

Vendor Optic Locking: State of the Nation

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Why do vendors lock optics?

- Vendors don't make their own pluggables
- There's a wide number of optical OEMs
 - Finisar, Picolight, Luminent, Avanex, Intel, Hitachi/Opnext, JDSU, Avago, Bookham, etc., etc...
- All vendors re-market units from these OEMs
- The vendor ID in the EEPROM is reset to the system vendor's own
- There should be no reason why an OEM article shouldn't work in your Foo box

Why vendors tell you they lock

- Fake equipment issue
 - Grey market counterfeit optics
 - “Might break your gear!”
 - Cisco-badged optics particularly common
- Quality Assurance
 - The vendor has “qualified” the optics from the OEM
- “Trust us, right?”

Why vendors may really lock

- Reduces support burden
 - Cases are opened at TAC because of issues caused by third-party optics
 - But aren't these pluggables based on standards?
 - ...as long as we're not using knock-offs?
- OEM optics threaten profits!
 - The markup can be around 10x, or more for a fairly exotic optic

State of common vendors

- Foundry
 - Recent change for MLX/XMR software
 - Around version 3.5
 - By default locks to Foundry XFPs
 - Disable with
`no transceiver-type-check`
- Extreme (BD88xx, x450)
 - No locking but “unsupported optic” nag in log

State of common vendors

- Cisco (65/76xx)
 - Locks by default
 - Can be turned off with a hidden command
- Juniper
 - No locking
- Force10
 - No locking
- Anyone got any other experience?

Ongoing Issues

- Vendors are cagey about locking
 - Customer aggravation
 - Not new, been going on for 5 years
 - <http://www.nanog.org/mtg-0310/wodelet.html>
- Latest seems to crippling functionality, allowing 3rd party optic use, such as:
 - Disabling stats (tx power, rx power, etc)
 - Spawning regular and annoying log messages

New Optic Footprint: SFP+

- SFP+ is a relatively new form-factor
- Same footprint as SFP, but can support 10G data rates, so very high densities
 - Sounds great, eh?
- Challenge is lack of power (1-1.5W)
- Reduces reach significantly
 - 10km and less, no DWDM support
- Good for high density, short reach

Comments? Questions?



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