



Heimdal Security

Product Documentation

Technical whitepaper and implementation guide for corporate environments

Thor Foresight Thor Vigilance



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1. Introduction

This document contains an in depth technical walkthrough of Heimdal Corporate products. The document describes the software products, product features, communication, system requirements, implementation recommendation and administration processes.

2. Who is Heimdal Security

In early 2014, Heimdal Security A/S spun off from the Denmark-based CSIS Security Group company and became a separate corporate entity. Today Heimdal Security works with major corporations, public entities and banks across the world in fighting against e-crime.

Ever since its inception, the Heimdal Security company has developed new products that have set new standards in financial malware detection by continuously following IT criminals' footsteps and providing the best security solutions for organizations as well as private individuals.

Find out more about us:

https://heimdalsecurity.com/en/about

https://heimdalsecurity.com/blog/

3. What are the Heimdal Security products

The Heimdal Security product line-up includes 2 main product branches: **Thor Foresight** and **Thor Vigilance**. The products complement each other and they should be combined in order to offer maximum system and network protection for the protected companies and entities. Thor Foresight can be regarded as the product branch which is minimizing threats, closing loopholes in the security of applications and filtering unsafe traffic, while Thor Vigilance can be regarded as the reactive branch that deals with threats that have found their way on the local machines like viruses and malware.

3.1. Thor Foresight

Work-related and private internet usage create challenges for corporations, as it becomes difficult for the average user to defend himself from advanced malware techniques employed by cyber criminals. Since malicious code can be executed even from legitimate websites, through drive-by attacks or through phishing links, checking traffic for applications which are using web technologies is a must for all company endpoints.

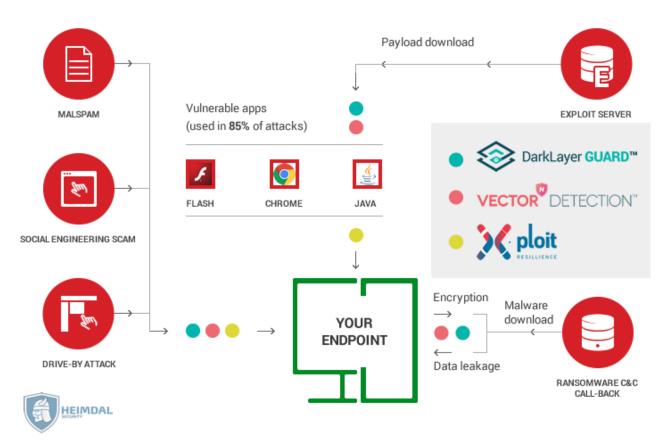
Thor Foresight embeds everything a system needs to prevent an infection before it happens. It filters malicious traffic, it updates 3rd party apps thus minimizing exploitation risks and it identifies the computers that may have been compromised by attackers, also reporting this to the centralized management system. The protection is proactive, reliable, scalable and consists of three active modules:



3.1.1. Dark Layer Guard

This module is responsible with filtering all network packages based on DNS request origin and destination. It replaces the manual or DHCP set DNS values with IPs from the Client Host IP range thus effectively telling the computers to resolve the DNS requests themselves. The original DNS values from the network card settings are not lost, they are saved under GUIDS in registry editor and they are used when requests are made towards internal resources like print servers, local file servers or anything that has a private IP assigned. The traffic filtering engine, which blocks malicious packages from communicating across the network prevents man-in-the-browser attacks, detects zero-hour exploits, protects from data or financial exfiltration and prevents data loss or network infections.

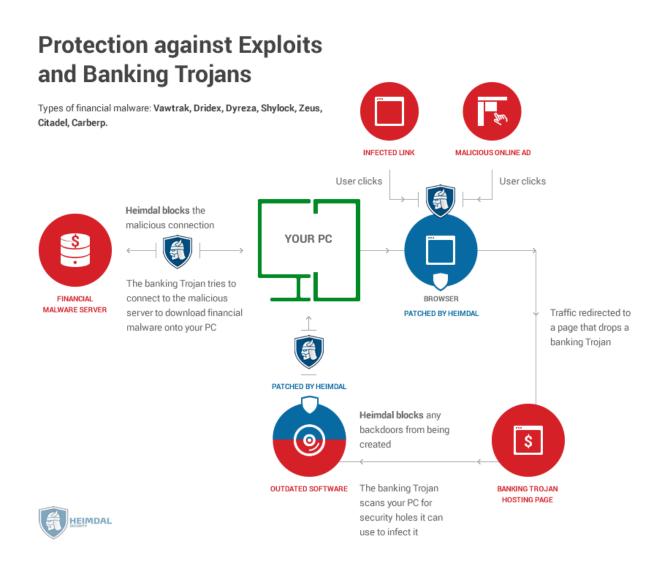
Here is an example on the how Thor Foresight's multi-layered protection works against malspam, social engineering scams and drive-by attacks.



The module blocks malicious websites by making sure that users do not establish untrusted connections. If a connection is made, an attacker is able to open backdoors into a PC by using zero-day exploits or by executing remote shell codes. Thor Foresight also makes sure that data is not automatically filled into online forms, belonging to fraudulent websites. DLG can shield a PC from a man-in-the-browser attack, it can hide it from an attacker's domain or it can prevent ransomware - such as Cryptolocker - from downloading its encryption keys even if the PC has already been infected.



An example on how DLG protects users from financially exploiting malware (banking trojans) can be seen below.



The DLG filter receives more than 800.000 new weekly updates to keep up with cyber criminals' threats. A filter update is provided every 2 hours. The update is based on a wide range of data, such as new registered domain names, reverse engineering of advanced malware, monitoring of criminal network sinkholes and data gathered during e-crime analysis. This insight into cybercrime enables Heimdal to block data from a PC or network from being sent to a hacker-controlled server, therefore protecting corporate or personal data from exfiltration.

3.1.2. VectorN Detection

This module identifies the computers that are most prone to have been infected by malicious scripts and malware. It will identify patterns of malicious domain requests and filter these accordingly. The computers identified by VectornN as potentially infected are to be ultimately treated as threats by the system administrator, investigated and scanned for threats either manually or automatically.



In 2017 data stealing malware or data usage attacks were responsible for more than 55% of the cases where corporations lost valuable information. Approximately 19% of data theft malware is detected by traditional antivirus software. Low detection rates are caused by polymorphism, which means that malware can constantly change behavior and attack methods. The problem of data theft is furthermore increasing, because informational theft is no longer happening on the PC itself but is spreading over the entire network. VectorN Detection employs traffic and usage algorithms, rather than rely just on signature and access detection.

3.1.3. X-Ploit Resilience

More than 80% of all attacks happen by using exploits in 3rd party software. The module identifies and automatically updates 3rd party software on any computer it is installed upon, so that cyber criminals can't take advantage of any potential vulnerability arisen due to outdated software. X-Ploit resilience is designed to have low resource consumption, using as few system resources as possible and works without interrupting the user. X-Ploit Resilience works with our own CDN so pushing new software and updates is fast and reliable.

3.2. Thor Vigilance

Thor Vigilance is the reactive protection side of our product suite. It is the next gen antivirus solution that reacts to infected files found on the system. It complements the Thor Foresight product module to offer all around protection. It offers a centralized management interface across all the devices for easy corporate client management. It is flexible, easy to use and it offers a wide variety of scanning profiles to fit your corporate needs.



4. Minimum System Requirements for Heimdal Security products

You may install Thor Foresight and Thor Vigilance on computers running the following configurations and specs:

OS:

- Windows 7 (32 and 64 bit), Service Pack 1 or higher with the newest updates, hotfixes and service packs installed
- Windows 8 (32 and 64 bit)
- Windows 8.1 (32 and 64 bit)
- Windows 10 (32 and 64 bit)
- Windows Server 2008 R2 with Service Pack 1
- Windows Server 2012/2012 R2.
- Windows Server 2016
- •

Please note that for the best experience we recommend using the latest version of any OS available from an official source.

Processors:

- AMD: Ab Athlon 64/Sempron (Paris Core)/Opteron
- Centaur Technologie: starting with VIA C7
- Intel: starting with Pentium 4 (Desktop) or Pentium M (Laptop)
- Transmeta: starting with Efficeon

Memory:

• At least 2GB RAM

Hard disk:

• At least 2GB disk space. The space is required for downloading Virus Definition Files and quarantined files, not for the actual local agents.

Browser:

• The recommended browser for using the Thor products suite is Chrome.

Special requirements:

- .Net Version 4.6.1 must be installed on the operating system prior to the installation
- Internet access with the following ports open to traffic: port 80, port 53, port 443



4.1. PC rights

To install, close or restart the local Thor agent, you must have administrative rights over the relevant machine. With local user rights, the user interface can still be run.

Action:	Required user rights:
Installation of Thor suite	Local/ Domain administrator
Automatic update of Thor suite	Local user
Patching 3rd party software*	Local user
Dark Layer Guard	Local user
Reboot or restart of Thor suite	Local/ Domain administrator
Manual starting of Thor suite	Local/ Domain administrator
Changing locked setting for Thor suite in the CORP version	Not Possible

* If the used group policy allows the action to be permitted locally.

4.2. Resource usage

The Thor suite consists of one modular application and 4 Windows services:

Component:	Component type:
HeimdalAgent.exe	Application
Heimdal Client Host	Service
Heimdal DarkLayer Guard*	Service
Heimdal Uptime Checker	Service
Heimdal Antivirus	Service
Heimdal Security Service Monitor	Task Scheduler

*The bandwidth needed by the DarkLayer Guard service is quite low. When the DarkLayer Guard is in use and Heimdal starts to block DNS requests, the average bandwidth needed is around 1,500 bytes per second.

Overview CPU Memo											
	ory Di										
CPU		5% CPU Usage	a2% Maximum Free	quency				\odot			Views
🖉 Image	PID	Description		St	atus	Threads	CPU	Average CPU ^	CP	U	100
svchost.exe (LocalService)	1200	Host Process for Windows Services		R	unning	4	0	0.00		hrw	$m \sim n \sim 1$
svchost.exe (LocalService)	1208	Host Process for Windows Services		Ru	unning	4	0	0.00			••••••••••••••••••••••••••••••••••••••
svchost.exe (LocalService)	1216	Host Process for Windows Services		Ru	unning	7	0	0.00			
svchost.exe (LocalSyste	1356	Host Process for Windows Services		R	unning	2	0	0.00			
WUDFHost.exe	1472	Windows Driver Foundation - User-mode Driver Framework Host Process		Ru	unning	7	0	0.00			
svchost.exe (LocalServic	1496	Host Process for Windows Services		R	unning	2	0	0.00			
svchost.exe (LocalSyste	1560	Host Process for Windows Services		R	unning	9	0	0.00	60	Seconds	5 0
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iltered by Heimdal.Darkl	ayerGu	ard.exe								د اللم	
nage	PID	Address				Send (B/sec)	Receive (B/sec)	Total (B/sec)	M	emory	100 Hard Faults/s
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eimdal.DarkLayerGuard.exe	4032	DESKTOP-2B8N305.heimdalsec.com				142	0	142			
leimdal.DarkLayerGuard.exe	4032	DESKTOP-2B8N305.heimdalsec.com				0	72	72			
eimdal.DarkLayerGuard.exe	4032	fe80::b49a:9bef:4249:ac2e				49	19	68			
eimdal.DarkLayerGuard.exe	4032	192.168.1.1				31	0	31			
eimdal.DarkLayerGuard.exe		127.7.7.5				0	8	8		AA.	
			67% Used Physical								



The data from the above picture comes from a resource stress test that was carried out throughout a normal work day as to simulate a normal day at the office for the average user.

4.3. What system changes do apply when installing Thor suite?

The most important change the DLG module does is the modification of the local DNS value. There are other changes that are worth mentioning like an impact on the IPv4 checksum offloading and a few other technologies we employ to make sure the protection we offer works and is reliable. However, for a full list of these changes you can click the below link:

https://support.heimdalsecurity.com/hc/en-us/articles/115003890465-What-changes-do-Heimdal-apply-when-installed-

It's also worth mentioning that in addition to the services that Thor creates on your machines, you may also see new tasks created under Task Scheduler. **Heimdal Security Service Monitor** is a task scheduler that verifies if all services are up and running. If they are not, it will start them.

This scheduler is triggered at system startup, log on of any user and on local connection to any user session. This task scheduler is controlled by the Heimdal.MonitorServices.exe program.

4.4. Software compliance

We constantly whitelist our products with other major AV vendors so that the conflicts between our products can always be kept to a minimum.

Since Thor Vigilance is a fully-grown antivirus solution, incompatibilities may arise between this product and the AV that you are currently using. Generally speaking, if you use the **Thor Vigilance** product, you should not have any other AV solution installed on your endpoints.

If you are only using the **Thor Foresight** product, you will not have any incompatibility between it and any pre-existing AV solution.

If a **Firewall** or a **Proxy** is installed on the Client, you have to sure Thor is allowed to communicate with our servers online. In order to create a rule in your Firewall, Thor needs to be able to access these domains:

- <u>http://heimdalprodstorage.blob.core.windows.net</u> with local port 80;
- <u>https://cloudservice.heimdalsecurity.com</u> with local port 443;
- https://rc-cloudservice.heimdalsecurity.com;
- https://dashboard.heimdalsecurity.com;
- https://rc-dashboard.heimdalsecurity.com;
- prodcdn.heimdalsecurity.com;

Example of firewall and proxy in which you need to add these exclusions:

Websense, Fortigate, SonicWALL, Windows Firewall, Watchguard, Zscaler, Cisco ASA firewalls, Sophos UTM, Untangle, Barracuda, Webtitan, TRITON AP-WEB, Symantec, Trend Micro, Netgear.



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For Software Center Endpoint Protection 2012 you need to exclude Thor's processes (Heimdal.Agent .exe, Heimdal.AgentLoader .exe, Heimdal.Antivirus .exe, HeimdalClientHost .exe, HeimdalDarkLayerGuard .exe and Heimdal.UptimeChecker .exe) as shown in the pictures below:

•		System Center 2012 Endpoin	Protection – 🗆 🗙
	Computer status - Protected Home Scheduled scan Default actions	Kitting Kitting Kittings	Help System Center 2012 Endpoint Protection
	Real-time protection Excluded files and locations	your computer less protected.To add m entries in the text box. Add only files that have one of the follo	Select the processes you wish to exclude:
	Excluded file types Excluded processes Advanced Microsoft SpyNet	Process names:	Image: Resources Image: Resources Image: Resources Image: Resource Image: Resou
			OK Cancel

🕇 Home 🛛 🚷 Update	A History	192	😯 Hel
cheduled scan lefault actions seal-time protection xcluded files and locations xcluded file types	Excluding certain processes that run on your computer can help spee your computer less protected. To add multiple processes, use a semic entries in the text box. Add only files that have one of the following extensions: .exe, .com o Process names:	colon to se	
xcluded processes		~	Browse
licrosoft SpyNet		>	Add
	Name		Remove
	C:\Program Files (x86)\Heimdal\Heimdal.Agent.exe		
	C:\Program Files (x86)\Heimdal\Heimdal.AgentLoader.exe		
	C:\Program Files (x86)\Heimdal\Heimdal.ClientHost.exe		
	C:\Program Files (x86)\Heimdal\Heimdal.SecureDNS.exe		



4.5. Web based administration module

Thor Corporate Suite includes an online management tool, which can be accessed through <u>https://dashboard.heimdalsecurity.com.</u>

If you are curious about the latest Thor Suite features and technologies, you can always have a look here: <u>https://rc-dashboard.heimdalsecurity.com</u>. Our recommendation is to always allow the enrollment of a few endpoints in the RC (release candidate) program so that you can see what the next new and exciting features inside the Thor products will be.

5. Function description

Thor Corporate consists of 3 elements: a software client with 2 logical modules, a content delivery network (CDN) and a web-based statistics module.

