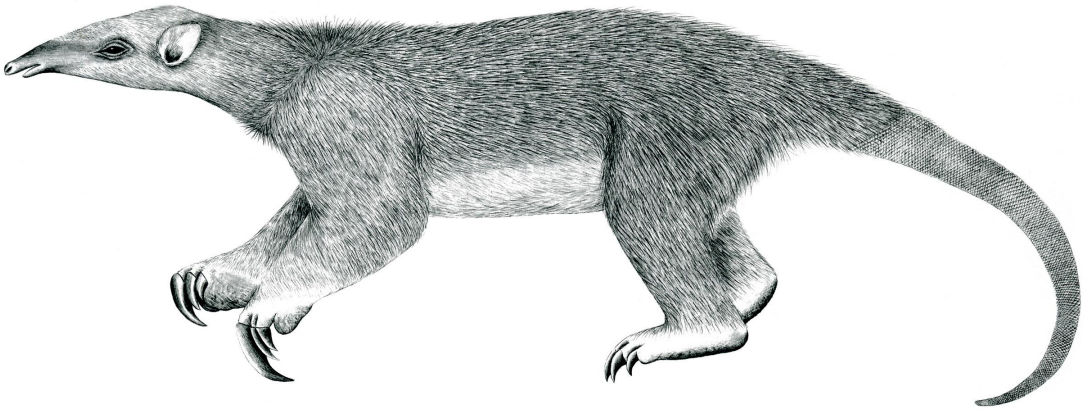
Tranalyzer2

vtpDecode

VLAN Trunking Protocol (VTP)



Tranalyzer Development Team

Contents

1 vtpDecode

1.1 Description

The vtpDecode plugin analyzes the VLAN Trunking Protocol (VTP) protocol.

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	Flags
VTP_AGGR	1	Aggregate updater identity	
VTP_SAVE	1	Extract all VLANs info in a separate file	
VTP_DEBUG	0	Print debug messages	
VTP_TS_FRMT	1	Format for timestamps: 0: string, 1: timestamp	
VTP_NUM_UPDID	16	Max number of updater identity	
VTP_STR_MAX	64	Max length for strings	
VTP_SUFFIX	"_vtp.txt"	Suffix for separate file	VTP_SAVE=1
VTP_VLANID_FRMT	1	Format for VLAN ID: 0: int, 1: hex	VTP_SAVE=1

1.3.1 Environment Variable Configuration Flags

The following configuration flags can also be configured with environment variables (ENVCNTRL>0):

- VTP_SUFFIX

1.4 Flow File Output

The vtpDecode plugin outputs the following columns:

Column	Type	Description	Flags
vtpStat	H8	Status	
vtpVer	H8	Version	
vtpCodeBF	H8	Aggregated codes	
vtpVlanTypeBF	H8	Aggregated VLAN types	
vtpDomain	S	Management Domain	
vtpNumUpdId	U32	Number of Updater identity	VTP_NUM_UPDID>0
vtpUpdId	R(IP4)	Updater identity	VTP_NUM_UPDID>0

Column	Type	Description	Flags
vtpFirstUpdTS	S/TS	Timestamp of first update	VTP_TS_FRMT=0/1
vtpLastUpdTS	S/TS	Timestamp of last update	VTP_TS_FRMT=0/1

1.4.1 vtpStat

The vtpStat column is to be interpreted as follows:

vtpStat	Description
0x0001	Flow is VTP
0x0002	Different versions used
0x0004	Different Management Domains used
0x0008	-
0x0010	Invalid Management Domain Length (> 32)
0x0020	Invalid version
0x0040	Invalid code
0x0080	Invalid VLAN type
0x0100	—
0x0200	—
0x0400	—
0x0800	—
0x1000	—
0x2000	Array truncated... increase VTP_NUM_UPDID
0x4000	String truncated... increase VTP_STR_MAX
0x8000	Packet snapped, decoding failed

1.4.2 vtpCode and vtpCodeBF

The vtpCode and vtpCodeBF columns are to be interpreted as follows:

vtpCode	vtpCodeBF	Description
--	0x01	—
0x01	0x02	Summary Advertisement
0x02	0x04	Subset Advertisement
0x03	0x08	Advertisement Request
0x04	0x10	Join/Prune Message
--	0x20	—
--	0x40	—
--	0x80	Unknown VTP code

1.4.3 vtpVlanType and vtpVlanTypeBF

The `vtpVlanType` and `vtpVlanTypeBF` columns are to be interpreted as follows:

vtpVlanType	vtpVlanTypeBF	Description
--	0x01	—
0x01	0x02	Ethernet
0x02	0x04	Fiber Distributed Data Interface (FDDI)
0x03	0x08	Token Ring Concentrator Relay Function (TrCRF)
0x04	0x10	Fiber Distributed Data Interface Network Entity Title (FFID-net)
0x05	0x20	Token Ring Bridge Relay Function (TrBRF)
--	0x40	—
--	0x80	Unknown VTP VLAN type

1.5 Packet File Output

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

Column	Type	Description	Flags
vtpStat	H8	Status	
vtpVer	H8	Version	
vtpCode	H8	Code	
vtpDomain	SC	Management Domain	
vtpVlanTypeBF	H8	Aggregated VLAN type	

1.6 Plugin Report Output

The following information is reported:

- Aggregated vtpStat
- Aggregated vtpCodeBF
- Aggregated vtpVlanTypeBF
- Number of VTP packets
- Number of VTPv1, VTPv2 and VTPv3 packets
- Number of VTP Summary Advertisement packets
- Number of VTP Subset Advertisement packets
- Number of VTP Advertisement Request packets
- Number of VTP Join/Prune Message packets
- Number of VTP packets with unknown type

1.7 Additional Output

Non-standard output:

- `PREFIX_vtp.txt`: List of VLANs extracted from Subset Advertisement messages

The `PREFIX_vtp.txt` file contains the following columns:

Name	Description
`pktNo`	Packet number
`flowInd`	Flow index
`srcMac`	MAC address which issued this advertisement
`vtpVer`	VTP version
`vtpDomain`	VTP Management Domain
`vtpRevNum`	VTP Configuration Revision Number
`vtpVlanType`	Aggregated VLAN type
`vtpVlanID`	ISL VLAN ID
`vtpVlanName`	VLAN Name
`vtpVlanSAID`	802.10 Index (IEEE 802.10 security association identifier for this VLAN)
`vtpVlanMTU`	MTU Size
`vtpVlanSuspended`	State of the VLAN (suspended or not)

1.8 References

- Understanding VLAN Trunk Protocol (VTP)