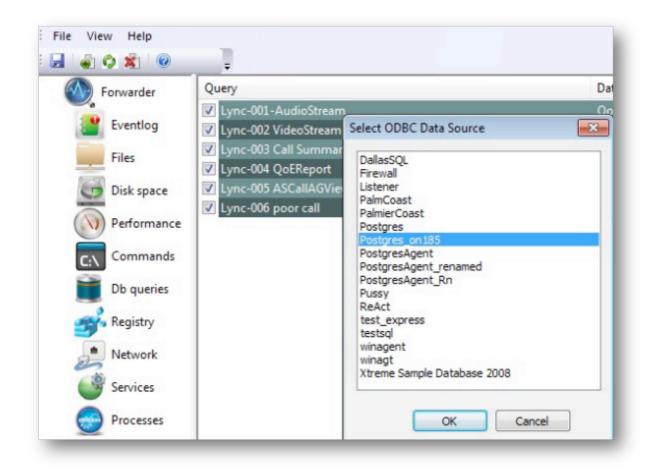
#### Modifying the query with a new database connection

You may need to modify the database connection for an existing query after importing the resulting data on a machine different from the one where the query was originally configured.

Since the database connection is embedded in the overall query information, a special mode was added to handle this situation:



Selecting **Modify database connection** displays a list of available DSN-s. These are presented in the same way as if the query is being created from scratch:



Once a DSN is selected, the application shifts to a single query view that combines SQL and scheduling data from previously existing query and new database connection:

Forwarder	-Database (ReporterServices)  -Tables	Fields :	SQL statement:
Eventlog Files Disk space	- Vevs	Name Type	select * from AudoStream where datedff(ss,ConferenceDateTime,getutcdate()) <=300
Performance			
Db queries			
Registry		Run	
Network			
Services			
Processes			
Server settings	Query should be executed every	300 seconds	Query Logical name: Lync-001-AudioStream Limit result to 100 records

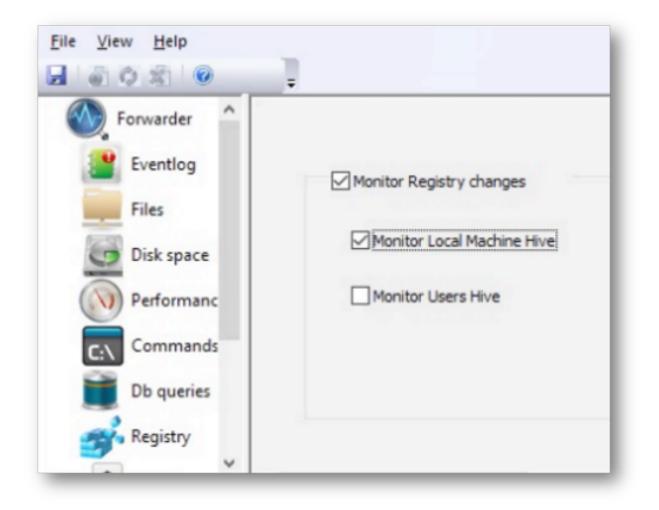
When saving the modified query, a list of queries will now reflect the new database information:

🗟 🗘 🛣 🔞	-	
Forwarder	Query	Database
	✓ Lync-001-AudioStream	ReporterServices
Eventlog	✓ Lync-002 VideoStream	QoEMetrics
Files	Lync-003 Call Summary	QoEMetrics
rites	✓ Lync-004 QoEReport	QoEMetrics
Disk space	✓ Lync-005 ASCallAGView	QoEMetrics
	✓ Lync-006 poor call	QoEMetrics
Performance		
C:\ Commands		
Db queries		

### 3.8. Registry

A separate service (which runs in tandem with the Forwarder), performs registry monitoring.

Registry monitoring can be enabled or disabled and you can specify what hives should be included.