5.1. Installation of Thor Products

Both Thor products are installed via one unique installation file and can be deployed automatically in corporate environments, using different installation triggers and delivery mechanisms/ techniques.

Please note that for Thor Vigilance installation to take effect, a computer restart is needed.

The right order for AV activation is to firstly activate the module from the interface management under the group policies section. This will trigger the AV installation behind the scenes and will also download the Virus Definition Files (VDF's) from our cloud. After the process is done, the computer will require a restart so that the AV can actually come into effect.

5.1.1. Installation Process and usage environments

Thor can be installed via MSI based installers. For corporate usage we recommend that the msi used for deployment be the one published under the GUIDE section (download and install sub-section) inside the dashboard.

By default, this msi installer file is called **Heimdal.DeliveryLauncher.msi** and it is an online installer. The files installed are always downloaded from our cloud and the installer will always push the **latest Thor version** as well as .net framework 4.6.1 which is a prerequisite. This is of crucial importance when deploying in environments which still rely on Windows 7 OS.

Default behavior when pushing .net is needed: Thor will push .net first and then it will wait for a computer restart from the user's side to be able to install the actual Thor agent.

5.1.1.1. Installation via MSI file

It is also possible to install Thor via offline MSI. The newest version including detailed documentation can be downloaded below: <u>http://heimdalprodstorage.blob.core.windows.net/setup/Heimdal.msi</u>

In order to be able to install Thor Corporate Suite please verify that you have **Microsoft**.**NET Framework 4.6.1** full profile with all the appropriate updates. If **Microsoft**.**NET Framework 4.6.1** is not installed onto your computer, please download **it from here:** https://www.microsoft.com/en-us/download/details.aspx?id=49982

Each time a new version of Thor Suite is released, we are also releasing an **RC-VERSION** that contains fixes, improvements or other changes that will appear in the next official launch. This is the download link for the beta version:

https://heimdalprodstorage.blob.core.windows.net/setup/Heimdal-rc.msi



If you want to install or test the **RC version** of Thor, we do not recommend you do it on more than 1 or 2 machines, because this version may have features that have not yet been fully tested.

Thor can be installed via command line like shown below:

msiexec /qn /i Heimdal.msi heimdalkey="key here"



5.1.1.2. Install Thor with no GUI

Thor can be deployed as GUI-less. That means you can choose to deploy the product but hide the interface and the agent presence from the taskbar notification area. Thor's services will still be running in the background (visible in services.msc console) and the installation will still be shown in the programs and features section.

Here is how you do this:

- 1. Install Thor on your machines (see 5.1.1.1)
- 2. After the installation is done, open your web-based administration panel (dashboard.heimdalsecurity.com)
- 3. Select and create a new **policy** (if you already have a policy set, then you can edit that one if you don't want to create a new one)
- 4. In the policy you've just created or you want to edit, go to the "General" section and check the option **"Do not show GUI"**

Include in Release Candidate Program									
Do not show GUI									
Enforce uninstall password 👔									
Synchronize with time server 👔									
ADMIN SETTINGS									
CHECKSUM OFFLOADING									
Skip	-								
Multiple Server Mode									
Forensic mode / Block page server									
UPDATE POLICY CANCEL DUPLICATE POLICY									



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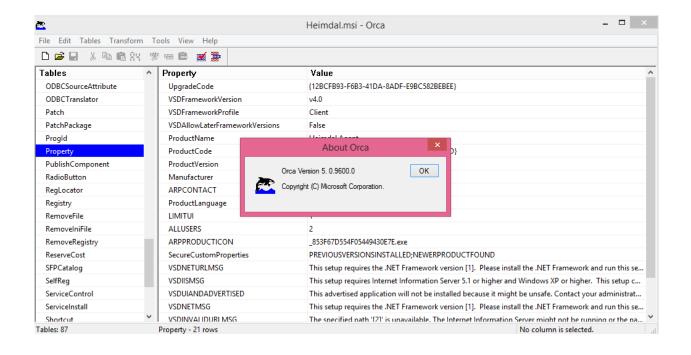
5. Press the green 'Update' button and save your changes

These policy changes will be applied after the machines on which Thor is installed and that respond to the relevant policy will receive a reboot. Please note that the reboot is mandatory for proper GUI-less functionality.

5.1.2. Creating adapted MSI installation files

It is possible to install Thor Suite in non-command accepting environments such as Active Directory Group Policy Management and similar systems.

The activation key can be inserted directly into the MSI, as a row with the property "HEIMDALKEY" and Value "[activationkey/serialkey]". The following section shows the approach to be used when inserting the activation key using Orca Version 5.0.9600.0.



5.1.2.1. Orca pre-configuration

Before doing the adapted MSI file, check the following settings from ORCA:

- a. Open Orca
- b. Click on Tools
- c. Choose Options
- d. Go to the Database tab
- e. Check the first two options



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f. Hit Apply

🔁 Untitled - Orca			
Tables	Options Display Directories Validation Mer ✓ Genyrate a unique Package Code ✓ Copylembedded streams during " When a package marked with one of editing, take the following action: Read-Only Recommended:	each time a database is saved. Save As'. he following security flags is opened for Read-Only Enforced:	
	Open Read/Write anyway Open and clear flag Ask which action to take Open Read-Only	Open Read/Write anyway Open and clear flag Ask which action to take Open Read-Only OK Cancel Apply	
Tables: 0 No table is selected.			No column is selected.

5.1.2.2. The MSI editing process

The msi editing process can be broken down into the following steps:

1. Install Orca and open Heimdal.msi

<u>e</u>			Heimdal.ms	si - Orca			
File Edit Tables Transf	orm T	ools View Help					
D 🚅 🖬 🐰 🖻 🖻 :	<u>.</u>	; •= 🗈 🛒 🏪					
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ODBCTranslator		VSDFrameworkVersion	LOOK IT:		•	9 🖉 🗁 🛄 🕈	
Patch		VSDFrameworkProfile	<u></u>	Name	Î.	Date modified	Туре
PatchPackage		VSDAllowLaterFrameworkVersions		🔂 Heimdal		10/29/2015 10:33	Windows
Progld		ProductName	Recent places				
Property		ProductCode					
PublishComponent		ProductVersion	Desktop				
RadioButton		Manufacturer					
RegLocator		ARPCONTACT					
Registry		ProductLanguage	Libraries				
RemoveFile		LIMITUI					
RemovelniFile		ALLUSERS					
RemoveRegistry		ARPPRODUCTICON	This PC				
ReserveCost		SecureCustomProperties		<			>
SFPCatalog		VSDNETURLMSG		File name:	Heimdal		Open
SelfReg		VSDIISMSG	Network				
ServiceControl		VSDUIANDADVERTISED		Files of type:	Installer Database Files (*.msi, *.ms	m, ".pcp, ".m ∨	Cancel
ServiceInstall		VSDNETMSG			Open as read-only		
Shortcut	~	VSDINVALIDURI MSG					.::
Tables: 87		Property - 21 rows				No column is selected.	



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- 2. Find and mark the table "Property" and select 'Tables' and click 'Add Row...'.

<u>2</u>				Heimdal.msi - Orca – 🗖 🗙		
File Edit T	ables Transform	Tools View Hel	p			
Tables	Add Table Add Custom Tab Drop Table	Ctrl+T le	E	Value (128CFB93-F6B3-41DA-8ADF-E9BC582BEBEE)		
ODBCTra	Add Row	Ctrl+R	Version	v4.0		
Patch	Drop Row(s)		Profile	Client		
PatchPac			rameworkVersions	False		
Progld	Proglet Proglet Property PublishC Adjust Schema			Heimdal Agent		
Property				{766CACAE-77C4-4095-AA26-170B02EF94DD}		
PublishC				2.0.21		
RadioButton Manufacturer		-	Heimdal Security			
RegLocator		ARPCONTAC	г	Heimdal Security		
Registry		ProductLangu	age	1033		
RemoveFile		LIMITUI		1		
RemovelniF	ile	ALLUSERS		2		
RemoveReg	jistry	ARPPRODUCT	ICON	_853F67D554F05449430E7E.exe		
ReserveCos	t	SecureCuston	Properties	PREVIOUSVERSIONSINSTALLED; NEWERPRODUCTFOUND		
SFPCatalog		VSDNETURLN	SG	This setup requires the .NET Framework version [1]. Please install the .NET Framework and run this se		
SelfReg VSDIISMSG			This setup requires Internet Information Server 5.1 or higher and Windows XP or higher. This setup c			
ServiceCont	trol	VSDUIANDAD	VERTISED	This advertised application will not be installed because it might be unsafe. Contact your administrat		
ServiceInsta		VSDNETMSG		This setup requires the .NET Framework version [1]. Please install the .NET Framework and run this se		
Shortcut	Ŷ	1 VSDINVALIDU		The specified path '[2]' is unavailable. The Internet Information Server might not be running or the pa		
Tables: 87		Property - 21 row	5	No column is selected.		

3. In the Property field, write **HEIMDALKEY** and in the Value field paste your activation key

<u>e</u>		Heimdal	I.msi - Orca	- 🗆 🗙
File Edit Tables Transform	Tools View Help			
	* = 🖻 🛒 🏪			
Tables ^	Property	Value		^
ODBCSourceAttribute	UpgradeCode	{12BCFB9	3-F6B3-41DA-8ADF-E9BC582BEBEE}	
ODBCTranslator	VSDFrameworkVersion	v4.0		
Patch	VSDFrameworkProfile	Client		
PatchPackage	VSDAllowLaterFrameworkVersions	False		
Progld	ProductName	Heimda	Add Row	
Property	ProductCode	{766CA		
PublishComponent	ProductVersion	2.0.21	Name Value	
RadioButton	Manufacturer	Heimda	Property	
RegLocator	ARPCONTACT	Heimdi	Value	
Registry	ProductLanguage	1033		
RemoveFile	LIMITUI	1		
RemovelniFile	ALLUSERS	2		
RemoveRegistry	ARPPRODUCTICON	_853F67		
ReserveCost	SecureCustomProperties	PREVIO	Column	
SFPCatalog	VSDNETURLMSG	This set	Property - String[72], Required	c and run this se
SelfReg	VSDIISMSG	This set	HEIMDALKEY	er. This setup c
ServiceControl	VSDUIANDADVERTISED	This ad		our administrat
ServiceInstall	VSDNETMSG	This set		k and run this se
Shortcut Y	VSDINVALIDURI MSG	The spe	OK Cancel	inning or the pa 🗡
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Tables ^	Property	Value
ODBCAttribute	ProductName	Heimdal Agent
ODBCDataSource	ProductCode	{766CACAE-77C4-4095-AA26-170B02EF94DD}
ODBCDriver	ProductVersion	2.0.21
ODBCSourceAttribute	Manufacturer	Heimdal Security
ODBCTranslator	ARPCONTACT	Heimdal Security
Patch	ProductLanguage	1033
PatchPackage	LIMITUI	1
Progld	ALLUSERS	2
Property	ARPPRODUCTICON	_853F67D554F05449430E7E.exe
PublishComponent	SecureCustomProperties	PREVIOUSVERSIONSINSTALLED; NEWERPRODUCTFOUND
RadioButton	VSDNETURLMSG	This setup requires the .NET Framework version [1]. Please install the .NET Framework and run this se
RegLocator	VSDIISMSG	This setup requires Internet Information Server 5.1 or higher and Windows XP or higher. This setup c
Registry	VSDUIANDADVERTISED	This advertised application will not be installed because it might be unsafe. Contact your administrat
RemoveFile	VSDNETMSG	This setup requires the .NET Framework version [1]. Please install the .NET Framework and run this se
RemovelniFile	VSDINVALIDURLMSG	The specified path '[2]' is unavailable. The Internet Information Server might not be running or the pa
RemoveRegistry	VSDVERSIONMSG	Unable to install because a newer version of this product is already installed.
ReserveCost	ARPNOMODIFY	1
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SelfReg V		· · · · · · · · · · · · · · · · · · ·
Tables: 87	Property - 22 rows	No column is selected.

4. To save as a standalone MSI with the activation key built in, click "File" and "Save As".

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ile <u>E</u> dit T <u>a</u> bles T <u>r</u> ansform	<u>T</u> ools <u>V</u> iew <u>H</u> elp	
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Save As	ictCode	{766CACAE-77C4-4095-AA26-170B02EF94DD}
Save Transformed As	IctVersion	2.0.21
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1 Heimdal	ONTACT	Heimdal Security
2 C:\Users\\Heimdal	ictLanguage	1033
	UI	1
Exit	SERS	2
Property	ARPPRODUCTICON	_853F67D554F05449430E7E.exe
PublishComponent	SecureCustomProperties	PREVIOUSVERSIONSINSTALLED; NEWERPRODUCTFOUND
RadioButton	VSDNETURLMSG	This setup requires the .NET Framework version [1]. Please install the .NET Framework and run this se.
RegLocator	VSDIISMSG	This setup requires Internet Information Server 5.1 or higher and Windows XP or higher. This setup c
Registry	VSDUIANDADVERTISED	This advertised application will not be installed because it might be unsafe. Contact your administrat
RemoveFile	VSDNETMSG	This setup requires the .NET Framework version [1]. Please install the .NET Framework and run this se.
RemovelniFile	VSDINVALIDURLMSG	The specified path '[2]' is unavailable. The Internet Information Server might not be running or the pa.
RemoveRegistry	VSDVERSIONMSG	Unable to install because a newer version of this product is already installed.
ReserveCost	ARPNOMODIFY	1
SFPCatalog	HEIMDALKEY	abAAA_333_AC/DC_TEST_cafe
SelfReg	*	Value - Localizable(0)

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ODBCDriver	ProductVersion	<u> (</u>	Name	<u>^</u>		Date modified	Туре
ODBCSourceAttribute	Manufacturer		🛃 Heimdal			10/29/2015 11:19	Windows
ODBCTranslator	ARPCONTACT	Recent places					
Patch	ProductLanguage						
PatchPackage	LIMITUI	Desktop					
Progld	ALLUSERS						
Property	ARPPRODUCTICON						
PublishComponent	SecureCustomProperties	Libraries					
RadioButton	VSDNETURLMSG						
RegLocator	VSDIISMSG						
Registry	VSDUIANDADVERTISED	This PC					
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ReserveCost	ARPNOMODIFY		File name:	Heimdal_MSI		×	Save
SFPCatalog	HEIMDALKEY		Save as type:	Windows Installer (*.msi)		¥	Cancel
SelfReg	~						

Remember that MSI files contain your organizations license/serial key and should only be used on the computer, which you have purchased licenses for.

Please note that the activations are constantly monitored by the account management teams.

5.1.3. Deployment of Thor through Active Directory Group Policy Management

Microsoft Active Directory Group Policy Management is an integrated part of Microsoft Active Directory, which helps you do configurations across all the parts or your organizations computers.

To configure an automatic distribution of the Thor agent through Group Policy Management you will need:

• The Thor MSI installation package. You can grab the installer (direct link) here:

http://heimdalprodstorage.blob.core.windows.net/setup/Heimdal.DeliveryLauncher.ms

- A customized MSI file with your organization's activation key included.
- Access and rights to change the Active Directory group policy for the domain.
- A network path, where the Thor MSI installation file can be placed. All computers, which are to have the agent installed, must have at least read access to this network path.
- Microsoft .net 4.6.1 or later full profile must be installed on all computers.

