STORMSHIELD

TECHNICAL NOTE

STORMSHIELD NETWORK SECURITY

INTEGRATING SNS LOGS IN IBM QRADAR

Product concerned: SNS 3.7.x and higher, SNS 4.x

Document last updated: December 23, 2020

Reference: sns-en-integrating_SNS_logs_in_IBM_QRadar_technical_note

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Getting started

Of all the cybersecurity components that can be deployed to secure a network, Stormshield's SNS firewalls and IBM's Security QRadar come together to ensure that security operations center (SOC) analysts and administrators can fully trust the defenses that are implemented and obtain relevant information about events occurring on their networks.

As a cybersecurity vendor, Stormshield has protected organizations that host critical and highly sensitive infrastructures for the past 20 years with its firewall range. Thanks to Stormshield firewalls, administrators are able to secure their networks, monitor the nature of data that their users share, and encrypt data through IPsec VPN tunnels. As for all the routine events that take place every day, Stormshield firewalls generate logs that keep administrators informed as soon as events occur on the network. Stormshield SNS firewalls' ability to organize and categorize logs gives administrators a deeper understanding of what their firewalls process.

IBM's Security QRadar Device Support Module (DSM) offers administrators and SOCs the possibility of integrating SNS firewall logs into IBM Security QRadar so that they can obtain relevant information in their security information and event management (SIEM) solution. With this combination, security teams can analyze network behavior in real time and detect threats that target their organization.

The IBM Security Qradar DSM for Stormshield firewalls makes it possible to analyze the following log categories:

- Authentication,
- Firewall,
- Intrusion prevention (IPS),
- Threat management (UTM),
- Sandboxing,
- System events,
- Alarms.

About this document

IBM QRadar is a security information and event management (SIEM) solution that enables the real-time analysis of security alerts generated by network-based applications and solutions.

This document explains how to integrate the Stormshield Network Security DSM into IBM QRadar.

Requirements and compatibility

- SNS DSM version: 1.0.0 (published: October 2020),
- IBM QRadar 7.3.2 and higher,
- SNS 3.7 and higher.

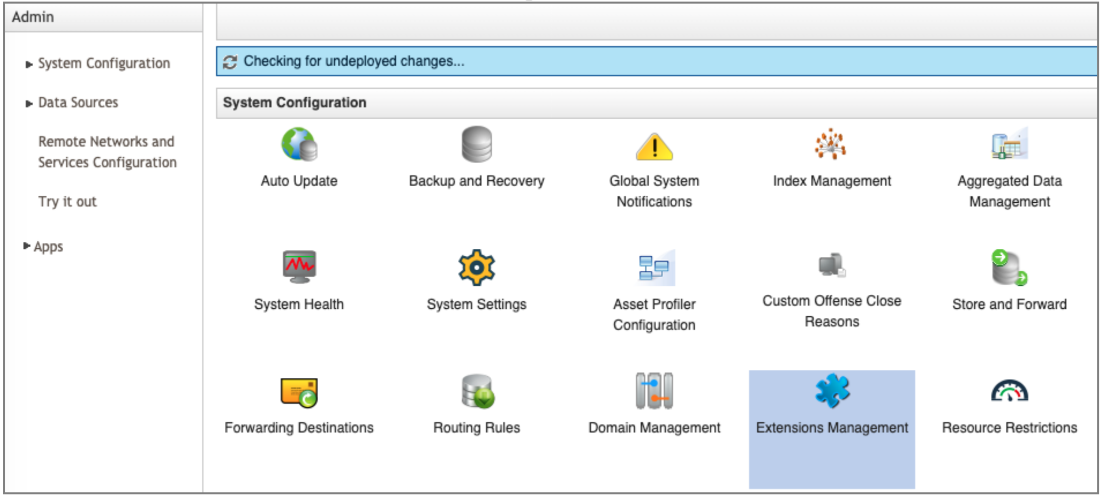
Installing the SNS extension in IBM QRadar

To install the extension:

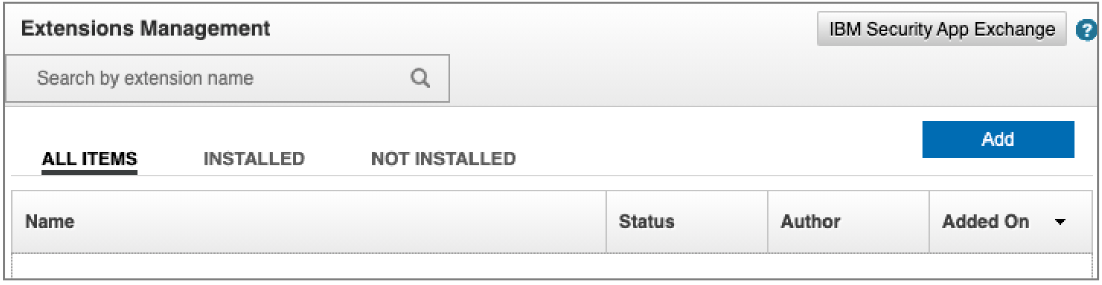
- Download the Stormshield Network Security DSM from the IBM application store,
- Import the DSM into QRadar,
- Configure a log source that accepts and maps syslog messages from the SNS firewall to the DSM.

