

QualNet 4.5.1 Model Library Index

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TABLE 1. Model Library Index: Alphabetical by Model

Model	Library
802.11 MAC Protocol	Wireless
802.11a/g PHY Model	Wireless
802.11b PHY Model	Wireless
802.11e MAC Protocol	Wireless
802.11s MAC Protocol	Wireless
802.16 MAC and 802.16e MAC	Advanced Wireless
802.16 PHY	Advanced Wireless
802.3 LAN/Ethernet	Developer
ALE/ASAPS	ALE/ASAPS Propagation
ASAPS	ALE/ASAPS Propagation
Abstract Cellular	Cellular
Abstract Network Equation Satellite (ANESAT) Model	Satellite
Abstract PHY Model	Wireless
Abstract Satellite Model	Developer
Abstract Transmission Control Protocol (Abstract TCP)	Developer
Ad-Hoc On Demand Distance Vector (AODV) Routing Protocol	Wireless
Address Resolution Protocol (ARP)	Developer
Adversary Model	Network Security
Aloha MAC Protocol	Wireless
Aloha Satellite Model with RSV Support (Satellite-RSV)	Satellite
Anonymous On-demand Routing (ANODR) Protocol	Network Security
Asynchronous Transfer Mode (ATM)	Developer
Automatic Model Selection	Urban Propagation Advanced Propagation
BER-based Reception Model	Wireless
Battery Models	Wireless
Bellman-Ford Routing Protocol	Developer
Border Gateway Protocol version 4 (BGPv4)	Multimedia & Enterprise
Bordercast Resolution Protocol (BRP)	Wireless
COST 231-Hata Propagation Model	Urban Propagation Advanced Propagation
COST 231-Walfish-Ikegami (COST-WI) Propagation Model	Urban Propagation Advanced Propagation
Carrier Sense Multiple Access (CSMA) MAC Protocol	Wireless
Cartesian Terrain Format	Wireless
Class-Based Queuing (CBQ)	Developer

TABLE 1. Model Library Index: Alphabetical by Model (Continued)

Model	Library
Compact Terrain Database Format 7 (CTDB 7) and Format 8 (CTDB 8) Models*	Military Radios
Constant Bit Rate (CBR) Traffic Generator	Developer
Constant Shadowing Model	Wireless
Credential Model: IFF Certificate	Network Security
Detailed Switch Model	Multimedia & Enterprise
Differentiated Services (DiffServ)	Multimedia & Enterprise
Digital Elevation Model (DEM) Terrain Format	Wireless
Digital Terrain Elevation (DTED) Terrain Format	Wireless
Distance Vector Multicast Routing Protocol (DVMRP)	Multimedia & Enterprise
Distributed Interactive Simulation (DIS) Interface	Standard Interfaces
Dynamic MANET On-demand (DYMO) Routing Protocol	Wireless
Dynamic Source Routing (DSR) Protocol	Wireless
Enhanced Interior Gateway Routing Protocol (EIGRP)	Multimedia & Enterprise
FCSC Radio Prototype*	Military Radios
Fast Rayleigh Fading Model	Wireless
Faults	Developer
File Transfer Protocol (FTP)	Developer
File Transfer Protocol/Generic (FTP/Generic)	Developer
File-based Mobility Model	Wireless
File-based Node Placement Model	Developer
First-In First-Out (FIFO) Queue	Developer
Fisheye State Routing Protocol	Wireless
Free-space Pathloss Model	Wireless
Generic MAC Protocol	Wireless
Global System for Mobile Communications (GSM) Model	Cellular
Grid Node Placement Model	Developer
Group Node Placement and Mobility Models	Wireless
H323 and H225 Protocols	Multimedia & Enterprise
High Level Architecture (HLA) Interface	Standard Interfaces
Hot Standby Router Protocol (HSRP)	Multimedia & Enterprise
HyperText Transfer Protocol (HTTP)	Developer
IP Network Emulation (IPNE) Interface	Network Emulation Interface
ISAKMP Model	Network Security
Interior Gateway Routing Protocol (IGRP)	Multimedia & Enterprise
Internet Control Message Protocol (ICMP)	Developer
Internet Control Message Protocol version 6 (ICMPv6)	Developer
Internet Group Management Protocol (IGMP)	Developer

TABLE 1. Model Library Index: Alphabetical by Model (Continued)

