

# DECnet

## Digital Network Architecture

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### MOP registry

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This is the Digital registry of MOP code assignments for communication devices and data link types.

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DECserver	PDP	
DECUS	Q-bus	
DELNI	RSX	
DELUA	RSX11M-PLUS	
DELQA	ThinWire	
DEMPR	ULTRIX	

## Preface

This registry contains the predefined values for various maintenance operation parameters. A copy of this registry (current as of that date) can be found in Appendix A of the MOP architecture spec. These values are referenced in the interfaces and in the message definitions.

Code assignments used in Digital products under development are not shown here. Such assignments will be included in revisions of this document as products are released. All values that are not shown as assigned in this document are reserved for future use and may be assigned at a later time.



# Appendix A

## Predefined Values

This appendix contains the predefined values for various maintenance operation parameters. These values are referenced in the interfaces and in the message definitions. Each parameter has a description to be used in the interface calls and an actual value to be used in protocol messages.

New values are defined on an as needed basis. Any values not shown are reserved for use by Digital. Values are listed in decimal.

### A.1 Communication Devices

<u>Value</u>	<u>Name</u>	<u>Device</u>
1	UNA	DEUNA UNIBUS CSMA/CD communication link
2	DU	DU11-DA synchronous line interface
3	CNA	DECNA Professional CSMA/CD communication link
4	DL	DL11-C, -E or -WA asynchronous line interface
5	QNA	DEQNA Q-bus CSMA/CD communication link
7	CI	Computer Interconnect interface
8	DA	DA11-B or -AL UNIBUS link
9	PCL	PCL11-B UNIBUS multiple CPU link
10	DUP	DUP11-DA synchronous line interface
11	LUA	DELUA UNIBUS CSMA/CD communication link
12	DMC	DMC11-DA/AR, -FA/AR, -MA/AL or -MD/AL synchronous link
13	LNA	MicroServer Lance CSMA/CD communication link
14	DN	DN11-BA or -AA automatic calling unit
16	DLV	DLV11-E, -F, -J, MXV11-A or -B asynchronous line interface
17	LCS	LANCE/DECserver100 CSMA/CD communication link
18	DMP	DMP11 UNIBUS multipoint synchronous link
20	DTE	DTE20 PDP-11 to KL10 interface
21	DBT	DEBET CSMA/CD communication link
22	DV	DV11-AA/BA UNIBUS synchronous line multiplexer
23	BNA	DEBNT BI CSMA/CD communication link
24	DZ	DZ11-A, -B, -C, or -D UNIBUS asynchronous line multiplexer
25	LPC	VAXmate (LANCE) CSMA/CD communication link
26	DSV	DSV11 Q-bus synchronous link
27	CEC	3Com 3C501, IBM-PC CSMA/CD adapter
28	KDP	KMC11/DUP11-DA synchronous line multiplexer
29	IEC	Micom/Interlan 5010, IBM-PC CSMA/CD adapter
30	KDZ	KMC11/DZ11-A, -B, -C, or -D asynchronous line multiplexer

31	LQA	DELQA CSMA/CD communication link, alternate assignment. See note below.
33	DS2	LANCE/DECserver 200 CSMA/CD communication link
34	DMV	DMV11 Q-bus synchronous link
35	DS5	DECserver 500 CSMA/CD communication link
36	DPV	DPV11 Q-bus synchronous line interface
37	LQA	DELQA CSMA/CD communication link. See note below
38	DMF	DMF-32 UNIBUS synchronous line unit
39	SVA	DESVA Microvax-2000, 3100, 3300 CSMA/CD communication link
40	DMR	DMR11-AA, -AB, -AC, or -AE UNIBUS interprocessor link
41	MUX	MUXServer 100 CSMA/CD communication link
42	KMY	KMS11-PX UNIBUS synchronous line interface with X.25 level 2 microcode
43	DEP	DEPCA PCSG/IBM-PC CSMA/CD communication link
44	KMX	KMS11-BD/BE UNIBUS synchronous line interface with X.25 level 2 microcode
45	LTM	LTM (911) Ethernet monitor
46	DMB	DMB-32 BI synchronous line multiplexer
47	DES	DESNC Ethernet Encryption Module
48	KCP	KCP Professional synchronous/asynchronous comm port
49	MX3	MUXServer 300 CSMA/CD communication link
50	SYN	MicroServer Synchronous line interface
52	DSB	DSB32 BI Synchronous Line Interface
53	BAM	DEBAM LANBridge-200 Data Link
54	DST	DST-32 TEAMmate Synchronous Line Interface (DEC423)
58	3C2	3COM Etherlink II (part number 3C503)
59	3CM	3COM Etherlink/MC (part number 3C523)
60	DS3	DECServer 300 CSMA/CD communication link
61	MF2	MicroVAX 3300 CSMA/CD communication link
63	VIT	Vitalink TransLAN III/IV (NP3A) Bridge
64	VT5	Vitalink TransLAN 350 (NPC25) Bridge, TransPATH 350 BRouter
65	BNI	DEBNI BI CSMA/CD communication link
66	MNA	DEMNA XMI CSMA/CD communication link
67	PMX	DECstation-3100 CSMA/CD communication link
70	KMK	KMS11-K DataKit UNIBUS adapter
72	DP2	DECserver-250 (parallel printer server) CSMA/CD communication link
73	ISA	Pele SGEC-based CSMA/CD communication link
74	DIV	DIV-32 Q-bus ISDN (2B+D) adapter
75	QTA	DEQTA (DELQA-YM) CSMA/CD comm link
76	B15	LANbridge-150 CSMA/CD comm link
86	DR2	DECrouter-250 CSMA/CD comm link
87	SCC	DECrouter-250 DUSCC serial comm link (DDCMP or HDLC)
90	FBN	DECbridge-5xx CSMA/CD comm link
91	FEB	DECbridge-5xx, -6xx FDDI comm link
92	FCN	DECconcentrator-500 wiring concentrator FDDI comm link
93	MFA	DEMFA XMI — FDDI comm link
94	MXE	MIPS workstation family CSMA/CD comm links (3MAX/KN02 system board; PMAD option board)
101	DSF	DSF-32 2 line synchronous comm link for Cirrus
104	KFE	VAXft-3000 KFE52 CSMA/CD comm link
105	RT3	rtVAX-300 SGEC-based CSMA/CD comm link
111	MPS	DECstation 5400 SGEC CSMA/CD comm link
112	L20	LPS20 print server CSMA/CD comm link
113	VT2	Vitalink TransLAN 320 Bridge
114	DWT	VT-1000 DECwindows terminal
115	WGB	DEWGB Work Group Bridge CSMA/CD comm link
118	MNE	3MIN (KN02-BA) integral CSMA/CD comm link
119	FZA	DEFZA TurboChannel FDDI comm link