Downloading the DSM

1. Log in to your IBM QRadar console.
2. In the **Admin** menu, select **Extensions Management**:



3. Click on **IBM Security App Exchange**.
   Your browser will open the page https://exchange.xforce.ibmcloud.com/hub/ (IBM ID required).

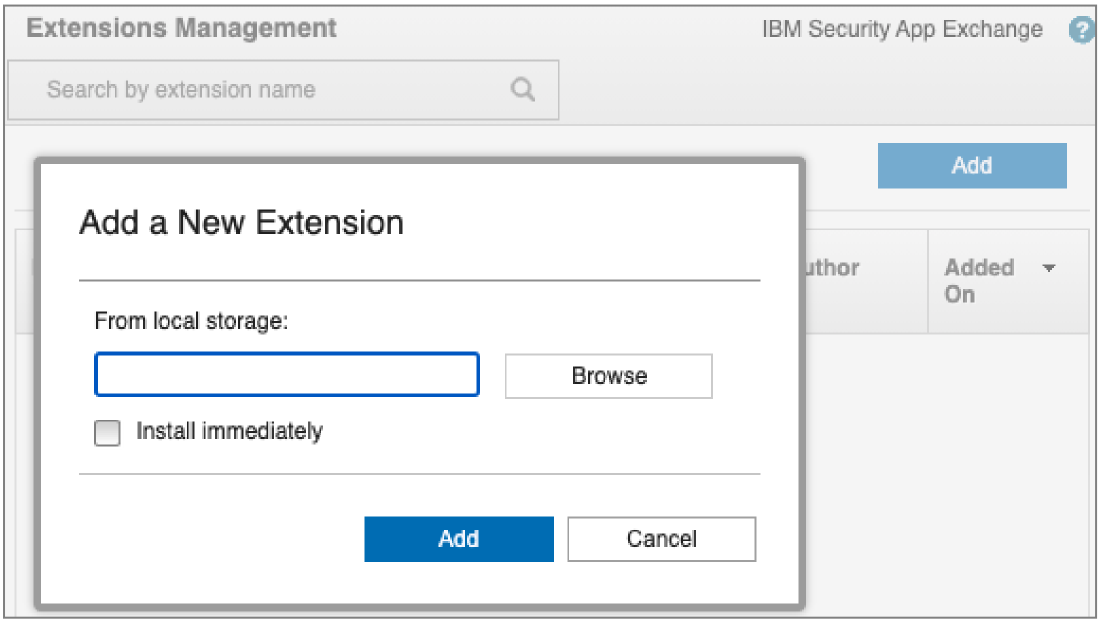


4. Download the "Stormshield Network Security" DSM.

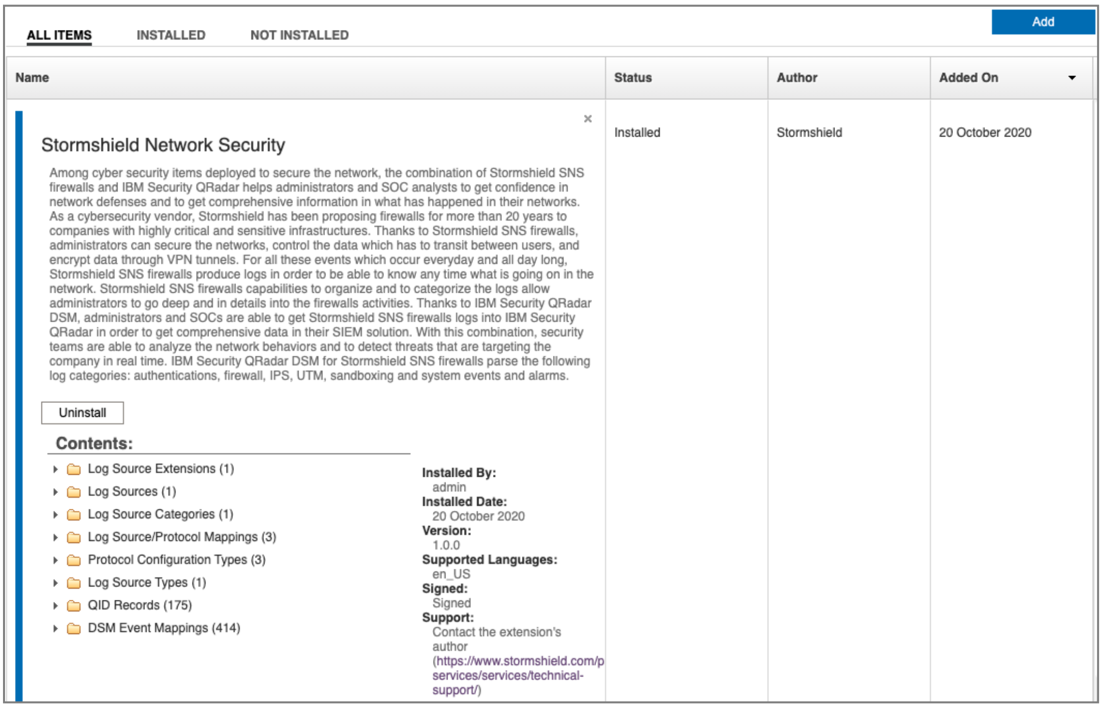
Importing the DSM into QRadar

In your IBM QRadar console:

1. Go to **Admin** > **Extensions Management.**
2. Click on **Add a New Extension:**



3. Select the zip archive downloaded earlier (Stormshield_Network_Security_DSM_v1.0.0.zip).
4. Click on **Add** to install the extension:



Name	Status	Author	Added On
Stormshield Network Security	Installed	Stormshield	20 October 2020

Stormshield Network Security

Among cyber security items deployed to secure the network, the combination of Stormshield SNS firewalls and IBM Security QRadar helps administrators and SOC analysts to get confidence in network defenses and to get comprehensive information in what has happened in their networks. As a cybersecurity vendor, Stormshield has been proposing firewalls for more than 20 years to companies with highly critical and sensitive infrastructures. Thanks to Stormshield SNS firewalls, administrators can secure the networks, control the data which has to transit between users, and encrypt data through VPN tunnels. For all these events which occur everyday and all day long, Stormshield SNS firewalls produce logs in order to be able to know any time what is going on in the network. Stormshield SNS firewalls capabilities to organize and to categorize the logs allow administrators to go deep and in details into the firewalls activities. Thanks to IBM Security QRadar DSM, administrators and SOCs are able to get Stormshield SNS firewalls logs into IBM Security QRadar in order to get comprehensive data in their SIEM solution. With this combination, security teams are able to analyze the network behaviors and to detect threats that are targeting the company in real time. IBM Security QRadar DSM for Stormshield SNS firewalls parse the following log categories: authentications, firewall, IPS, UTM, sandboxing and system events and alarms.

Contents:

- Log Source Extensions (1)
- Log Sources (1)
- Log Source Categories (1)
- Log Source/Protocol Mappings (3)
- Protocol Configuration Types (3)
- Log Source Types (1)
- QID Records (175)
- DSM Event Mappings (414)

Installed By:
admin
Installed Date:
20 October 2020
Version:
1.0.0
Supported Languages:
en_US
Signed:
Signed
Support:
Contact the extension's author (https://www.stormshield.com/pservices/services/technical-support/)

