

Lifecycle Management and Redundancy Strategy

This module describes the operations required for life cycle management and redundancy.

- Lifecycle Management, on page 1
- Redundancy Strategy, on page 1
- High-Availability for XRd vRouter, on page 2

Lifecycle Management

Upon uninstallation of an XRd instance, if you had configured persistence, a persistent volume claim (PVC) remains. To fully eliminate the XRd instance, you must delete the PVC manually.

To enable support upgrade flows, bring down the worker node, uninstall the XRd deployment while retaining the PVC to allow persistence over upgrades, reinstall and reinstate with new settings.

You can use the standard Helm upgrade path if no worker node modifications are needed. The worker node can remain operational during the upgrade. Kubernetes must accept the resource changes that ensue.

Testing in the lab may be necessary to determine if an upgrade is compatible because not all circumstances are considered. Most configuration upgrades, including images, base configurations, and interfaces, are expected to work with this method.

Redundancy Strategy

The redundancy approach for XRd involves the utilization of two distinct XRd installations to support a redundant pair of instances. This ensures the establishment of two separate Kubernetes resources.

When modifications are necessary, you can make the changes to either of the instances initially. When the changes have stabilized, you can implement the same changes to the other instance.

High-Availability for XRd vRouter

Table 1: Feature History Table

Feature Name	Release Name	Description
High-Availability for XRd vRouter	Release 7.11.1	Now you can run XRd vRouter as a highly available redundant pair, actively managing session state. It incorporates VRRP monitoring and high-availability automation logic in peer containers, configured to update the AWS APIs.

Overview

To ensure continuous availability, the redundant instance pair may be configured to operate as a highly available cluster. This configuration utilizes VRRP monitoring to proactively manage session state. Additionally, high-availability automation logic is implemented within peer containers to facilitate dynamic updates to AWS APIs. This combination of proactive monitoring and dynamic automation ensures seamless service delivery even in the event of individual instance failures.

References

For Information On	Refer
XRd HA app container application and its deployment and configuration	XRd HA App repository
VRRP configured on unicast mode	The *Unicast VRRP* section in the *IP Addresses and Services Configuration Guide for Cisco ASR 9000 Series Routers, IOS XR Release 7.11.x*