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WLSLogReport

User GUIDE

LOG

Last Modification

*The main objective of this document is to show how to
configure and use the WLSLogReport Tool*

23/04/2008

History

Revision	Date	Author	Changes
1.0	23/04/2008	J.FRANCOIS	Initial Version

1 CONTENTS

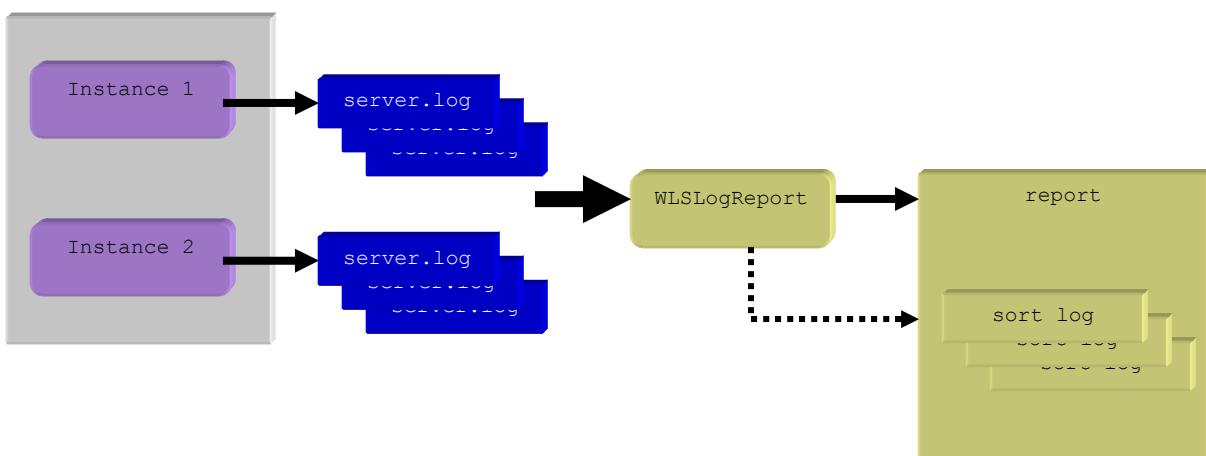
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2 OBJECTIVE

The subject of this tool is to present a synthetic report from Weblogic logs sorted by verbosity and by type. The main objective is to reduce the huge mass of information from the log to a brief report and focus on the problem that is exposed by those files (never used because too big). The report present:

- ✓ **The number of occurrence of a message type.**
- ✓ **A BEA message descriptif.**
- ✓ **A BEA support explantation.**
- ✓ **A detail of all occurrences from the same type (regroup in an ASCII file).**

In input, we give one or several log file or folder and we get back an output folder containing the report



3 INSTALLATION

The requirement for the installation is :

- ✓ **JVM [1.4.X or later]**

The tool is composed of a launch script and a JAR file containing the Java code.

wlsLogReport.\${WLS version}.[sh/bat]	<i>Tool scripte</i>
lib/WlsLogReport.jar	<i>Tool code</i>
doc/WlsLogReport-user guide.[FR/EN].[doc/pdf]	<i>This documentation</i>
conf/setEnv.[sh/bat]	<i>Setup Scripte</i>

3.1 Tool Configuration

For the tool setup, modify the file : conf\setEnv.[sh/bat].

JAVA_HOME	JAVA directory installation
WLSLOGREPORT_HOME	Installation tool directory

3.2 Launching : WLSLogReport

The WLSLogReport.[Version WLS].[bat/sh] command take as input parameters files or directory of WLS logs to be analyzed. It can be :

- ✓ **A file**
- ✓ **A list of files**
- ✓ **A directory**
- ✓ **A list of directory**

(the separator list is a comma)

```
WlsLogReport.[bat/sh]
WlsLogReport.[bat/sh] /export/home/logs
WlsLogReport.[bat/sh] /export/home/logs/serveur1.log,/export/home/logs/serveur2.log
```

An output directory is generated including :

- ✓ A synthesis HTML file (document_root/index.html)
- ✓ An error file (document_root/error.log) containing all the untreated lines (not taken in the logs because the number of fields found in the record exceeds the number of fields waited: (perhaps due to the presence of a character < or > in the message))
- ✓ File containing the BEA ID lines (wrongID.log) not taken by the BEA support information's included in the tools.

Inside the synthesis file are presented by severity the number of message types as well as the total number of found lines.

WLS LOG REPORT	
GENERATED ON [2008/01/31 02h44] FROM [2007/02/14 04h15] TO [2007/02/18 04h15] Version WLS V.10	

{ERRORS} {WRONG ID} {EXCLUDE ID}

TOTAL TYPE	TOTAL MESSAGE	SEVERITY NAME
1	1	<u>Warning</u>
3	3	<u>Info</u>
1	2	<u>Debug</u>
2	3	<u>Error</u>

Each sub directory represent a severity containing the HTML file gathering the message types found as well as a CVS format file of the same contents.

