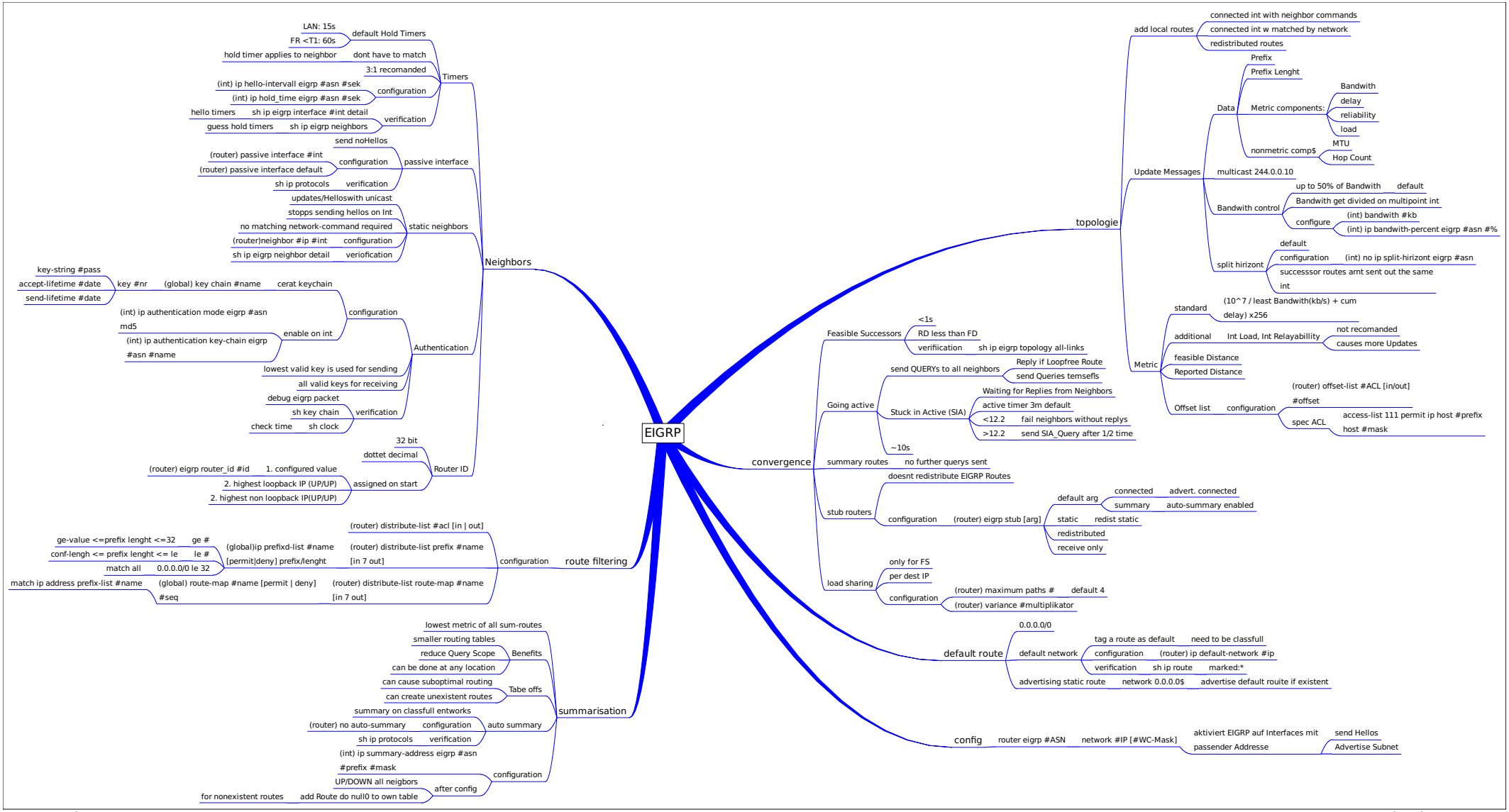
EIGRP
Neighbors
Timers
default Hold Timers
LAN: 15s
FR <T1: 60s
dont have to match
hold timer applies to neighbor
3:1 recomanded
configuration
(int) ip hello-intervall eigrp #asn #sek
(int) ip hold_time eigrp #asn #sek
verification
sh ip eigrp interface #int detail
hello timers
sh ip eigrp neighbors
guess hold timers
passive interface
send noHellos
configuration
(router) passive interface #int
(router) passive interface default
verification
sh ip protocols
static neighbors
updates/Helloswith unicast
stopps sending hellos on Int
no matching network-command required
configuration
(router)neighbor #ip #int
veriofication
sh ip eigrp neighbor detail
Authentication
configuration
cerat keychain
(global) key chain #name
key #nr
key-string #pass
accept-lifetime #date
send-lifetime #date
enable on int
(int) ip authentication mode eigrp #asn
md5
(int) ip authentication key-chain eigrp
#asn #name
verification
lowest valid key is used for sending
all valid keys for receiving
debug eigrp packet
sh key chain
sh clock
check time
Router ID
32 bit
dottet decimal
assigned on start
1. configured value
(router) eigrp router_id #id
2. highest loopback IP (UP/UP)
2. highest non loopback IP(UP/UP)
route filtering
configuration
(global)ip prefixd-list #name
[permit|deny] prefix/lenght
ge #
ge-value <=prefix lenght <=32
le #
conf-lengh <= prefix lenght <= le
match all
0.0.0.0/0 le 32
(router) distribute-list #acl [in | out]
(router) distribute-list prefix #name
[in 7 out]
(global) route-map #name [permit | deny]
#seq
match ip address prefix-list #name
(router) distribute-list route-map #name
[in 7 out]
summarisation
Benefits
lowest metric of all sum-routes
smaller routing tables
reduce Query Scope
can be done at any location
Tabe offs
can cause suboptimal routing
can create unexistent routes
auto summary
summary on classfull entworks
configuration
(router) no auto-summary
verification
sh ip protocols
configuration
(int) ip summary-address eigrp #asn
#prefix #mask
