# Alternative Features for Link Aggregation and Device Discovery (End of Support for FEC and CDP)

## Executive Summary

ProCurve Networking Business now recommends IEEE standards-based features for Link Aggregation and Device Discovery. To this end, software updates for the products listed below, manufactured before December 2005, will discontinue support for Cisco Systems' Fast EtherChannel (FEC) and Cisco Discovery Protocol (CDP)[1]:

- Switch 2500 Series (all models)
- Switch 4100gl Series (all models)
- Switch 6108
- Switch 2600 Series (all models, including PWR Series)[2]
- Switch 2800 Series (all models)
- Switch 5300xl Series (all models)

The Switch 3400cl/6400cl, Switch 8100fl Series, WAN and Wireless LAN devices do not support CDP and FEC. In addition, new Switch Series models introduced after October 2005 will not offer support for FEC or CDP.

For **aggregated links**, use either 1) Link Aggregation Control Protocol (LACP) as defined in IEEE 802.3ad, or 2) static trunks as defined by the ProCurve system software. ProCurve has performed interoperability testing using an FEC-configured switch, then updating the switch to software that no longer supports this feature. The interoperability testing shows that traffic continues to be load balanced across the trunk, although we highly recommend that the other end of the trunk links be like configured (LACP or static).

For **device discovery**, use the Link Layer Discovery Protocol (LLDP), the IEEE 802.1ab standard, to provide for device discovery for network management platforms and switch neighbor discovery.

## Applicable Software Versions

The software versions that this change is applicable to are as follows (and all following versions):

| Product | Last Version to support FEC/CDP[a] | First Version with no support for FEC/CDP[b] |
| --- | --- | --- |
| Switch 2500 Series (all models) | F.05.40 | F.05.50[c] |
| Switch 4100gl Series (all models) | G.07.78 | G.07.79 |
| Switch 6108 | H.07.56 | H.07.57 |
| Switch 2600 Series (all models, including PWR) | H.08.76 | H.08.77 |
| Switch 2800 Series (all models) | I.08.73 | I.08.74 |
| Switch 5300xl Series (all models) | E.10.08 | E.10.09 |

a. To download these last versions to support CDP/FEC, click on an active hyperlink for a version number.
b. To download the current version of code, click on an active hyperlink for the latest software updates.
c. 2500 Series transmits LLDP packets but does not support discovery of connected LLDP neighbor devices.

All bug fixes to Switch software will only be applied to the current versions.

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1. Cisco and Fast EtherChannel are registered trademarks of Cisco Systems, Inc.
2. 2600-8-PWR (J8762A) never offered CDP or FEC support. This model was available Nov 1, 2005.

# Actions to take prior to SW installation

To install the latest software on your ProCurve Switch, first verify that your existing configurations no longer use the FEC feature and are using the supported alternatives, LACP or Static trunks.

> Generally, aggregated links must be configured with the same type of configuration on both ends of the link - LACP or static configuration ("trunk" option) for ProCurve devices.

## Link Aggregation (ProCurve Trunk configurations)

If your switch configuration was working previously with the FEC connection to a switch or a server, it may continue to work after this software update. ProCurve highly recommends that you reconfigure the other end of the link to match either the LACP or static aggregated link configuration on the non-ProCurve equipment.

For your ProCurve switches, do the following:

1. Prior to installation of the new software, verify that your configuration does not contain the following item:

   ```
   trunk A1-A2 Trk1 fec
   ```
   (where "A1-A2" is a listing of the ports to use in this group, and "Trk1" represents the Trunk name -Trk1, Trk2, Trk3… ).

2. Replace this configuration line with the following:

   ```
   trunk A1-A2 Trk1 lacp        for an LACP Trunk
   ```
   or
   ```
   trunk A1-A2 Trk1 trunk       for a Static Trunk (no protocol)
   ```

3. Ensure that the other end of the port aggregated link is similarly configured (for configuration instructions your non-ProCurve equipment, refer to the appropriate product documentation):

   - use the "lacp" option for equipment that has support for LACP

   - use the "trunk" option for a switch or server at the other end that can configure the aggregated ports statically (that is, uses no signaling protocol)

## Device Discovery

For device discovery, the new software will enable LLDP by default (there will be no line item in the configuration indicating that LLDP is enabled). All switch platforms listed on page 1 (with the exception of the 2500 Series) support the transmission and reception of LLDP packets. The Switch 2500 Series only supports the transmission of LLDP packets. The 2500 Series will not list any discovered neighbor switches.

For your ProCurve switches:

■ To disable LLDP operation, use the following command:

   ```
   no lldp run
   ```

Some configurations may continue to provide limited read-only support for CDP. In configurations where you see the command line, cdp run, this indicates that this switch will receive CDP information generated by neighbor equipment. The LLDP MIB fields for connected device information will be populated with the respective information received in a CDP packet.

■ To disable the receipt and processing of CDP information, use the following command:

   ```
   no cdp run
   ```

# FAQs

**Why has ProCurve implemented this change?**

ProCurve has discontinued the use of proprietary protocols for Link Aggregation and Device Discovery in order to offer IEEE standard options for these features.

**What happens if I install the new software and didn't change my configuration?**

When the new software is rebooted and encounters

```
trunk [port list] [trk#] fec
```

in the configuration file, it will replace "fec" with the keyword "trunk":

```
trunk [port list] [trk#] trunk
```

If the other end of the link is still configured for "fec" and *worked previously with this ProCurve switch*, the link may continue to work and properly load balance traffic across the aggregated links. **We recommend reconfiguring the link on the other side for "static" operation.**

ProCurve has tested this mismatched configuration with

- ProCurve to ProCurve switches

- ProCurve to Cisco Switches (and routers)

- ProCurve to NIC-Teamed Servers

All configurations showed that load balancing continues to work across these grouped ports after an update to the above listed versions of software.  This testing was done on a finite set of configurations, so your environment may require a manual reconfiguration of the aggregated link (that is, reconfigure your other switch or server to an LACP or static trunk).

**What are the ramifications of switching from CDP to LLDP?**

Your ProCurve Networking products will be discovered by other interconnected ProCurve products.  Devices that continue to use CDP for discovery of neighboring devices may no longer see these ProCurve switches.  For information on enabling LLDP on your non-ProCurve equipment, refer to the appropriate product documentation.

ProCurve Manager (PCM) can use alternative methods to map the network and does not rely solely on CDP as a discovery method to map your network topology.