### 3.9. Network

The Forwarder can monitor all network connections providing the same information as the netstat command, including process information. Monitoring is performed based on the configuration and will include TCP and UDP connections depending on the options you select:

Forwarder	Check every	30 seconds				
Files	Monitor TO	<sup>p</sup> connections				
Disk space	PID	Name	State	Local	Remote	
	9720	winagtcfg.exe	ESTABLISHED	192, 168, 10, 46 : 55503	10.13.37.185:5432	- 1
(N) Performance	9720	winagtcfg.exe	ESTABLISHED	192, 168, 10, 46 : 55502	10.13.37.185:5432	
	1512	Agentur.exe	ESTABLISHED	192.168.10.46:54896	10.13.37.185:5432	
Ca Commands	1512	Agentur.exe	ESTABLISHED	192.168.10.46:54895	10.13.37.185 : 5432	
	1512	Agentur.exe	ESTABLISHED	192.168.10.46:54894	10.13.37.185 : 5432	
Db queries	1512	Agentur.exe	ESTABLISHED	192, 168, 10, 46 : 54893	10.13.37.185 : 5432	
-	4	System	LISTENING	192, 168, 10, 46 : 139	0.0.0.0:0	
Registry	8396	chrome.exe	ESTABLISHED	192.168.1.8:55553	173.194.206.101:443	
Network	4584	WINWORD.EXE	ESTABLISHED	192.168.1.8 : 55548	40.113.10.78:443	
B	<					>
Services	Monitor UD	D connections				
Processes		- CONTRECTORIE				
E commission	PID	Name		Local Address	Remote Address	1
Server settings	1064	sychost.exe		192, 168, 10, 46 : 49243		. 1
	2044	mDNSResponder.exe		192.168.10.46:5353	**	
	1064	sychost.exe		192.168.10.46:2177		
	1064	sychost.exe		192.168.10.46:1900		
	4	System		192, 168, 10, 46 : 138		

## 3.10. Windows Services

The Forwarder can monitor the status of any Windows service and report it to the Arbitrator server.

	Service name				
Forwarder	Service name	Display Name	Name	File	I
Eventlog		Acronis Nonstop Backup Service	afcdpsrv	C:\Program Files	1
-	Add Service	Acronis Scheduler2 Service	AarSch2Svc	"C:\Program Files	
Files		Acronis Sync Agent Service	syncagentsrv	"C:\Program Files	
Disk space		ActiveX Installer (AxInstSV)	AxInstSV	%SystemRoot%	
- Disk spore		Adaptive Brightness	SensrSvc	%SystemRoot%	
(N) Performance		Adobe Acrobat Update Service	AdobeARMservice	"C:\Program Files	
<b>—</b>		Adobe Flash Player Update Service	AdobeFlashPlaye	C:\Windows\Sys	
C:\ Commands		Adobe LM Service	Adobe LM Service	"C:\Program Files	
Db queries		Apple Mobile Device	Apple Mobile Device	*C:\Program Files	
Db queries		Application Experience	AeLookupSvc	%systemroot%\	
Registry		Application Host Helper Service	AppHostSvc	%windir%\syste	
		Application Identity	AppIDSvc	%SvstemRoot%	1
Network					

For each monitored service, you can specify the following options:

á 🗘 🕱 🔞	÷	
Forwarder	Service name	Display name
	aspnet_state	ASP.NET State Service
Eventlog		Add Service
Files		Remove Service
		Update Monitoring parameters

Service:	aspnet_state			
Display name:	ASP.NET State Servi	ce		
Description:	Provides support for	out-of-process session states	for ASP.NET. If this s	ervice is stoppe
Dependencies:				
Path:	C:\WINDOWS\Micros	oft.NET\Framework64\v4.0.3	0319\aspnet_state.ex	ĸe
Startup Type:	Manual	1		
Send notification	n when service starts			
Send notification	n when service stops	Repeat while stopp	ed every 1	minutes
	Display name: Description: Dependencies: Path: Startup Type: Send notification	Display name: ASP.NET State Service Description: Provides support for Dependencies: C:\WINDOWS\Micros	Display name:       ASP.NET State Service         Description:       Provides support for out-of-process session states         Dependencies:	Display name:       ASP.NET State Service         Description:       Provides support for out-of-process session states for ASP.NET. If this s         Dependencies:

## 3.11. Forwarder Configuration

This page allows you to define connection information between the Forwarder and the local Arbitrator server.

