



BeyondTrust

BeyondInsight 23.1 Event Forwarder Message Fields

Table of Contents

Event Forwarder Message Fields	3
Overall Message structure	3
Persistent Fields	4
Variable Fields	5
Events	6
Password Safe Event Field Mappings	6
Event Triggers	6
U-Series Appliance SNMP Events	9
Possible Hardware Events	9
List of Monitored Services	9
List of Performance Counters	10
Sample Syslog Output Formats	11
Syslog Format: Newline-delimited	11
Syslog Format: Tab-delimited	11
JSON Syslog Format	12
LEEF Syslog Format	13
CEF Syslog Format	13

Event Forwarder Message Fields

There are a number of syslog formats supported by BeyondInsight, including newline-delimited, tab-delimited, LEEF, CEF, and a custom JSON structure for added parsing options.

Overall Message structure

The newline-delimited and JSON syslog message structure is outlined below. CEF, LEEF, FireEye TAP, Splunk HTTP EC, and other implementations adhere to the message structures as required by their specifications.

Message Components

```
[priority] [syslog sender time] [syslog sender IP] [message body]
```

- **Priority:** Calculated using the event severity and syslog facility.
- **Syslog Sender Time** (yyyy-MM-ddTHH:mm:ss): UTC date and time when the event was forwarded.



Note: If there appears to be a discrepancy with the time of an event, make sure the receiver is configured to use UTC.

- **Syslog Sender IP:** The IP address of the sender as an IPv4 address or IPv6 address.
- **Message Body:** The current syslog message body implementation is newline-delimited.

Message Format

```
<priority>yyyy-MM-ddTHH:mm:ssZ 10.10.10.10 Key=Value
```



Example: Sample Message Format

```
<0>2016-06-13T11:38:21Z 10.101.25.115 AgentId=Retina ...
```



Note: The Event Forwarder only scrapes and forwards events from the database. A comprehensive list of all Syslog Event Messages is currently unavailable.

Persistent Fields

The following keys can be expected within each message.

Field	Value Type	Description
Event Date	DateTime	Event date (UTC)
Server Date	DateTime	DateTime of server event forwarding processing (UTC)
RefType	String	Event reference Id
Agent Desc	String	The last known relaying agent (for example, <i>Application Bus 3.0</i>)
Agent ID	String	The source or originating agent
Agent Ver	String	The version of the agent
Source Host	String	The machine name of the agent (or IP address if the machine name is not available)
Source IP	String	The IP address of the agent
OS	String	The operating system of the agent
Category	String	Event Category. This can be any number of verbs (T49152, U11234, Group, Audits, etc.)
Event Name	String	The name of the event
Event Desc	String	Additional descriptive details for the event. This varies in level of detail based on the event source, etc.
Event Severity	Integer	In general, (BeyondInsight 5.8 syslog) Emergency = 0, Alert = 1, Critical = 2, Error = 3, Warning = 4, Notice = 5, Information = 6, Debug = 7 (BeyondInsight 6.0 syslog) Severities range from 0 – 10 where information = 0, low = 3, medium = 6, and high = 9.
Event Subject	String	Subject Identity at the root of the event. This can be a scanned asset (for example, IP or Hostname), an action (for example, <i>Application launch</i>)
Event Type	Integer	[Reserved for future use]
User	String	The computer / machine user associated with the event
Workgroup ID	String	The workgroup ID (for example, <i>BeyondTrust Workgroup</i>)
Workgroup Desc	String	The workgroup name (for example, <i>BeyondTrust</i>)
Workgroup Location	String	The workgroup location (for example, <i>Default Location</i>)

Variable Fields

Additional fields may be present following the persistent fields already mentioned. These are message type dependent and can vary over time.

