

Configuration of Iraqi Industrial Ring Network Switches



Overview

This publication describes DLR network operation, topologies, configuration considerations, and diagnostic methods. Download firmware, associated files (such as AOP, EDS, and DTM), and access product release notes from the Product Compatibility and Download Center at. This document provides basic background information regarding adding ring redundancy in your wired Ethernet networks. It will explore the N-Tron proprietary protocol N-Ring and how it is a step up from IEEE Spanning Tree and Rapid Spanning Tree Protocol (STP, RSTP). Industrial switches, as the core components of this infrastructure, play a pivotal role in establishing and maintaining the integrity of industrial ring. Device Level Ring (DLR) is a Layer 2 protocol that enables redundancy in a ring topology, providing fast network fault detection and reconfiguration for industrial networks. DLR network includes at. One of the classic ways of enhancing the availability of a PROFINET network segment is to use an MRP ring topology that can compensate the failure of an individual device without impairing the network.



Article Content

May 14, 2026

EtherNet/IP Device Level Ring

A ring with redundant gateways uses multiple switches to provide multiple connections from a ring to the outside network infrastructure (Figure 9). If you need only one connection to the outside network,

May 21, 2026

PROFINET – MRP Ring:

One of the classic ways of enhancing the availability of a PROFINET network segment is to use an MRP ring topology that can compensate the failure of an individual device without impairing the network.

Apr 02, 2026

The OEM Guide to Networking ENET-RM001A-EN-P

The primary disadvantages of a device-level ring topology are additional setup required (e.g., configuring the active ring supervisor) over a device-level linear or switch-level star network topology, and

Mar 12, 2026

Rapid Spanning Tree Protocol in Ring Network Topology RSTP ...

In this case, Industrial Ethernet Switches provide some protocols to ensure this service. Ring protocol, HRP, MRP, RSTP are some protocols that can be refereed for this purpose.

Oct 12, 2025

Step-by-Step Configuration Guide for Industrial Lte Router Ring

Industrial Lte router ring redundancy technology was born precisely to solve such "life-or-death" challenges—it enables networks to self-heal like "blood vessels," completing fault switching within

Dec 30, 2025

Industrial Ring Networks | ERPS | Antaira Technologies

The ITU-T G.8032 Ethernet Ring Protection Switching (ERPS) is an open-standard layer 2 Ethernet protocol designed to detect and prevent switching loops from occurring. Originally developed by the

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Setting Up ERPS Ring for PLANET Network Switch Training

Enable a fast and reliable network recovery system by learning how to set up an ERPS Ring Network with PLANET Managed Network Switches and handle troubleshooting for various situations.

Dec 25, 2025

Proprietary Ring Topologies in Automation Networks | DigiKey

In fact, select manufacturers claim much better recovery times for their proprietary ring networks sometimes to within 10 msec. Conclusion on ring topologies in industrial automation

Jan 31, 2026

Redundancy Protocol Configuration Guide, Cisco Catalyst IE3x00,

A DLR network with redundant gateways uses multiple switches to provide multiple connections from a ring to the outside network. Redundant gateways are not essential if you need

May 04, 2026

Ethernet Ring Redundancy

This document provides basic background information regarding adding ring redundancy in your wired Ethernet networks. It will explore the N-Tron proprietary protocol N-Ring and how it is a

Sep 28, 2025

Get To Know Ethernet Ring Protection Switching (ERPS)

Ethernet Ring Protection Switching (ERPS) helps achieve high reliability and network stability. This article provides an overview of ERPS, including its definition, basic concepts, and

Nov 25, 2025

Fiber Optic Ring Redundancy Design for Industrial Ethernet Switches

5. Redundancy Design as the "Lifeline" of Industrial Networks Fiber optic ring redundancy design represents not just a technical choice but an industrial pursuit of "determinacy"—ensuring real-time,

Nov 12, 2025

X-Ring Ethernet Industrial Ring Technology

The diagram above shows the start-up sequence of an X-Ring network, where all the units are set to be a "Master" switch. Notice each unit starts transmitting SBPDU packets after initialisation.

Nov 26, 2025

Redundancy Protocol Configuration Guide, Cisco Catalyst IE3x00,

Device Level Ring Device Level Ring Components of DLR DLR Topology Multiple Rings Redundant Gateways Cisco IE Switch Support for DLR DLR Feature Interactions Guidelines and

Jan 26, 2026

Industrial Ring Networks | ERPS | Antaira Technologies

The Ethernet Ring Protection Switching (ERPS) protocol is a powerful technology and service that can be used on industrial switches to ensure high network availability and prevent network downtime.

Apr 17, 2026

Industrial Lan switch how to group ring network

September 19, 2024 Industrial Lan switch how to group ring network In the industrial Internet of Things, the Industrial Lan Switch group ring network is an important network architecture method that can

Nov 21, 2025

How Industrial Switches Build Industrial Ring Networks

This article aims to provide a concise yet comprehensive overview of how industrial switches contribute to the formation of industrial ring networks, catering to both traditional industry

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How to configure Ring network (ERPS) for industrial managed switch ...

ERPS is a standard ring network protocol, and it is the most popular function for managed ethernet switches. But many people met the problem in configuring the ring networks.

Mar 03, 2026

Rapid Spanning Tree Protocol in Ring Network Topology

RSTP is a protocol that most automation industrial switch vendors have implemented for ensuring the availability of their industrial network and plant.

Oct 08, 2025

How Industrial Switches Build Industrial Ring Networks

In a ring network configuration, industrial switches are interconnected in a circular fashion, creating a closed-loop communication path. Each switch serves as a node in the network, facilitating the

Jun 17, 2026

X-Ring Plus Ethernet Industrial Ring Technology

X-Ring Plus resilient ring technology is provided with network operating system 2.0 & is an enhanced version of Case Communications "X-Ring" technology.

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Fiber Optic Ring Network Design Explained: Topologies, Diagrams ...

Learn how to design a fiber optic ring network with practical diagrams, topologies, and switch setup tips. Explore ring network switch options for industrial applications.

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Industrial Ethernet switches are critical components in network infrastructures, often used in harsh environments and mission-critical applications. The Ethernet Ring Protection Switching

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Media Redundancy Protocol

Media Redundancy Protocol (MRP), defined in International Electrotechnical Commission (IEC) standard 62439-2, provides fast convergence in a ring network topology for Industrial Automation

Apr 29, 2026

Network Basics: Beginners Guide to Ethernet Ring Protection Switching

Ethernet Ring Protection Switching (ERPS) is a feature that provides security to networks without blocking all traffic. The switch protects the network by detecting any attempted malicious

Sep 17, 2025

Best Practices for Designing Redundant Networks for Industrial

Redundancy is a crucial aspect of designing and configuring industrial control systems (ICS) to ensure high availability, fault tolerance and reliability. A redundant network architecture

Sep 04, 2025

What Is Network Redundancy? Key Strategies for Industrial Switches

Learn what network redundancy is and why it matters for industrial communication systems. Explore device, link, ring, and gateway redundancy techniques to build a fail-safe network

Contact Us

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