

DEC and IEEE 802.1d Bpdu Formats

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Introduction

This document describes DEC and IEEE 802.1d Bridge Protocol Data Unit (Bpdu) formats.

Before You Begin

Conventions

For more information on document conventions, see the Cisco Technical Tips Conventions.

Prerequisites

There are no specific prerequisites for this document.

Components Used

This document is not restricted to specific software and hardware versions.

Bpdu Formats

A DEC Bpdu has the following format:

```
DEC code:      E1
bpdu type:    19 hello, 02 topology change notice
version:      01
bit field:    1 byte
  1 : topology change notice
  2 : topology change notice ack
  3 : unused   0
  4 : unused   0
  5 : unused   0
  6 : unused   0
  7 : unused   0
  8 : use short timers
root priority: 2 bytes
root id:      6 bytes
root path cost: 2 bytes
bridge priority: 2 bytes
bridge id:    6 bytes
port id:      1 byte
message age:  1 byte
hello time:   1 byte
```

max age: 1 byte
forward delay: 1 byte

An IEEE 802.1d Bpdu has the following format:

```
protocol id: 0000 IEEE 802.1d
version id: 00
bpdu type: 00 config bpdu, 80 tcn bpdu
bit field: 1 byte
  1 : topology change flag
  2 : unused 0
  3 : unused 0
  4 : unused 0
  5 : unused 0
  6 : unused 0
  7 : unused 0
  8 : topology change ack
root priority 2 bytes
root id: 6 bytes
root path cost: 4 bytes
bridge priority: 2 bytes
bridge id: 6 bytes
port id: 2 bytes
message age: 2 bytes in 1/256 secs
max age: 2 bytes in 1/256 secs
hello time: 2 bytes in 1/256 secs
forward delay: 2 bytes in 1/256 secs
```

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