Event Category	Event Description	Agent ID	Event Type ID	Event ID
BeyondInsight Application Audit		appaudit		
Clarity		mlwr		
General Appliance Health		GenAppHealth		
File Integrity Monitoring		flm		
Privilege Management for Windows, Privilege Management for Mac	Application Request Elevation	pbw, pbmac	28691	PBW-EVENT-28691
	Application Launched	pbw, pbmac	28692	PBW-EVENT-28692
	Custom Rule Applied	pbw, pbmac	28693	PBW-EVENT-28693
	Shell Rule Applied	pbw, pbmac	28694	PBW-EVENT-28694
	ActiveX - Control Rule Applied	pbw, pbmac	28695	PBW-EVENT-28695
	ActiveX - Application Request Elevation	pbw, pbmac	28696	PBW-EVENT-28696
	UAC Prompt	pbw, pbmac	28697	PBW-EVENT-28697
	Denied Rule Applied	pbw, pbmac	28698	PBW-EVENT-28698
	Passive Rule Applied	pbw, pbmac	28699	PBW-EVENT-28699
	Validate Policy	pbw, pbmac	28702	PBW-EVENT-28702
	Policy Applied	pbw, pbmac	28703	PBW-EVENT-28703
Privilege Management for Windows Vulnerabilities		pbw_vulnerability		
Privilege Management for Mac Vulnerabilities		pbmac_vulnerability		
Password Safe		pbps		
Privilege Management for Unix & Linux	Accept	pbul	01	PBUL-EVENT-01
	Finish	pbul	02	PBUL-EVENT-02
	Keystroke	pbul	03	PBUL-EVENT-03
	Reject	pbul	04	PBUL-EVENT-04
	Register	pbul	05	PBUL-EVENT-05
	Update	pbul	06	PBUL-EVENT-06
BeyondTrust Network Security Scanner		Retina		

Events

Password Safe Event Field Mappings

Field	Value Type	Description
Event Date	DateTime	Event date (UTC)
Server Date	DateTime	DateTime of server event forwarding processing (UTC)
Agent ID	String	PBPS
Source Host	String	The machine name of BeyondInsight instance
Source IP	String	The IP address of BeyondInsight instance
Event Name	String	Role used
Event Desc	String	Object Type + Operation (for example, Functional Account Add)
Event Severity	Integer	0 = failed, 1 = success
Event Subject	String	IP address of the browser that initiated the event
User	String	Username associated with the event
Workgroup ID	String	Where applicable, workgroup ID of the associated asset
Workgroup Desc	String	Where applicable, workgroup description of the associated asset
LogSystemID	Integer	PMMLogSystem table reference ID
LogTime	DateTime	MM/dd/yyyy HH:mm:ss
UserName	String	Username associated with the event
UserID	String	User ID associated with the event
RoleUsed	String	Role used
ObjectTypeID	Integer	Object Type reference ID
ObjectType	String	Object Type (i.e. Function Account)
ObjectID	Integer	Object reference ID
Operation	String	Operation (for example, Add, Update)
Failed	Boolean	True / False
Target	String	Describes the asset acted upon (for example, FAccount=testuser1 FAlias=testuser1 FDomain=testdomain1 PFid=25)
Details	String	Miscellaneous additional information

Event Triggers

Event Name and Event Type Values

The following are potential values that can be found in application audit messages for **Event Name**, in addition to their corresponding **Event Type** value shown in parentheses. Events are based on action taken.



Note: This list may change over time and is not guaranteed to include every possible value.

“Event Name” (Event Type)

Default (0)	Login (1)	Logout (2)	Add (3)
Edit (4)	Delete (5)	Read (6)	Assign (11)
Rename (12)	Schedule (14)	Abort Job (17)	Delete Job (18)
Reset (19)	Import (20)	Copy (23)	Generate (24)
Session End (25)	Bulk Password Change (26)	Bulk Domain Account Unlink (27)	Validate (28)
Update (30)	Download (35)	Unlock (36)	Bulk Move Credential (37)

Event Category Values

The following are potential values that can be found for **Category** in application audit messages.



Note: This list may change over time and is not guaranteed to include every possible value.