The full process works like this:



<u>Step 1:</u>

Create the folder where you want to share **Thor.msi** from:

👪 l 💽 👪 🗢 l	Heimdal		_	D X	
File Home Share	View			~ 😮	
🗲 🍥 🔻 🚹 🕨 Tł	nis PC 🔸 Local Disk (C:) 🔸 Heimdal	∨ Ċ Se	arch Heimdal	Q	
☆ Favorites	Name	Date modified	Туре	Size	
Desktop Downloads	թ Heimdal	5/19/2015 1:57 PM	Windows Installer	3,240 KE	
1톺 This PC 약 Network					
1 item State: 🐝 Shared					
			Windows	Server 20	012 R2

Make sure the folder is accessible and that the computers have at least read access to the newly created folder

потпе	Stidle View			· •	
€ ⊚ - ↑	This PC > Local Disk (C:)	~ C	Search Local Disk (C	C. (::	
🔆 Favorites	Name	Date modified	Туре	Size	
E Desktop	3 Chrome	10/29/2015 10:56	File folder		
- Downlo 👢		11/2/2015 3:23 PM	M File folder		
🕮 Recent 🛛	Heimdal Properties	013 6:52 PI	M File folder		
🌉 This PC	General Sharing Security Previous Versions Customize	2013 5:50 PI 2013 6:39 PI 2015 10:19 A	M File folder		
🗣 Network	Heimdal Shared	015 10:19 A			
	Network Path: \\DC01\Heimdal Share				
	Advanced Sharing Set custom permissions, create multiple shares, and set other advanced sharing options.				
7 items 1 ite	Advanced Sharing				
	OK Cancel App	bly	Window	ws Server 20	012 R2



Step 2:

Choose the people in you network you want to share this folder with and establish their permission level.

	🛄 Desktop	🖐 Chrome		10/29/	2015 10:56 .		File folder	
				c 11/3/2	2015 3:23 PM	1	File folder	
		Heimdal Properties		- 11 - 0.000	X	1	File folder	
							File folder	
💿 💿 💀 File Sha	aring						File folder	
						м	File folder	
Choose pe	eople on your n	etwork to share with				м	File folder	
Type a name	and then click Add,	or click the arrow to find someone	2.					
			¥	Add				
Name			Permission L					
2 Administ			Read/Write	-				
Administ .			Owner				>	
A Everyone	2		Read 🔻 🗸	Read			III 📰 🖬	
				Read/Write				
				Remove				
						_		
I'm having tro	ouble sharing						Windows Serve	r 2012 R2
			0	Share Ca	ancel			
	-			_		Γ		

<u>Step 3:</u>

On the Domain Controller, click on Administrative Tools and then open Group Policy Management.

Under the domain for which you want to create a GPO:

- select Group Policy Objects
- ➢ right click
- ➢ choose New GPO
- \blacktriangleright and then select the name ("Thor" in our case).

📓 Gr	oup Policy Management	_ D X
File Action View Window Help		_ 8 ×
Group Policy Management Group Policy Management Group Policy Chrome Group Policy Default Domain Policy GPO Chrome H1 Default Domain Controllers Group Policy Objects Default Domain Controllers Policy Default Domain Policy GPO Chrome H1 Default Domain Policy Default Domain Policy Starter GPOs Sites Group Policy Modeling Group Policy Results	Group Policy Objects in contoso.com Contents Delegation Name GPO Status WM Default Domain Controller Enabled Non GPO Chrome Enabled Non GPO Chrome Enabled Non H1 Enabled Non Name: Heindal Source Starter GPO: OK OK Can	ne ne ne



<u>Step 4:</u>

Open the Group Policy Management Editor and select the following:

- ➢ User Configuration
- Policies
- Software Settings
- ➢ Software Installation
- > Package
- ➢ right click
- ≻ New
- ➢ Package.

<u>_</u>	Group Policy Mana	gement Editor	_ D X
File Action View Help Image: Second s			
 Heimdal [DC01.CONTOSO.CON ▲ Computer Configuration ▷ Policies ▷ Preferences ▲ User Configuration ▲ Policies ▲ Software Settings 	Software Settings Select an item to view its description.	Name	
▷ Preferences Re	ste fresh operties		

Make sure to browse to the target msi installer.

J	Group Pol	icy Manageme	nt Editor		_ 0			
File Action View Help								
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🗐 Heimdal [DC01.CONTOSO.CON	Name	Versi Deployn	nent st Source					
⊿ ♣ Computer Configuration		There are n	o items to show in this vi	ew.				
Policies Preferences		There are no reents to show in this view.						
Preferences Iser Configuration								
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⊿ 🚞 Software Settings 🗧	-		~			x		
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▷ I Windows Settings ▷ I Administrative Ten	🔄 🕘 🔻 🕈 <u>א</u> « D	Search Heimda		٩				
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	★ Favorites	Name	^	Date mo	dified	Туре		
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	1 This PC							
	📬 Network 🗸 🗸	<	ш			>		
	File n	ame:	Ý	Windows Insta	ller packag	es (*.r \vee		
				Open	Ca	ancel		



<u>Step 5:</u>

For "Deploy Software", chose the "Assigned" option. This means the installation will run without user interaction:

<u>I</u>	Group Policy Management Editor								
File Action View Help Image: Constraint of the second seco									
 ▲ ● Computer Configuration ▶ ○ Policies ▶ ○ Preferences 	ame Versi Deployment st Source There are no items to show in this view.								
 Wer Configuration Policies Software Settings Software installat Windows Settings Administrative Temp Preferences 	Deploy Software Select deployment method: Published Image: Assigned Advanced Select this option to Assign the application without modifications.								

<u>Step 6:</u>

Select package "Heimdal", right click, select Properties.

<u> </u>	Gro	up Policy Man	agement Edito	r	-		x
File Action View Help							
🗢 🏟 🙍 📰 🗐 🙆 া	?						
🗐 Heimdal [DC01.CONTOSO.CON	Name ^	Versi	Deployment st	Source			
Computer Configuration	🔂 Heimdal Secu	✓ Auto-Install	d	\\DC01\Heimdal\Heimdal.msi			
Policies	`						
Preferences		Assign					
⊿ K User Configuration ⊿ [□] Policies		Publish					
⊿ Software Settings		All Tasks	•				
Software installat		Refresh					
Windows Settings		Properties					
Administrative Temp		· ·					
Preferences		Help					
< 111 >							
Displays Help for the current selectio	n.						
				Window	WS S	berv	ver 2



<u>Step 7:</u>

Next, go to "Deployment" tab, where you can see deployment types and options. To install Heimdal CORP (v2), please choose the "Install this application at logon" option and then hit "Apply".

J	Group	Policy Man	agement Edito	r		. 🗆	x
File Action View Help							
🗢 🄿 🙍 🗔 🖾 🖌	? 📰						
 Heimdal [DC01.CONTOSO.CON Computer Configuration Policies Preferences User Configuration Policies Software Settings Software installat Windows Settings Administrative Temp Preferences 	Name	Deployme Publis Assign Deployme V Auto-1 Unins mana Do no panel V Install	ployment Upgrades int type shed ned int options install this application wi gement of display this packag this application at log n user interface option	-	? X		
< III >		Advanced	l				
				OK Cancel	Apply		
				Cancel	Арріу	- erv	ver 201

Step 8:

To install Heimdal CORP (v2) from the user's computer, do the following:

- > Open Command Prompt as Administrator and type:
- gpupdate /force /boot /logoff





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The user's computer will restart and install the software, as shown below:



This is a silent installation. You can check the results in the Control Panel/Programs to verify if Thor was installed successfully.

	Programs Programs and Features		✓ Search Programs and Features
ile Edit View Tools Help			
Control Panel Home	Uninstall or change a program		
	Uninstall of change a program		
View installed updates	To uninstall a program, select it from the list and then click Uninstall, Ch	ange, or Repair.	
Turn Windows features on or			
off	Organize 🝷 Uninstall Repair		8≣ ◄ (
	Name	Size	
	Dolby Advanced Audio v2	2.20 MB	
	FileZilla Client 3.16.1	22.4 MB	
	G Foxit Reader	154 MB	
	GIMP 2.8.16	283 MB	
	Coogle Chrome	44.4 MB	
	Coogle Drive	35.2 MB	
	Ref HashTab 5.2.0.14		
	Heimdal Agent	19.3 MB	
	Cecream Screen Recorder version 1.47	187 MB	
	Integrated Camera		
	Intel(R) WiDi	84.1 MB	
	Intel(R) Wireless Bluetooth(R)(patch version 17.1.1449.356)	40.8 MB	
	🕼 Intel® Driver Update Utility	6.91 MB	
	Intel® Graphics Driver	74.2 MB	
	Untel® Management Engine Components	20.4 MB	
	Intel® PROSet/Wireless Software	294 MB	
	Intel® SDK for OpenCL - CPU Only Runtime Package		
	Intel® USB 3.0 eXtensible Host Controller Driver	18.4 MB	
	l Tunes	215 MB	
	🔬 Java 8 Update 77	89.1 MB	
	Java 8 Update 77 (64-bit)	102 MB	
	Heimdal Security Product version: 2.2.0	188 MB	



5.2. AD group binding for Thor

5.2.1. Thor's Group policies without AD groups

By default, all accounts that are created under the dashboard receive a pre-existing policy called "Custom" and a "Default" one. The "Custom" policy ensures that all machines licensed under the corresponding account have basic protection features turned on. The individual features can of course be edited and tweaked later by the admin.

Group Policies				[CREATE NEW POLICY
A TOTAL OF 2 LISTINGS					
POLICY NAME	AD COMPUTER GROUP	AD USER GROUP	PRIORITY	STATUS	COPY
Custom	•		2	ENABLED DISABLED	
Default	-	-	1		

Please note that the "Default" policy is non-interaction-able and is a policy that is meant to ensure proper communication between the web interface and the local agents.

IMPORTANT

THE DEFAULT POLICY SHOULD ALWAYS HAVE THE LOWEST PRIORITY (PRIORITY 1). PLEASE DO NOT DRAG AND DROP THIS POLICY AROUND THUS MODIFYING ITS INTENDED SYSTEM PRIORITY

Only one policy per Thor agent is allowed and only one shall apply. If there are more which are suitable for application (AD restrictions are not in place for instance), Thor will apply only the one with the highest value of priority (in our case "Skype" policy has the highest value - 4). Therefore, the local Thor agent will only apply the policy called Skype

Group Policies					CREATE NEW POLICY
A TOTAL OF 4 LISTINGS					
POLICY NAME	AD COMPUTER GROUP	AD USER GROUP	PRIORITY	STATUS	COPY
Skype	-	-	4	ENABLED DISABLED	DUPLICATE
Chrome		-	3	ENABLED DISABLED	DUPLICATE
Mozilla			2	ENABLED DISABLED	
Default	-	-	1		



5.2.2. Thor's Group policies with AD groups

This feature allows the binding of certain policies only for some users (groups) or for some computers (groups). In turn, this allows for applying different Thor defined policies to different AD groups (either users or computers). It is useful for instance when applying differentiated patches (versioning) across distributed environments.

5.2.2.1. Applying differentiated Thor policies across distinct AD computer groups

If the administrator needs to distribute a policy only to a certain AD computer group, firstly the new policy needs to be created. Afterwards, the "AD Computer Group" field needs to be filled with the name of the corresponding AD computer group. ("Marketing Computers", as shown below).

General	Thor Vigilance	Thor Foresight
POLICY NAME*	LANGUAGE*	PRIORITY 2
AD COMPUTER GROUP Marketing Computers	AD USER GROUP	

After you create the policy, you only need to enable it to take effect.

IMPORTANT

The local agent does not do LDAP so basically Thor does not interrogate the AD directly. Thor does not communicate with the domain controller or with the AD server for the purpose of data gathering.

The local Thor agent does a gpresult /r locally so basically it interrogates the host about AD computer group membership and AD user group membership.

It then tries to match whatever it detects in the Thor dashboard policy to the results that stem from the gpresult command. If a match is found, then the corresponding Thor policy applies to the matched AD group.



The adjacent example shows the gpresult /r command in action which finds that the local host on which the Thor agent is installed is part of the "Marketing Computers" AD group.

The correct procedure is then to assign inside the Thor Dashboard the same AD group name.





IMPORTANT

- Right now, the only AD group types that are supported are GLOBAL SECURITY GROUPS (COMPUTER OR USER)
- Nested groups as well as AD OU names are not supported for use within the Thor dashboard.
- The group names are case sensitive inside the Thor dashboard so for a successful bind, the names have to be an exact match.
- It is possible to have both fields AD Computer Group and AD User Group filled in for the SAME policy. However, this will make the policy extremely restrictive. It will only apply when both the computer and user membership requirements are met.

5.2.2.2. How can I distribute a policy to an AD User groups?

If the administrator needs to distribute a policy only to a certain AD user group, firstly the new policy needs to be created. Afterwards, the "AD User Group" field gets filled with the name of the corresponding AD user group. ("Marketing Users", as shown below):

General	Thor Vigilance	Thor Foresight
POLICY NAME*	LANGUAGE*	PRIORITY 2
AD COMPUTER GROUP	AD USER GROUP Marketing Users	

IMPORTANT

The local agent does not do LDAP so basically Thor does not interrogate the AD directly. Thor does not communicate with the domain controller or with the AD server for the purpose of data gathering.

The local Thor agent does a gpresult /r locally so basically it interrogates the host about AD computer group membership and AD user group membership.

It then tries to match whatever it detects in the Thor dashboard policy to the results that stem from the gpresult command. If a match is found, then the corresponding Thor policy applies to the matched AD group.

IMPORTANT

- Right now, the only AD group types that are supported are GLOBAL SECURITY GROUPS (COMPUTER OR USER)
- Nested groups as well as AD OU names are not supported for use within the Thor dashboard.
- The group names are case sensitive inside the Thor dashboard so for a successful bind, the names have to be an exact match.
- It is possible to have both fields AD Computer Group and AD User Group filled in for the SAME policy. However, this will make the policy extremely restrictive. It will only apply when both the computer and user membership requirements are met.



5.2.2.3. Changing group policy priority

The value/number of priority of a group policy is assigned automatically in an increasing way. The higher the number, the higher the priority.

Changing the policy priority is done via drag and drop from the policy name box. Simply click and do "drag and drop" vertically to change the policy apply order.

AD COMPUTER GROUP	AD USER GROUP	PRIORITY	STATUS	COPY
		4	ENABLED DISABLED	DUPLICATE
-		3	ENABLED DISABLED	DUPLICATE
		2	ENABLED DISABLED	DUPLICATE
		1		DUPLICATE
		· · · · · · · · · · · · · · · · · · ·	· · 4 · · 3 · · 2	· · 4 ENABLED · · 3 ENABLED · · 2 ENABLED

5.3. Using Thor while behind an authentication proxy

Thor can be used in combination with IT Security proxies or authentication proxies. The steps below must be followed to use Thor if behind a proxy:

- Login at https://dashboard.heimdalsecurity.com and click Group Policies.
- If you do not already have policies defined, then click 'Create New Policy'.
- If more than one policy is being used, then the proxy information must be entered into all of them.
- Go to the General Settings Tab and find the option "Enable proxy settings"

Enable proxy settings					
HOST*	PORT*	DOMAIN	USERNAME	1	PASSWORD
	0				

• once you introduced your Proxy settings on the dashboard side, deploy Thor. You may use the command line and use specific parameters. Please see the example below:

msiexec /qn /i Heimdal.msi heimdalkey="xxxxx-xxxxx-xxxxxx" proxy="Address=x.x.x.x Port=xy Username=XXXX Password=XXXX Domain="



5.4. Internet WebServers for use with Thor Foresight

Using Thor Foresight with internal webservers is fully supported as long as they use DNS based naming. For example a request for <u>http://thorforesight.local</u> will be recognized as a valid, supported DNS request and will be able resolvable. On the contrary, a request for <u>http://thorforesight</u> is not supported. IP address-based requests are handled without a problem. Requests like this one are fully supported: <u>http://192.168.0.1</u>

IMPORTANT

This only affects web-based services, not file sharing services or drive share mapping such as \\thorforesight

5.5. Static/ Dynamic IP DNS Environments Settings for Thor

The Thor suite is fully compatible with both static and dynamic DNS environments. There should be no issues no matter the initial DNS configuration of your environment.

5.6. Virtualization environments

For virtual machines:

Thor can be successfully installed on machines that stem from the same cloned image.