Forwarder	Site				
Eventlog	Entity:	Avaya			
Files	Site:	North Building			
Disk space	Arbitrator Prime		Arbitrator Falove	r	
Performance	IP address:	10.13.37.185	IP Address:		
	Port number:	514	Port number:	5000	
Commands	Transport protocol:	UDP	Transport protoc	ol: TCP/IP	•
Db queries	Send Json encode	d data	Duplicate data	Send Json	encoded data
Registry	Reporter Database				
Network	Connection establish	ned			R
Services	Service				
Processes	Status: S	topped	Start	Autoupdate (	Settings
Server settings	V Trace to file	Trace to:	c:\traces\winagent.log		
	Tracing				

Although the configuration screen explicitly mentions Arbitrator (Correlation Server), the Forwarder can work with both the Arbitrator and Dashboard server. The ports will depend on which system the Forwarder will be connected to. In the case of Dashboard, it is preferable to send the data in JSON format.

The latest version of the Forwarder can save data directly into the Dashboard server database, if it is configured to communicate directly with the Dashboard server. Even though the configuration dialog mentions Arbitrator (Correlation Server), you can use the Dashboard IP address.

The Forwarder service will send a request to the server upon startup and upon receiving the type of the server, will change it's behavior.

To be able to write data into the Dashboard/Reporting database, the Forwarder needs a locally configured system DSN pointing at the Dashboard/Reporting database. This DSN will be created by a configuration program when it's first launched after the installation.

If the DSN has been configured and tested, a **Connection established** checkbox is selected, and the service will be set to create several "static" tables that will hold performance, eventlog, network, and process data. These tables are created by calling the REST APIs executed by the Dashboard/Reporting server. Each of these tables will be named following the same pattern, <data type>\_<site>\_<entity>, for example, evtlog\_avaya\_north building.

Tables collecting the results of database queries will be named: Wbquery\\_

This screen also provides a way to configure traces of the Forwarder service.

## 4. Save and Retrieve Settings

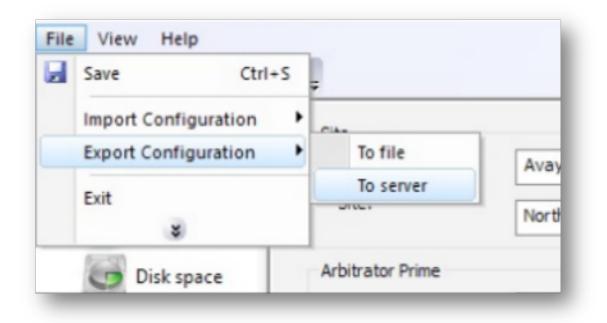
All settings for the VOSS Insights Windows Forwarder are kept in the Windows registry. They are loaded by both the Forwarder itself and the configuration program on startup.

All changes made in the configuration program are kept locally until you click the **Save Setting** button. Only then are they saved in the registry.

The Forwarder was designed to pick up the changes "on the fly" (i.e. service does not have to be restarted to make changes effective).

There are two ways to propagate the Forwarder settings:

- 1. Select **File** > **Export Configuration** > **To file** to save the settings as a file. This file can be later used to restore settings or configure different instance of a Forwarder.
- 2. Select **File** > **Export Configuration** > **To server** to upload settings to the Arbitrator server and use it as a repository for the configuration files.



The system displays the list of currently saved configuration files. You will have an option to either replace the existing file or to create a new one:

Select existing configuration: Description	Timestamp	Fie
Amontiliado This is the description for touy.txt	3/29/2016 14: 1:57 3/29/2016 13:35: 6	NorthBuil touy.txt
Or assign new name:		

The server-based repository may be used in conjunction with the Forwarder's *Autoupdate* feature, and can be configured from the same screen:

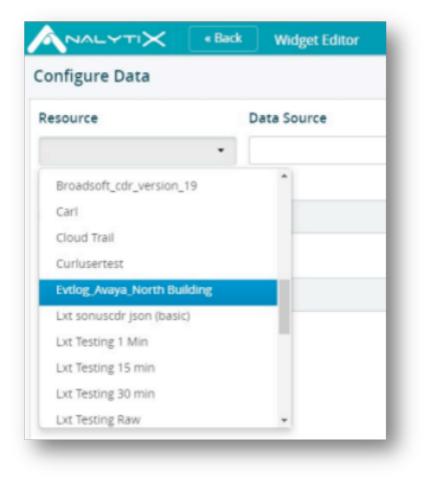
Start	✓ Autoupdate	Settings

The system displays a list of existing files. You can select the one it will use to update itself.