120	90L	DS90L terminal server CSMA/CD comm link
124	DW2	DECwindows terminal II CSMA/CD comm link
126	M38	MUXServer 380 CSMA/CD communication link
128	LT2	LPS20-turbo print server CSMA/CD comm link
129	L17	LPS17 print server CSMA/CD comm link
133	NDI	NDIS data link driver for MS/DOS systems — unspecified device — CSMA/CD comm link
134	ND2	NDIS data link driver for OS/2 systems — unspecified device — CSMA/CD comm link
135	TRN	DEQRA token ring (802.5) comm link
139	ISE	Network Integration Server 600 (Hastings) CSMA/CD line card
140	IST	Network Integration Server 600 (Hastings) T1 sync line card
141	ISH	Network Integration Server 600 (Hastings) 64 kb HDLC line card
142	ISF	Network Integration Server 600 (Hastings) FDDI line card
143	DR1	DECrouter-150 CSMA/CD comm link
144	SC1	DECrouter-150 DUSCC serial comm link (DDCMP or HDLC)
145	FB3	DECbridge-6xx CSMA/CD (3 port) comm link
149	DSW	DSW-21 single line serial comm link
150	DW4	DSW-41/42 single/dual line serial comm link
154	ITC	DEC/4000 (Cobra) TGEC based CSMA/CD comm link
156	ACS	DECserver 700 (Whitewater) terminal server CSMA/CD comm link
157	9LP	DECserver-90L+ CSMA/CD comm link
158	92M	DECserver-90TL CSMA/CD comm link
160	FTA	DEFTA Turbochannel-Plus adapter FDDI comm link
162	FEA	DEFEA EISA bus adapter FDDI comm link
165	NMA	DENMA DEChub-90 network management agent CSMA/CD comm link
166	M32	MUXServer 320 CSMA/CD communication link
167	90W	WANrouter-90 multiprotocol router CSMA/CD comm link
168	9WS	WANrouter-90 multiprotocol router DDCMP/HDLC comm link
170	A35	DEC3000 model 400/500 (Sandpiper/Flamingo) Alpha AXP workstation CSMA/CD comm link
172	V49	VAXstation 400 model 90 workstation CSMA/CD comm link
181	FGL	Gigaswitch DEFGL line card FDDI comm link
182	ERA	DE422 EISA-bus PC CSMA/CD comm link

### Note:

Note on the assignment for the DELQA: the primary assignment is 37. Device code 31 is used in early DELQA devices when used on PDP-11 systems, in the "Request Program" message only. Later revisions of the DELQA use code 37 throughout. Software shall treat codes 31 and 37 as equivalent.

Note on the assignment for MicroVAX 3300 integral CSMA/CD comm link: there is a specific assignment for this device (61, mnemonic "MF2"). This code is used by the boot ROMs. Operating system drivers treat it as equivalent to the MicroVAX 2000 integral CSMA/CD comm link and use the code assigned to that device (39, "SVA").

## A.2 Data Links

The data link type values are:

<u>Value</u>	<u>Meaning</u>
1	CSMA-CD
2	DDCMP
3	LAPB (frame level of X.25)
4	HDLC

5	FDDI
6	Token-passing Ring (IEEE 802.5)
7–10	<i>Reserved</i>
11	Token-passing Bus (IEEE 802.4)
12	Z–LAN 4000: Zenith 4 Megabit/second broadband CSMA/CD LAN
13	Unilink-2 CATV LAN data link

Note that these codes are *not* the same as the “Circuit Type” codes used in the management interface, which are defined in Section 5.4. To simplify the mapping between these two encodings, new values for Circuit Type and Data Link Type will be assigned such that the following algorithm applies:

```
IF DataLinkType ≤ 10
THEN CircuitType := LookupTable[DataLinkType]
ELSE CircuitType := DataLinkType – 5
```