A directory (OCC) contains the TXT files gathering all the occurrences of the same type of message.

(Detail of an HTML file for the Severity Error with for each message type, The number of found occurrences', BEA ID and Weblogic information as well as support information)

Error	
<u>2</u>	BEA-090133
Subsystem	Security
Server Name	Machine Xaxdcz00p1jr.unedic.fr
Name	Thread ID
	User crea201_x61
	Thread ID Main
	Other
Transaction ID	
Message Text	Could not load a JKS keystore from the file /applis/xdtapp/pur/wixa61/par./certificats/xaxdcz00p1jr.jks. Exception: java.io.IOException: Keystore was tampered with, or password was incorrect
Error	Could not load a keystoreType keystore from the file pathname. Exception exception
Description	When calling the load method for the keystore, an IOException was thrown.
Cause	There is an I/O or format problem with the keystore data.
Action	Verify that the path to the keystore, the keystore type, and the password for the keystore were specified correctly. Note that some keystore types (for example, JKS) do not require a password for read-only access. Read the exception text for more help on diagnosing the problem. Reboot the server after correcting the problem.
<u>1</u>	BEA-000297
Subsystem	WebLogicServer
Server Name	Machine xaxdcz00p1jr.unedic.fr
Name	Thread ID
	User crea201_x61
	Thread ID Main
	Other
Transaction ID	
Message Text	Inconsistent security configuration, java.lang.Exception: Cannot use SSL, no certificates have been specified in the WebLogic configuration.
Error	Inconsistent security configuration, th0
Description	The initialization of SSL failed due to an exception when loading the private key, loading the server certificates, loading the trusted CA certificates, or setting the trust validator.
Cause	An exception occurred in SSL initialization.
Action	Look at the exception in th0 for more information on diagnosing the problem.

4 ADVANCED OPTIONS

You have the possibility to modifying the tool parameter. These parameters are placed with the JAVA execution command.

Some options have default values. Values passed in parameter can be values :

- ✓ **Enumerated (value to be chosen in a given list).**
- ✓ **Free (for the choise of a directory)**
- ✓ **Enumerated list (multiple choices)**

```
WlsLogReport version={Weblogic version : 7/8/9/10/etc ...}
input={file/liste/directory} [output={directory}{Default=document_root}]
[after={yyyy/MM/dd hh'h'mm}] [before={yyyy/MM/dd hh'h'mm}]
[day={yyyy/MM/dd}] [exclude_ranger_houre={[hh:mm-hh:mm]}}
[occurrence_log={true/false}{Default=true}] [percent_approximate={[0-
100]}{Default=50}] [exact_match={true/false}{Default=false}]
[debug={true/false}{Default=false}]
[DateLanguage="fr"] [DateCountry="FR"] [DateFormat="MMM dd, yyyy hh:mm:ss
aaa z"] [ExcludeIdFile={file}.id] [StackDepth={nb of stack line to
compare}]
```

4.1 **version={7/8/9/10/etc}**

Option	<i>file</i>
Mode	<i>Mandatory</i>
Input	<i>Impose</i>

Precise the Weblogic version which have produced the log file.

4.2 **input={file/liste/directory}**

Option	<i>File</i>
Mode	<i>Mandatory</i>
Input	<i>Free</i>

Allow to specify the input log files. That can be a single value or a list of file and directory containing WLS logs. Only WLS Log files are taken in the analysis. (BEA format).

```
file=/opt/bea/domaine1/logs/serveur1/serveur.log
file=/opt/bea/domaine1/logs/serveur1/serveur.log,/opt/bea/domaine1/logs/serveur2/serveur.log
file=/opt/bea/domaine1/logs
file==/opt/bea/domaine1/logs/serveur1,/opt/bea/domaine1/logs/serveur2
```

4.3 **[after={yyyy/MM/dd hh'h'mm}]**

Option	<i>after</i>
Mode	<i>Optional</i>
Input	<i>Imposed format</i>
Default value	<i>No</i>

Allow not to take into account the lines former to the specified date. To be combine with the `before` option, but not used with the `day` option.

4.4 [before={yyyy/MM/dd hh'h'mm}]

Option	<code>before</code>
Mode	<i>Optional</i>
Input	<i>Imposed format</i>
Default value	No

Allow not to take into account the posterior lines at the specified date. To be combine with the `after` option, but not used with the `day` option.

4.5 [day={yyyy/MM/dd hh'h'mm}]

Option	<code>day</code>
Mode	<i>Optional</i>
Input	<i>Imposed format</i>
Default value	No

Allow to take into account only the lines of the day indicated. Invalid the options `after` and `before`.