Server:	10.13.37.185		
File:	Description	Timestamp	Fie
	C Other	2/25/2016 14:35:42	agtconfl
	Agent config home	2/23/2016 14:53: 0	agent.cfg
	Agent config home	2/25/2016 16:40:42	NorthBu
Check ever	y: 2 hour(s)		

# 5. Reporter Integration

As described earlier, the Forwarder can send data to both Arbitrator and Dashboard/Reporting server. In the case of the Dashboard/Reporting server, the Forwarder can add certain data elements as a custom resource to be used for the widget:



The current version creates three types of custom resources for each instance of the Forwarder, where *Locale* is the "Entity" and "Site" of each Forwarder:

- Evtlog\_<locale>
- Perfmon\_<locale>
- Wbquery\_<locale>

For each instance of a Forwarder there will be one Evtlog and Perfmon source and as many Wbquery sources as the database queries configured on the Forwarder.

This feature is designed to simplify the process of creating reports and Widgets based on the data that can be easily tabulated:

	$\sim$	8 <sup>url</sup> Wina	agent test
<ul> <li>Global</li> </ul>	Filters ( 0 applied )		
Performa	nce		Θ
4 -			
Values	c	)	
>	c	, ,	
0	• Disk Reads/se	c-0.18	
	O Disk Reads/se		
	<ul> <li>Disk Reads/set</li> </ul>	c-0.37	
	▲ 1/2 <b>▼</b>		

## 6. Centralized Management

Each instance of the Forwarder registers with the Dashboard server or the Arbitrator server configured as the main server.

The registration creates a record in the central database and enables the server to display information about all of the installed Forwarder instances.

Once a minute, each Forwarder sends a keep alive message to the server, thus maintaining its status.

It will also periodically check to see if the profile assigned to it has changed. If so then and if it will download and replace itself with the updated version.

Note: The AutoUpdate feature needs to be enabled.

Centralized management allows you to configure one or multiple profiles, upload it to a central repository, and distribute it to multiple instances of the Forwarder without touching the actual server it's running on.

Eon	warder Manager	v1.0.12					admir
-01	warder manager	¥1.0.12					aurin
For	warder: Q	۲	Computer -			Change Pr	ofile
	↑ Computer	IP Address	Site	Entity	Operating System	Profile	Status
	WIN-600GP0A064C	192.168.103.117	VM2008R2	HOME	Windows Server 2008 R2	agent.cfg Agent config home	DOWN
	ASavransky	192.168.103.117	North Building	Avaya	Windows 10 Pro	agtconfig.cfg Other	DOWN
	WIN-9P1C4MUDNQ9	192.168.103.117	Avaya	North Building	Windows Server 2012	agent.cfg Agent config home	DOWN
	Lapochka	192.168.10.44	North Building	Avaya	Windows 7 Ultimate N		DOWN

# 7. Setting up a Data Source Name (DNS)

This section describes how to set up a data source name (DSN) to execute database queries via the VOSS Insights Windows Forwarder.

The Forwarder uses a DSN connection mechanism in order to connect to an external database and collect information periodically.

#### Requirements for the environment:

The following assumptions are made for the environment:

- The Forwarder is installed on the same host machine as the database.
- The target database type is MS-SQL 2XXX.
- The Host machine's operating system is Windows 64-bit.
- The Host machine is part of a windows domain.
- The domain (admin/local/system) account that is used to run the Forwarder as a service has at least read-only access to the database that is supposed to be queried periodically.

