

# Switch loop causes optical port shutdown



## Article Overview

Optical ports on switches can automatically shut down when a network loop is detected, often triggered by STP, UDLD, or SLPP mechanisms to prevent broadcast storms and MAC table instability.

### Causes of Optical Port Shutdown

Network loops occur when frames circulate endlessly between switches or within a single switch due to miswiring or configuration errors. In fiber networks, this can happen if multiple active paths exist between devices, creating a fiber switching loop. Consequences include broadcast storms, MAC address table instability (MAC flapping), unicast flooding, and severe network performance degradation, which can prompt the switch to shut down affected ports to protect the network. Spanning Tree Protocol (STP) and its variants (RSTP, MSTP) detect loops by monitoring for duplicate MAC addresses or BPDU packets. If a loop is detected, STP may block or shut down a port to prevent network disruption. Similarly, UDLD (Unidirectional Link Detection) monitors fiber links for one-way traffic; if a unidirectional condition is detected, the port may be disabled to prevent loops. SLPP (Switch Link Protection Protocol) Guard is another mechanism used on some switches to detect loops at the edge. When SLPP detects a loop, it can automatically shut down the port to prevent network instability.

### Troubleshooting Steps

- Check switch logs for events indicating STP, UDLD, or SLPP triggers. This helps identify which protocol caused the shutdown.
- Inspect physical connections to ensure no accidental loops exist, such as cables connected between two ports on the same switch or multiple active paths between...

## Article Content

Apr 21, 2026

Solved: What would cause all fiber optic ports on a switch to go down ...

It seems that the whole fiber optic controller stops working for some external cause, like there's something that

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Troubleshoot Layer-2 Loops on Catalyst 9000 Series Switches

This document describes information to help identify the source of Layer 2 loops and provide safeguards to prevent

Jan 10, 2026

Cisco switch spanning tree loop

The port is err-disabled because Spanning Tree has determined that another switch/etc is plugged in (which Spanning

Dec 13, 2025

Switch LOOPING

A bridging loop or spanning-tree loop caused a network outage. Switch loops due to different ports connected to each

May 22, 2026

How To Prevent Cisco Switches Network Loop?

The network loop forms a broadcast storm, which not only affects the data forwarding of the switch, but also affects the

May 12, 2026

Switch ports keep going down/timing out?

How many switches do you have; and are they all configured similarly to the one given? Do you still have other

May 13, 2026

Fiber Switching Loop Errors? Here is Your 5-Step Fix Guide

We will dissect this network-crippling phenomenon and introduce a systematic 5-step fix, grounded in the principles of

Sep 05, 2025

## Cisco Port Randomly Shuts Off

For some reason the port on the cisco switch they are connected to randomly shuts down and the light goes off as if

Oct 22, 2025

## Top 9 Reasons for Network Switches Failure

Other common telephone voice switches, fiber switches, and so on. For example, if the VLAN is incorrectly partitioned,

Feb 12, 2026

## Troubleshooting loopback detection automatic port shutdown ...

Loopback detection automatically shuts down a port when the switch transmits a specific loopback detection frame out of an interface

Mar 25, 2026

## Why would my switch be shutting down ports automatically?

My thoughts: Someone may have gotten in the way of the optical link while it was running an automated bandwidth

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## What is Loopback Detection in Switches and How It Works

When a switch port is accidentally looped back via a cable or connected improperly, the loop can flood the network

Jun 15, 2026

## Optical Transceiver Failure: How to solve it?

Failure phenomenon Two optical interfaces through the fiber docking, the local port Down, optical module docking

Nov 27, 2025

## Switching loop

A switching loop or bridge loop occurs in computer networks when there is more than one layer 2 path between two endpoints (e.g.,

Jan 01, 2026

## Switch to switch loop issue

If I connect a cable between 2 ports on the same switch loop will come, if so how to avoid the loop even if it is done

Apr 19, 2026

Cisco switch problem

It can't be a loop on the affected switch because I can shut down ALL of the ports except the uplink, and it still goes err-disabled. But

Sep 14, 2025

Fix Network Loops: Step-by-Step Guide

Introduction A network loop occurs when redundant connections between switches cause data packets to

Apr 02, 2026

Issue with Switch Port Shutdowns Due to SLPP Guard (NIC?)

I'm experiencing an issue on our network where certain switch ports are shutting down, and we're unsure of the root

Nov 08, 2025

Loopback Test Guide: Switch Port Troubleshooting Steps | EDGE Optical ...

Complete guide to performing loopback tests on switch ports. Diagnose network issues with fiber optic cables and

May 09, 2026

Network Looping Question

So two cables between two switch's can cause a switch loop. But why is it having 9 connections from a server to the

Aug 30, 2025

Troubleshooting Interface Down Problems

Causes and Recovery Measures for Interface Error-Down Events Causes for Interface Error-Down Events The error-down

Sep 09, 2025

The Guide to Preventing Loops in ONU Networks

Lack of Loop Detection Features in ONU Devices: Some ONUs do not have built-in loop detection or port isolation, so

Jan 26, 2026

Loop port shutdown

Hi everyone, I'm using x460 and x450, so, i have enabled the stp/rstp on the switch to guard against loop network and

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What Is Loop Prevention on a Network Switch? Causes, Risks, and

This article provides a clear and practical guide for both beginner engineers and technical professionals, explaining

## Contact Us

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