Routerkonfiguration Routing (Cisco IOS):

Statische Route

```
ROUTER(config)#ip route 210.93.105.0   255.255.255.0   204.204.7.2
                       Zielnetz        ZielnetzSubnet   Gateway
```

Default Route

```
ROUTER(config)#ip default-network    204.204.7.2
ROUTER(config)#ip route 0.0.0.0      0.0.0.0       204.204.7.2
                       Zielnetz      Zielnetz Subnet  Gateway
                    (alle Netze)     (alle Hosts)
```

Routingtabelle löschen

```
ROUTER#clear ip route *
```

Dynamisches Routing (RIP)

```
ROUTER(config)#router rip                          RIP aktivieren
ROUTER(config-router)#network 192.168.1.0          am Routerangeschlossene Netze angeben
ROUTER(config-router)#network 192.168.2.0
```

Dynamisches Routing (RIPv2)

```
ROUTER(config)#router rip                          RIP aktivieren
ROUTER(config-router)#version 2                    umschalten auf RIP v2
ROUTER(config-router)#network 192.168.1.0          am Routerangeschlossene Netze angeben
ROUTER(config-router)#network 192.168.2.0
```

Dynamisches Routing (IGRP)

```
ROUTER(config)#router igrp 100                     IGRP für autonomes System 100 aktivieren
ROUTER(config-router)#network 192.168.1.0          am Routerangeschlossene Netze angeben
ROUTER(config-router)#network 192.168.2.0
ROUTER(config-router)#timers basic 15 45 0 60      Updateintervall (Standard: 90s)
ROUTER(config-router)#no metric holddown           Holddowns deaktivieren
ROUTER(config-router)#metric maximum-hop 50        Maximaler Hop auf 50
ROUTER(config)#no router igrp 100                  IGRP deaktivieren
```

Dynamisches Routing (EIGRP)

```
ROUTER(config)#router eigrp 100                    EIGRP für autonomes System 100 aktivieren
ROUTER(config-router)#network 192.168.1.0          am Routerangeschlossene Netze angeben
ROUTER(config-router)#network 192.168.2.0

ROUTER(config-router)#eigrp log-neighbor-changes
ROUTER(config-router)#no auto-summary              Subnetze nicht zusammenfassen
ROUTER(config-if)#bandwidth 56                     kbps
ROUTER(config-if)#ip summary-address eigrp 100 2.1.0.0 255.255.0.0 12     (100=AS,12=admin.dist.)
```

Dynamisches Routing (OSPF)

```
ROUTER(config)#router ospf 1                                 OSPF aktivieren (1=process-ID)
ROUTER(config-router)#network 10.64.0.0  0.0.0.255 area 0    (Wildcardmask statt Subnetmask!)

ROUTER(config-router)#default-information originate          share default route in area

ROUTER(config-if)#ip ospf priority 123                       interface priority number
ROUTER(config-if)#bandwidth 64                               kbps
ROUTER(config-if)#ip ospf cost 123                           Cost für Route
ROUTER(config-if)#ip ospf hello-interval 5                   Hello Intervall in s
ROUTER(config-if)#ip ospf dead-interval 20                   Dead Intervall in s

ROUTER(config-if)#ip ospf authentication-key blabla          unverschlüsseltes Passwort
ROUTER(config-router)#area 0 authentication                  Authentifizierung verwenden

ROUTER(config-if)#ip ospf message-digest-key 123 encryption-type md5 7 blabla     MD5-Passwort
ROUTER(config-router)#area 0 authetication message-digest    Authentifizierung verwenden
```

Diagnose

show

ROUTER#**show ip route**	Routingtabelle
ROUTER#**show ip protocols**	Informationen über verwendetes Routingprotokoll
ROUTER#**show running-configuration**	Informationen über verwendetes Routingprotokoll
ROUTER#**show ip ospf interface** serial 0	interface priority number
ROUTER#**show ip ospf neighbor**	
ROUTER#**show ip ospf neighbor detail**	
ROUTER#**show ip route eigrp**	Routingtabelle
ROUTER#**show ip eigrp neighbors ...**	
ROUTER#**show ip eigrp interfaces ...**	
ROUTER#**show ip eigrp topology ...**	
ROUTER#**show ip eigrp topology all-links**	
ROUTER#**show ip eigrp traffic**	

debug

ROUTER#**debug ip packet**	Routing- Pakete
ROUTER#**debug ip rip**	RIP mitprotokollieren
ROUTER#**debug ip rip database**	
ROUTER#**debug ip rip events**	
ROUTER#**debug ip igrp events**	IGRP mitprotokollieren
ROUTER#**debug ip igrp transactions**	IGRP mitprotokollieren
ROUTER#**debug eigrp fsm**	feasible successor activity
ROUTER#**debug eigrp packet**	hello, update, request, query, reply
ROUTER#**debug ip ospf events**	
ROUTER#**debug ip ospf packet**	
ROUTER#**no debug all**	Mitprotokollierung deaktivieren