Model	Library
Internet Protocol - Dual IP	Developer
Internet Protocol Security (IPSec)	Developer
Internet Protocol version 4 (IPv4)	Developer
Internet Protocol version 6 (IPv6)	Developer
Interzone Routing Protocol (IERP)	Wireless
Intrazone Routing Protocol (IARP)	Wireless
Irregular Terrain Model (ITM)	Wireless
Joint Tactical Radio System-Wideband Networking Waveform (JTRS-WNW)*	Military Radios
Landmark Ad Hoc Routing (LANMAR) Protocol	Wireless
Link 11 Protocol*	Military Radios
Link 16 Protocol*	Military Radios
Location-Aided Routing (LAR) Protocol	Wireless
Logical Link Control (LLC) Protocol	Developer
Lognormal Shadowing Model	Wireless
Lookup Traffic Generator	Developer
Microwave Links	Wireless
Mobile IPv4	Wireless
Multi-Generator (MGEN) Toolset*	Military Radios
Multi-Protocol Label Switching (MPLS)	Multimedia & Enterprise
Multicast Constant Bit Rate (MCBR) Traffic Generator	Developer
Multicast Extensions to OSPF (MOSPF)	Multimedia & Enterprise
Multiple Access Collision Avoidance (MACA) MAC Protocol	Wireless
Okumura-Hata Propagation Model	Urban Propagation Advanced Propagation
Omnidirectional Antenna Model	Wireless
On-Demand Multicast Routing Protocol (ODMRP)	Wireless
Open Shortest Path First version 2 (OSPFv2) Routing Protocol	Multimedia & Enterprise
Open Shortest Path First version 3 (OSPFv3) Routing Protocol	Multimedia & Enterprise
Optimized Link State Routing Protocol - INRIA (OLSR-INRIA)	Wireless
Optimized Link State Routing Protocol version 2 (OLSRv2)	Wireless
Pathloss Matrix Model	Wireless
Patterned Antenna Model	Wireless
Pedestrian Mobility Model	Wireless
Phone Call Traffic Generator	UMTS
Policy-based Routing	Multimedia & Enterprise
Protocol Independent Multicast Protocol: Dense Mode (PIM-DM) and Sparse Mode (PIM-SM)	Multimedia & Enterprise
Quality of Service Extensions to OSPF (QOSPF)	Multimedia & Enterprise

TABLE 1. Model Library Index: Alphabetical by Model (Continued)

Model	Library
Radio Energy Models	Wireless
Random Early Detection (RED) Queue	Developer
Random Early Detection with In/Out (RIO) Queue	Developer
Random Node Placement Model	Developer
Random Waypoint Mobility Model	Wireless
Rayleigh Fading Model	Wireless
Real-time Transport Protocol (RTP)	Multimedia & Enterprise
Ricean Fading Model	Wireless
Round Robin Scheduler	Developer
Route Map	Multimedia & Enterprise
Route Redistribution	Multimedia & Enterprise
Router Access List	Multimedia & Enterprise
Router Model	Multimedia & Enterprise
Routing Information Protocol next generation (RIPng)	Developer
Routing Information Protocol/Routing Information Protocol version 2 (RIP/RIPv2)	Developer
SNR-based Reception Model	Wireless
Satellite Technology Support Module Physical Layer (SATTSM-PHY)	Satellite
Satellite Toolkit/Connect (STK/Connect)	Developer
Secure Neighbor Model	Network Security
Self-Clocked Fair Queueing (SCFQ) Scheduler	Developer
Session Initiation Protocol (SIP)	Multimedia & Enterprise
Simulation Description Files (SDF)/Platform Description Files (PDEF) Parser*	Military Radios
Single Channel Ground and Airborne Radio System (SINCGARS)*	Military Radios
Source Tree Adaptive Routing (STAR) Protocol	Wireless
Static Multicast Routes	Developer
Static and Default Routes	Developer
Steerable Antenna Model	Wireless
Street Microcell Propagation Model	Urban Propagation Advanced Propagation
Street Mobile-to-mobile Propagation Model	Urban Propagation Advanced Propagation
Strict Priority Scheduler	Developer
Suburban Propagation Model	Urban Propagation Advanced Propagation
Super Application Traffic Generator	Developer
Switched Ethernet	Multimedia & Enterprise
Switched-beam Antenna Model	Wireless
Telecommunications Network (TELNET)	Developer

TABLE 1. Model Library Index: Alphabetical by Model (Continued)