For Citrix environments: These Citrix environment software versions are minimum requirements for Thor compatibility:

XenServer – Version 6.5 XenApp & XenDesktop – Version 7.6

5.7. Using Thor in VPN environments – VPN compatibility

By default, Thor should be compatible with all VPN clients. Depending on the VPN technology used, there have been observed 3 types of VPN behaviors:

- VPN clients that directly try to modify the NIC settings for DNS
- VPN clients that add an additional virtual network card that they use to route the traffic into the tunnel. They are also known as TAP adapters and they need TAP drivers to work properly.
- VPN clients that add additional network layers on top of IPv4 or IPv6, essentially adding another driver to the existing NIC that they use to route the traffic.



If connectivity issues are observed while having Thor Foresight installed, please have a look at the below case corners:

IMPORTANT: Thor is compatible with all VPN technologies. The connection should be established in a correct and stable way. HOWEVER, if you notice traffic filtering issues like pages not being filtered while connected to the VPN server, please contact the support team at <u>corpsupport@heimdalsecurity.com</u>.

5.7.1. Using Thor with Cisco AnyConnect VPN

Thor Suite can be used with Cisco AnyConnect VPN if 2 conditions are met:

1. Set split exclude: 104.46.51.121 (this is the IP address of our cloud services). For the model Cisco ASA 5585-X, you can change as in the next image:

Add Delete General General Servers Advanced		plit tunneling decisions on the	basis of a network list that can be specified below by providing the proper parameters to 'Policy' and 'Network List' field
Advanced	Date along a		
	DNS Names:	🕅 Inherit	
Browser	Proxy Send All DNS Lookups T nect Client	Through Tunnel: 🦳 Inherit	⊘ Yes
	Ev1) Client Policy:	🕅 Inherit	Exclude Network List Below
emote Access VPN	IPv6 Policy:	🔽 Inherit	
Introduction Network (Client) Access	Network List:	🕅 Inherit	Exclude

2. Go to <u>https://dashboard.heimdalsecurity.com</u>, click Group Policy, open your Group Policy, go to Thor Foresight, navigate to DarkLayer Guard and enable the option called **Cisco AnyConect IPv6 compatibility mode**.

General	Tho	r Vigilance	∞ ™	nor Foresight
DarkLayer Guard	VectorN I	Detection	X-ploit R	esilience
Enable this module				
Enable DarkLayer Guard				
Enable High Compatibility mode 👔		Force DHCP DNS u	sage 🕧	
Automatically Disable Traffic Filtering	_	Enable VectorN det	ection lockdown 🕧	
Use default loopback address 🕧		Cisco Anyconnect I	Pv6 compatibility mode 🕧	



5.7.2. Using Thor with GlobalProtect from Palo Alto

From experience we have determined that the VPN client from the Palo Alto manufacturer works best if the admin enforces the DNS IP value 127.0.0.1 – client host IP – on the network card. This option will change the usual 127.7.7.X IP that is placed on the NIC DNS settings as a result.

General	Thor Vigilance	Thor Foresight
DarkLayer Guard	VectorN Detection	X-ploit Resilience
Enable this module		
Enable DarkLayer Guard		
Enable High Compatibility mode 🕧	Force DHCP DNS us	sage 🚺
Automatically Disable Traffic Filtering	Enable VectorN dete	ection lockdown 🕧
✓ Use default loopback address ()	Cisco Anyconnect II	Pv6 compatibility mode 🕧

5.7.3. Using Thor with VPN clients that modify the DNS settings in the NIC (ex. FortiGate from Fortinet) Thor usage combined with a VPN client that when connected adds a Static IP on the NIC and in conjunction with a DHCP connection, requires one setting to be made: enable the option called Force DHCP DNS usage.

Please, enable this option ONLY if the machines from your organization ARE NOT using STATIC IP.

General	Thor Vigilance	Thor Foresight
DarkLayer Guard	VectorN Detection	X-ploit Resilience
 Enable this module 		
Enable DarkLayer Guard		
Enable High Compatibility mode 🕧	Force DHCP DNS us	sage 👔
✓ Automatically Disable Traffic Filtering	Enable VectorN det	ection lockdown 🕧
Use default loopback address 🕧	Cisco Anyconnect II	Pv6 compatibility mode 🕧
IMPORTANT!		



Do not touch the VPN settings presented in the case corners above if the connection works by default. The settings above should be considered tweaks and not mandatory for the connection via VPN to be functional.

5.8. Usage on Terminal servers or Citrix servers

In order to run Thor Suite on Terminal Servers or Citrix servers, we suggest that you use the "Do not show GUI" option inside the general settings of relevant Group Policies.

On details about the showing or hiding the GUI please read chapter 5.1.1.2

5.9. Internet Protocol Version

Thor Foresight can filter network traffic both on IPv4 and IPv6. Please see below the DNS settings made by Thor Foresight when Traffic Filtering is activated.

• On IPv4, the DNS address set by Thor Foresight looks like 127.7.7.X where X is variable. In the example below the assigned DNS value is 127.7.7.5.

Internet Protocol Version 4 (TCP/IPv	4) Properties ×							
General Alternate Configuration								
supports this capability. Otherwise, yo	You can get IP settings assigned automatically if your network supports this capability. Otherwise, you need to ask your network administrator for the appropriate IP settings.							
Obtain an IP address automatically								
Use the following IP address:								
IP address:								
Subnet mask:								
Default gateway:								
Obtain DNS server address automatically								
Use the following DNS server add	Iresses							
Preferred DNS server:	127 . 7 . 7 . 5							
Alternate DNS server:	· · ·							
Ualidate settings upon exit	Advanced							
	OK Cancel							



• On IPv6, the DNS address set by Thor is **fe80::b49a:9bef:4249:ac2e**

Internet Protocol Version 6 (TCP/IP	76) Properties	\times
General		
	tomatically if your network supports this capability. ork administrator for the appropriate IPv6 settings.	
Obtain an IPv6 address automat	ically	
Use the following IPv6 address		
IPv6 address:		
Subnet prefix length:		
Default gateway:		
Obtain DNS server address auto	matically	
Use the following DNS server ad	dresses	
Preferred DNS server:	fe80::b49a:9bef:4249:ac2e	
Alternate DNS server:		
Validate settings upon exit	Advanc	ed
	ОК	Cancel

*if **DarkLayer Guard** is disabled from Thor Foresight - the 127.7.7.5 will be removed when the adapter becomes active * **DarkLayer Guard** can cause issues if the client uses SAP because SSO requires the KDC (Kerberos Domain Controller) to be present as the Primary DNS

5.10. Multiple Server Mode

Multiple Server Mode is an option that allows Thor Foresight to filter the traffic on more than one active (NIC)*s. That means that Thor Foresight will add its own DNS addresses on all the active NICs.

The DNS addresses added by Thor Foresight on the NICs will start from 127.7.7.3 and continue depending on the number of active NICs. For example, if a machine has 3 active NICs, Thor Foresight will add the following DNS addresses:

- NIC 1 127.7.7.3
- NIC 2 127.7.7.4
- NIC 3 127.7.7.5

*NIC = Network Interface Card

IMPORTANT

This option is not available for customers, only the Heimdal Security Technical Support team can enable this for you.



5.11. Uninstall Protection for Thor products

Thor Suite offers the administrator the option for setting an uninstall password to avoid 3rd party tools removing Thor and to make sure users will not uninstall Thor by mistake, even with administrative privileges in place.

The Uninstall Password feature offers you two options:

- 1. An **Uninstall Password** per Group Policy
- 2. A Master Uninstall Password that can be applied to all your machines
- **The Uninstall Password** can be found in each Group Policy and if the administrator wants to set an Uninstall Password for a certain Group Policy, these are the steps he needs to follow:
 - a. Go to https://dashboard.heimdalsecurity.com
 - b. From the Top Menu Select Group Policy
 - c. Open the Group Policy that needs modifying
 - d. In the General settings section, there will be an option called Enforce uninstall password
 - e. Enable that option and type a password that will be requested by the agent on uninstall

General	Thor Vig	gilance	T	or Foresight
POLICY NAME*	LAN	GUAGE*		PRIORITY
Thor Policy Manager	/ E	nglish	-	2
AD COMPUTER GROUP	AD L	USER GROUP		
POLICY CHECK INTERVAL [MIN]	LICE	INSING CHECK INTERVAL [M	IN]	
III 120 III		1440 III		
Include in Release Candidate Program				
Do not show GUI				
Enforce uninstall password ()				
UNINSTALL PASSWORD				
	۲			

NOTE: This password will be applied only to those machines that are part of the Group Policy you edited

f. After the password is set, scroll down and press the Update button

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- The Master Uninstall Password the administrator also has the option to generate a Master Password. This option will generate a Master Password automatically for the administrator and can be used on all relevant licensed machines, regardless of the password set per group policy. To generate this master uninstall password, these are the steps that need to be followed:
 - a. Go to https://dashboard.heimdalsecurity.com
 - b. From the Top Menu select Guide
 - c. Navigate to Generate uninstall password
 - d. Press Generate Password and a master password will be generated

↑ Home	Guide							
THOR FORESIGHT	About Heimdal CORP Your HS Activation Key Your HS Api Key Download and install Central Administration Generate uninstall password							
VectorN Detection X-ploit Resilience THOR VIGILANCE Next-gen antivirus Active clients	VectorN Detection X-ploit Resilience HOR VIGILANCE Next-gen antivirus The Master Password is only available during the day it was generated for. You can use the Master Password in case you've forgotten to password set in the group policy.							
ROI report C Email report	YOUR HEIMDAL CORP UNINSTALL MASTER PASSWORD IS: 2859FCD21B05470669C792BE3CB7C4C5 COPY KEY							

IMPORTANT

If you want to uninstall Thor silently and you have an uninstall password set, you need to add the following parameter to the uninstall command: **uninstallpassword=''passwordgoeshere''.**

This applies for both Uninstall Password from Group Policy and The Master Uninstall Password

The master password takes precedence over the regular uninstall password set per group policy. The master password will be accepted and it will work towards the uninstall regardless of the initial password set in the group policy field.



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6. Features

6.1. Features of Thor Foresight

6.1.1. Patch Management

Thor Foresight monitors and automatically updates a range of software applications. The patches are downloaded directly from our servers and we only add special code switches to deploy the patches silently and at the correct time. Thor Foresight will never close a running application or automatically reboot the PC after the updates have been installed. Also, Thor Foresight will never request user/ admin permissions or show UAC pop-ups, even if the UAC is enabled.

Applications included and monitored in the Patch Management system are selected on the following criteria:

- One or more versions contain vulnerabilities, which are corrected in updated versions
- Vulnerabilities pose a security risk and are therefore actively used by IT criminals

6.1.1.1. The list of supported software

Here you can find the full list of the applications that can be installed or patched by Heimdal Foresight: <u>https://support.heimdalsecurity.com/hc/en-us/articles/206845959-Which-software-does-Heimdal-patch-</u>

6.1.1.2. Technical implementation

Thor receives its information from monitoring the Registry Editor application. Firstly, it looks for the DisplayName property of an app. If this property is not found, the Install button/option is displayed. Secondly, if the DisplayName is found, then it looks to the DisplayVersion properties and it decides if the installed version is older than the latest one. Depending on the comparison result, Thor then applies the patch.

Edit View Favorites Help		(
🖌 📙 Uninstall	*	Name	Туре	Data
4021da516-b5d9-40cd-9ade-6427d40fe1e4		🐏 (Default)	REG_SZ	(value not set)
		authorizedCDFPrefix	REG_SZ	
[1D8E6291-B0D5-35EC-8441-6616F567A0F7]		and Comments	REG_SZ	
[1F72FDD5-A069-45B4-928F-D0F16492DC69]		and Contact	REG_SZ	AppleCare Support
[23170F69-40C1-2702-1514-000001000000] [23D2AFC7-C01E-4413-9D9A-0BABF52569BF]		🐏 DisplayName	REG_SZ	iTunes
[25058321-C33E-496B-8915-6FD64D362CAF]		b DisplayVersion	REG_SZ	12.3.2.3
29460351-4CD6-4AD7-9F30-65AF2CE47B3D		EstimatedSize	REG_DWORD	0x0003927d (234109)
{302600C1-6BDF-4FD1-1411-148929CC1385}		ab HelpLink	REG_EXPAND_SZ	http://www.apple.com/support/
(37B8F9C7-03FB-3253-8781-2517C99D7C00)		ab HelpTelephone	REG_SZ	1-800-275-2273
44B72151-611E-429D-9765-9BA093D7E48A		ab InstallDate	REG_SZ	20160217
		ab InstallLocation	REG_SZ	C:\Program Files (x86)\iTunes\
		ab InstallSource	REG_SZ	C:\Users\Public\Documents\Heimdal Security\Patching\Downlo
486C7001-C7D6-3710-913E-5BC23FCE91E6		100 Language	REG_DWORD	0x00000409 (1033)
		ab ModifyPath	REG EXPAND SZ	MsiExec.exe /[{8A4D15F4-2148-48DF-AC31-9513E5B734ED}
	}	ab Publisher	REG SZ	Apple Inc.
		Readme	REG SZ	
{8C775E70-A791-4DA8-BCC3-6AB7136F4484}	Ξ	ab Size	REG SZ	
490160000-008F-0000-1000-0000000FF1CE} (92FB6C44-E685-45AD-9B20-CADF4CABA132)		MuninstallString	REG EXPAND SZ	MsiExec.exe /[{8A4D15F4-2148-48DF-AC31-9513E5B734ED}
(92FB0C44-E085-45AD-9620-CADF4CABA132)	· · ·	ab URLInfoAbout	REG SZ	http://www.apple.com/
(5455AED4 AB57 555E 0C42 000EE775ECA7) [95120000-00B9-0409-1000-0000000FF1CE]		at URLUpdateInfo	REG SZ	http://www.apple.com/itunes/
(989DC5D9-A776-430D-9E16-D36E5B81CD86	3	Wersion	REG DWORD	0x0c030002 (201523202)
A749D8E6-B613-3BE3-8F5F-045C84EBA29B	·	WersionMajor	REG DWORD	0x0000000c (12)
		W Version Minor	REG DWORD	0x00000003 (3)
Ad8a2fa1-06e7-4b0d-927d-6e54b3d31028		WindowsInstaller	REG DWORD	0x00000001 (1)
			NEG_DWORD	
III	P	•	III	

Thor Foresight scans the PC every 2 hours by default to find new applications or apply patches to the existing ones. The list of detected software, their version and update status can be seen in the "Patching System" tab from the main user interface as well as in the online management portal.



If an update is available, then the patching process will begin as soon as possible, when the PC is idle and is not using the specific software. If several pieces of software require patching, then these will be managed one at a time. If the agent is unable to patch specific software like a browser plug-in because it may be in use, Thor Foresight will notify the user via a red exclamation mark inside the interface and the relevant information will be added in the dashboard.

6.1.1.3. Software that already has autoupdate enabled

Please note that some of the software apps that Thor Foresight monitors and updates automatically and silently may already have autoupdate enabled in their default settings. This means that updates delivered into the software directly by the software manufacturer (via the autoupdate feature built into the application) may be faster than patches applied by Thor Foresight.

The following applications already have autoupdate enabled by default by the software manufacturer and consequently, may be updated faster than Thor Foresight can deliver the necessary patches: Google Chrome, Google Drive, Skype, Mozilla Firefox, Mozilla Thunderbird.

IMPORTANT

If you "select all" for the "install" option in the group policy, when new software is added to the Thor Foresight, the newly added software will be automatically installed in your environment.

