APPENDIX A

Predefined Optimization Policy

The WAAS software includes over 200 predefined optimization policy rules that help your WAAS system classify and optimize some of the most common traffic on your network. Table A-1 lists the predefined applications and class maps that WAAS will either optimize or pass through based on the policy rules that are provided with the system.

Before you create an optimization policy, we recommend that you review the predefined policy rules and modify them as appropriate. Often, you can more easily modify an existing policy rule than create a new one.

When reviewing Table A-1, note the following information:

- The subheadings represent the application names, and the associated class maps are listed under these subheadings. For example, Authentication is a type of application and Kerberos is a class map for that application.
- Applications and class maps with the word (*monitored*) next to them are monitored by the WAAS Central Manager, which can monitor statistics for up to 25 applications and 25 class maps at a time. To view statistics for one of the unmonitored applications, use one of the following methods:
  - Use the WAAS CLI, which can display statistics for all applications and class maps on a WAAS device. For more information, see the *Cisco Wide Area Application Services Command Reference*.
  - Modify the application or class map settings so the WAAS Central Manager GUI displays statistics for the desired application or class map. For more information, see Chapter 13, "Configuring Application Acceleration."
- WAAS Express devices have similar default policy rules but provide application acceleration only for HTTP, SSL, and SMB traffic. Where a different application accelerator is listed in Table A-1, it is not part of the WAAS Action for a WAAS Express device.

The WAAS software uses the following optimization technologies based on the type of traffic that it encounters:

- TFO (transport flow optimization)—A collection of optimization technologies such as automatic windows scaling, increased buffering, and selective acknowledgement that optimize all TCP traffic over your network.
- DRE (data redundancy elimination)—A compression technology that reduces the size of transmitted data by removing redundant information before sending the shortened data stream over the WAN. DRE operates on significantly larger streams and maintains a much larger compression history than LZ compression. DRE can use bidirectional, unidirectional, or adaptive caching. Unless noted in Table A-1, DRE caching is bidirectional.
- LZ (compression)—Another compression technology that operates on smaller data streams and keeps limited compression history compared to DRE.

- Application accelerator—A collection of individual application accelerators for the following traffic types: CIFS, EPM, HTTP, ICA, MAPI, NFS, SSL, and streaming video. (Some application accelerators are not available on WAAS Express devices.)

Table A-1 Predefined Traffic Policy Rules

Application/Class Map	WAAS Action	Destination Ports
class-default (*monitored*)	LZ+TFO+ DRE-adaptive	All ports not included in other class maps
Authentication		
apple-sasl	Passthrough	3659
auth	Passthrough	113
Kerberos	Passthrough	88, 888, 2053
kerberos-adm (*monitored*)	Passthrough	749
klogin	Passthrough	543
kpasswd	Passthrough	464
kshell	Passthrough	544
TACACS	Passthrough	49
tell	Passthrough	754
Backup *(monitored)*		
Amanda	TFO	10080
backup-express	TFO	6123
CommVault	TFO	8400–8403
connected	TFO	16384
IBM-TSM	LZ+TFO+ DRE-unidirectional	1500-1502
Legato-NetWorker	TFO	7937, 7938, 7939
Legato-RepliStor	TFO	7144, 7145
Veritas-BackupExec (*monitored*)	TFO	1125, 3527, 6101, 6102, 6106
Veritas-NetBackup	TFO	13720, 13721, 13782, 13785
CAD		
PDMWorks	LZ+TFO+DRE	30000, 40000
Call-Management		
Cisco-CallManager	Passthrough	2443, 2748
cisco-q931-backhaul	Passthrough	2428
cisco-sccp	Passthrough	2000–2002
h323hostcall	Passthrough	1720
h323hostcallsc	Passthrough	1300
mgcp-callagent	Passthrough	2727
mgcp-gateway	Passthrough	2427
sip	Passthrough	5060

Table A-1 Predefined Traffic Policy Rules (continued)

