

Configure Nexus 9000 Unicast NLB

Contents

[Introduction](#)

[Prerequisites](#)

[Requirements](#)

[Components Used](#)

[Guidelines and Limitations](#)

[Configure](#)

[Network Diagram](#)

[N9396-1 Configuration Example](#)

[N9396-2 Configuration Example](#)

[Verify](#)

[Troubleshoot](#)

[Design Considerations](#)

Introduction

This document describes the configuration that must be enabled on the server in order to ensure Unicast Microsoft Network Load Balancing (NLB) mode operates correctly on Nexus 9000 Series switches. Per the [Nexus 9000 Series NX-OS Multicast Routing Configuration Guide](#), multicast mode NLB is not supported on this platform when the device is responsible for routing traffic into the NLB cluster VLAN until NX-OS Software Release 9.2(1).

Prerequisites

In order to ensure a successful configuration:

- Unicast NLB mode must be configured on the server appropriately.
- The virtual Port-channel (vPC) configuration on the switches must be in place if this configuration is deployed in the same manner as depicted in the Network Diagram section of this configuration example.
- The appropriate VLANs and Layer 3 (L3) interfaces must be present.

Requirements

Cisco recommends that you have knowledge of these topics:

- Nexus Operating System (NX-OS)
- Microsoft NLB
- Routing
- Switching
- vPC

Components Used

The information in this document is based on these software and hardware versions:

- Nexus 9000-C9396PX
- Cisco NX-OS Version 7.0(3)I1(1a)

The information in this document was created from the devices in a specific lab environment. All of the devices used in this document started with a cleared (default) configuration. If your network is live, make sure that you understand the potential impact of any command.

