PIX/ASA 7.x and Later: Mail (SMTP) Server Access on Outside Network Configuration Example

Contents

Introduction

This sample configuration demonstrates how to set up the PIX Firewall for access to a mail server located on the outside network.

Refer to PIX/ASA 7.x and above : Mail Server Access on Inside Network Configuration Example in order to set up the PIX/ASA Security Appliance for access to a mail/SMTP server located on the Inside network.

Refer to PIX/ASA 7.x with Mail Server Access on DMZ Network Configuration Example in order to set up the PIX/ASA Security Appliance for access to a mail/SMTP server located on the DMZ network.

Refer to ASA 8.3 and Later: Mail (SMTP) Server Access on Outside Network Configuration Example for more information on the identical configuration on Cisco Adaptive Security Appliance (ASA) with version 8.3 and later.

Refer to the Cisco Secure PIX Firewall documentation for further information about how to set Microsoft Exchange. Choose your software version, then go to the configuration guide and read the chapter on how to configure for Microsoft Exchange.

Prerequisites

Requirements

There are no specific requirements for this document.

Components Used

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

- PIX Firewall 535
- PIX Firewall software release 7.1(1)
- Cisco 2500 Routers

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.

Conventions

Refer to the Cisco Technical Tips Conventions for more information on document conventions.

Related Products

This configuration can also be used with an Adaptive Security Appliance (ASA) that runs version 7.x and later.

Configure

In this section, you are presented with the information to configure the features described in this document.

Note: Use the Cisco CLI Analyzer to obtain more information on the commands used in this section.

Network Diagram

This document uses this network setup:

Configurations

This document uses these configurations:

- PIX Firewall
- Router A
- Router B

PIX Firewall

```
PIX Version 7.1(1)
!
hostname pixfirewall
enable password 8Ry2YjIyt7RRXU24 encrypted
names
```

```
!
interface Ethernet0
 shutdown
 no nameif
 no security-level
 no ip address
!
interface Ethernet1
 shutdown
 no nameif
 no security-level
 no ip address
!
interface Ethernet2
 shutdown
 no nameif
 no security-level
 no ip address
!

!--- Define the IP address for the inside interface.
interface Ethernet3 nameif inside
 security-level 100
 ip address 192.168.1.1 255.255.255.252
!

!--- Define the IP address for the outside interface.
interface Ethernet4 nameif outside
 security-level 0
 ip address 209.64.3.1 255.255.255.252
!
interface Ethernet5
 shutdown
 no nameif
 no security-level
 no ip address
!
passwd 2KFQnbNIdI.2KYOU encrypted
ftp mode passive
pager lines 24
mtu inside 1500
mtu outside 1500
no failover
no asdm history enable
arp timeout 14400

!--- This command defines the global for the Network
Address Translation !--- (NAT) statement. In this case,
the two commands state that any traffic !--- from the
192.168.2.x network that passes from the inside
interface (Ethernet0) !--- to the outside interface
(Ethernet 1) translates into an address !--- in the
range of 209.64.3.129 through 209.64.3.253 and contains
a subnet !--- mask of 255.255.255.128. global (outside)
1 209.64.3.129-209.64.3.253 netmask 255.255.255.128

!--- This command reserves the last available address
(209.64.3.254) for !--- for Port Address Translation
(PAT). In the previous statement, !--- each address
inside that requests a connection uses one !--- of the
addresses specified. If all of these addresses are in
use, !--- this statement provides a failsafe to allow
additional inside stations !--- to establish
connections. global (outside) 1 209.64.3.254
```

```
!--- This command indicates that all addresses in the
192.168.2.x range !--- that pass from the inside
(Ethernet0) to a corresponding global !--- designation
are done with NAT. !--- As outbound traffic is permitted
by default on the PIX, no !--- static commands are
needed. nat (inside) 1 192.168.2.0 255.255.255.0

!--- Creates a static route for the 192.168.2.x network
with 192.168.1.2. !--- The PIX forwards packets with
these addresses to the router !--- at 192.168.1.2. route
inside 192.168.2.0 255.255.255.0 192.168.1.2 1

!--- Sets the default route for the PIX Firewall at
209.64.3.2. route outside 0.0.0.0 0.0.0.0 209.64.3.2 1
timeout xlate 3:00:00
timeout conn 1:00:00 half-closed 0:10:00 udp 0:02:00
icmp 0:00:02
timeout sunrpc 0:10:00 h323 0:05:00 h225 1:00:00 mgcp
0:05:00
timeout mgcp-pat 0:05:00 sip 0:30:00 sip_media 0:02:00
timeout uauth 0:05:00 absolute
no snmp-server location
no snmp-server contact
snmp-server enable traps snmp authentication linkup
linkdown coldstart
telnet timeout 5
ssh timeout 5
console timeout 0
!
class-map inspection_default
 match default-inspection-traffic
!
!

!--- SMTP/ESMTP is inspected since "inspect esmtp" is
included in the map. policy-map global_policy class
inspection_default inspect dns maximum-length 512
inspect ftp inspect h323 h225 inspect h323 ras inspect
rsh inspect rtsp inspect esmtp
  inspect sqlnet
  inspect skinny
  inspect sunrpc
  inspect xdmcp
  inspect sip
  inspect netbios
  inspect tftp
!


service-policy global_policy global
Cryptochecksum:8a63de5ae2643c541a397c2de7901041
: end
```

