books

Designing and Implementing Linux Firewalls and QoS using netfilter, iproute2, NAT and l7-filter
https://www.packtpub.com/product/designing-and-implementing-linux-firewalls-and-qos-using-netfilter-iproute2-nat-and-l7-filter/9781904811657

Network Management: Accounting and Performance Strategies - Graphically Rich Book
http://etutorials.org/Networking/network+management/Network+Management+Accounting+and+Performance+Strategies+-+Graphically+Rich+Book/

diffserv - dscp

Differentiated services
https://en.wikipedia.org/wiki/Differentiated_services

Per-hop behaviour
https://en.wikipedia.org/wiki/Per-hop_behaviour

Differentiated Services Field Codepoints (DSCP)
https://www.iana.org/assignments/dscp-registry/dscp-registry.xhtml

DSCP and Precedence Values
https://www.cisco.com/c/en/us/td/docs/switches/datacenter/nexus1000/sw/4_0/qos/configuration/guide/nexus1000v_qos/qos_6dscp_val.pdf

Quality of Service Transport Network
https://www.sciencedirect.com/topics/engineering/differentiated-service

DSCP based QoS with HTB
https://wiki.mikrotik.com/wiki/DSCP_based_QoS_with_HTB

Binary to Decimal converter
https://www.rapidtables.com/convert/number/binary-to-decimal.html?x=111111 –> 8-bit, dec 0 to 63

diffserv - ecn

Explicit Congestion Notification
https://en.wikipedia.org/wiki/Explicit_Congestion_Notification

gif – generic tunnel interface
https://man.netbsd.org/gif.4 –> ECN friendly

switching fabric

Switched fabric
https://en.wikipedia.org/wiki/Switched_fabric

Crossbar switch
https://en.wikipedia.org/wiki/Crossbar_switch

4.6 What's inside a router?
https://www.net.t-labs.tu-berlin.de/teaching/computer_networking/04.06.htm

What is the Definition of a Switch Fabric ?
https://etherealmind.com/what-is-the-definition-of-switch-fabric/

Switch Fabrics: Fabric Arbitration and Buffers
https://etherealmind.com/switch-fabrics-farbic-arbitration-and-buffers/

Shared Memory Switch
https://www.sciencedirect.com/topics/computer-science/shared-memory-switch

Chapter 3 - Switch Fabric Technology
https://www.sciencedirect.com/science/article/pii/B9780128007280000035

There are three types of switching fabrics memory bus
https://www.coursehero.com/file/p69hqvv/There-are-three-types-of-switching-fabrics-memory-bus-the-crossbar-Switching/

qos essentials

Best-effort delivery
https://en.wikipedia.org/wiki/Best-effort_delivery

Traffic classification
https://en.wikipedia.org/wiki/Traffic_classification

Network traffic
https://en.wikipedia.org/wiki/Network_traffic

Network packet
https://en.wikipedia.org/wiki/Network_packet

Traffic flow (computer networking)
https://en.wikipedia.org/wiki/Traffic_flow_(computer_networking)

Flow control (data)
https://en.wikipedia.org/wiki/Flow_control_(data)

telecom networks

Telecommunication circuit
https://en.wikipedia.org/wiki/Telecommunication_circuit

Traffic contract
https://en.wikipedia.org/wiki/Traffic_contract

Teletraffic engineering
https://en.wikipedia.org/wiki/Teletraffic_engineering

tips & tricks

NetBSD ALTQ
https://pub.nethence.com/bsd/altq

Per Connection Queue (PCQ) on an MKT NAT gateway
https://pub.nethence.com/network/mkt-pcq.md

ip ranges lab

Whatsapp IP pool (restricted)
https://www.whatsapp.com/cidr.txt

Manual:Routing Table Matcher
https://wiki.mikrotik.com/wiki/Manual:Routing_Table_Matcher

Routing information
https://wiki.nftables.org/wiki-nftables/index.php/Routing_information

super duper labs

Data Plane Development Kit
https://en.wikipedia.org/wiki/Data_Plane_Development_Kit

Application-specific integrated circuit
https://fr.wikipedia.org/wiki/Application-specific_integrated_circuit

Command to set dscp / ToS value on outgoing packets for OS X Mavericks?
https://serverfault.com/questions/616793/command-to-set-dscp-tos-value-on-outgoing-packets-for-os-x-mavericks

linux lab

QoS with Linux using PRIQ and HTB
https://www.voip-info.org/qos-with-linux-using-prio-and-htb/

Linux Advanced Routing & Traffic Control
https://lartc.org/

Linux HTB QoS script with source-based prioritization.
https://gist.github.com/brimston3/7ba85740a1617fd713a5

QoS with HTB
https://www.linuxquestions.org/questions/linux-networking-3/qos-with-htb-349073/

Kernel Korner - Analysis of the HTB Queuing Discipline
https://www.linuxjournal.com/article/7562

RU - QoS в Linux
http://xgu.ru/wiki/QoS_%D0%B2_Linux

HTB Linux queuing discipline manual - user guide
http://luxik.cdi.cz/~devik/qos/htb/manual/userg.htm

RU - HOW-TO …
http://web.archive.org/web/20070701015113/http://linuxadmin.chat.ru/pulsar/QoS.txt

RU - ADSL Bandwidth Management HOWTO
http://web.archive.org/web/20100404010822/http://gazette.linux.ru.net/rus/articles/adsl_bandwidth_management-howto.html