after config
UP/DOWN all neigbors
add Route do null0 to own table
for nonexistent routes
topologie
add local routes
connected int with neighbor commands
connected int w matched by network
redistributed routes
Update Messages
Data
Prefix
Prefix Lenght
Metric components:
Bandwith
delay
reliability
load
nonmetric comp$
MTU
Hop Count
multicast 244.0.0.10
Bandwith control
up to 50% of Bandwith
default
Bandwith get divided on multipoint int
configure
(int) bandwith #kb
(int) ip bandwith-percent eigrp #asn #%
split hirizont
default
configuration
(int) no ip split-hirizont eigrp #asn
successsor routes arnt sent out the same
int
Metric
standard
(10^7 / least Bandwith(kb/s) + cum
delay) x256
additional
Int Load, Int Relayabillity
not recomanded
causes more Updates
feasible Distance
Reported Distance
Offset list
configuration
(router) offset-list #ACL [in/out]
#offset
spec ACL
access-list 111 permit ip host #prefix
host #mask
convergence
Feasible Successors
<1s
RD less than FD
verification
sh ip eigrp topology all-links
Going active
send QUERYs to all neighbors
Reply if Loopfree Route
send Queries temsefls
Stuck in Active (SIA)
Waiting for Replies from Neighbors
active timer 3m default
<12.2
fail neighbors without replys
>12.2
send SIA_Query after 1/2 time
~10s
summary routes
no further querys sent
stub routers
doesnt redistribute EIGRP Routes
configuration
(router) eigrp stub [arg]
default arg
connected
advert. connected
summary
auto-summary enabled
static
redist static
redistributed
receive only
load sharing
only for FS
per dest IP
configuration
(router) maximum paths #
default 4
(router) variance #multiplikator
default route
0.0.0.0/0
default network
tag a route as default
need to be classfull
configuration
(router) ip default-network #ip
verification
sh ip route
marked:*
advertising static route
network 0.0.0.0$
advertise default rouite if existent
config
router eigrp #ASN
network #IP [#WC-Mask]
aktiviert EIGRP auf Interfaces mit
passender Addresse
send Hellos
Advertise Subnet