Router A

```
Current configuration:
  !
  version 12.0
  service timestamps debug uptime
  service timestamps log uptime
  no service password-encryption
  !
```

```
  hostname 2522-R4
  !
  enable secret 5 $1$N0F3$XE2aJhJlCbLWYloDwNvcV.
  !
  ip subnet-zero
  !
  !
  !
  !
  !
  interface Ethernet0

!--- Assigns an IP address to the inside Ethernet
interface. ip address 192.168.2.1 255.255.255.0 no ip
directed-broadcast ! interface Ethernet1 !--- Assigns an
IP address to the PIX-facing interface. ip address
192.168.1.2 255.255.255.252 no ip directed-broadcast !
interface Serial0 no ip address no ip directed-broadcast
shutdown ! interface Serial1 no ip address no ip
directed-broadcast shutdown ! ip classless !--- This
route instructs the inside router to forward all !---
non-local packets to the PIX. ip route 0.0.0.0 0.0.0.0
192.168.1.1
  !
  !
  line con 0
   transport input none
   line aux 0
   autoselect during-login
   line vty 0 4
   exec-timeout 5 0
   password ww
   login
  !
  end
```

Router B

```
Current configuration:
  !
  version 12.0
  service timestamps debug uptime
  service timestamps log uptime
  no service password-encryption
  !
  hostname 2522-R4
  !
  enable secret 5 $1$N0F3$XE2aJhJlCbLWYloDwNvcV.
  !
  ip subnet-zero
  !
  !
  !
  !
  interface Ethernet0

!--- Assigns an IP address to the PIX-facing Ethernet
interface. ip address 209.64.3.2 255.255.255.252 no ip
directed-broadcast ! interface Ethernet1 !--- Assigns an
IP address to the server-facing Ethernet interface. ip
address 209.64.3.5 255.255.255.252 no ip directed-
broadcast ! interface Serial0 !--- Assigns an IP address
to the Internet-facing interface. ip address 209.64.3.9
```

```
255.255.255.252 no ip directed-broadcast no ip mroute-
cache ! interface Serial1 no ip address no ip directed-
broadcast ! ip classless !--- All non-local packets are
to be sent out serial 0. In this case, !--- the IP
address on the other end of the serial interface is not
known, !--- or you can specify it here. ip route 0.0.0.0
0.0.0.0 serial 0
  !

!--- This statement is required to direct traffic
destined to the !--- 209.64.3.128 network (the PIX
global pool) to the PIX to be translated !--- back to
the inside addresses. ip route 209.64.3.128
255.255.255.128 209.64.3.1
  !
  !
  line con 0
   transport input none
  line aux 0
   autoselect during-login
  line vty 0 4
   exec-timeout 5 0
   password ww
   login
  !
  end
```

ESMTP TLS Configuration

Note: If you use Transport Layer Security (TLS) encryption for e-mail communication then the ESMTP inspection feature (enabled by default) in the PIX drops the packets. In order to allow the e-mails with TLS enabled, disable the ESMTP inspection feature as this output shows.

```
pix(config)#policy-map global_policy
pix(config-pmap)#class inspection_default
pix(config-pmap-c)#no inspect esmtp
pix(config-pmap-c)#exit
pix(config-pmap)#exit
```

Verify

There is currently no verification procedure available for this configuration.

Troubleshoot

The Cisco CLI Analyzer supports certain **show** commands. Use CLI Analyzer to view an analysis of **show** command output.

Note: Refer to Important Information on Debug Commands before you use **debug** commands.

The **logging console debugging** command directs messages to the PIX console. If connectivity to the mail server is a problem, examine the console debug messages to locate the IP addresses of the sending and receiving stations in order to determine the problem.

Related Information

- Establishing Connectivity Through Cisco PIX Firewalls
- Cisco PIX Firewall Software
- Cisco Secure PIX Firewall Command References
- Cisco ASA 5500-X Series Firewalls
- Requests for Comments (RFCs)
- Technical Support & Documentation - Cisco Systems