#### Perform these steps to set up a DSN:

- 1. Use Windows Explorer to go to the following directory: C:\Windows\SysWOW64
- 2. Locate and then execute the following file: odbcad32.exe
- 3. Select the System DSN tab.

Name	Driver	Add
DemoAnsi Demoralize	PostgreSQL ANSI PostgreSQL Unicode	Remove
Lync Monitor QoE Lync Monitor Test		Configure
PostgresAgent	PostgreSQL ANSI	
	C System data source stores information about he ated data provider. A System data source is visi	

4. Click Add, then select SQL Server from the list, and click Finish.

Create New Data Source	Select a driver for which you want to set up a	a data source.
	Name Microsoft Text-Treiber (".txt; ".csv) Microsoft Visual FoxPro Driver Microsoft Visual FoxPro-Treiber PostgreSQL ANSI PostgreSQL Unicode SQL Server SQL Server Native Client 11.0	V ▲ 6. 1. 1. 9. 9. 9. 6. 21 ▼
	< Back Finish	Cancel

- 5. On the Create a New Data Source to SQL Server dialog:
  - Fill out the Name and Description fields.
  - Select the down-arrow at the **Server** drop-down, then let the system discover all the database instances available in your sub-network. Choose the appropriate "database hostnameinstance name" to connect to.
  - Click Next.

Create a New Data Sou	rce to SQL Server	x
	This wizard will help you create an ODBC data source that you can use to connect to SQL Server.	,
	What name do you want to use to refer to the data source?	
	How do you want to describe the data source?	
	Description: This is a test profile Which SQL Server do you want to connect to?	
	Server: MICLYNCSRV\MONITOR	I
	Finish Next > Cancel Help	-
		-

6. Do not change any settings on the authentication page. Click Next.

: a New Data So	urce to SQL Server	
	How should SQL Server verify the	ne authenticity of the login ID?
	With Windows NT auther	ntication using the network login ID.
		ication using a login ID and password
	entered by the user.	
	To change the network library u click Client Configuration.	sed to communicate with SQL Server
		Client Configuration
	Connect to SQL Server to of additional configuration optic	
	Login ID: Incdemo	
	Password:	
	< Back Next	> Cancel Help

**Note:** Before proceeding, review the prerequisites for this procedure, which describe the assumptions around your environment setup.

7. If your credentials are correct, you will be able to connect to the database instance and set a default database name on the next screen. Choose the appropriate database name that you would like to query and click **Next**, then click **Finish**.

-	Change the default database to:
	Attach database filename:
	Create temporary stored procedures for prepared SQL statements and drop the stored procedures:
	<ul> <li>Only when you disconnect.</li> <li>When you disconnect and as appropriate while you are connected.</li> </ul>
	✓ Use ANSI quoted identifiers.
	Use ANSI nulls, paddings and warnings.
	Use the failover SQL Server if the primary SQL Server is not available.

8. Click Test Data Source....

ODBC Microsoft SQL Server Setup	×
A new ODBC data source will be created with the following configuration:	
Microsoft SQL Server ODBC Driver Version 06.01.7601	-
Data Source Name: Test Profile Data Source Description: This is a test profile Server: MICLYNCSRV\MONITOR Database: LosCDR Language: [Default] Translate Character Data: Yes Log Long Running Queries: No Log Driver Statistics: No Use Regional Settings: No Prepared Statements Option: Drop temporary procedures on disconnect Use Failover Server: No Use ANSI Quoted Identifiers: Yes Use ANSI Quoted Identifiers: Yes Data Encryption: No	-1
Test Data Source OK Cance	-

9. If the test passes, you will see the following message:

. Server ODBC Data Source Test	
Microsoft SQL Server ODBC Driver Version 06.01.7601	<b>^</b>
Running connectivity tests	
Attempting connection Connection established Verifying option settings Disconnecting from server	
TESTS COMPLETED SUCCESSFULLY	
	Ŧ
	_
OK	

10. Click **OK** to exit setup.

The next time you try to add a "Db query" on Forwarder (see section Database Queries) where you will see your DSN name listed in the *ODBC Data Source List*.