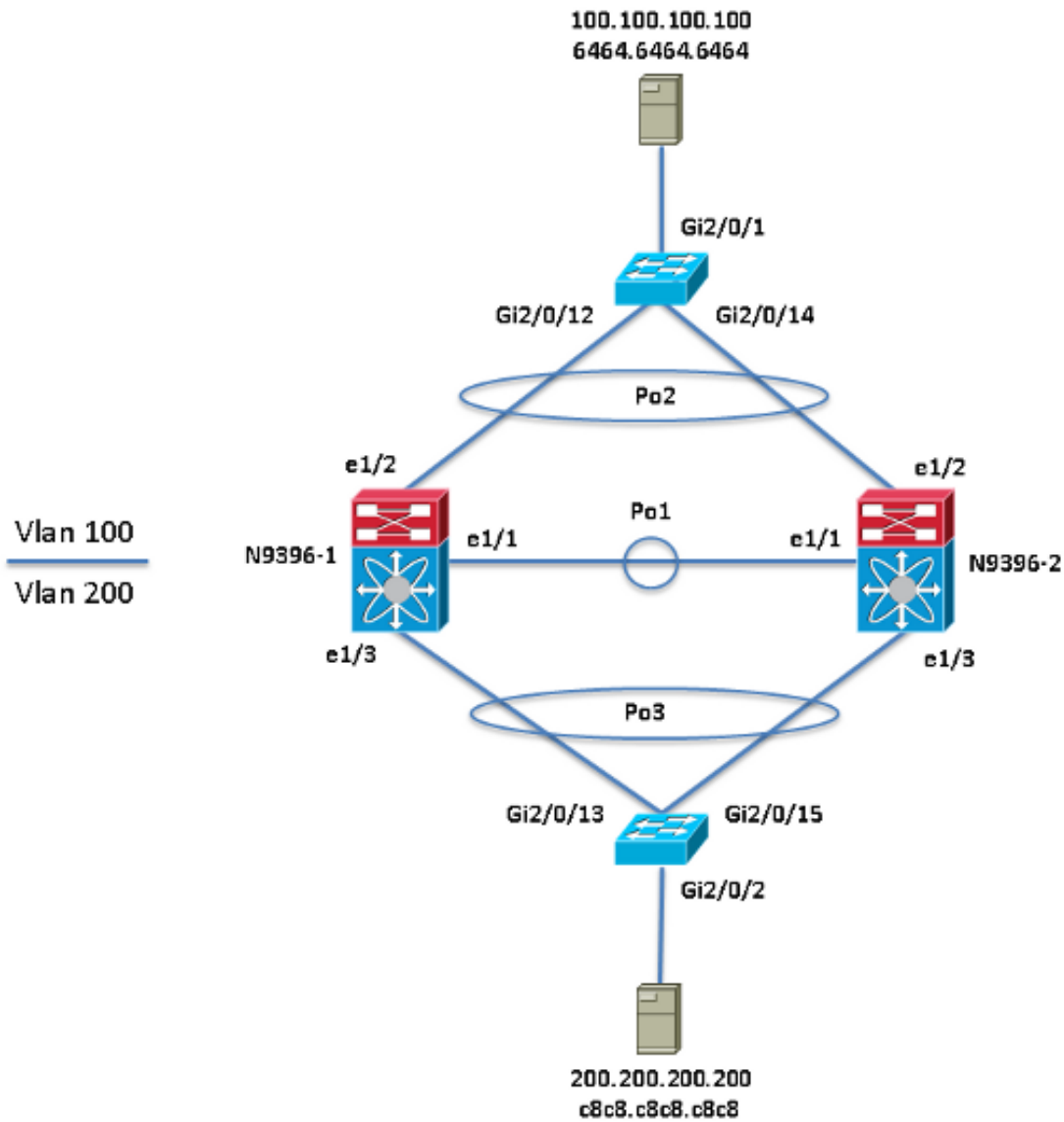
Guidelines and Limitations

The use of a static MAC address table entry for the NLB Virtual MAC Address is required on all Nexus 9000 Series switches.

Configure

Network Diagram

This network diagram shows NLB deployed in unicast mode. The NLB virtual IP (VIP) is 200.200.200.200 and virtual MAC (VMAC) is c8c8.c8c8.c8c8.



N9396-1 Configuration Example

```
interface Vlan200
ip arp 200.200.200.200 C8C8.C8C8.C8C8

mac address-table static c8c8.c8c8.c8c8 vlan 200 interface port-channel3
```

N9396-2 Configuration Example

```
interface Vlan200
ip arp 200.200.200.200 C8C8.C8C8.C8C8

mac address-table static c8c8.c8c8.c8c8 vlan 200 interface port-channel3
```

Verify

Use this section in order to confirm that your configuration works properly.

- show ip arp [NLB_VIP]
- show mac address-table address [NLB_VMAC]

N9396-1

```
N9396-1# show ip arp 200.200.200.200
```

```
Flags: * - Adjacencies learnt on non-active FHRP router
+ - Adjacencies synced via CFSOE
# - Adjacencies Throttled for Glean
D - Static Adjacencies attached to down interface
```

```
IP ARP Table
```

```
Total number of entries: 1
```

```
Address Age MAC Address Interface
```

```
200.200.200.200 - c8c8.c8c8.c8c8 Vlan200
```

```
N9396-1# show mac address-table address c8c8.c8c8.c8c8
```

```
Legend:
```

```
* - primary entry, G - Gateway MAC, (R) - Routed MAC, O - Overlay MAC
```

```
age - seconds since last seen,+ - primary entry using vPC Peer-Link,
```

```
(T) - True, (F) - False
```

```
VLAN MAC Address Type age Secure NTFY Ports
```

```
-----+-----+-----+-----+-----+-----+-----+-----
```

```
* 200 c8c8.c8c8.c8c8 static - F F Po3
```

N9396-2

```
N9396-2# show ip arp 200.200.200.200
```

```
Flags: * - Adjacencies learnt on non-active FHRP router
+ - Adjacencies synced via CFSOE
# - Adjacencies Throttled for Glean
D - Static Adjacencies attached to down interface
```

```
IP ARP Table
```

```
Total number of entries: 1
```

```
Address Age MAC Address Interface
```

```
200.200.200.200 - c8c8.c8c8.c8c8 Vlan200
```

```
N9396-2# show mac address-table address c8c8.c8c8.c8c8
```

```
Legend:
```

```
* - primary entry, G - Gateway MAC, (R) - Routed MAC, O - Overlay MAC
```

```
age - seconds since last seen,+ - primary entry using vPC Peer-Link,
```

```
(T) - True, (F) - False
```

```
VLAN MAC Address Type age Secure NTFY Ports
```

```
-----+-----+-----+-----+-----+-----+-----+-----
```

```
* 200 c8c8.c8c8.c8c8 static - F F Po3
```

Troubleshoot

There is currently no specific troubleshooting information available for this configuration.

Design Considerations

With the static ARP and MAC address entries in place, you must account for these design considerations:

- All NLB cluster members must be reachable via the same port-channel/physical interface from the perspective of the Nexus 9000.

- The ability to adapt to a change in the physical location of the NLB cluster members, due to vMotion, is not possible without an appropriate design.

이 번역에 관하여

Cisco는 전 세계 사용자에게 다양한 언어로 지원 콘텐츠를 제공하기 위해 기계 번역 기술과 수작업 번역을 병행하여 이 문서를 번역했습니다. 아무리 품질이 높은 기계 번역이라도 전문 번역가의 번역 결과물만큼 정확하지는 않습니다. Cisco Systems, Inc.는 이 같은 번역에 대해 어떠한 책임도 지지 않으며 항상 원본 영문 문서(링크 제공됨)를 참조할 것을 권장합니다.