Cisco: Konfiguracja Zone-Based Firewall (ZBF)

Wprowadzenie

Zone-Based Firewall (ZBF) to nowoczesne podejście do filtrowania ruchu w routerach Cisco, zastępujące klasyczne ACL i CBAC. Bazuje na przydzieleniu interfejsów do stref (zones), a następnie definiowaniu polityk między strefami.

Kroki konfiguracji

Tworzenie stref

Zdefiniuj strefy, do których przypiszesz interfejsy:

```
zone security ZONA-WEW
zone security ZONA-INTERNET
```

Przypisanie interfejsów do stref

```
interface GigabitEthernet0/0
zone-member security ZONA-WEW

interface GigabitEthernet0/1
zone-member security ZONA-INTERNET
```

Tworzenie klasy ruchu

Określ, jaki typ ruchu będzie rozpoznawany:

```
class-map type inspect match-any CMAP-WWW
match protocol http
match protocol https
```

Tworzenie polityki ruchu

```
policy-map type inspect PMAP-WEW-INTERNET
class type inspect CMAP-WWW
inspect
class class-default
```

```
drop
```

Powiązanie polityki z ruchem między strefami

```
zone-pair security ZP-WEW-DO-INTERNET source ZONA-WEW destination ZONA-
INTERNET
service-policy type inspect PMAP-WEW-INTERNET
```

Weryfikacja

```
show zone security
show zone-pair security
show policy-map type inspect zone-pair
```

Uwagi

- Jeśli interfejs nie należy do żadnej strefy, to nie może wymieniać ruchu z żadnym innym interfejsem.
- Komenda `inspect` oznacza zezwolenie i śledzenie sesji.
- Komenda `drop` blokuje nieokreślony ruch domyślnie.

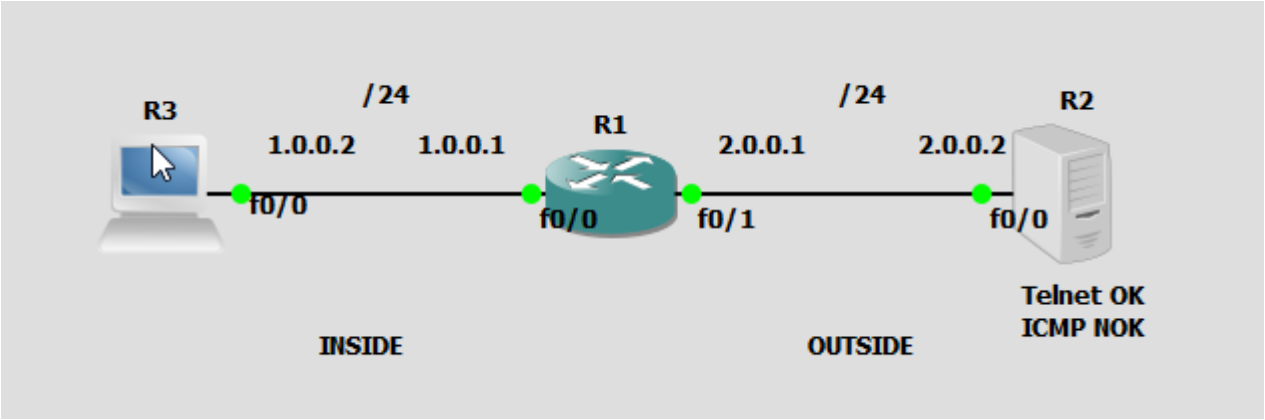
Przykład rozszerzenia

Dodanie reguły dla ICMP:

```
class-map type inspect match-any CMAP-PING
match protocol icmp

policy-map type inspect PMAP-WEW-INTERNET
class type inspect CMAP-WWW
inspect
class type inspect CMAP-PING
inspect
class class-default
drop
```

Przykład konfiguracji



konfiguracja routera:

```
*Mar  1 00:20:35.819: %SYS-5-CONFIG_I: Configured from console by console
R1#show running-config
Building configuration...

Current configuration : 1701 bytes
!
version 12.4
service timestamps debug datetime msec
service timestamps log datetime msec
no service password-encryption
!
hostname R1
!
boot-start-marker
boot-end-marker
!
!
no aaa new-model
memory-size iomem 5
no ip icmp rate-limit unreachable
ip cef
!
!
!
!
no ip domain lookup
!
multilink bundle-name authenticated
!
!
!
!
!
!
!
!
!
```

```
!
!
!
!
!
!
!
!
!
!
!
!
archive
 log config
  hidekeys
!
!
!
!
ip tcp synwait-time 5
!
class-map type inspect match-any TELNET-CLASS
 match protocol telnet
!
!
policy-map type inspect POLICY-INSIDE-TO-OUTSIDE
 class type inspect TELNET-CLASS
  inspect
 class class-default
  drop
!
zone security INSIDE
zone security OUTSIDE
zone-pair security ZP-INSIDE-OUTSIDE source INSIDE destination OUTSIDE
 service-policy type inspect POLICY-INSIDE-TO-OUTSIDE
!
!
!
!
interface FastEthernet0/0
 ip address 1.0.0.1 255.255.255.0
 zone-member security INSIDE
 duplex auto
 speed auto
!
interface Serial0/0
 no ip address
 shutdown
 clock rate 2000000
!
interface FastEthernet0/1
```

```
 ip address 2.0.0.1 255.255.255.0
 zone-member security OUTSIDE
 duplex auto
 speed auto
!
interface Serial0/1
 no ip address
 shutdown
 clock rate 2000000
!
interface Serial0/2
 no ip address
 shutdown
 clock rate 2000000
!
interface FastEthernet1/0
 no ip address
 shutdown
 duplex auto
 speed auto
!
interface FastEthernet2/0
 no ip address
 shutdown
 duplex auto
 speed auto
!
ip forward-protocol nd
!
!
no ip http server
no ip http secure-server
!
no cdp log mismatch duplex
!
!
!
!
!
!
control-plane
!
!
!
!
!
!
!
!
!
!
```

```
line con 0
 exec-timeout 0 0
 privilege level 15
 logging synchronous
line aux 0
 exec-timeout 0 0
 privilege level 15
 logging synchronous
line vty 0 4
 login
!
!
end
```

Test:

```
R3# ping 2.0.0.2

Type escape sequence to abort.
Sending 5, 100-byte ICMP Echos to 2.0.0.2, timeout is 2 seconds:
.....
Success rate is 0 percent (0/5)
R3#telnet 2.0.0.2
Trying 2.0.0.2 ... Open


User Access Verification

Username: admin
Password:
R2>
```