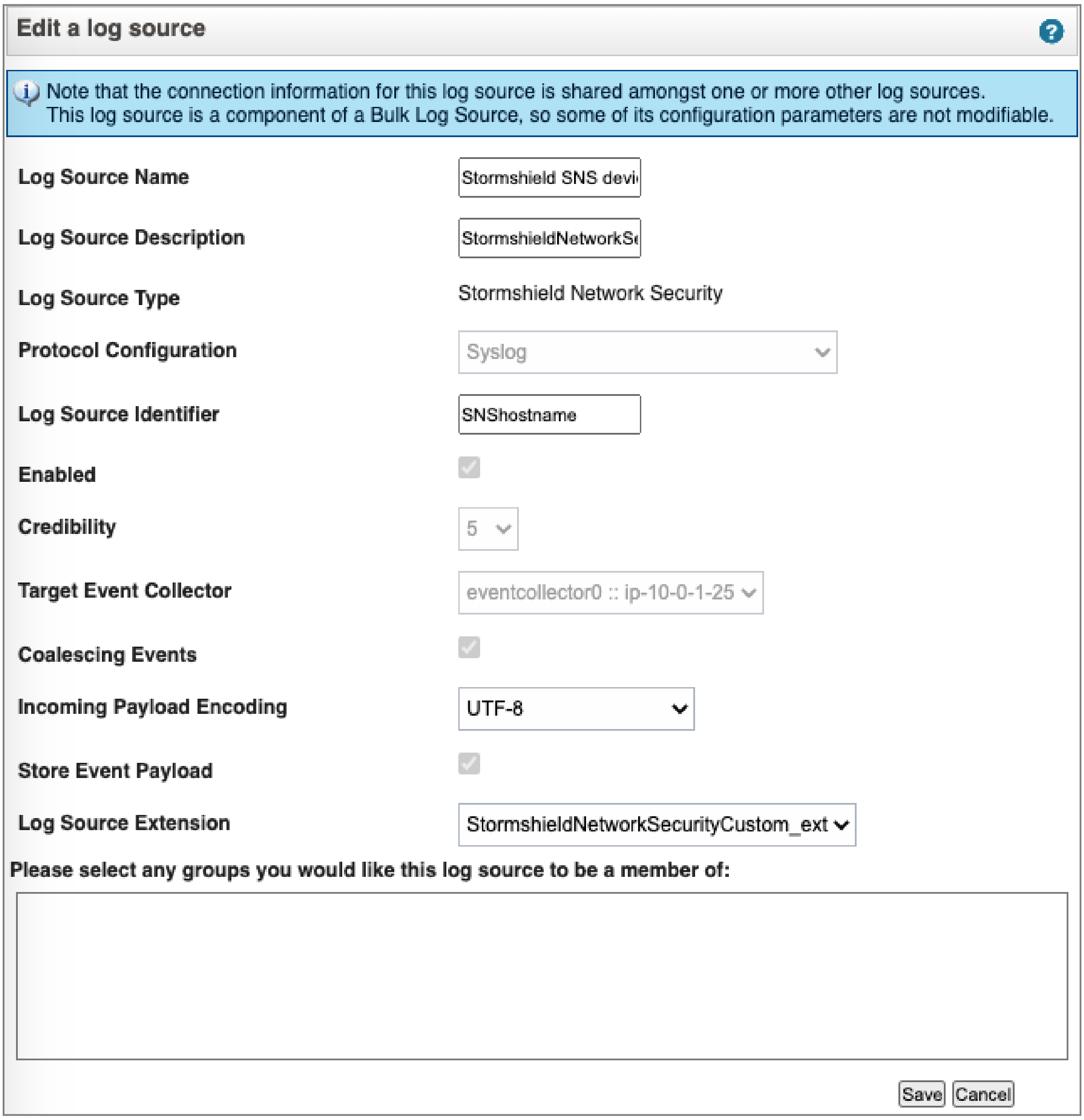
Configuring the log source

SNS firewalls send their logs to IBM QRadar over the syslog protocol.

1. Log in to your IBM QRadar console.
2. In the **Admin** menu, select **Log Source.**
3. Click on **Add**.
4. Fill in the form to create the Log Source:

- **Log Source Name** field: enter a name for your new log source (e.g.: *Stormshield SNS device*).
- **Log Source description** field: enter a description of your new log source.
- **Protocol Configuration** field: select **Syslog**.
- **Log Source Identifier** field: enter the host name of your SNS firewall.
  If no host name has been defined on your firewall, enter its serial number (e.g.: *VMSNSX00000000A1*).
- **Log Source Extension** field: select**StormshieldNeworkSecurityCustom_ext.**

5. Click on **Save**.



Edit a log source

