



# MikroTik RouterOS v7 Commonly Used Filters

## Notes about using the filters

- Starting in ROSv7, the filters are in a “normally closed” state. Traffic will not flow until an accept rule has been created for that traffic once the filters have been referenced. If the filters have not been referenced, then the protocol will act as normal.
- The chains used in the examples must be referenced in the routing protocol to work. These were used as examples only.
- Visit <https://help.mikrotik.com/docs/pages/viewpage.action?pageId=74678285> for more details on the filter syntax.

```
if ( [matchers] ) { [actions] } else { [actions] }
```

## Commonly Used Filters for OSPF

- To change the **Distance** on all OSPF routes:

```
/routing filter rule  
add chain=OSPF_In disabled=no rule="if ( protocol ospf ) { set distance 50; accept }"
```

- To change the **Distance** on just one OSPF route:

```
add chain=OSPF_In disabled=no rule="if ( dst==172.16.1.3/32 ) { set distance 40; accept }"
```

- To discard an incoming **Prefix**:

```
add chain=OSPF_In disabled=no rule="if ( dst==172.16.1.3/32 ) { reject }"
```

- To add a **Comment** to an OSPF route:

```
add chain=OSPF_In disabled=no rule="if ( dst==172.16.1.3/32 ) { set comment To_Main_Tower }"
```

- To discard OSPF routes based on the **CIDR Length** (greater than or equal to /31):

```
add chain=OSPF_In disabled=no rule="if ( dst-len >=31 ) { reject }"
```

- To change the **OSPF Type-1 metric** for a route:

```
add chain=OSPF_Out disabled=no rule="if ( dst==0.0.0.0/0 ) { set ospf-ext-metric 20 }"
```

- To change from the default of a Type1 route to a **Type2** route and change the metric:

```
add chain=OSPF_Out disabled=no rule="if ( dst==0.0.0.0/0 ) { set ospf-ext-type type2; set ospf-ext-metric 25 }"
```



### Commonly Used Filters for RIP

- To change the **Distance** on all RIP routes:

```
/routing filter rule  
add chain=RIP_In disabled=no rule="if ( protocol rip ) { set distance 30; accept }"
```

- To change the **Distance** on just one RIP route:

```
add chain=RIP_In disabled=no rule="if ( dst==172.16.1.3/32 ) { set distance 40; accept }"
```

- To discard an incoming **Prefix**:

```
add chain=RIP_In disabled=no rule="if ( dst==172.16.1.3/32 ) { reject }"
```

- To add a **Comment** to a RIP route:

```
add chain=RIP_In disabled=no rule="if ( dst==172.16.1.3/32 ) { set comment To_Main_Tower }"
```

- To discard RIP routes based on the **CIDR Length** (greater than or equal to /31):

```
add chain=RIP_In disabled=no rule="if ( dst-len >=31 ) { reject }"
```

### Commonly Used Filters for BGP

- To change the **Distance** on all BGP routes:

```
/routing filter rule  
add chain=BGP_In disabled=no rule="if ( protocol BGP ) { set distance 10; accept }"
```

- To change the **Distance** on just one BGP route:

```
add chain=BGP_In disabled=no rule="if ( dst==172.16.1.3/32 ) { set distance 40; accept }"
```

- To change the **Scope & Target Scope** of an incoming route:

```
add chain=BGP_In disabled=no rule="if ( dst==123.123.123.0/24 ) { set scope 50; set scope-target 35; accept }"
```

- To discard an incoming **Prefix**:

```
add chain=BGP_In disabled=no rule="if ( dst==172.16.1.3/32 ) { reject }"
```

- To add a **Comment** to a BGP route:

```
add chain=BGP_In disabled=no rule="if ( dst==172.16.1.3/32 ) { set comment To_Main_Tower }"
```



- To discard BGP routes based on the **CIDR Length** (greater than or equal to /24):

```
add chain=BGP_In disabled=no rule="if ( dst-len >=24 ) { reject }"
```

- To set the **BGP Weight**:

```
add chain=BGP_In disabled=no rule=" if ( dst==123.123.123.0/24 ) { set bgp-weight 50; accept }"
```

- To set the **Local Preference**:

```
add chain=BGP_In disabled=no rule=" if ( dst==123.123.123.0/24 ) { set bgp-local-pref 200; accept }"
```

- To set the **Path Prepend**:

```
add chain=BGP_Out disabled=no rule=" if ( dst==123.123.123.0/24 ) { set bgp-path-prepend 10; accept }"
```

- To change the **Prepending** of an incoming route:

```
add chain=BGP_In disabled=no rule=" if ( dst==123.123.123.0/24 ) { set bgp-path-peer-prepend 1; accept }"
```

- To reject routes that have been **Prepended** more than 4 times:

```
add chain=BGP_In disabled=no rule=" if ( dst==123.123.123.0/24 ) { set bgp-path-peer-prepend > 4; reject }"
```

- To set the **MED** on incoming routes:

```
add chain=BGP_In disabled=no rule=" if ( dst==123.123.123.0/24 ) { set bgp-med 50; accept }"
```

- To set the **MED** on outgoing routes:

```
add chain=BGP_Out disabled=no rule=" if ( dst==123.123.123.0/24 ) { set bgp-out-med 50; accept }"
```

- To set the **IGP Metric**:

```
add chain=BGP_In disabled=no rule=" if ( dst==123.123.123.0/24 ) { set bgp-igp-metric 10; accept }"
```