Model	Library
Terrain Integrated Rough Earth Model (TIREM)	TIREM Propagation
Threaded App*	Military Radios
Time Division Multiple Access (TDMA) MAC Protocol	Wireless
Trace File-based Traffic Generator (Traffic-Trace)	Developer
Traffic Generator (Traffic-Gen)	Developer
Transmission Control Protocol (TCP)	Developer
Two-ray Pathloss Model	Wireless
Uniform Node Placement Model	Developer
Unifying Slot Assignment Protocol (USAP)*	Military Radios
Universal Mobile Telecommunication System (UMTS)	UMTS
Urban Terrain Data Formats	Wireless
User Behavior Model	Cellular
User Datagram Protocol (UDP)	Developer
Variable Bit Rate (VBR)Traffic Generator	Developer
Virtual LAN (VLAN)	Multimedia & Enterprise
Voice over Internet Protocol (VoIP)	Multimedia & Enterprise
WEP and CCMP Model	Network Security
Weather Pattern Model	Wireless
Weighted Fair Queuing (WFQ) Scheduler	Developer
Weighted RED (WRED) Queue	Developer
Weighted Round Robin (WRR) Scheduler	Developer
Wired and Wireless Point-to-Point Links	Developer
ZigBee MAC	Sensor Networks
ZigBee PHY	Sensor Networks
Zone Routing Protocol (ZRP)	Wireless

* Restricted to NATO/US or responsible agency. DoD authorization is necessary to receive these QualNet Models.

TABLE 2. Model Library Index: Alphabetical by Library

Library	Models
Advanced Wireless	802.16 MAC and 802.16e MAC
	802.16 PHY
ALE/ASAPS Propagation	ALE/ASAPS
	ASAPS
Cellular	Abstract Cellular
	Global System for Mobile Communications (GSM) Model
	User Behavior Model
Developer	802.3 LAN/Ethernet
	Abstract Satellite Model
	Abstract Transmission Control Protocol (Abstract TCP)
	Address Resolution Protocol (ARP)
	Asynchronous Transfer Mode (ATM)
	Bellman-Ford Routing Protocol
	Class-Based Queuing (CBQ)
	Constant Bit Rate (CBR) Traffic Generator
	Faults
	File Transfer Protocol (FTP)
	File Transfer Protocol/Generic (FTP/Generic)
	File-based Node Placement Model
	First-In First-Out (FIFO) Queue
	Grid Node Placement Model
	HyperText Transfer Protocol (HTTP)
	Internet Control Message Protocol (ICMP)
	Internet Control Message Protocol version 6 (ICMPv6)
	Internet Group Management Protocol (IGMP)
	Internet Protocol - Dual IP
	Internet Protocol Security (IPSec)
	Internet Protocol version 4 (IPv4)
	Internet Protocol version 6 (IPv6)
	Logical Link Control (LLC) Protocol
	Lookup Traffic Generator
	Multicast Constant Bit Rate (MCBR) Traffic Generator
	Random Early Detection (RED) Queue
	Random Early Detection with In/Out (RIO) Queue
	Random Node Placement Model
	Round Robin Scheduler

TABLE 2. Model Library Index: Alphabetical by Library (Continued)

Developer (continued)	Routing Information Protocol next generation (RIPng)
	Routing Information Protocol/Routing Information Protocol version 2 (RIP/RIPv2)
	Satellite Toolkit/Connect (STK/Connect)
	Self-Clocked Fair Queueing (SCFQ) Scheduler
	Static and Default Routes
	Static Multicast Routes
	Strict Priority Scheduler
	Super Application Traffic Generator
	Telecommunications Network (TELNET)
	Trace File-based Traffic Generator (Traffic-Trace)
	Traffic Generator (Traffic-Gen)
	Transmission Control Protocol (TCP)
	Uniform Node Placement Model
	User Datagram Protocol (UDP)
	Variable Bit Rate (VBR)Traffic Generator
	Weighted Fair Queuing (WFQ) Scheduler
	Weighted RED (WRED) Queue
	Weighted Round Robin (WRR) Scheduler
	Wired and Wireless Point-to-Point Links
	Military Radios
FCSC Radio Prototype*	
Joint Tactical Radio System-Wideband Networking Waveform (JTRS-WNW)*	
Link 11 Protocol*	
Link 16 Protocol*	
Multi-Generator (MGEN) Toolset*	
Simulation Description Files (SDF)/Platform Description Files (PDEF) Parser*	
Single Channel Ground and Airborne Radio System (SINCGARS)*	
Threaded App*	
Unifying Slot Assignment Protocol (USAP)*	

TABLE 2. Model Library Index: Alphabetical by Library (Continued)