Application/Class Map	WAAS Action	Destination Ports
sip-tls	Passthrough	5061
VoIP-Control	Passthrough	1718, 1719, 11000–11999
CIFS		
CIFS *(monitored)*	LZ+TFO+DRE+ CIFS accelerator	139, 445
Citrix		
Citrix (*monitored*)	TFO+ ICA accelerator	1494, 2598, or a dynamic port associated with the **citrix** protocol match
Conferencing		
cuseeme	Passthrough	7640, 7642, 7648, 7649
ezMeeting	Passthrough	10101–10103, 26260, 26261
MS-NetMeeting (*monitored*)	Passthrough	522, 1503, 1731
proshare	Passthrough	5713–5717
PSOM-MTLS	Passthrough	8057
VocalTec	Passthrough	1490, 6670, 25793, 22555
Console		
cmd	Passthrough	514
exec	Passthrough	512
login	Passthrough	513
sshell	Passthrough	614
Telnet	Passthrough	23, 107
Telnets	Passthrough	992
Content-Management *(monitored)*		
dmdocbroker	LZ+TFO+DRE	1489
Filenet	LZ+TFO+DRE	32768–32774
Directory-Services *(monitored)*		
LDAP	LZ+TFO+ DRE-unidirectional	389, 8404
ldaps	Passthrough	636
msft-gc	LZ+TFO+ DRE-unidirectional	3268
msft-gc-ssl	Passthrough	3269
Email-and-Messaging *(monitored)*		
ccmail	LZ+TFO+DRE	3264
groupwise	LZ+TFO+DRE	1677, 2800, 3800, 7100, 7101, 7180, 7181, 7205, 9850
imap	LZ+TFO+DRE	143

Table A-1 Predefined Traffic Policy Rules (continued)

Application/Class Map	WAAS Action	Destination Ports
imap3	LZ+TFO+DRE	220
imaps	TFO	993
iso-tsap	LZ+TFO+DRE	102
lotusnote	LZ+TFO+DRE	1352
MAPI[1] (*monitored*)	LZ+TFO+DRE+ MAPI accelerator	UUID:a4f1db00-ca47-1067-b31f-00dd010662da
MDaemon	LZ+TFO+DRE	3000, 3001
MS-Exchange-Directory-NSPI[1]	Passthrough	UUID:f5cc5a18-4264-101a-8c59-08002b2f8426
MS-Exchange-Directory-RFR[1]	Passthrough	UUID:1544f5e0-613c-11d1-93df-00c04fd7bd09
NNTP (*monitored*)	LZ+TFO+DRE	119
nntps (*monitored*)	TFO	563
openmail	LZ+TFO+DRE	5755, 5757, 5766, 5767, 5768, 5729
pcmail-srv	LZ+TFO+DRE	158
pop3	LZ+TFO+DRE	110
pop3s	LZ+TFO+DRE	995
QMTP	TFO	209
smtp (*monitored*)	LZ+TFO+DRE	25
smtps	TFO	465
Enterprise-Applications *(monitored)*		
MS-GROOVE	TFO	2492
SAP (*monitored*)	LZ+TFO+DRE	3200–3204, 3206–3219, 3221–3224, 3226–3259, 3261–3263, 3265–3267, 3270–3282, 3284–3305, 3307–3351, 3353–3388, 3390–3399, 3600–3658, 3662–3699
Siebel	LZ+TFO+DRE	2320, 2321, 8448
File-System *(monitored)*		
afpovertcp	LZ+TFO+DRE	548
afs3	LZ+TFO+DRE	7000–7009
ncp	LZ+TFO+DRE	524
NFS	LZ+TFO+DRE+ NFS accelerator	2049
sunrpc	Passthrough	111
File-Transfer *(monitored)*		
BFTP	LZ+TFO+DRE	152
ftp (*monitored*)	Passthrough	21

Table A-1 Predefined Traffic Policy Rules (continued)