Note that the connection information for this log source is shared amongst one or more other log sources.
This log source is a component of a Bulk Log Source, so some of its configuration parameters are not modifiable.

Log Source Name	Stormshield SNS devi
Log Source Description	StormshieldNetworkSe
Log Source Type	Stormshield Network Security
Protocol Configuration	Syslog
Log Source Identifier	SNShostname
Enabled	☑
Credibility	5
Target Event Collector	eventcollector0 :: ip-10-0-1-25
Coalescing Events	☑
Incoming Payload Encoding	UTF-8
Store Event Payload	☑
Log Source Extension	StormshieldNetworkSecurityCustom_ext

Please select any groups you would like this log source to be a member of:

Adapting the size of *syslog* UDP messages in QRadar

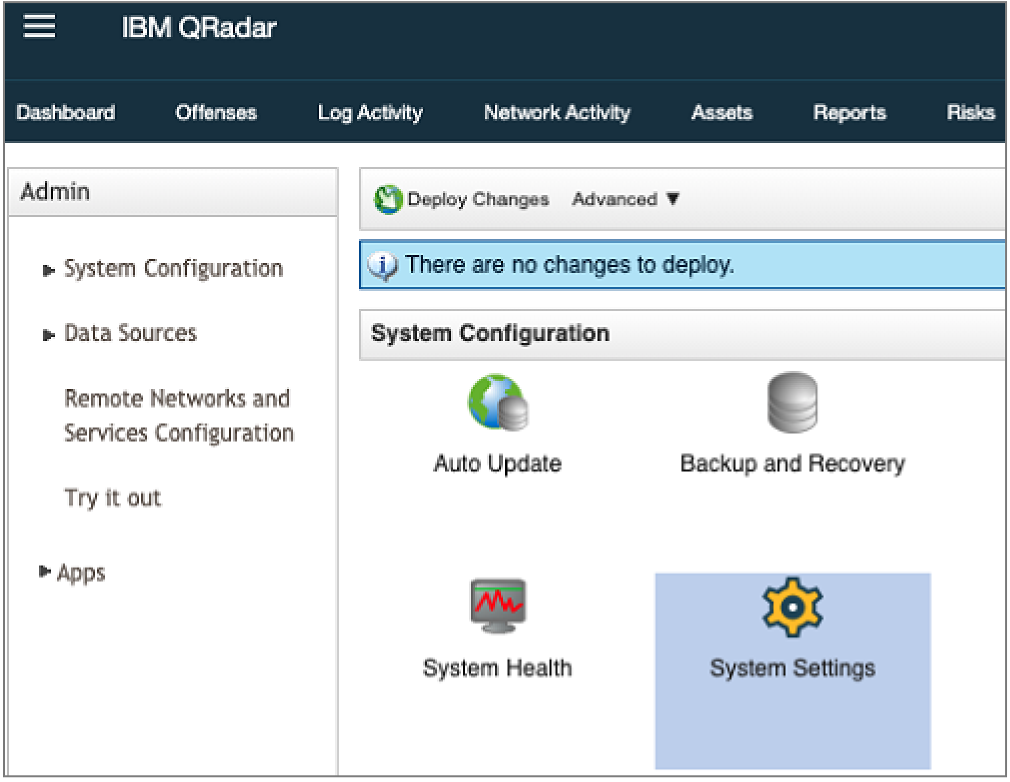
QRadar uses a default payload size of 1024 bytes for syslog UDP messages.
When a message exceeds this size, it will be automatically truncated.

