Blocking Unknown Unicast Flooding

This chapter contains the following sections:

Information About UUFB

Unknown unicast packet flooding (UUFB) limits unknown unicast flooding in the forwarding path to prevent the security risk of unwanted traffic reaching the Virtual Machines (VMs). UUFB prevents packets received on both vEthernet and Ethernet interfaces destined to unknown unicast addresses from flooding the VLAN. When UUFB is applied, Virtual Ethernet Modules (VEMs) drop unknown unicast packets received on uplink ports, while unknown unicast packets received on vEthernet interfaces are sent out only on uplink ports.

Guidelines and Limitations for UUFB

- Before configuring UUFB, make sure that the VSM HA pair and all VEMs have been upgraded to the latest release by entering the **show module** command.
- You must explicitly disable UUFB on virtual service domain (VSD) ports. You can disable UUFB in the VSD port profiles.
- You must explicitly disable UUFB on the ports of an application or VM by using MAC addresses other than the one given by VMware.
- Unknown unicast packets are dropped by Cisco UCS fabric interconnects when Cisco UCS is running in end-host-mode.
- On Microsoft Network Load Balancing (MS-NLB) enabled vEthernet interfaces (by entering the **no mac auto-static-learn** command), UUFB does not block MS-NLB related packets. In these scenarios, UUFB can be used to limit flooding of MS-NLB packets to non-MS-NLB ports within a VLAN.

Default Settings for UUFB

Parameters	Default
uufb enable	Disabled
switchport uufb disable	Disabled

Configuring UUFB

Blocking Unknown Unicast Flooding Globally on the Switch

You can globally block unknown unicast packets from flooding the forwarding path for the switch.

Before you begin

Log in to the CLI in EXEC mode.

Procedure

	Command or Action	Purpose
Step 1	switch# **configure terminal**	Enables global configuration mode.
Step 2	switch(config)# [**no**] **uufb enable**	Configures UUFB globally for the VSM.
Step 3	(Optional) switch(config)# **show uufb status**	Displays the UUFB global setting for the VSM.
Step 4	(Optional) switch(config)# **copy running-config startup-config**	Copies the running configuration to the startup configuration.

Example

This example shows how to block unknown unicast flooding globally:

```
switch# configure terminal
switch(config)# uufb enable
switch(config)# show uufb status
UUFB Status: Enabled
switch(config)# copy running-config startup-config
[########################################] 100%
```

Configuring an Interface to Allow Unknown Unicast Flooding

You can allow unknown unicast packets to flood a vEthernet interface if you have blocked flooding globally for the VSM. You can also make sure unknown unicast packets are never blocked on a specific interface, regardless of the global setting.

If you have previously blocked unknown unicast packets globally, you can allow unicast flooding on either a single interface or all interfaces in a port profile.

Before you begin

Log in to the CLI in EXEC mode.

Procedure

	Command or Action	Purpose
Step 1	switch# **configure terminal**	Enters global configuration mode.
Step 2	switch(config)# **interface vethernet** *interface-number*	Places you in interface configuration mode for the specified interface.
Step 3	switch(config)# [**no**] **switchport uufb disable**	Disables blocking of unicast packet flooding for the named interface.
Step 4	(Optional) switch(config)# **show running-config vethernet** *interface-number*	Displays the running configuration for the interface for verification.
Step 5	(Optional) switch(config)# **copy running-config startup-config**	Copies the running configuration to the startup configuration.

Example

This example shows how to configure an interface to allow unknown unicast flooding:

```
switch# configure terminal
switch(config)# interface vethernet 100
switch(config-if)# switchport uufb disable
switch(config-if)# show running-config interface veth100

!Command: show running-config interface Vethernet100
!Time: Fri Jun 10 12:43:53 2011

version 4.2(1)SV1(4a)

interface Vethernet100
  description accessvlan
  switchport access vlan 30
  switchport uufb disable
switch(config-if)# copy running-config startup-config
[########################################] 100%
```

Configuring a Port Profile to Allow Unknown Unicast Flooding

You can allow unknown unicast packets to flood the interfaces in an existing vEthernet port profile if you have disabled unicast flooding globally for the VSM. You can also make sure unknown unicast packets are never blocked on a specific port profile, regardless of the global setting.

If you have previously blocked unknown unicast packets globally, you can then allow unicast flooding on either a single interface or all interfaces in a port profile.

Before you begin

- Log in to the CLI in EXEC mode.
- Configure the vEthernet port profile for which you want to allow flooding.

Procedure

	Command or Action	Purpose
Step 1	switch# **configure terminal**	Enters global configuration mode.
Step 2	switch(config)# **port-profile** *profile-name*	Places you in configuration mode for the named port profile.
Step 3	switch(config-port-prof)# [**no**] **switchport uufb disable**	Disables blocking of unicast packet flooding for all interfaces the named port profile.
Step 4	(Optional) switch(config-port-prof)# **show running-config port-profile** *profile-name*	Displays the configuration for the named port profile for verification.
Step 5	(Optional) switch(config-port-prof)# **copy running-config startup-config**	Copies the running configuration to the startup configuration.

Example

This example shows how to configure a port profile to allow unknown unicast flooding:

```
switch# configure terminal
switch(config)# port-profile accessprof
switch(config-port-prof)# switchport uufb disable
switch(config-port-prof)# show running-config port-profile accessprof

!Command: show running-config port-profile accessprof
!Time: Fri Jun 10 12:06:38 2011

version 4.2(1)SV1(4a)
port-profile type vethernet accessprof
  vmware port-group
  switchport mode access
  switchport access vlan 300
  switchport uufb disable
  no shutdown
  description all_access
switch(config-port-prof)# copy running-config startup-config
[########################################] 100%
```

Configuration Example for Blocking Unknown Unicast Packets

This example shows how to block unknown unicast packets from flooding the forwarding path globally for the VSM:

```
n1000v# config terminal
n1000v(config)# uufb enable
n1000v(config)# show uufb status
```

```
UUFB Status: Enabled
n1000v(config)# copy running-config startup-config
[########################################] 100%
```

Feature History for UUFB

This table only includes updates for those releases that have resulted in additions to the feature.

Feature Name	Releases	Feature Information
UUFB	4.2(1)SV1(4a)	This feature was introduced.