6.1.1.4. Patches deployment method – Bulk or Staged?

If you are about to deploy Thor Foresight in your organization and your Group Policy is set to deploy new applications or to patch existing ones, you must know that the patches will be downloaded as the clients check towards the Dashboard, they never check at the same time. This way, we ensure that you'll avoid any traffic load in your organization. If a higher version is already installed on your PC, Thor Foresight will display the following warning:

OVERVIEW	TRAFFIC SCANNING MALWARE		E ENGINE	PATCHING SYSTEM	
ON OFF P	ATCHING SYSTEM	0			14
SOFTWARE NAME	VERSION	STATUS	AUTOUPDATE		SOFTWARE MONITORED OUT OF 36
Gimp x86	2.8.16	-			
Google Drive	1.28.1549	-			16
iTunes	12.3.3.17	INSTALL	•		10
iTunes x64	12.3.2.35	1	•		PATCHES APPLIED LAST 7 DAYS
Java x64	8.0.730.2	- Newe	r version detecte	d on you	r computer



6.1.1.5. Uninstall Application Feature - CORP clients only Please read more about this on our article from FAQ:

https://support.heimdalsecurity.com/hc/en-us/articles/214423645-UNINSTALL-APPLICATION-feature-explained

6.1.2. Traffic check – Malicious websites, zero-day exploits and data ex-filtration

Internet traffic checking in Thor Foresight is based on a database and a filtering engine. It blocks websites with malicious content or blocks access to servers which are controlled and operated by IT Criminals. Thor Foresight also incorporates heuristic traffic checking and statistical analysis to discover new and yet unknown threats. By doing so it protects a corporate network or private user from opening backdoors, uploading data into the hands of hackers or from having data ex-filtrated from PCs or Networks. As the filter is based on a CDN it works just as quick anywhere in the world and it adds no delay (4 ms on average) compared to normal web browsing.

6.1.2.1. Technical Implementation

The feature runs as a service on the local PC and checks all DNS lookups that are made on the PC. When a lookup is made, Thor Foresight will send the DNS lookup onto the DNS Servers defined in the client DHCP settings and check whether any of them are found in the list of malicious servers or websites.

The list is compiled as a space optimized probabilistic data structure and only takes up 15 MB of disk space. Through this data structure Thor Foresight can decide if the DNS name is either:

- a) With 100% certainty not on the list of malicious sites
- b) With 98% certainty on the list of malicious sites

If the address is not on the list of malicious servers, Thor Foresight will approve the request from the used DNS servers.

If the address is with a 98% certainty on the list, Thor Foresight will perform an extra check towards our servers to verify whether the address is harmful or not.

- a) If it does show up as harmful, the site or traffic is blocked and a notice will be displayed.
- b) If the domain address is not harmful the traffic will be allowed.

The advantage of using a probabilistic data structure is that the speed of the service is much higher and the size of the database is only roughly 0,5% of the total list.

The traffic check works for all services on the PC and on VPN. It also works on internal as well as private networks.



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6.2. Features for Thor Vigilance

As a standalone AV product Thor Vigilance features a complex threat scan module that is capable of detecting viruses, trojans, riskware, heuristic threats, adware, backdoor, constructors, dialers, exploits, trash, APCs. Besides the scan module that is available on each Thor installation, the AV as a concept also features:

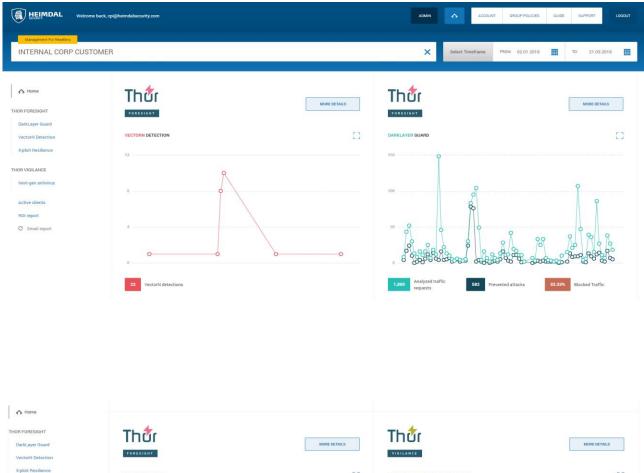
- reporting and control dashboard (see chapter 7.1.4)
- protection cloud (see chapter 7.1.4)
- local quarantine location
- VDFs (Virus Definition Files)



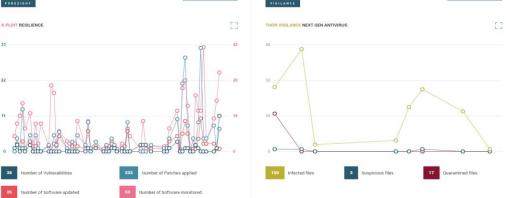
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7. Managing the dashboard interface for Thor Products

Both products that comprise the Thor Suite are controlled in the CORP version from a centralized web interface that is commonly known as and referred to as "the dashboard". The URL that will make it accessible to visitors is https://dashboard.heimdalsecurity.com/home

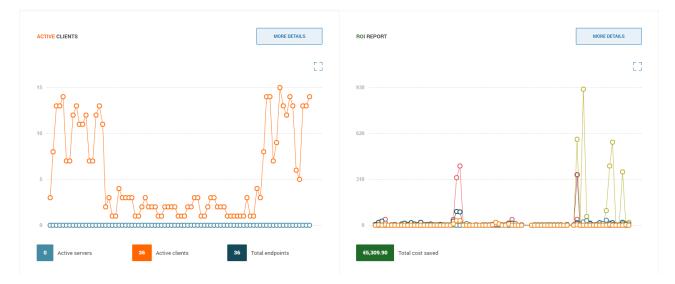








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a. The home page contains different graph types that can be visualized and used for reporting purposes – GDPR & audit b. The left side menu contains product overviews and can be browsed to check data that has been collected from the endpoints on which the 2 Thor products that comprise the Thor Suite run.

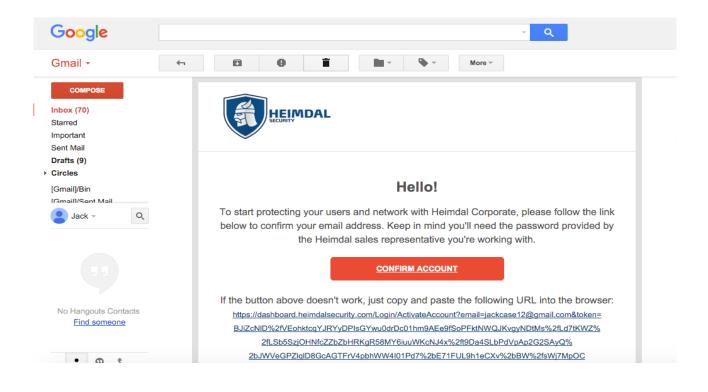
c. The top options will allow for the definitions of agent behaviors as well as controlling the reporting flows.

7.1.1. Account activation and install

Step 1 - Confirmation

The administrator will receive 2 emails:

- The first email will be from your Account Manager including your Username and Password
- The second email will come from the Thor dashboard which shall have a link please see below.





Step 2 - Logging into the Management Portal

When you have clicked the Confirm Account Link, you will be taken to a page where you will be able to log into the Management Portal – please see below screenshot.

- Please download the Google Authenticator app on your phone (it's free and can be found on Google Play, iTunes and Windows Store)
- Scan the QR code with Google Authenticator, this will then generate a 6-digit code roughly every 30 seconds. You will need to get a code from Google Authenticator every time you log into Thor's Management Portal!
- Enter the password given in the email you received from your Account Manager and then create a new password
- Enter the generated code from Google Authenticator and press the Submit button.

Please enter your two-factor verification cod	e and the new password Current password*
	New password*
SECRET KEY 2X737JNYJWQ6QLBJXAV57CQAWEVEO6PI	The password can be any combination of characters, and must be at least 6 characters in length, must contain a number, an upper and lower case character, and a special symbol.
	Enter your generated code*

If you are admin and you need access to your account, reset password or add a new IP to your account, please contact your Account Manager.

Step 3 – MSI file and your License Key

With everything set up you can now download Thor onto as many Endpoints and Servers as you like

- Click "Guide" at the top of the Screen
- Here you will find the MSI File to Download and Install Thor
- You will also find Your License Key here
- The Customer you select under "Management for Resellers", it will bring up their license key

7.1.2. Group policies

To have a better overview of this, please visit our FAQ and read about the Group Policy feature.

This is the address: <u>https://support.heimdalsecurity.com/hc/en-us/articles/213634049-Dashboard-Features-Group-Policy-Overview</u>



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7.1.3. Management interface for Thor Foresight

7.1.3.1. VectorN Detection

HOME > VECTORN DETECTION						
↑ Home	Thur	VECTOR [®] DET	ECTION [™]		22 Vecto	rN detections
THOR FORESIGHT	FORESIGHT	Search			но	STNAME Z Q
VectorN Detection	A TOTAL OF 3 LISTINGS					DOWNLOAD CSV
X-ploit Resilience	HOSTNAME	MALWARE PATTERN	PROBABILITY OF INFECTION	COUNT	ттрс 🚺	LAST MATCH
THOR VIGILANCE Next-gen antivirus	WORKSTATION42	ATTACK BLOCKED	HIGH	1	CHROME.EXE	13.02.2018 15:48:30
Active clients	WORKSTATION27	APT STRAIN	HIGH	18	-	29.01.2018 01:37:44
ROI report	W7-LAURITS	ATTACK BLOCKED	HIGH	1	-	05.01.2018 13:24:42
C Email report	FIRST PAGE (1	LAST PAGE GO TO PA	AGE			TEMS PER PAGE

VectorN Detection will focus on ensuring <u>Code Autonomous Protection</u>TM on both corporate and private endpoints, detecting malware in ways that no other endpoint protection can.

The overview will show the endpoints with the HIGHEST probability of infection across all online detection patterns.

Please note that an entry in this section may hide other detection patterns with lower probability (like moderate for instance) so if you need further info on this, you need to individually click the entries displayed in the VectorN section for details.

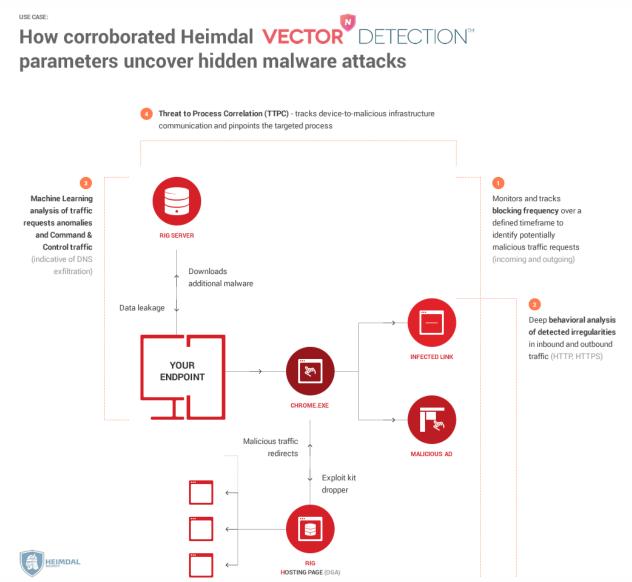
A few key things you should know about <u>VectorN Detection</u>:

- It works across-the-board on any Windows[™] device;
- It does not rely on scanning the code or auditing any system processes. Instead, the new technology uses Machine Learning Detection (MLD) to perform an in-depth analysis of all incoming and outgoing HTTP, HTTPS and DNS traffic.
- It matches Machine Learning (MLD) insights with Indicators of compromise/attack (IOC/IOA) and network forensics, turning Thor into a unique proactive cyber security suite.
- It even helps users discover hidden, second generation malware that tries to infect the endpoint or attempts to harvest data from the compromised system.
- By tracking device-to-infrastructure communication, this technology enables users to detect and block advanced malware, regardless of the attack vector.



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The graphic below illustrates how **VectorN Detection**TM empowers Thor users to detect and block even hidden malware attacks, preventing malware from infiltrating the system.



Clicking on individual VectorN detections will result in showing all malware detections as well as the TTPC (threat to Process correlation)

TOTAL OF 2 LISTINGS				
MALWARE PATTERN	PROBABILITY OF INFECTION	COUNT	ттрс 🚺	LAST MATCH
ATTACK BLOCKED	нісн	2	BITTORRENT.EXE	05.03.2018 18:07:47
APT STRAIN	нісн	18		29.01.2018 01:37:44
FIRST PAGE (1) LAST PAGE	GO TO PAGE			TEMS PER PAGE



7.1.3.2. X-ploit Resilience

The Vulnerability Overview tab provides a centralized view about the vulnerabilities in your environment, enabling you to manage them and prevent security incidents.

• Home	Thởr 🔹	39	Number of vulnerabilities		233 Number of patches applied	
FORESIGHT	FORESIGHT	· pion	Number of software updated		53 Number of software monitored	
rkLayer Guard	Search				HOSTNAME	٩
oit Resilience IGILANCE	STANDARD VIEW PATCHES PER ENDPOINTS V	IEW CURRENT VULNERABILITIES VIEW			A TOTAL OF 131 LISTINGS	DOWNLOAD
-gen antivirus	FILTERS	Patched	Vulnerable	Up-to-date		
e clients		- Ricileu	Vullerable	Optionalie	O Chinistened	
ail report	HOSTNAME	IP ADDRESS	SOFTWARE	VERSION	DATE	STATUS
	WORKSTATION40\ana	192.168.0.108	Chrome	65.0.3325.181	21.03.2018 15:18:49	0
	WORKSTATION47\jgs	10.64.13.226	Chrome	65.0.3325.181	21.03.2018 14:49:44	0
	WORKSTATION42\abo	192.168.1.91	Chrome	65.0.3325.181	21.03.2018 14:39:34	0
	WORKSTATION48\mmr	10.64.13.17	Chrome	65.0.3325.181	21.03.2018 14:24:25	0
	WORKSTATION52\mkj	192.168.0.25	Chrome	65.0.3325.181	21.03.2018 13:11:42	0

You can choose what software to install or update using policies from Group policies tab. More details about group policies in chapter 5.2. The admin has the option to check for current vulnerabilities.

		39	Number of vulnerabilities	233 Number of	atches applied
THOR FORESIGHT		Ploit RESILLIENCE 26	Number of software updated	53 Number of so	ftware monitored
DarkLayer Guard		_	•		
VectorN Detection					
X-ploit Resilience	Search				HOSTNAME Q
THOR VIGILANCE	STANDARD VIEW PATCHES PER ENDPOINTS VIEW	CURRENT VULNERABILITIES VIEW		A TOTAL OF	BI LISTINGS
Next-gen antivirus	HOSTNAME	IP ADDRESS	SOFTWARE	VERSION	DATE
Active clients ROI report	DESKTOP-DKQEER9\o3	192.168.1.135	Backup and Sync from Google	3.40.8921.5350	21.03.2018 17:02:54
C Email report	WORKSTATION40\ana	192.168.0.108	Backup and Sync from Google	3.40.8921.5350	21.03.2018 15:21:57
	WORKSTATION47\jgs	10.64.13.226	Backup and Sync from Google	3.40.8921.5350	21.03.2018 14:51:42
	WORKSTATION50\mjp	10.64.13.44	Backup and Sync from Google	3.40.8921.5350	21.03.2018 14:40:46
	WORKSTATION43\hma	192.168.1.109	Backup and Sync from Google	3.40.8921.5350	21.03.2018 14:29:55
	WORKSTATION52\mkj	192.168.0.25	Backup and Sync from Google	3.40.8921.5350	21.03.2018 13:13:44

This list contains all outdated pieces of software in the environment that the relevant policy applies to.