Incidentally, some of the events that SNS firewalls send exceed this size. Since the log type is placed at the end of the line, QRadar will not be able to extract the corresponding event category, and treat these messages as unknown.

The size of syslog UDP messages that IBM QRadar accepts must therefore be changed. Increasing the limit to 2048 bytes will sufficiently cover all types of messages that the firewall may send.

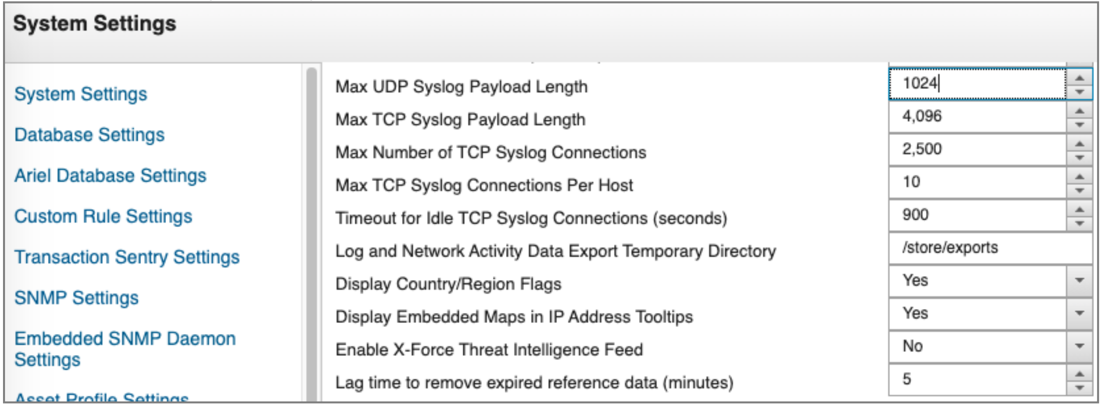
Changing the payload size of syslog messages in QRadar

1. Log in to your IBM QRadar console.
2. In the **Admin** menu, select **System settings:**



There are no changes to deploy.

3. Switch the system settings panel from **Basic** to **Advanced** mode.
4. In the **Max UDP Syslog Payload Length** field, enter **2048:**