Multimedia & Enterprise	Border Gateway Protocol version 4 (BGPv4)
	Detailed Switch Model
	Differentiated Services (DiffServ)
	Distance Vector Multicast Routing Protocol (DVMRP)
	Enhanced Interior Gateway Routing Protocol (EIGRP)
	H323 and H225 Protocols
	Hot Standby Router Protocol (HSRP)
	Interior Gateway Routing Protocol (IGRP)
	Multicast Extensions to OSPF (MOSPF)
	Multi-Protocol Label Switching (MPLS)
	Open Shortest Path First version 2 (OSPFv2) Routing Protocol
	Open Shortest Path First version 3 (OSPFv3) Routing Protocol
	Policy-based Routing
	Protocol Independent Multicast Protocol: Dense Mode (PIM-DM) and Sparse Mode (PIM-SM)
	Quality of Service Extensions to OSPF (QOSPF)
	Real-time Transport Protocol (RTP)
	Route Map
	Route Redistribution
	Router Access List
	Router Model
	Session Initiation Protocol (SIP)
Switched Ethernet	
Virtual LAN (VLAN)	
Voice over Internet Protocol (VoIP)	
Network Emulation Interface	IP Network Emulation (IPNE) Interface
Network Security	Adversary Model
	Anonymous On-demand Routing (ANODR) Protocol
	Credential Model: IFF Certificate
	ISAKMP Model
	Secure Neighbor Model
	WEP and CCMP Model
Satellite	Abstract Network Equation Satellite (ANESAT) Model
	Aloha Satellite Model with RSV Support (Satellite-RSV)
	Satellite Technology Support Module Physical Layer (SATTSM-PHY)
Sensor Networks	ZigBee MAC
	ZigBee PHY
Standard Interfaces	Distributed Interactive Simulation (DIS) Interface
	High Level Architecture (HLA) Interface

TABLE 2. Model Library Index: Alphabetical by Library (Continued)

TIREM Propagation	Terrain Integrated Rough Earth Model (TIREM)
UMTS	Phone Call Traffic Generator
	Universal Mobile Telecommunication System (UMTS)
Urban Propagation	Automatic Model Selection
	COST 231-Hata Propagation Model
	COST 231-Walfish-Ikegami (COST-WI) Propagation Model
	Okumura-Hata Propagation Model
	Street Microcell Propagation Model
	Street Mobile-to-mobile Propagation Model
	Suburban Propagation Model
Wireless	802.11 MAC Protocol
	802.11a/g PHY Model
	802.11b PHY Model
	802.11e MAC Protocol
	802.11s MAC Protocol
	Abstract PHY Model
	Ad-Hoc On Demand Distance Vector (AODV) Routing Protocol
	Aloha MAC Protocol
	Battery Models
	BER-based Reception Model
	Bordercast Resolution Protocol (BRP)
	Carrier Sense Multiple Access (CSMA) MAC Protocol
	Cartesian Terrain Format
	Constant Shadowing Model
	Digital Elevation Model (DEM) Terrain Format
	Digital Terrain Elevation (DTED) Terrain Format
	Dynamic MANET On-demand (DYMO) Routing Protocol
	Dynamic Source Routing (DSR) Protocol
	Fast Rayleigh Fading Model
	File-based Mobility Model
	Fisheye State Routing Protocol
	Free-space Pathloss Model
	Generic MAC Protocol
	Group Node Placement and Mobility Models
	Interzone Routing Protocol (IERP)
	Intrazone Routing Protocol (IARP)
	Irregular Terrain Model (ITM)
	Landmark Ad Hoc Routing (LANMAR) Protocol
	Location-Aided Routing (LAR) Protocol

TABLE 2. Model Library Index: Alphabetical by Library (Continued)

Wireless (continued)	Lognormal Shadowing Model
	Microwave Links
	Mobile IPv4
	Multiple Access Collision Avoidance (MACA) MAC Protocol
	Omnidirectional Antenna Model
	On-Demand Multicast Routing Protocol (ODMRP)
	Optimized Link State Routing Protocol - INRIA (OLSR-INRIA)
	Optimized Link State Routing Protocol version 2 (OLSRv2)
	Pathloss Matrix Model
	Patterned Antenna Model
	Pedestrian Mobility Model
	Radio Energy Models
	Random Waypoint Mobility Model
	Rayleigh Fading Model
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	SNR-based Reception Model
	Source Tree Adaptive Routing (STAR) Protocol
	Steerable Antenna Model
	Switched-beam Antenna Model
	Time Division Multiple Access (TDMA) MAC Protocol
	Two-ray Pathloss Model
Urban Terrain Data Formats	
Weather Pattern Model	
Zone Routing Protocol (ZRP)	

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