7.1.3.3. DarkLayer Guard Overview

	GUARD [™] 1,975 Analyzed	Traffic Requests 585 Pr	evented Attacks	29.62% Blocked Traffic
FORESIGHT				
STANDARD VIEW THREAT TYPE VIEW HOSTNAME/THR	IEATS VIEW LATEST THREATS VIEW TTPC VIEW			A TOTAL OF 28 LISTINGS
HOSTNAME	IP ADDRESS	ANALYZED REQUESTS	BLOCKED REQUESTS	RISKLEVEL
WORKSTATION27\afa	192.168.1.127	883	338	нібн
WORKSTATION40\ana	192.168.0.108	191	29	LOW
WORKSTATION21\iri	192.168.1.51	136	63	LOW
WORKSTATION42\abo	192.168.1.117	126	26	Low
WORKSTATION43\hma	192.168.1.109	103	32	LOW
WORKSTATION47\jgs	10.64.13.226	85	18	LOW
WORKSTATION62	10.64.13.29	59	6	LOW

Thor Foresight uses bloom filter technology (the same is used by the Google search engine). This ensures that the module is as fast and as accurate as possible. The bloom filter resides locally on the endpoints which have the agent installed and it will only ask the cloud when there is a partial or full match to the local filter. If there is no match, it passes clean through.

With the size of the filter we use, we get 99.5% accuracy of the local PC. Consequently, we will only have to ask for the remaining 0,5% of information during the DNS interrogation. That's because, out of all the data we check, there will already have been a match in the local database for the most of it.

Out of those 0,5% that we check - about 1-3% are typically malicious, depending on the user profiles. The benefits of this system are:

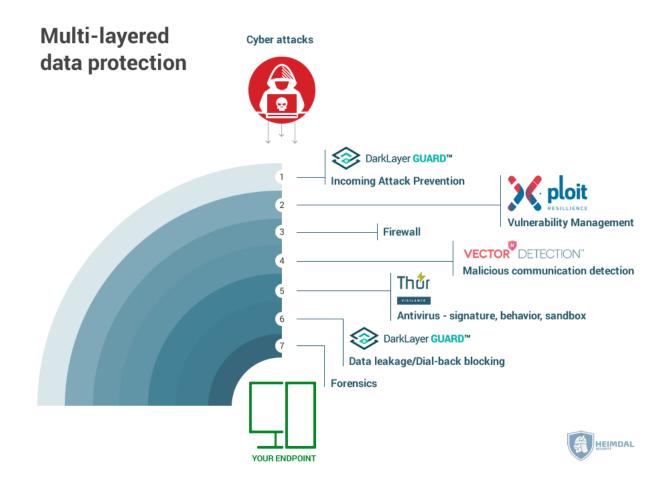
- High accuracy
- High performance
- Low false positive blocks

The downside is that about 0,47-0,49% of what we check will be a false positive check (but not a block). This is an optimal solution in order to avoid huge local databases. Our cloud servers are also configured to run 128 cores to make sure lag is kept at a minimum and the turnaround time on requests is also very short.

The DarkLayer Guard feature communicates using encrypted traffic with the Heimdal Security cloud infrastructure. This ensures that third parties can't intercept network package traffic. Please bear in mind that in certain countries or infrastructures encrypted communication may be refused by the infrastructure owner and hence the DLG feature may not work properly. Using the "Auto Disable" option will resolve this issue. Enabling this feature though may also leave your endpoints unprotected in these scenarios to ensure uptime.



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The DarkLayer Guard module protects your users by blocking access to malicious websites. This feature is updated regularly and does not require any administration or maintenance on your part. The graph above will explain the protection level placement for each Thor Foresight module.

The DLG module filters all network traffic packages and every package is intercepted. This has the following effect: not only the addresses that are manually written by the users in the URL bar are filtered but also all redirects, all additional pages that are opened when unintentionally clicking on a commercial/ link or ad.

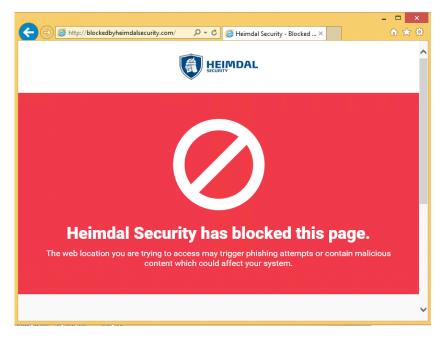
Please keep in mind that the DLG does not do SSL dissection, it does not look what's inside the packages and does not try to filter based on content. The DLG works by assessing the package origin and destination and it works by building strong reliable statistics. If an endpoint does too many requests or receives too many requests to or from a domain flagged as infected, the endpoint is flagged as potentially dangerous.

IMPORTANT

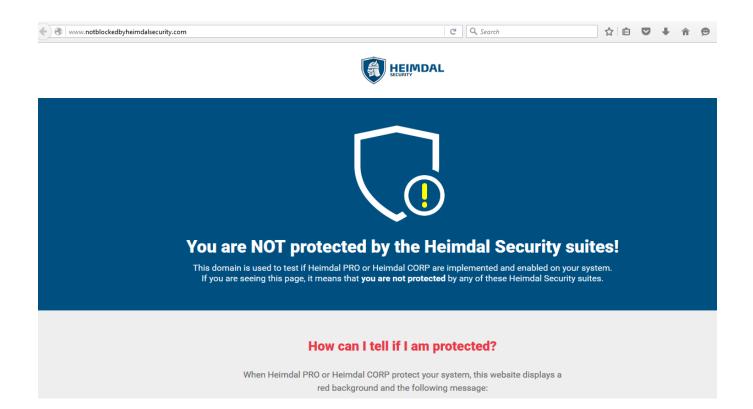
If a redirected page is blocked, this page will not open in the browser at all. However, the block will be registered inside the management interface (dashboard).



If a DNS request is blocked on a client (browser level), following a manual URL being written inside the URL bar or a suspicious link being clicked, the user will see the following within the browser:



To test at client level whether the DLG is enabled or not, visit the following website (owned and operated by Heimdal Security): <u>notblockedbyheimdalsecurity.com</u> If the DLG is not working or you don't have the DLG option enabled, the users will get the following page shown:



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What happens when we prevent an HTTPS page from loading?

Your connection is	not private	
Attackers might be trying to st example, passwords, messages NET::ERR_CERT_AUTHORITY_INVAL		book.com (for
ADVANCED		Reload

The DLG cannot display the Thor block page when a HTTPS address is blocked because HTTPS needs a certificate validation.

For example, if you decide to block facebook.com for your users, each time one of your users tries to go on facebook.com the local endpoint browser will receive the above error, because facebook.com uses the https protocol. That means that when the user tries to access facebook.com, the browser expects a certificate validation from Facebook. The validation will not be received and instead the browser session will receive the Heimdal Security certificate, therefore the request will fail.

If the administrator is interested in finding out the threat types vs. the hostnames, there is a special view inside the dashboard management interface. This view, also known as the "threat tab" will show the most blocked threat type from the target environment.

DarkLayer GUAI	1,992 Analyzed Traffic Requests		586 Prevented Attacks	29.42%	Blocked Traffic
Search					HOSTNAME
STANDARD VIEW THREAT TYPE VIEW HOSTNAME/THREATS V	LATEST THREATS VIEW TTPC VIEW			A TOTAL	OF 137 LISTINGS DOWNLOAD CSV
HOSTNAME	DOMAIN BLOCKED		THREAT TYPE		NUMBER OF MATCHES
WORKSTATION55\Amy	www.ditchampark.com	F	Manual Malware		а
WORKSTATION55\Amy	www.meremuseum.org	ß	Malware		1
WORKSTATION55\Amy	googlew.com	ß	typosquatting_domains		1



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7.1.3.4. Forensic view

338 Communications blocked		31 Patched vulnerabilities		20 Vect	torN detections	
FILTERS						A TOTAL OF 338 LISTINGS
All Statuses	O Blocked		Allowed		Analyzed	
ACTIVE USERNAME	THREAT SOURCE	THREAT TYPE	ТТРС 🚺	PROTOCOL	DATE	STATUS
afa	www.maxonolick.com	Scam/Spam	CHROME.EXE	IPv6	04.01.2018 20:58:58	0
afa	www.webhosting4.net	Phishing		IPv6	22.01.2018 01:49:07	0
afa	www.reviewcentralme.com	Phishing	-	IPv6	12.02.2018 12:06:51	0
afa	ipbmafia.ru 🕞	Manual Malware	CHROME.EXE	IPv6	04.01.2018 20:59:30	0
afa	ipbmafia.ru 🕞	Manual Malware		IPv6	13.01.2018 08:40:09	0
afa	tracker.ex.ua	Manual Malware		IPv6	26.01.2018 20:43:03	0
afa	tracker.ex.ua ESOLVED IPS 194.106.216.222 RESOLVED IOGAANS RESOLVED IOGAANS . URLS . Http://tracker.ex.ua/announce? info.hashr>%80.20%25/. . Strub.ETNEP.Bit.1%89A/2%5/ETNG7 Speet_id+. . ETT1000%5bAcCN0Ph11~%0cH385X0Ph6 . CT14.8port=518258uploaded=063download ed=1933048ief1=105488525966comptor 084ey=98AA/TEFERevent=StateRedumma nt=2008compact=18no_peer_id=1	Manual Malware	BITTORRENT.EXE	IPvő	26.01.2018 20:43:24	Ø

Clicking on any entry inside the DLG will show the extended threat view for that particulat hostname/user. If the administrator clicks on the blue "F", the forensics view will be uncovered.

Forensic view is an option that will provide more information about the domains that the DLG inside the Thor Foresight blocked. This feature will provide you the following information:

- Resolved IPs these are the IPs of the domain we blocked
- Resolved Domains is the domain we have backlisted in our database
- URLs is the domain the machine received or made a request from/to it.

In case no information is showed, it means the domain is not available anymore and it was taken down, or it could mean that the requests were not outbound, but inbound.



7.1.4. Management interface for Thor Vigilance

First of all, to be able to activate the Thor Vigilance product, the dashboard customer needs to have this enabled in the admin console as follows:

Name*		Type*		
INTERNAL CORP CUSTOMER		Corp		٣
Reseller*		Total licer	ISES *	
OfflineSales		× • 50		
Email*		Details		
mkj@heimdalsecurity.com		Internal	Corp account	
Licensing options *				
Beta	Free		Malware	
X-ploit Resilience	ProxyAr	ndTraffic	CredentialsMonitoring	
DarkLayer Guard	Pro		Family	
Corp	🕢 ApiKey		SPLA	
ManagedService	Next-ge	n antivirus	VectorN	
KEY		STATUS	EXPIRATION	
		Active	31.12.2020	
BILLING INFO:				
Country		Billing Ad	dress	
Denmark		▼ Vesterg	ade 2	
Vat		Company		
35802495		Heimda	Security	

This is doable by:

- the sales team (account managers)
- the dashboard administrators
- the support team
- resellers
- distributors

If you do not have the possibility to activate this yourself inside the admin console, please contact the account manager or the support team.



7.1.4.1. Activation of Thor Vigilance

In order to turn on the Thor Vigilance product, it needs to be activated from the Group Policies tab. Please see the screen below:

HOME > GROUP POLICIES > ALL			
Home THOR FORESIGHT	Back to Group policies		
DarkLayer Guard VectorN Detection X-ploit Resilience	General	Thor Vigilance	Thor Foresight
THOR VIGILANCE	Enable Next Gen AV 👔		

In other words, the controls for the Foresight and the Vigilance product are modular, independent from each other and can be activated individually. This means that depending on your environment and what you want to achieve in it, you may opt for policies that:

- only work as a preventive protection layer (only Thor Foresight active)
- act as a strong reactive countermeasure against viruses (only Thor Vigilance active)
- benefit from both products for maximum protection against both online and offline threats.

Once the product has been enabled, it can be configured at will, according to the intent and need of the administrator.

The first section of the policy that you can configure is the general scan settings according to the printscreen below:

GENERAL SETTINGS			
Enable Real-Time Protection ()		Enable Protection Cloud ()	
DEFAULT SCAN ACTION ON INFECTED		DEFAULT SCAN ACTION ON SUSPICIOUS	
Deny	-	Deny	-
UPDATE VIRUS DEFINITIONS INTERVAL [MIN]			
III 120 III			

Real time protection is available for use with any policy. This means that the local agent is closely watching in real time what the opened and accessed local files are. Before opening and executing files the agent is actively scanning the file.

You may define a set of actions here that will be executed by default upon opening or executing an infected or suspicious file. There are 3 options available and they are the same for both infected/suspicious files:

a) **Deny** – means that the file will not be able to be opened or executed by the user. This is valid also for users with local admin privileges. This is done from windows settings and not the AV client. The default message that the users will receive upon trying to open such a file is that the system does not have enough resources to execute the command.

b) **Quarantine** – means that the file will be automatically moved to the Quarantine and will become unavailable until removed from Quarantine.

c) Allow – the real time protection is bypassed and the files become accessible even if found to be infected or suspicious.



7.1.4.2. What is the protection cloud?

Protection cloud is a service which Heimdal Security offers by default to all their customers. If a file looks suspicious to the local AV agent, a copy of the file is uploaded in our cloud, in a sandboxed environment and its hash is checked against our own real time database. Further standard tests are performed on the file to determine if it's really infected or not. You may want to set the default action to deny the access to the file if deemed suspicious and then if you have the protection cloud enabled, we will analyse it and find out more about the file.

This provides an additional layer of security and extra info when trying to determine the infection status of a file.

7.1.4.3. Threat types and differentiated threat response

Thor Vigilance differentiates between infected files and suspicious files. Suspicious files are the files that exhibit the behaviour of infected files (accessing the same memory areas, accessing other system files, etc...). You may define real time protection default response for both infected and suspicious files.

Please note that some files we are 100% sure to be malicious viruses get deleted automatically by the AV and are not even sent to quarantine.

7.1.4.4. Updating virus definitions locally

The slider that is shown in the general settings tab controls how often does the agent check to see whether there are new virus definitions files (VDF's) within the Thor cloud. If a new VDF is available, this gets automatically downloaded to the local agent database.

UPDATE VIRUS DEFINITIONS INTERVAL [MIN]			
F	III	360	Ш

As designed, the minimum is set to 120 minutes but it can also be increased up to 360 minutes if you need to keep your network traffic to a minimum. We wholeheartedly recommend that this setting is kept as low as possible (120 mins) so that checks are made often and the latest virus definition files are immediately downloaded locally to identify and recognize threats as soon as they potentially reach the computer environment. Any delay in recognizing that a local file or files may potentially be dangerous could result in a viral infection that ultimately could have been avoided.



7.1.4.5. Creating and managing scan profiles

Defining scan profiles is crucial for the way the local Thor agent works. Basically the scan profile defines the way the local agent performs all the local scans. This includes the scan frequency, the target file location and the timeframe for performing the scheduled scans.

SCHEDULE SCAN				AI	DD NEW SCAN
NAME	DESCRIPTION	PROFILE TYPE	SCHEDULER TYPE	INTERVAL	ACTION
test		Full Scan	Weekly	8 - 16	/ 3

As the printscreen below illustrates, there are a few scan types that can be used to create a new scan profile. These are consistent with common AV activity scenarios in a business environment. The administrator can choose between:

- Full scan profile will scan all the local files on the endpoints that have the policy applied
- Quick scan profile will scan critical OS locations and the most usual target folders which are known for virus activity
- HardDrive scan profile will scan all files on the hard drive while ignoring the files on all external media types
- LocalDrive scan profile will scan all files that are hosted on the partition hosting the OS
- System scan profile will scan system files only
- **RemovableDrive scan** profile will only scan for files that become accessible from external sources like flash drives
- Active Processes Scan profile will only scan for processes currently running on the target machine

SCHEDULE SCAN					A	D NEW	SCAN
SCAN PROFILE NAME*	Choose week day	\bigcirc	Choose	day of	month	I	
1	Monday						
SCAN TYPE*	Tuesday						
Full Scan	Wednesday						
Full Scan	Thursday						
Quick Scan HardDrive Scan	Friday						
LocalDrive Scan	Saturday						
System Scan RemovableDrive Scan	Sunday						
Active Processes Scan	CHOOSE TIME INTERVAL [00:00 TO MIDNIGHT]						
	iii 8:00 iii	III	16:00	Ш			
	• Active during time selection	\bigcirc	Inactiv	e durin	g time	selecti	on
SET SCAN CANCEL							

The scan profile also lets the administrator choose the timeframe for the scan to be performed.