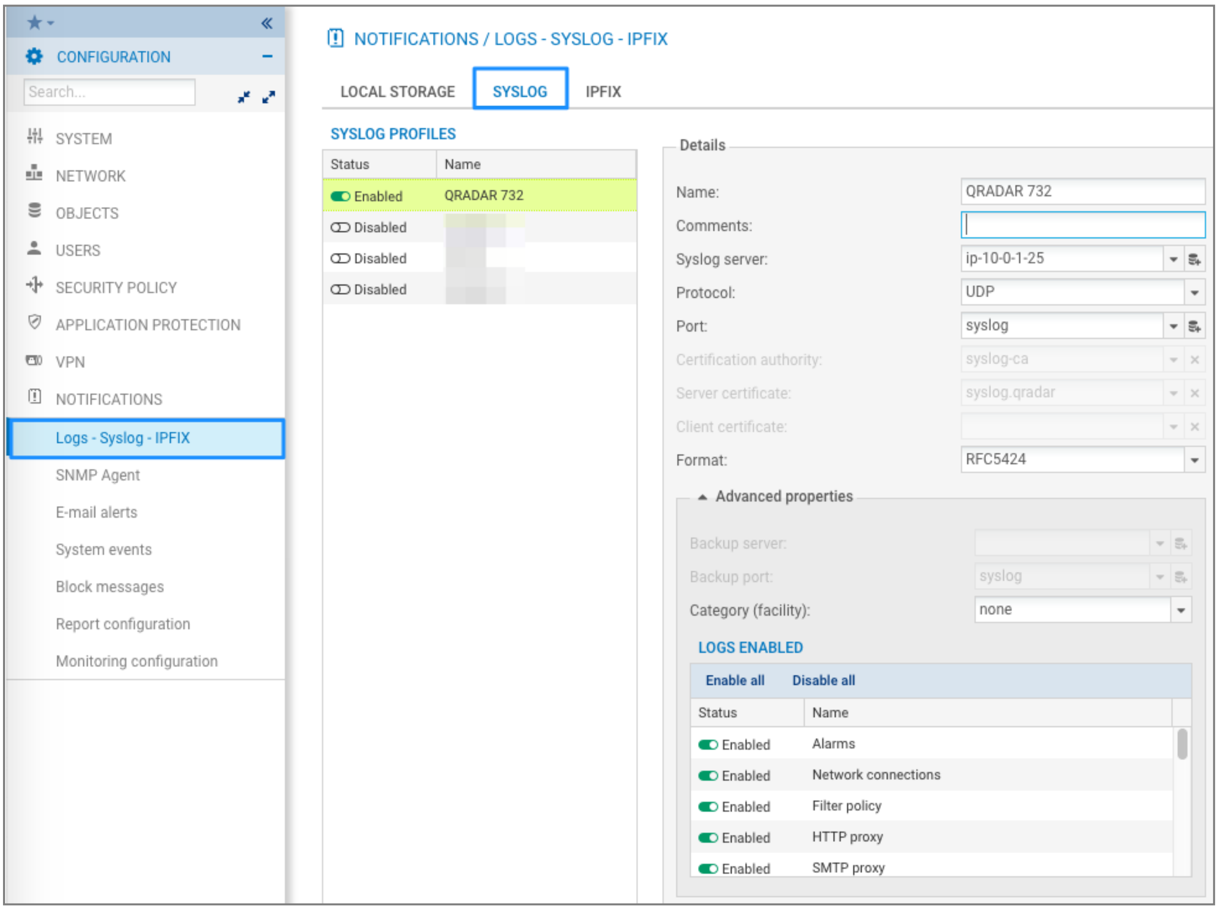


Max UDP Syslog Payload Length	1024
Max TCP Syslog Payload Length	4,096
Max Number of TCP Syslog Connections	2,500
Max TCP Syslog Connections Per Host	10
Timeout for Idle TCP Syslog Connections (seconds)	900
Log and Network Activity Data Export Temporary Directory	/store/exports
Display Country/Region Flags	Yes
Display Embedded Maps in IP Address Tooltips	Yes
Enable X-Force Threat Intelligence Feed	No
Lag time to remove expired reference data (minutes)	5

5. Click on **Save** to save your changes.

Configuring the SNS firewall to send logs to IBM QRadar

1. Log in to the web administration interface of your SNS firewall.
2. Go to **Configuration** > **Notifications** > **Logs - Syslog - IPFIX** > **SYSLOG** tab.
3. Edit one of the four available SYSLOG profiles.
4. **Name** field: enter a custom name for this profile.
5. **Syslog server** field: select or create a network object representing the IBM QRadar machine.
6. **Protocol** field: select **UDP**.
7. **Port** field: select **syslog**.
8. **Format** field: select **RFC5424**.
9. In **Advanced properties** > **Logs enabled**, select the log categories to be sent to IBM QRadar.
10. Click on **Apply**.
11. Double-click in a profile's **Status** cell to enable it.



NOTIFICATIONS / LOGS - SYSLOG - IPFIX

SYSLOG PROFILES

Status	Name
Enabled	QRADAR 732
Disabled	[redacted]
Disabled	[redacted]
Disabled	[redacted]

Details

Name:	QRADAR 732
Comments:	
Syslog server:	ip-10-0-1-25
Protocol:	UDP
Port:	syslog
Certification authority:	syslog-ca
Server certificate:	syslog.qradar
Client certificate:	
Format:	RFC5424

Advanced properties

Backup server:	
Backup port:	syslog
Category (facility):	none

LOGS ENABLED

Status	Name
Enabled	Alarms
Enabled	Network connections
Enabled	Filter policy
Enabled	HTTP proxy
Enabled	SMTP proxy