Account Lockout	Address Group	Application Session	Assets	Attribute
Attribute Type	BeyondInsight Password Policy	BeyondInsight Configuration Tool	Change Password	Client Certificate
Cloud Connector	Configure	Credential	Databases	Direct Connect
Direct Connect Failure	Directory Query	Domain Management	EPM Exclusion	EPM Policy Logout
EPM Policy User	EPM Rule	Event Forwarder	JIRA Ticket System	Login Failure
Managed Account Alias	Organization	Plugin Setting	PMM Access Policy	PMM Access Policy Schedule
PMM Account	PMM API Authentication Rule Failure	PMM API Registration	PMM API SignOut	PMM Application
PMM Change Email Template	PMM Connection Profile	PMM Connection Profile Filter	PMM DSS Key Policies	PMM Functional Account
PMM Login	Pre-Login Banner	PMM Login Failure	PMM Managed Account	PMM Managed System
PMM Mask Remedy Connector	PMM Oracle Internet Directory	PMM Password Rule	Propagation Action	Purging Options
Remedy Connector Mapping	Sailpoint STI	Scan	SCIM	ServiceNow Connector
ServiceNow Export	ServiceNow Export Mapping	ServiceNow Import	ServiceNow Ticket System Mapping	ServiceNow Ticket System
Session Monitoring	Smart Rule	System Options	TeamPasswords	TeamPasswords Credential

<i>TeamPasswords Folder</i>	<i>Third Party Connector</i>	<i>Ticket</i>	<i>TOTP Authentication Failure</i>	<i>TOTP Device Enrolled</i>
<i>User</i>	<i>User Group</i>	<i>User Group - Smart Rule Role</i>	<i>Worker Node</i>	<i>Workgroup</i>

U-Series Appliance SNMP Events

There are 4 event names:

- EventName = PerformanceAlert / EventID = variable (for example, U-Series Appliance-HARDWARE-001)
- EventName = ServiceErrorAlert / EventID = U-Series Appliance-SERVICE-001
- EventName = HardwareFaultAlert / EventID = variable (for example, U-Series Appliance-HARDWARE-001)
- EventName = DailyPerformanceSummary / EventID = U-Series Appliance-PERFDAILY-001

The sources that trigger the events can be categorized as follows:

- **Hardware Events:** Any of the hardware events raised by Dell's OpenManage.
- **Monitored Services:** A variety of events around monitored services, such as:
 - Crashes
 - A Service's running state isn't as expected (for example, running when it should be stopped or vice-versa, or when the previously alerted service is then found to be running in the correct state).
 - Service controller manager generates any of the following events in the event log (crashes or did-not-start type of events): 7034, 7000, 7013, 7023, 7024, 7031, 7032, 7034, 7043.
- **Performance Counters:** Events when the various performance monitor counters cross the user-configured thresholds (low, med, or hi and reset).

Possible Hardware Events

batterywarn	batteryfail	fanwarn	fanfail	hardwarelogwarn
hardwarelogfull	intrusion	memprefail	memfail	systempowerwarn
systempowerfail	powersupply	powersupplywarn	processorwarn	processorfail
redundegrad	redunlost	tempwarn	tempfail	voltwarn
voltfail	watchdogasr	storagesyswarn	storagesysfail	storagectrlwarn
storagectrlfail	pdiskwarn	pdiskfail	vdiskwarn	vdiskfail
enclosurewarn	enclosurefail	storagectrlbatterywarn	storagectrlbatteryfail	systempeakpower

List of Monitored Services

EventServer	ManagementConsole	StandaloneEventServer	BI Database	Database
PasswordSafe	StandalonePasswordSafe	PatchManagement	ThirdPartyPatch	Retina
ARCube	ARReporting	AutoUpdates	EUS	Updater

List of Performance Counters

SQL Memory usage (% used of the allocated SQL Server memory limit)	SQL Server's CPU usage	Total CPU usage
Disk free on each drive	Physical Disk Avg Disk sec write C:	Physical Disk Current Disk Queue Length
Memory Pages/sec	Memory Cache Bytes	Paging File_Percent_Usage
SQLServer Batch Requests/Sec	SQLServer SQL Compilations/Sec	SQLServer SQL_ReCompilations/Sec
SQLServer User Connections	SQLServer LockWaits/Sec	SQLServer PageSplits/Sec
SQLServer ProcessesBlock	SQLServer CheckpointPages/Sec	

Sample Syslog Output Formats



Note: This is a small sample of event messages in various formats, not an all-encompassing set of every possible event.

