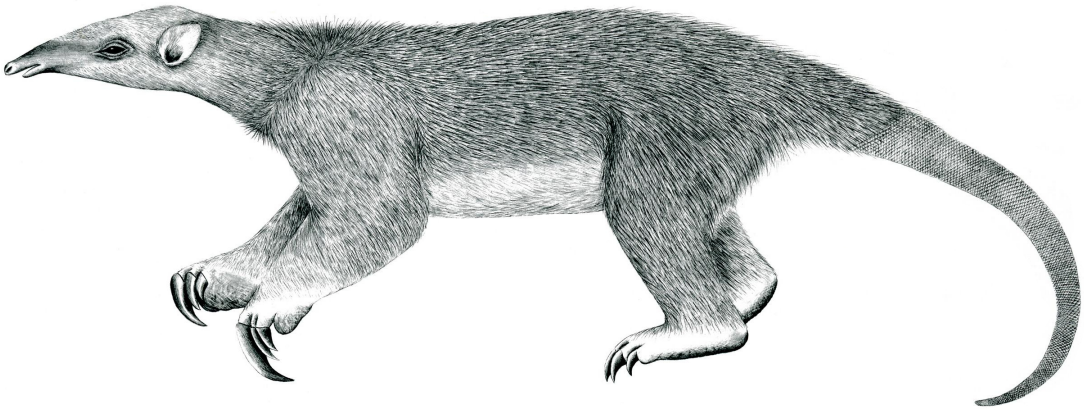
Tranalyzer2

lldpDecode

Link Layer Discovery Protocol (LLDP)



Tranalyzer Development Team

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1.1 Description

The lldpDecode plugin analyzes LLDP traffic.

1.2 Dependencies

1.2.1 Core Configuration

This plugin requires the following core configuration:

- *$T2HOME/tranalyzer2/src/networkHeaders.h*:
  - `ETH_ACTIVATE>0`

1.3 Configuration Flags

The following flags can be used to control the output of the plugin:

Name	Default	Description
`LLDP_TTL_AGGR`	1	Aggregate TTL values
`LLDP_NUM_TTL`	8	Number of different TTL values to store
`LLDP_OPT_TLV`	1	Output optional TLVs info
`LLDP_STRLEN`	20	Maximum length of short strings to store
`LLDP_LSTRLEN`	100	Maximum length of long strings to store

1.4 Flow File Output

The lldpDecode plugin outputs the following columns:

Column	Type	Description	Flags
`lldpStat`	H16	Status	
`lldpTTL`	R(U16)	Time To Live (sec)	
`lldpTLVTypes`	H32	TLV types	
`lldpChassis`	SC	Chassis ID	
`lldpPort`	S	Port ID	
`lldpPortDesc`	S	Port description	`LLDP_OPT_TLV=1`
`lldpSysName`	S	System name	`LLDP_OPT_TLV=1`
`lldpSysDesc`	S	System description	`LLDP_OPT_TLV=1`
`lldpCaps_enCaps`	H16_H16	Supported and enabled capabilities	`LLDP_OPT_TLV=1`
`lldpMngmtAddr`	SC	Management address	`LLDP_OPT_TLV=1`

1.4.1 lldpStat

The `lldpStat` column is to be interpreted as follows:

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lldpStat	Description
0x0001	Flow is LLDP
0x0002	Mandatory TLV missing
0x0004	Optional TLV present
0x0008	Reserved TLV type/subtype used
0x0010	Organization specific TLV used
0x0020	Unhandled TLV used
0x0040	Invalid TLV length
0x0080	—
0x0100	—
0x0200	—
0x0400	—
0x0800	—
0x1000	—
0x2000	String truncated... increase LLDP_STRLEN
0x4000	Too many TTL... increase LLDP_NUM_TTL
0x8000	Snapped payload

1.4.2 lldpTLVTypes

The lldpTLVTypes column is to be interpreted as follows:

lldpTLVTypes		Description
2^0	(=0x0000 0001)	End of LLDPDU
2^1	(=0x0000 0002)	Chassis ID
2^2	(=0x0000 0004)	Port ID
2^3	(=0x0000 0008)	Time To Live (sec)
2^4	(=0x0000 0010)	Port description
2^5	(=0x0000 0020)	System name
2^6	(=0x0000 0040)	System description
2^7	(=0x0000 0080)	System capabilities
2^8	(=0x0000 0100)	Management address
TLV types 9 to 126 are reserved		
2^{31}	(=0x8000 0000)	TLV type ≥ 31

1.4.3 lldpCaps_enCaps

The lldpCaps_enCaps column is to be interpreted as follows:

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lldpCaps/lldpEnCaps	Description
0x0001	Other
0x0002	Repeater
0x0004	Bridge
0x0008	WLAN access point
0x0010	Router
0x0020	Telephone
0x0040	DOCSIS cable device
0x0080	Station only
0x0100-0x8000	Reserved

1.5 Packet File Output

In packet mode (`-s` option), the lldpDecode plugin outputs the following columns:

Column	Type	Description	Flags
lldpStat	H16	Status	
lldpTTL	U16	Time To Live (sec)	
lldpTLVTypes	H32	TLV types	
lldpChassis	SC	Chassis ID	
lldpPort	SC	Port ID	
lldpPortDesc	SC	Port description	LLDP_OPT_TLV=1
lldpSysName	SC	System name	LLDP_OPT_TLV=1
lldpCaps_enCaps	H16_H16	Supported and enabled capabilities	LLDP_OPT_TLV=1
lldpMngmtAddr	SC	Management address	LLDP_OPT_TLV=1

1.6 Monitoring Output

In monitoring mode, the lldpDecode plugin outputs the following columns:

Column	Type	Description	Flags
lldpPkts	U64	Number of LLDP packets	

1.7 Plugin Report Output

The following information is reported:

- Aggregated lldpStat
- Aggregated lldpTLVTypes
- Aggregated lldpCaps_enCaps
- Number of LLDP packets

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