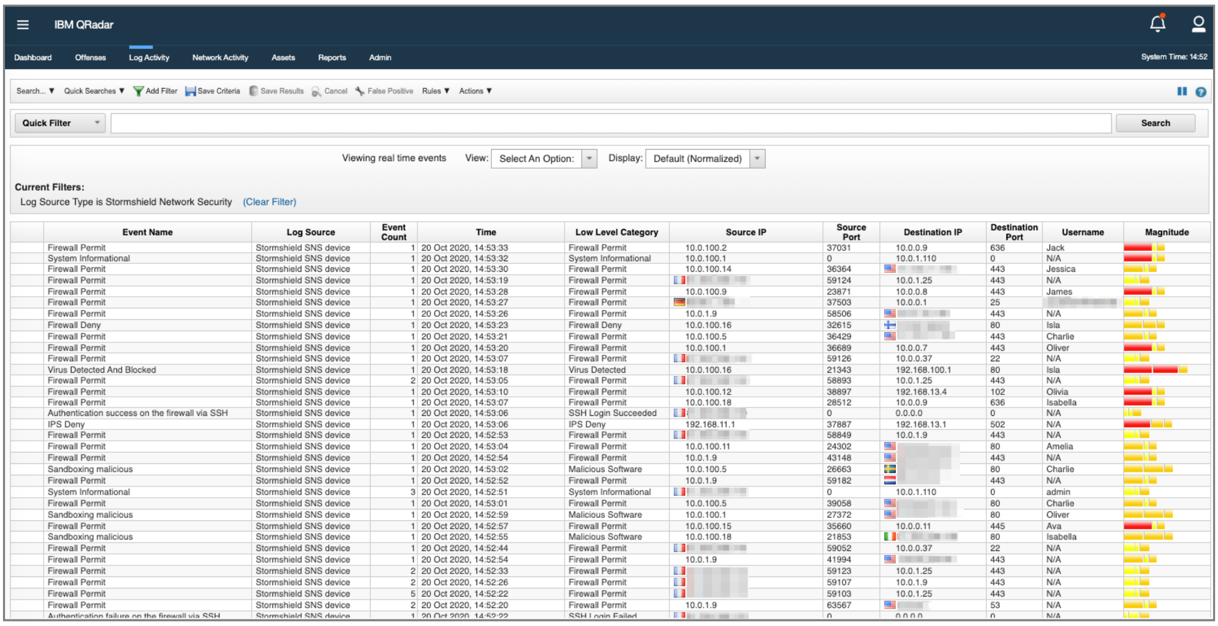
The installation is complete – the SNS firewall's logs will be redirected to the IBM QRadar platform.

Using QRadar with the SNS DSM

1. Log in to your IBM QRadar console.
2. In the **Log Activity** menu, click on **New Search**.
3. Fill in the various fields of the search form:

- **Parameter** field: select **Log Source Type**,
- **Operator** field: select **Equals**,
- **Value** field: select **Stormshield Network Security**.

4. Confirm by clicking on **Add Filter**.
5. Click on **Search**.
   Stormshield logs will appear in the grid.



Viewing real time events View: Select An Option: Display: Default (Normalized)

Current Filters:
Log Source Type is Stormshield Network Security (Clear Filter)