Syslog Format: Newline-delimited

```
<0>2016-12-05T11:22:53Z 10.124.101.11 Agent Desc: Application Bus 3.0
Event Date: 2016-06-13 10:14:35
Server Date: 2016-06-13 11:38:21
RefType: 16
Agent ID: retina
Agent Ver: 5.23.1.3108
Category: Processes
Source Host: WIN-4PBV285405S
Event Desc: svchost
Event Name: Process 772
OS: Windows,Microsoft,Windows,Server 2008 R2 Standard Edition (full installation) x64,Service
Pack 1
Event Severity: 0
Source IP: 10.200.31.203
Event Subject: 010.200.031.085
Event Type: 0
User: SYSTEM
Workgroup Desc: BeyondTrust
Workgroup ID: BeyondTrust Workgroup
Workgroup Location: Default Location
Process ID: 772 (0x304)
Parent Process ID: 492 (0x1EC)
Start Time: 5/12/2016 9:21:05 AM GMT-04
```

Syslog Format: Tab-delimited

```
<0>2016-12-05T11:22:53Z 10.101.25.167 Agent Desc: Application Bus 3.0Agent ID: retina
Agent Ver: 5.25.2.3215Category: UserSource Host: WIN-N83HFCEB9RNAEvent
Desc: Built-in account for guest access to the computer/domainEvent Name: GuestOS:
Windows,Microsoft,Windows,UnknownEvent Severity: 0Source IP: 10.101.25.167
Event Subject: 010.101.025.177Event Type: 0User: WIN-N83HFCEB9RNA$
Workgroup Desc: BeyondTrust Workgroup ID: BeyondTrust Workgroup Workgroup
Location: Default Location Member of Group (01/001): Guests Privilege (01/002)
: Guest Account Disabled (01/003): True Last Logon (01/004): never Last Logoff
(01/005): unknown Expires (01/006): never Max Storage (01/007): unlimited Bad
PW Count (01/008): 0 Number of Logons (01/009): 0 Logon Server (01/010): \\* Country
Code (01/011): 0 RID (01/012): 501 Password Expired (01/013): no Source
(01/014): NetUserEnum SID (01/015): S-1-5-21-2210307081-232491991-3792010023-501
```

JSON Syslog Format

```
<0>2016-06-13T11:38:21 10.101.25.115
{
  "formatVersion": "1.0",
  "vendor": "BeyondTrust",
  "product": "BeyondInsight",
  "version": "6.0.0",
  "agentid": "attack",
  "agentdesc": "Application Bus 3.0",
  "agentver": "Unknown",
  "category": "User",
  "severity": "0",
  "eventid": "RET-SCAN-007",
  "eventname": "beyondtrust",
  "eventdesc": "bt admin",
  "eventdate": "Jun 10 2016 03:05:04",
  "sourcehost": "mymachine-ws",
  "os": "Windows,Microsoft,Windows,Unknown",
  "sourirceip": "172.168.101.202",
  "eventssubject": "172.168.101.222",
  "eventtype": "0",
  "user": "MYMACHINE-WS$",
  "workgroupid": "BeyondTrust Workgroup",
  "workgroupdesc": "BeyondTrust",
  "workgrouplocation": "Default Location",
  "nvps":
  {
    "id": "c85dca8c-df30-4a70-98f8-c8a47f7fc2fa",
    "evtdate": "6/10/2016 3:05:04 AM",
    "clienthost": "mymachine-ws",
    "eventseverity": "0",
    "dllversion": "AppBus EMS v3.0 com xml",
    "transactiongroup": "5B3A069BE0D84E7EA56F2A40EFDDBE253",
    "subjectdescription": "mymachine-ws",
    "evtsubjbi": "2896693762",
    "evtsrcipbi": "2896693762",
    "referenceid": "7",
    "evtdatatype": "SCAN",
    "evtstatus": "True",
    "badpwcount0101": "0",
    "countrycode0101": "0",
    "expires0101": "never ",
    "fullname0101": "beyondtrust",
    "lastlogoff0101": "unknown ",
    "lastlogon0101": "Tue Jun 02 19:26:42 2015",
    "logonserver0101": "\\*",
    "maxstorage0101": "unlimited",
    "memberofgroup0101": "Administrators, Performance Log Users, Users",
    "numberoflogons0101": "7",
    "passwordage0101": "412 days",
    "passwordexpired0101": "no",
    "privilege0101": "Administrator",
    "rid0101": "1006",
```

```

        "sid0101": "S-1-5-21-4152543990-75340177-3020034217-1006",
        "source0101": "NetUserEnum"
    }
}