Application/Class Map	WAAS Action	Destination Ports
ftp-data[2]	LZ+TFO+DRE	20 (source port)
ftps	TFO	990
ftps-data[2]	Passthrough	989 (source port)
sftp	LZ+TFO+DRE	115
TFTP	LZ+TFO+DRE	69
TFTPS	TFO	3713
Instant Messaging		
AOL	Passthrough	5190–5193
Apple-iChat	Passthrough	5297, 5298
ircs	Passthrough	994
ircu	Passthrough	531, 6660–6665, 6667–6669
msnp	Passthrough	1863, 6891–6900
sametime	Passthrough	1533
talk	Passthrough	517
xmpp-client	Passthrough	5222
xmpp-server	Passthrough	5269
Yahoo-Messenger	Passthrough	5000, 5001, 5050, 5100
Name Services		
DNS	Passthrough	53
isns	Passthrough	3205
nameserver	Passthrough	42
netbios	Passthrough	137
svrloc	Passthrough	427
WINS (*monitored*)	Passthrough	1512
Other		
Basic-TCP-services	Passthrough	1–19
BGP	Passthrough	179
corba-iiop-ssl	Passthrough	684
epmap (*monitored*)	TFO, EPM accelerator	135
msmq	LZ+TFO+DRE	1801, 2101, 2103, 2105
NTP	Passthrough	123
Other-Secure	Passthrough	261, 448, 695, 994, 2252, 2478, 2479, 2482, 2484, 2679, 2762, 2998, 3077, 3078, 3183, 3191, 3220, 3410, 3424, 3471, 3496, 3509, 3529, 3539, 3660, 3661, 3747, 3864, 3885, 3896, 3897, 3995, 4031, 5007, 7674, 9802, 12109

Table A-1 Predefined Traffic Policy Rules (continued)

Application/Class Map	WAAS Action	Destination Ports
ssc-agent	LZ+TFO+DRE	2847, 2848, 2967, 2968, 38037, 38292
Unclassified	LZ+TFO+DRE	
P2P *(monitored)*		
BitTorrent	Passthrough	6881–6889, 6969
eDonkey	Passthrough	4661, 4662
Gnutella	Passthrough	5634, 6346–6349, 6355
Grouper	Passthrough	8038
HotLine	Passthrough	5500–5503
Kazaa	Passthrough	1214
Laplink-ShareDirect	Passthrough	2705
Napster	Passthrough	6666, 6677, 6688, 6700, 7777, 8875
Qnext	Passthrough	44, 5555
SoulSeek	Passthrough	2234, 5534
WASTE	Passthrough	1337
WinMX	Passthrough	6699
Printing *(monitored)*		
hp-pdl-datastr	LZ+TFO+DRE	9100
IPP	LZ+TFO+DRE	631
printer	LZ+TFO+DRE	515
print-srv	LZ+TFO+DRE	170
xprint-server	LZ+TFO+DRE	8100
Remote-Desktop *(monitored)*		
Altiris-CarbonCopy	Passthrough	1680
citrixadmin	LZ+TFO+ DRE-unidirectional	2513
citrixima	LZ+TFO+ DRE-unidirectional	2512
citriximaclient (*monitored*)	LZ+TFO+DRE	2598
ControlIT	TFO	799
Danware-NetOp	TFO	6502
ica (*monitored*)	LZ+TFO+DRE	1494
laplink	LZ+TFO+ DRE-unidirectional	1547
Laplink-surfup-HTTPS	TFO	1184
ms-wbt-server (*monitored*)	TFO	3389
net-assistant	Passthrough	3283
netrjs-3	TFO	73

Table A-1 Predefined Traffic Policy Rules (continued)