Event Name	Log Source	Event Count	Time	Low Level Category	Source IP	Source Port	Destination IP	Destination Port	Username	Magnitude
Firewall Permit	Stormshield SNS device	1	20 Oct 2020, 14:53:33	Firewall Permit	10.0.100.2	37031	10.0.0.9	636	Jack	
System Informational	Stormshield SNS device	1	20 Oct 2020, 14:53:32	System Informational	10.0.100.1	0	10.0.1.110	0	N/A	
Firewall Permit	Stormshield SNS device	1	20 Oct 2020, 14:53:30	Firewall Permit	10.0.100.14	36364	[redacted]	443	Jessica	
Firewall Permit	Stormshield SNS device	1	20 Oct 2020, 14:53:19	Firewall Permit	[redacted]	59124	10.0.1.25	443	N/A	
Firewall Permit	Stormshield SNS device	1	20 Oct 2020, 14:53:28	Firewall Permit	10.0.100.9	23871	10.0.0.8	443	James	
Firewall Permit	Stormshield SNS device	1	20 Oct 2020, 14:53:27	Firewall Permit	[redacted]	37503	10.0.0.1	25	[redacted]	
Firewall Permit	Stormshield SNS device	1	20 Oct 2020, 14:53:26	Firewall Permit	10.0.1.9	58506	[redacted]	443	N/A	
Firewall Deny	Stormshield SNS device	1	20 Oct 2020, 14:53:23	Firewall Deny	10.0.100.16	32615	[redacted]	80	Isla	
Firewall Permit	Stormshield SNS device	1	20 Oct 2020, 14:53:21	Firewall Permit	10.0.100.5	36429	[redacted]	443	Charlie	
Firewall Permit	Stormshield SNS device	1	20 Oct 2020, 14:53:20	Firewall Permit	10.0.100.1	36689	10.0.0.7	443	Oliver	
Firewall Permit	Stormshield SNS device	1	20 Oct 2020, 14:53:07	Firewall Permit	[redacted]	59126	10.0.0.37	22	N/A	
Virus Detected And Blocked	Stormshield SNS device	1	20 Oct 2020, 14:53:18	Virus Detected	10.0.100.16	21343	192.168.100.1	80	Isla	
Firewall Permit	Stormshield SNS device	2	20 Oct 2020, 14:53:05	Firewall Permit	[redacted]	58893	10.0.1.25	443	N/A	
Firewall Permit	Stormshield SNS device	1	20 Oct 2020, 14:53:10	Firewall Permit	10.0.100.12	38897	192.168.13.4	102	Olivia	
Firewall Permit	Stormshield SNS device	1	20 Oct 2020, 14:53:07	Firewall Permit	10.0.100.18	28512	10.0.0.9	636	Isabella	
Authentication success on the firewall via SSH	Stormshield SNS device	1	20 Oct 2020, 14:53:06	SSH Login Succeeded	[redacted]	0	0.0.0.0	0	N/A	
IPS Deny	Stormshield SNS device	1	20 Oct 2020, 14:53:06	IPS Deny	192.168.11.1	37887	192.168.13.1	502	N/A	
Firewall Permit	Stormshield SNS device	1	20 Oct 2020, 14:52:53	Firewall Permit	[redacted]	58849	10.0.1.9	443	N/A	
Firewall Permit	Stormshield SNS device	1	20 Oct 2020, 14:53:04	Firewall Permit	10.0.100.11	24302	[redacted]	80	Amelia	
Firewall Permit	Stormshield SNS device	1	20 Oct 2020, 14:52:54	Firewall Permit	10.0.1.9	43148	[redacted]	443	N/A	
Sandboxing malicious	Stormshield SNS device	1	20 Oct 2020, 14:53:02	Malicious Software	10.0.100.5	26663	[redacted]	80	Charlie	
Firewall Permit	Stormshield SNS device	1	20 Oct 2020, 14:52:52	Firewall Permit	10.0.1.9	59182	[redacted]	443	N/A	
System Informational	Stormshield SNS device	3	20 Oct 2020, 14:52:51	System Informational	[redacted]	0	10.0.1.110	0	admin	
Firewall Permit	Stormshield SNS device	1	20 Oct 2020, 14:53:01	Firewall Permit	10.0.100.5	39058	[redacted]	80	Charlie	
Sandboxing malicious	Stormshield SNS device	1	20 Oct 2020, 14:52:59	Malicious Software	10.0.100.1	27372	[redacted]	80	Oliver	
Firewall Permit	Stormshield SNS device	1	20 Oct 2020, 14:52:57	Firewall Permit	10.0.100.15	35660	10.0.0.11	445	Ava	
Sandboxing malicious	Stormshield SNS device	1	20 Oct 2020, 14:52:55	Malicious Software	10.0.100.18	21853	[redacted]	80	Isabella	
Firewall Permit	Stormshield SNS device	1	20 Oct 2020, 14:52:44	Firewall Permit	[redacted]	59052	10.0.0.37	22	N/A	
Firewall Permit	Stormshield SNS device	1	20 Oct 2020, 14:52:54	Firewall Permit	10.0.1.9	41994	[redacted]	443	N/A	
Firewall Permit	Stormshield SNS device	2	20 Oct 2020, 14:52:33	Firewall Permit	[redacted]	59123	10.0.1.25	443	N/A	
Firewall Permit	Stormshield SNS device	2	20 Oct 2020, 14:52:26	Firewall Permit	[redacted]	59107	10.0.1.9	443	N/A	
Firewall Permit	Stormshield SNS device	5	20 Oct 2020, 14:52:22	Firewall Permit	[redacted]	59103	10.0.1.25	443	N/A	
Firewall Permit	Stormshield SNS device	2	20 Oct 2020, 14:52:20	Firewall Permit	10.0.1.9	63567	[redacted]	53	N/A	
Authentication failure on the firewall via SSH	Stormshield SNS device	1	20 Oct 2020, 14:52:22	SSH Login Failed	[redacted]	0	0.0.0.0	0	N/A	

NOTE:
There are two limitations in version 1.0.0 of the SNS DSM:

- IPv6 values are not taken into account.
- Only standard QRadar fields are used; custom properties to filter by vendor-specific values are not available.

The Stormshield DSM provides the values of the following QRadar standard properties:

- DestinationIp,
- DestinationMAC,
- DestinationPort,
- DestinationIpPreNAT,
- DestinationPortPreNAT,
- DeviceTime,
- EventCategory,
- Protocol,

- SourceIp,
- SourceMAC,
- SourcePort,
- SourceIpPostNAT,
- SourcePortPostNAT,
- UserName.

Following events are categorised by QRadar:

- Connections Pass or Block,
  - Firewall and proxies,
  - Filter policy,
  - Alarms (IPS Permit or Deny),
- Proxies,
  - Virus detection,
  - Sandboxing detection,
- Authentication errors,
- System events.

Support

If you encounter issues while installing or using the Stormshield Network Security DSM on the IBM QRadar platform, feel free to get in touch with **Stormshield technical support**.

Getting started

Additional information and responses to questions you may have are available in the **Stormshield knowledge base** (authentication required).

documentation@stormshield.eu

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