```

LEEF Syslog Format

```

Jun 13 23:11:40 fe80::ad7a:8589:f107:158a%12
LEEF:1.0|BeyondTrust|BeyondInsight|6.0.0|RET-SCAN-009|cat=Modules      devTime=Jun
04 2016 02:08:58      devTimeFormat=MMM dd yyyy HH:mm:ss      sev=0
src=10.200.31.212      resource=WIN-AR9FPF5LTJG      dst=10.200.31.84
usrName=WIN-AR9FPF5LTJG$      groupID=BeyondTrust Workgroup
AgentDesc=Application Bus 3.0      AgentID=retina      AgentVer=5.24.1.3126
EventDesc=acrotray.exe      EventName=acrotray.exe
Os=Windows,Microsoft,Windows,Unknown      EventType=0
WorkgroupDesc=BeyondTrust      WorkgroupLocation=Default Location      Type=Module
Name=acrotray.exe      Filename=C:\\Program Files\\Adobe\\Acrobat
11.0\\Acrobat\\acrotray.exe      MD5=E0DF6506C36AA207F41EFED13D876D83
SHA1=11B87A57B626CCD760D121215C1B96AB72F06BAA      Version=11.0.6.70
Company Name=Adobe Systems Inc.      Description=AcroTray      Product=AcroTray -
Adobe Acrobat Distiller helper application.      Signer=Adobe Systems, Incorporated      Image
Size=3514368      Entry Address=0056F07E      Base Address=003C0000
CertSerial=68ADD7AFFC72183C31865ACD3CB2D70C      CertIssuer=Symantec Class 3
Extended Validation Code Signing CA

```

CEF Syslog Format

```

Jun 13 16:09:00 WIN-TC570BCQDNA CEF:0|BeyondTrust|BeyondInsight|6.0.0|RET-SCAN-012|
IP Start Time|0|rt=Jun 13 2016 19:08:32 deviceExternalId=pbw_vulnerability cat=Status
src=10.200.31.81 shost=PATCHWIN764X suser=NT AUTHORITY\NETWORK SERVICE msg=2016-
06-13 16:08:33 dst=10.200.31.81 BeyondTrustBeyondInsightAgentDesc=PBW 7.0.2.79
BeyondTrustBeyondInsightAgentID=pbw_vulnerability
BeyondTrustBeyondInsightAgentVer=7.0.2.79 BeyondTrustBeyondInsightCategory=Status
BeyondTrustBeyondInsightClientHost=PATCHWIN764X
BeyondTrustBeyondInsightEventDesc=2016-06-13 16:08:33
BeyondTrustBeyondInsightEventName=IP Start Time BeyondTrustBeyondInsightOs=Windows 7
(X64), Service Pack 1 BeyondTrustBeyondInsightEventSeverity=0
BeyondTrustBeyondInsightSourceIp=10.200.31.81
BeyondTrustBeyondInsightEventSubject=10.200.31.81 BeyondTrustBeyondInsightEventType=0
BeyondTrustBeyondInsightUser=NT AUTHORITY\NETWORK SERVICE
BeyondTrustBeyondInsightWorkgroupDesc=BeyondTrust Workgroup
BeyondTrustBeyondInsightWorkgroupID=BeyondTrust Workgroup
BeyondTrustBeyondInsightWorkgroupLocation=Default Location

```