Two schedule types are available: **weekly** and **monthly** and they allow the control of the timeframe in which the scans are performed. Monthly scans can be used in corporate environments where there are strict maintenance policies in regard





to the timeframe when IT interventions can be performed. The scan timing can be controlled pretty strictly and it can be narrowed down to even the time interval when the scans can be performed.

When all options are configured to satisfy the scan profile behaviour, the set scan button can be used to create the scan profile.

IMPORTANT!

- The scan profile does not apply automatically in the policy after clicking the "set scan" button. The administrator needs to confirm this by clicking the "update policy" button. If the update is not clicked, the defined scan profile will be lost if the current page is left before updating the policy.
- Multiple scan profiles can be created inside a single Thor Vigilance policy. However, the scan type is exclusive. This means that it is not possible to create multiple profiles with the same scan type. Example: no 2 scan profiles can be defined to perform full scans in the same policy.

7.1.4.6. Creating an exclusion list

An exclusion list in the policy works pretty much like a whitelist. The Thor Vigilance agent will ignore whatever the administrator decides to add in the exclusion list.

Multiple elements can be added in the exclusion list like file names, file paths and whole directories. The AV agent will not scan for threats inside the elements defined here. This can be used to whitelist processes for 3rd party software that are not supposed to be picked up as threats. The added exclusions can be searched and can be removed from the list if needed.

Add new exclusion	FILE NAME 🔽	ADD
Search exclusion	FILE NAME FILE PATH DIRECTORY	
FILE NAME/PATH	TYPE	ACTION
explorer.exe	File Name	8
FIRST PAGE		1 LISTINGS

EXCLUSION LIST

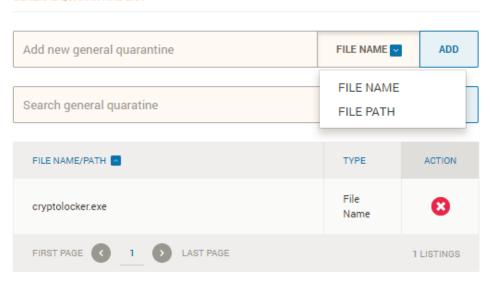
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7.1.4.7. Creating a general quarantine list

A general quarantine list works pretty much like a conventional blacklist. It is used to define a certain AV behavior when a certain file with a distinct file name is created on the hard drive. Also it can be tweaked to only apply to files in a certain physical location.

Basically the administrator is telling the agent that whenever a certain file name is found on the hard drive, the file gets automatically quarantined. As already stated, this is also valid for file paths: whenever a file is detected on a certain path, that file gets quarantined immediately.



GENERAL QUARANTINE LIST

As with the exclusion list, the quarantine list can be searched and can be edited by the administrator.

7.1.4.8. Managing the AV detections

Once the policy was applied successfully and the AV has found infected or suspicious files, these are listed under the next-gen antivirus section of the Thor Vigilance module like in the below screenshot:

↑ Home	Thờr	76 Infected files	2	Suspicious files		38 Quarar	itined files
THOR FORESIGHT	VIGILANCE	Search				HOS	
VectorN Detection	LATEST INFECTIONS VIEW INFI	ECTIONS TYPE VIEW HOSTNA	ME/INFECTIONS VIEW QUARAN	ITINE VIEW		A TOTAL OF 84 LI	STINGS DOWNLOAD CSV
X-ploit Resilience	HOSTNAME	FILE	THREAT CATEGORY	INFECTION NAME	STATUS	RESOLUT	
THOR VIGILANCE Next-gen antivirus	SELECT ALL	QUARANTINE 🤌	REPAIR 😑 EXCLUDE	😣 DELETE 🗙 CANCEL			
Active clients	WORKSTATION53\aca	PE_LAB_SYMBOS.EXE	Virus	SYMBOS/Avira-Sig	Infected	FNOTEXI ST	15.03.2018 15:41:41
ROI report	WORKSTATION53\aca	PE_LAB_UNIX.EXE	Virus	UNIX/Avira-Sig	Infected	DeletePe nding	15.03.2018 15:39:59
C Emaineport	WORKSTATION53\aca	PE_LAB_TR.EXE	Trojan	TR/Avira-Sig	Infected	None	15.03.2018 15:39:58
	WORKSTATION54\jca	PE_LAB_W16.EXE	Virus	W16/Avira-Sig	Infected	None	15.03.2018 13:28:28



The view is compact, contains information about detected infections and shows the available actions that can be undertaken for each detected infection. You get details about the name of the infected file, the threat type and status. Depending on the status there are certain sets of actions that can be undertaken.

Once you click on an entry from the AV overview you can see all threats that have been registered under the host.

	IOR FORESIGHT		⊘ ™	ior Vigil	ANCE
3 Detected Threats		0 Qua	rantine		
TOTAL OF 3 LISTINGS					
FILE	THREAT CATEGORY	INFECTION NAME	STATUS	RESOLUT ION	
SELECT ALL QUA	RANTINE 🥕 REPAIR 🚍	EXCLUDE 🔀 DELETE	X CANCEL		
PE_LAB_SYMBOS.EXE	Virus	SYMBOS/Avira-Sig	Infected	FNOTEXI ST	15.03.2018 15:41:41
PE_LAB_UNIX.EXE	Virus	UNIX/Avira-Sig	Infected	DeletePe nding	15.03.2018 15:39:59
PE_LAB_TR.EXE	Trojan	TR/Avira-Sig	Infected	None	15.03.2018 15:39:58

Depending on the real time protection resolution, when selecting a threat there are multiple actions available:

- Quarantine
- Exclude
- Delete

TOTAL OF 3 LISTINGS

FILE	THREAT CATEGORY	INFECTION NAME	STATUS	RESOLUT ION	
SELECT ALL QUA	RANTINE 😑 EXCLUDE	X DELETE			
PE_LAB_SYMBOS.EXE	Virus	SYMBOS/Avira-Sig	Infected	FNOTEXI ST	15.03.2018 15:41:41
PE_LAB_UNIX.EXE	Virus	UNIX/Avira-Sig	Infected	DeletePe nding	15.03.2018 15:39:59
PE_LAB_TR.EXE	Trojan	TR/Avira-Sig	Infected	None	15.03.2018 15:39:58
FIRST PAGE I I LAST PAGE	GO TO PAGE			п	TEMS PER PAGE

• First infected file has the FNOExist resolution which means that the file has already been removed from the host. The deletion was performed either by the user directly or by the Thor agent following a command from the dashboard. For this file there are no actions available



- The second infected file has been marked for deletion. The only available action is cancelation of the deletion
- The third infected file has the resolution "none" which means all actions are available for it: move to quarantine, exclude from detection or deletion.

7.2. Active clients

For a PC to appear in the dashboard and to count as an active client it needs to use the following 3 identifiers. Thus it can generate a machine info to the dashboard.

- Hostname
- Motherboard serial
- HDD serial

Based on these 3 identifiers an endpoint gets identified and counts towards the total number of licenses available.

IMPORTANT

If one of the 3 components changes it will be marked as a new endpoint in the dashboard because the machine info generated changes.

The Active Clients tab shows a list of the active workstations protected by Thor Suite using the same activation key. This module lets the administrator check which are the active clients. The administrator can list them and search after the following criteria: Hostname, IP Address, Agent Version, Operating System, Group Policy, Last Healthy Time, Last Faulted Time, Last Seen-.

Total Endpoints - is the number of endpoints on which you have Thor installed to.

Active Clients - is the number of machines that are active and reporting in the Dashboard

Active Servers - is the number of servers that are active and reporting in the Dashboard

Last Seen – refers to when was the last time Thor was active on that endpoint.

Delete Button – is Active only for Admins (Heimdal Security Employees)

∧ Home	0 Active servers			36 Active clients		36 Tota	al endpoints		
IOR FORESIGHT	Search							HOSTNAME	Q
ectorN Detection	A TOTAL OF 36 LISTINGS								DOWNLOAD CS
R VIGILANCE	All statuses			C License revoked		O License	e active		
Next-gen antivirus Active clients	HOSTNAME	IP ADDRESS	VERSION	OPERATING SYSTEM	GROUP POLICY	LAST SEEN	UPTIME	STATUS	DELETE
IOI report	WORKSTATION51\vgs	192.168.1 00.101	2.5.100 RC	Microsoft Windows 10 - x64	All	22.03.201 8 19:12:13	0	0	8
	WORKSTATION31\apa	192.168.1. 90	2.2.200	Microsoft Windows 10 - x64	All	22.03.201 8 19:01:35	0	0	0
	WORKSTATION53\aca	192.168.1. 196	2.5.100 RC	Microsoft Windows 10 - x64	All	22.03.201 8 18:43:48	0	0	0
	DESKTOP-DKQEER9\o3	192.168.1. 135	2.5.100 RC	Microsoft Windows 10 - x64	All	22.03.201 8 18:28:38	0	0	0
	WORKSTATION43\hma	192.168.1. 109	2.5.100 RC	Microsoft Windows 10 - x64	All	22.03.201 8 16:27:57	0	0	0



7.2.1. Revoke License Button

This option can be found on the Active Clients list.

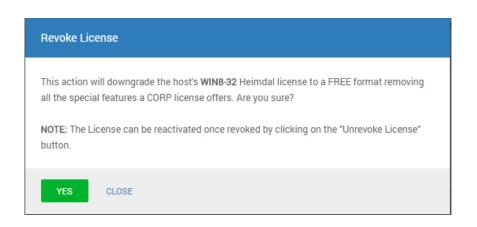
	0 Active servers			36 Active clients		36 Tot	al endpoints		
THOR FORESIGHT DarkLayer Guard	Search							HOSTNAME	٩
VectorN Detection	A TOTAL OF 36 LISTINGS								DOWNLOAD CSV
X-ploit Resilience	FILTERS								
THOR VIGILANCE	All statuses			C License revoked		O License	e active		
Next-gen antivirus	HOSTNAME	IP ADDRESS	VERSION	OPERATING SYSTEM	GROUP POLICY	LAST SEEN	UPTIME	STATUS	DELETE
ROI report	WORKSTATION51\vgs	192.168.1 00.101	2.5.100 RC	Microsoft Windows 10 - x64	All	22.03.201 8 19:12:13	0	•	8
	WORKSTATION31\apa	192.168.1. 90	2.2.200	Microsoft Windows 10 - x64	All	22.03.201 8 19:01:35	0	0	0
	WORKSTATION53\aca	192.168.1. 195	2.5.100 RC	Microsoft Windows 10 - x64	All	22.03.201 8 18:43:48	0	0	0
	DESKTOP-DKQEER9\o3	192.168.1. 135	2.5.100 RC	Microsoft Windows 10 - x64	All	22.03.201 8 18:28:38	0	0	0
	WORKSTATION43\hma	192.168.1. 109	2.5.100 RC	Microsoft Windows 10 - x64	All	22.03.201 8 16:27:57	0	0	0

This option allows the Account Administrator to revoke the Thor usage rights on a certain Host/Machine. This means that, once the REVOKE LICENSE button will be clicked, **Thor** will **never** receive the information from the Policies set in the Dashboard (*you will be able to install Thor on that machine, but it will always revert to the FREE version since a policy cannot be applied*)

You access the feature by clicking the green checkmark in the STATUS column!

We recommend you use this option ONLY when a machine/computer leaves your organization (lost/ stolen, etc)

If you decide to revoke the license for specific clients, then click the green checkbox and you will be prompted to confirm this:





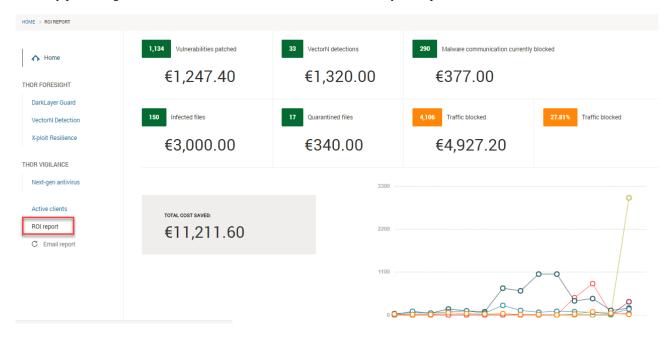
Once you pressed "Yes", the machine for which you revoked the license will stop receiving information from the Group Policy and it will not be updated correctly. If you pressed the Revoke button by mistake or you want to revert the action, you can always press the Unrevoke License button.

	0 Active servers			36 Active clients		36 Tota	al endpoints		
OR FORESIGHT	Search							HOSTNAME	q
arkLayer Guard									
ectorN Detection	A TOTAL OF 1 LISTINGS								DOWNLOA
-ploit Resilience	FILTERS								
RVIGILANCE	All statuses			O License revoked		C License	e active		
lext-gen antivirus	HOSTNAME	IP ADDRESS	VERSION	OPERATING SYSTEM	GROUP POLICY	LAST SEEN	UPTIME	STATUS	DELET
Ctive clients	WORKSTATION55\amc	192.168.1. 70	2.5.100 RC	Microsoft Windows 10 - x64	All	22.03.201 8 19:51:07	0	0	0
5 Email report	FIRST PAGE 🚺 1	LAST PAGE	GO TO PAGE					ITEMS PER PAGE	10

By pressing this button, the administrator will give all the rights back to the machine that was removed from the organization and after a reboot, the machine should receive again the Group policy the administrator has set in the Dashboard.

7.3. ROI Report

The ROI Report tab depicts an estimated return on investment provided by Thor Suite in terms of financial resources saved by protecting the users and data in the environment monitored by Thor products.





The ROI takes into account factors like cost per hour for employees when recovering data, overtime, and cost of bitcoin. If needed, we can provide on demand the algorithm used to calculate the ROI.

8. Miscellaneous

8.1. How can I activate my dashboard account?

You can ask your account manager about it. All we need is your email address and your IP. Please notice that you can access your account **only** from the IP provided. In case you need to access your account from a different location, just ask your account manager to add this new IP in your Dashboard account.

8.2. Heimdal ApiKey?

Please find details about the Heimdal API here: <u>https://support.heimdalsecurity.com/hc/en-us/articles/115003784445-Heimdal-Security-ApiKey</u>

8.3. Dashboard Login FAQ

On Android phones, when trying to download the app, you get the following error: "Google Play authentication is required".

Have a look at this guide: https://www.androidpit.com/how-to-fix-google-play-authentication-is-required-error

"Codes generated by the Authenticator do not work."

This is most likely because it is not synced correctly. You can try the following:

Go to the main menu on the Google Authenticator app: Click Settings Click Time correction for codes Click Sync now

How can I synchronize the time on iPhone?

You can synchronize the time following these steps: Settings -> General -> Date & Time -> Set Automatically

8.4. How to use Google Authenticator on Google Chrome browser

This guide will show you the steps you need to follow so you can add Google Authenticator to Chrome browser.

Step 1.

Click on: <u>Download</u> and add the GAuth Authenticator extension to the browser if asked to do so or click on the *Add to Chrome button* > *Add extension*



offered	+ ADD TO CHROME	Cator	uth Authentie	

Step 2.

- 1. Now that the extension is added to the browser, open it and start configuring it: Click on the Thor Dashboard link: <u>https://dashboard.heimdalsecurity.com/</u>
- 2. Log in using the credentials sent by the account manager
- 3. After logging in, you'll need to change your password.

	Current password*
	New password*
	Confirm new password*
SECRET KEY 2X737JNYJWQ6QLBJXAV57CQAWEVE06PI	The password can be any combination of characters, and must be at least 6 characters in length, must contain a number, an upper and lower case character, and a special symbol.
	Enter your generated code*
	Submit

- **Step 3.** While on this page, click on the GAuth Authenticator extension and click on the Pencil icon to begin adding the account.
- **Step 4.** Next, click on the + *Add* and Insert the email address and the *Secret Code* is the one from the dashboard login page.