Application/Class Map	WAAS Action	Destination Ports
pcanywheredata	TFO	5631, 5632, 65301
radmin-port	TFO	4899
Remote-Anything (*monitored*)	TFO	3999, 4000
timbuktu	TFO	407
timbuktu-srv	TFO	1417–1420
Vmware-VMConsole	TFO	902
VNC (*monitored*)	TFO	5800–5809, 5900–5909
x11	TFO	6000–6063
Replication *(monitored)*		
Double-Take	LZ+TFO+ DRE-unidirectional	1100, 1105
EMC-Celerra-Replicator	LZ+TFO+ DRE-adaptive	8888
MS-AD-Replication[1]	LZ+TFO+DRE	UUID:e3514235-4b06-11d1-ab04-00c04fc2 dcd2
ms-content-repl-srv	TFO	507, 560
MS-FRS[1]	LZ+TFO+DRE	UUID:f5cc59b4-4264-101a-8c59-08002b2f 8426
netapp-snapmirror	LZ+TFO+ DRE-adaptive	10565-10569
pcsync-http	LZ+TFO+DRE	8444
pcsync-https	TFO	8443
rrac	TFO	5678
Rsync (*monitored*)	LZ+TFO+ DRE-unidirectional	873
SQL *(monitored)*		
gds_db	LZ+TFO+DRE	3050
IBM-DB2	LZ+TFO+DRE	523
intersys-cache	LZ+TFO+DRE	1972
ms-olap4	TFO	2383
ms-sql-m	LZ+TFO+DRE	1434
MS-SQL-RPC[1]	LZ+TFO+DRE	UUID:3f99b900-4d87-101b-99b7-aa000400 7f07
ms-sql-s (*monitored*)	LZ+TFO+DRE	1433
MySQL	LZ+TFO+DRE	3306
Oracle	LZ+TFO+DRE	66
orasrv	LZ+TFO+DRE	1521, 1525
Pervasive-SQL	LZ+TFO+DRE	1583

Table A-1 Predefined Traffic Policy Rules (continued)

Application/Class Map	WAAS Action	Destination Ports
PostgreSQL	LZ+TFO+DRE	5432
sqlexec	LZ+TFO+DRE	9088, 9089
sql-net	LZ+TFO+DRE	150
sqlserv	LZ+TFO+DRE	118
sqlsrv	LZ+TFO+DRE	156
ssql	LZ+TFO+DRE	3352
sybase-sqlany	LZ+TFO+DRE	1498, 2439, 2638, 3968
UniSQL	LZ+TFO+DRE	1978, 1979
SSH		
SSH (*monitored*)	TFO	22
SSL *(monitored)*		
HTTPS (*monitored*)	TFO	443
Storage *(monitored)*		
EMC-SRDFA-IP	LZ+TFO+DRE	1748
FCIP	LZ+TFO	3225
iFCP	LZ+TFO+DRE	3420
iscsi	LZ+TFO+DRE	3260
Streaming *(monitored)*		
Liquid-Audio	LZ+TFO+ DRE-unidirectional	18888
ms-streaming (*monitored*)	LZ+TFO+ DRE-unidirectional	1755
RTSP (*monitored*)	LZ+TFO+ DRE-unidirectional +Video accelerator	554, 8554
Systems-Management *(monitored)*		
BMC-Patrol	Passthrough	6161, 6162, 6767, 6768, 8160, 8161, 10128
eTrust-policy-Compliance	TFO	1267
flowmonitor	LZ+TFO	7878
HP-OpenView	Passthrough	7426–7431, 7501, 7510
LANDesk	LZ+TFO+DRE	9535, 9593–9595
NetIQ	Passthrough	2220, 2735, 10113–10116
Netopia-netOctopus	Passthrough	1917, 1921
netviewdm	Passthrough	729–731
novadigm	LZ+TFO+DRE	3460, 3461, 3464
novell-zen	LZ+TFO+DRE	1761–1763, 2037, 2544, 8039
objcall	LZ+TFO+DRE	94, 627, 1965, 1580, 1581

Table A-1 Predefined Traffic Policy Rules (continued)

Application/Class Map	WAAS Action	Destination Ports
WBEM	Passthrough	5987–5990
Version-Management *(monitored)*		
Clearcase	LZ+TFO+DRE	371
cvspserver	LZ+TFO+DRE	2401
VPN		
L2TP	TFO	1701
OpenVPN	TFO	1194
PPTP	TFO	1723
Web *(monitored)*		
HTTP (*monitored*)	LZ+TFO+DRE+ HTTP accelerator	80, 3128, 8000, 8080, 8088
soap-http	LZ+TFO+ DRE-adaptive	7627

1. These classifiers use the EPM service in WAAS to accelerate traffic. EPM-based applications do not have predefined ports so the application's UUID must be used to identify the traffic.
2. These classifiers identify the source port instead of the destination port.