Application Layer Packet Classifier for Linux
http://l7-filter.sourceforge.net/

RU - Linux QoS
https://net-labs.in/category/linux/linux-qos/

Journey to the Center of the Linux Kernel: Traffic Control, Shaping and QoS
https://web.archive.org/web/20191204233127/https://wiki.linuxwall.info/doku.php/en:ressources:dossiers:networking:traffic_control

Traffic Control
https://www.funtoo.org/Traffic_Control

Advanced traffic control
https://wiki.archlinux.org/index.php/Advanced_traffic_control

tc: Linux HTTP Outgoing Traffic Shaping (Port 80 Traffic Shaping)
https://www.cyberciti.biz/faq/linux-traffic-shaping-using-tc-to-control-http-traffic/

ip accounting

Chapter 6. IP Accounting
http://etutorials.org/Networking/network+management/Part+II+Implementations+on+the+Cisco+Devices/Chapter+6.+IP+Accounting/

netflow

NetFlow
https://en.wikipedia.org/wiki/NetFlow

Chapter 7. NetFlow
http://etutorials.org/Networking/network+management/Part+II+Implementations+on+the+Cisco+Devices/Chapter+7.+NetFlow/

Fundamentals of NetFlow
http://etutorials.org/Networking/network+management/Part+II+Implementations+on+the+Cisco+Devices/Chapter+7.+NetFlow/Fundamentals+of+NetFlow/

netflow lab

Manual:IP/Traffic Flow
https://wiki.mikrotik.com/wiki/Manual:IP/Traffic_Flow

ipfix & sflow

IP Flow Information Export
https://en.wikipedia.org/wiki/IP_Flow_Information_Export

sFlow
https://en.wikipedia.org/wiki/SFlow

IP Flow Information Export (IPFIX) vs. NetFlow
https://blog.gigamon.com/2019/09/17/ipfix-vs-netflow/

qos

Network congestion
https://en.wikipedia.org/wiki/Network_congestion

Quality of service
https://en.wikipedia.org/wiki/Quality_of_service

Quality of Service (QoS)
https://www.ringcentral.co.uk/gb/en/blog/definitions/quality-of-service-qos/

IP Quality of Service
https://wiki.asterisk.org/wiki/display/AST/IP+Quality+of+Service

Jitter
https://en.wikipedia.org/wiki/Jitter

tos

Type of service
https://en.wikipedia.org/wiki/Type_of_service

altq.conf – ALTQ configuration file
https://man.netbsd.org/altq.conf.5

cos

Class of service
https://en.wikipedia.org/wiki/Class_of_service

CoS - IEEE P802.1p
https://en.wikipedia.org/wiki/IEEE_P802.1p

queues

Internet traffic engineering
https://en.wikipedia.org/wiki/Internet_traffic_engineering

Traffic shaping
https://en.wikipedia.org/wiki/Traffic_shaping

Traffic policing (communications)
https://en.wikipedia.org/wiki/Traffic_policing_(communications)

queue algos

FIFO (computing and electronics)
https://en.wikipedia.org/wiki/FIFO_(computing_and_electronics)

Stack (abstract data type)
https://en.wikipedia.org/wiki/Stack_(abstract_data_type)

FINO
https://en.wikipedia.org/wiki/FINO

Tail drop
https://en.wikipedia.org/wiki/Tail_drop

Weighted round robin
https://en.wikipedia.org/wiki/Weighted_round_robin

red alike

Random early detection
https://en.wikipedia.org/wiki/Random_early_detection

Weighted random early detection
https://en.wikipedia.org/wiki/Weighted_random_early_detection

Robust random early detection
https://en.wikipedia.org/wiki/Robust_random_early_detection

14.5. Random Early Detection (RED)
https://tldp.org/HOWTO/Adv-Routing-HOWTO/lartc.adv-qdisc.red.html

Random Early Detection RED
https://www.ccexpert.us/traffic-shaping-2/random-early-detection-red-1.html

Self-Tuning Random Early Detection Algorithm to Improve Performance of Network Transmission
https://www.hindawi.com/journals/mpe/2011/872347/

Blue (queue management algorithm)
https://en.wikipedia.org/wiki/Blue_(queue_management_algorithm)

rfcs

Internet Protocol – 3.1. Internet Header Format
https://tools.ietf.org/html/rfc791#section-3.1

SERVICE MAPPINGS
https://tools.ietf.org/html/rfc795

Type of Service
https://tools.ietf.org/html/rfc1349

Requirements for IP Version 4 Routers
https://tools.ietf.org/html/rfc1812 –> 4.2.2.4 Type of Service: RFC 791 Section 3.1 –> 5.2.4.3 Next Hop Address –> 5.3.2 Type of Service (TOS)

Differentiated Services Field – 4. Historical Codepoint Definitions and PHB Requirements
https://tools.ietf.org/html/rfc2474#section-4 –> backwards compatibility explained

Guidelines for DiffServ Service Classes
https://tools.ietf.org/html/rfc4594

rsvp

Integrated services
https://en.wikipedia.org/wiki/Integrated_services

Resource Reservation Protocol
https://en.wikipedia.org/wiki/Resource_Reservation_Protocol

RSVP-TE
https://en.wikipedia.org/wiki/RSVP-TE