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a de la companya de l					Ad	ld accour
Account name:						
ama@heimdalsecurity.com						
Secret key:						
G Add Cance	4	a -			>	<
/ 🕒 Unified Threat Dashboar 🛪 🖉 😧 Unified Threat Dashboar 🗴) 🙈	0	Ð	٥	G	:
Enter your generated code *						•
In order to successfully enable two-factor authentication, you must download one of the following mobile applications, depending on your mobile phone's operating system:						

Step 5. After the Secret Code is inserted please press Add

- At this point, the Authenticator is set up on the browser.
- The Dashboard login page must not be closed or logged into yet.

Step 6. Start generating the codes directly from the extension and use them to login the dashboard.

8.5. What is Thor RC?

Thor RC is the release candidate (beta version) that is in pre-production.

We recommend you install this version only if someone from the Heimdal Security team recommends you doing it. Otherwise, this version might cause issues in your organization because of its relative instability.

How can I upgrade to Thor RC? - PRO users

- 1. Open Thor.
- 2. Click on the settings wheel.
- 3. Click on Settings.
- 4. Scroll down and turn on Update to Beta.

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HEIMDAL

	Welcome	to Heimdal PRC)	ACTIVITY REPORTS
	OVERVIEW	TRAFFIC SCANNING	MALWARE ENGINE	PATCHING SYSTEM
2 SETTINGS NOTIFICATION CENTER LICENSE SUPPORT ABOUT	ON OFF AU USE PROXY	TOMATICALLY DISABLE TRAFFIC FILTE	3)
	English V			
63 DAYS LEFT	UN OFF OP		/DAL SECURITY 2016. AI	LL RIGHTS RESERVED V2.2.9

How can I upgrade to Thor RC? - CORP users

- 1. Open dashboard.heimdalsecurity.com.
- 2. Login to your account.
- 3. Select Group Policies.
- 4. Open the policy in which you want to activate and install Thor RC
- 5. Go to "General"
- 6. Enable "Include in the Release Candidate Program".

Does Thor upgrade automatically when a new version appears? And what happens if I already have Thor RC installed?

Yes, Thor updates itself automatically in one of the following scenarios:

A. If you have Thor 2.2.8 installed and version 2.2.9 is released, Thor will automatically update to version 2.2.9.B. If you have Thor 2.2.8 RC and version 2.2.9 is released, Thor will automatically update to version 2.2.9.

Thor will NOT update itself automatically in the following circumstances:

If you have Thor 2.2.9 RC and version 2.2.9 is released, Thor will <u>not</u> automatically update to version 2.2.9.

Thor's upgrade is based on the version number.

If Thor detects a **lower** version on the system, it upgrades automatically. But if it detects a version that is **equal or higher** than the latest version released (2.2.9 in this example), Thor will not upgrade itself automatically the latest version.

!!! The official update will always have a lower version number than the RC version (release candidate).

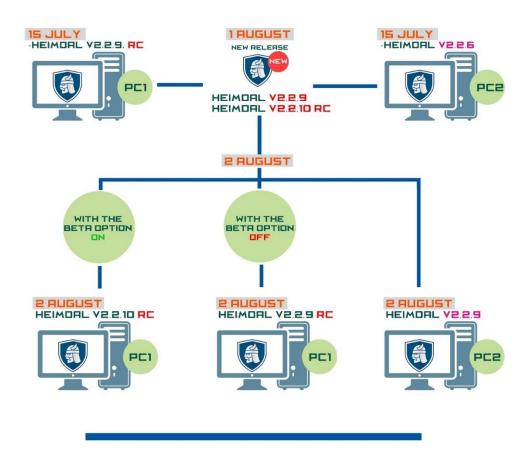
Example: If we launch Thor 2.2.9 official release, we will launch at the same time, Thor 2.2.10 RC. Consequently, the next official release version will be 2.2.10.



So if you decide to use Thor 2.2.10 RC, when version 2.2.10 will official be released, Thor 2.2.10 RC will **not** be automatically updated.

If the current version installed on the endpoint is **equal** to the RC version, the automatic update will **not** happen: 2.2.10 RC will NOT update to 2.2.10 official release.

If the current version installed on the endpoint is **lower** to the RC version, the automatic update **will** happen: 2.2.9 RC will update to 2.2.10 official release.



*Having a set of endpoints that constantly run the RC (Release Candidate) version of Thor can greatly help you anticipate potential issues that Thor might cause organization-wide, before releasing a new version to all your endpoints.

As a result, we recommend that the administrator enrolls 1-2% of the active endpoints into a separate Active Directory group. A specific group policy can be set to that set of endpoints, in order for them to always run the RC version of Thor. Our support team will always be within reach, so we can work out the potential issues and ensure that your organization is making the most of what Heimdal Security products have to offer!



9. Agent graphical user interface (GUI) for the PRO version

DISCLAIMER

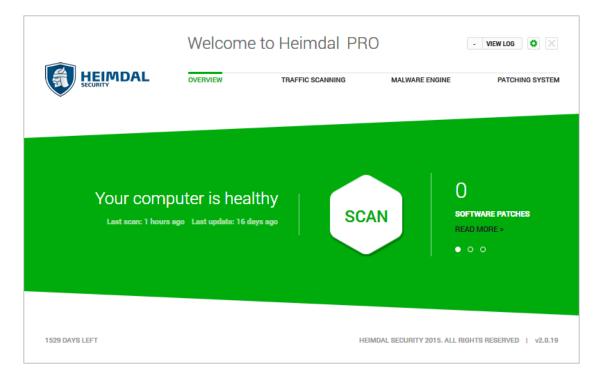
Please bear in mind this chapter is meant for PRO users ONLY and highlights the agent GUI and the functionalities that are otherwise included in the dashboard for CORP users.

9.1.1. The Overview tab

It is the home screen for your Thor products. It lets you know right away what the overall status of your system is. It can display 3 types of messages and colors:

- Green + "Your computer is healthy" when your system is safe
- Yellow + "Your computer must be updated" when there are outdated applications Thor detected and is currently patching
- Red + "Your computer is at risk!" when your credentials have been compromised.

You can initiate a Thor scan by clicking on the hexagonal button in the overview tab. On the bottom left corner of your Thor dashboard you will always see how many days you have left of your subscription.





9.1.2. Traffic scanning tab

In the Traffic Scanning tab, you can choose to turn off active **traffic scanning** or **traffic filtering**. However, we do not recommend doing it, because it will substantially decrease your protection level. If you want to find out more about these options, just click on the information balloon next to them.

ON OFF TRAFFIC SCANNING ()	ON OFF AUTODISABLE TRAFFIC FILTERING 🥖
ON OFF TRAFFIC FILTERING	

Autodisable traffic filtering feature - If Thor can't connect to the cloud servers from your location, DLG won't work properly. This may disconnect your PC from the Internet. To avoid this, you can choose to automatically disable Traffic Filtering. Thor will re-enable the feature when it can reconnect to the cloud servers.

Additionally, by clicking on the Use Proxy button, you can set up your own proxy to create an additional protection layer for your system.

On the right hand side, you will see how many web traffic scans Thor has performed on your system in the last 7 days. You can also see how many of the web addresses you accessed were blocked, if any.

	Welcome	to Heimdal PR	-	VIEW LOG
HEIMDAL SECURITY	OVERVIEW	TRAFFIC SCANNING	MALWARE ENGINE	PATCHING SYSTEM
	ON OFF TR	AFFIC SCANNING 🕧		3033
	ON OFF TR	AFFIC FILTERING (SCANS LAST 7 DAYS
	ON OFF AU	TODISABLE TRAFFIC FILTERING	D	
	USE PROXY			20 blocks last 7 days

212 DAYS LEFT

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9.1.3. Malware engine tab

In the Malware Engine tab, you can choose to turn off active malware scanning. However, we do not recommend doing it, because it will substantially decrease your protection level. If you want to find out more about this Thor PRO capability, just click on the information balloon next to this option for details.



On the right hand side, you will see how many malware scans Thor PRO has performed on your system in the last 7 days. You can also see how many malware strains Thor PRO has cleaned from your system in the same time frame.

	Welcome	e to Heimdal PR	0 -	VIEW LOG
HEIMDAL SECURITY	OVERVIEW	TRAFFIC SCANNING	MALWARE ENGINE	PATCHING SYSTEM
	ON OFF M	ALWARE SCANNING 👔		395 scans last 7 days
				O CLEANS LAST 7 DAYS
321 DAYS LEFT		HE	EIMDAL SECURITY 2015. ALL RIG	HTS RESERVED V2.0.29

9.1.4. Patching system tab

In the Patching System tab, you can choose to turn off the active the patching system. However, we do not recommend doing it, because it will substantially decrease your protection level by depriving your software of automatic updates.

If you want to find out more about this Thor PRO capability, just click on the information balloon next to this option for details.





In this tab you will also see a list of over 20 software applications that Thor can patch for your automatically and silently. You can see the latest version available for each of them and check their status:

• A green tick = the application is up to date

ON OFF PA	ATCHING SYSTEM	0		
SOFTWARE NAME	VERSION	STATUS	AUTOUPDATE	
Adobe Flash	20.0.0.267	~	•	

• A line of 2 dynamic dots = the application is being updated

	Adobe Acrobat Read	15.008.200	8	•	
--	--------------------	------------	---	---	--

• A red exclamation mark = the software couldn't be patched



• A yellow exclamation mark = the application couldn't be patched because a newer version is already installed

You can also **install new software applications with one click**. Just click the Install button next to the application you want. The latest version of the application will be installed in your system securely and directly, without having to download an installer and run it. No adware, no additional bundles – just the app you need.



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HEIMDAL SECURITY	OVERVIEW	TRAFFIC	SCANNING	MALW	ARE ENGINE	PATCHING SYSTEM	
	ON OFF P	ATCHING SYSTEM	0			13	
	SOFTWARE NAME	VERSION	STATUS	AUTOUPDA	ſE	SOFTWARE MONITORE OUT OF 24	
	Adobe AIR	20.0.0.233	INSTALL				
	Adobe Flash	20.0.0.267	~			0	
	Adobe Shockwave	12.2.2.172	INSTALL			3	
	CCleaner x64	5.13	~			PATCHES APPLIED LAST 7 DAYS	
	Chrome	47.0.2526	~		-		

You can also select which applications Thor should not patch for you automatically, if you want to. You can do this by deselecting the applications from the "Autoupdate" column. Please keep in mind that this will decrease your security level.

HEIMDAL SECURITY	OVERVIEW	TRAFFIC	SCANNING	MALWAR	e engine	PATCHING SYSTE	
	ON OFF P	ATCHING SYSTEM	0			13	
	SOFTWARE NAME	VERSION	STATUS	AUTOUPDATE		SOFTWARE MONITORE OUT OF 24	
	7-zip x64	15.12.00.0	-				
	7-zip x86	15.12.00.0	-			0	
	Adobe AIR	20.0.0.233	INSTALL			3	
	Adobe Flash	20.0.0.267	~	-		PATCHES APPLIED LAST 7 DAYS	
	Adobe Shockwave	12.2.2.172	INSTALL	~	•		

On the right hand side, you can see how many applications Thor is monitoring at the moment. You can also see how many updates (patches) Thor has applied to your apps in the last 7 days.



9.1.5. View logs section

In the **View Log** section you get a bird's eye view of your system's security, in the **General** tab. You can see how the Traffic Filter, Malware Engine and Patching System are working to keep you protected.

	Welcome to Heimdal PRO						
HEIMDAL	OVERVIEW	TRAFFIC SCANNING	MALWARE ENGINE PATCHING SYSTEM				
GENERAL	TRAFFIC FILTER	MALWARE ENGINE	PATCHING SYSTEM				
SOFTWARE PATCHES	238	80	26				
WEBSITES BLOCKED	SCANS LAST 7 DAYS	SCANS LAST 7 DAYS	SOFTWARE MONITORED OUT OF 28				
	0	0	0				
	BLOCKS LAST 7 DAYS	CLEANS LAST 7 DAYS	PATCHES APPLIED LAST 7 DAYS				
1529 DAYS LEFT		HEIMD	AL SECURITY 2015. ALL RIGHTS RESERVED v2.0.19				

If you choose the **Software Patches** tab in the left hand side menu, you will see which updates have been installed, for which application, which version and on which date.

	OVERVIEW	TRAFFIC SCANNING	MALWARE ENGINE	PATCHING SYSTEM
Jeconity				
GENERAL SOFTWARE PATCHES INFECTIONS DETECTED WEBSITES BLOCKED	SOFTWARE NAME	VERSION	DATE	
	Adobe Flash	20.0.0.267	28.12.2015	•
	Foxit Reader	7.2.8.1124	23.12.2015	
	Firefox	43.0.2	23.12.2015	
				-



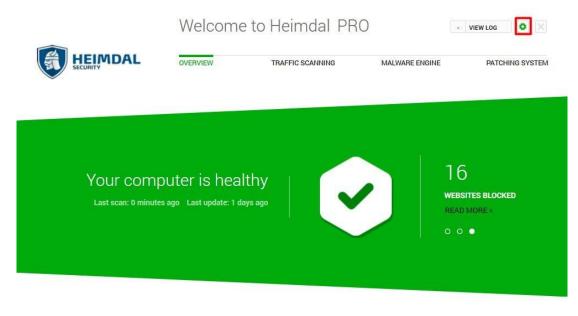
If you choose the **Infections Detected** tab, you will see which infections have been found and blocked by Thor. You can see when these infections were detected, the malware strain's name and their status. If no infection has been detected, the tab will be empty.

If you choose the **Websites blocked** page, you will see a list of infected or potentially dangerous websites that Thor has blocked to protect your system. You can see the web address that has been blocked and the date when it was blocked.

HEIMDAL SECURITY	OVERVIEW	TRAFFIC SCANNING	MALWARE ENGINE	PATCHING SYSTEM	
GENERAL SOFTWARE PATCHES INFECTIONS DETECTED WEBSITES BLOCKED	ADDRESS		DATE	DATE	
	b3.mookie1.com		30.12.2015		
	feeds2.feedburner.com		30.12.2015		
	static.adzerk.net		29.12.2015		
	whatis.techtarget.com		29.12.2015		
	cwe.mitre.org		29.12.2015		

9.1.6. Settings tab

If you want to access the Settings section, click the gear icon on the top right corner.



321 DAYS LEFT

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The first tab you will see is the Settings tab, where you can perform several actions:

- Turn the Malware Scanning capability off and on
- Increase the interval which determines how often Thor will scan your system for malware. The minimum interval is 60 minutes. Increasing this interval may leave you exposed to cyber threats. We recommend you use the default setting.
- Turn the Traffic Scanning capability off and on
- Configure proxy settings to provide an additional protection layer for your system
- Turn the Patching System off and on
- Increase the interval which determines how often Thor will scan for updates for your software applications. The minimum interval is 120 minutes. Increasing this interval may leave you exposed to cyber threats. We recommend you use the default setting.
- Choose to update to beta this provides you with the option to be among the first to have beta versions of Thor installed on your system, which come with enhancements. Not choosing to become part of the beta program means your Thor product will be updated to the latest stable release.

	Welcome to Heimdal PRO			- VIEW LOG
	OVERVIEW	TRAFFIC SCANNING	MALWARE ENGINE	PATCHING SYSTEM
SETTINGS LICENSE SUPPORT ABOUT	USE PROXY	TRAFFIC SCANNING 🕐	-	
1529 DAYS LEFT		HEI	MDAL SECURITY 2015. ALL	RIGHTS RESERVED v2.0.19

From this screen, you can also choose the License tab.

Here, you will be able to perform several actions, depending on your product type.