4.6

[output={directory} {Default=document_root}]

Option	<code>output</code>
Mode	<i>Mandatory</i>
Input	<i>Free</i>
Default value	<code>document_root</code>

Allow to choose a name of directory for the generation of the final report.

```
output=/var/report
```

4.7 [occurrence_log=true/false {Default=true}]

Option	<code>occurrence_log</code>
Mode	<i>Optional</i>
Input	<i>true/false</i>
Default value	<code>true</code>

Creation of the occurrence files under the `OCC` directory.

```
Occurance_log=false
```

4.8 [percent_approximate={ [0-100] } {Default=50}]

Option	<i>percent_approximate</i>
Mode	<i>Optional</i>
Input	<i>free</i>
Default value	50

Allow to chose a % of comparison to carry out aggregations of BEA messages by type. This partial comparison is carried out on the field message (stack java, etc ...) the other key of research being the field of the BEA identifier which is an exact comparison. This option can be disconnected via the parameter `exact_match`.

```
percent_approximate=30
```

4.9 exact_match={true/false} {Default=false}]

Option	<i>exact_match</i>
Mode	<i>Optional</i>
Input	<i>Enumerated [true/false]</i>
Default value	<i>WLSLogReport.log</i>

Allow to disconnect the comparison by approximation (the option `percent_approximate`).

```
exact_match=true
```

4.10 exclude_range_houre={ [hh:mm-hh:mm] }

Option	<i>Exclude_range_houre</i>
Mode	<i>Optional</i>
Input	<i>Enumeration [hh :mm-hh :mm]</i>
Default value	<i>none</i>

Option of exclusion of a time section. In the case or one wishes not to take into account periods of time scouring per day, one it possibility of specifying one hour of beginning and end.

4.11 ExcludeIdFile={file}.id

Option	<i>ExcludeIdFile</i>
Mode	<i>Optional</i>
Input	<i>File name in .id extension</i>
Default value	<i>none</i>

File in which one will specify the ID of message to be excluded from the report. This option with for goal not to take into account certain error message which is already in the course of treatment, and to post only the new messages. The messages are excluded in a file from the report from name `excludeID.log`

Example of a file of excluded ID

```
BEA-149206
```

BEA-159206
BEA-149806

4.12 StackDepth={nb of stack line to compare}

Option	<i>StackDepth</i>
Mode	<i>Optional</i>
Input	<i>Enumeration [true/false]</i>
Default value	<i>none</i>

Specify here the number of lines of the message to be taken into account for comparison (n first lines). The purpose of this option is to concentrate on a part of the message in order to obtain a different sorting.

4.13 [debug={true/false} {Default=false}]

Option	<i>debug</i>
Mode	<i>Optional</i>
Input	<i>Enumeration [true/false]</i>
Default value	<i>false</i>

Allow to post debug traces (not implemented for the moment).

debug=true

4.14 [DateFormat ="<date format>"] [DateLanguage="fr"] [DateCountry="FR"]

Option	<i>DateFormat/DateLanguage/DateCountry</i>
Mode	<i>Optional</i>
Input	<i>Date Format</i>
Default value	<i>dd MMMMM yyyy hh 'h' mm z/fr/Fr</i>

Allow to specify the DATE format of the log, the language and the country. These parameters are positioned in the following internal file of the tool and can be overloaded by this option in the launching script.

```
JAR/WLSLogReport.internal/${VERSION}/key.properties
MESSAGE_DATE_FORMAT=dd MMMMM yyyy hh 'h' mm z
MESSAGE_DATE_LANGUAGE=fr
MESSAGE_DATE_COUNTRY=Fr
```

US version Example

```
####<Jul 26, 2007 9:00:37 AM CEST> <Info> <WebLogicServer> <> <> <main> <> <> <>
<1185433237500> <BEA-000377> <Starting WebLogic Server with IBM J9 VM Version 2.3 from IBM
Corporation>
```

DateFormat =«MMM dd, yyyy hh:mm:ss aaa z»
DateLanguage=>en»
DateCountry=>US»

Fr version Example

```
####<24 juil. 2007 09 h 54 CEST> <Info> <Security> <Jfrancoi01> <examplesServer> <main> <<WLS Kernel>> <> <BEA-090516> <The Authenticator provider has preexisting LDAP data.>
```

```
DateFormat =«dd MMMMM yyyy hh 'h' mm z»  
DateLanguage=»fr»  
DateCountry=»Fr»
```

- The formalism of the *DateFormat* filter is as follows

Letter	Date or Time Component	Presentation	Examples
G	Era designator	Text	AD
y	Year	Year	1996; 96
M	Month in year	Month	July; Jul; 07
w	Week in year	Number	27
W	Week in month	Number	2
D	Day in year	Number	189
d	Day in month	Number	10
F	Day of week in month	Number	2
E	Day in week	Text	Tuesday; Tue
a	Am/pm marker	Text	PM
H	Hour in day (0-23)	Number	0
k	Hour in day (1-24)	Number	24
K	Hour in am/pm (0-11)	Number	0
h	Hour in am/pm (1-12)	Number	12
m	Minute in hour	Number	30
s	Second in minute	Number	55
S	Millisecond	Number	978
z	Time zone	General time zone	Pacific Standard Time; PST; GMT-08:00
Z	Time zone	RFC 822 time zone	-0800

Example

"yyyy.MM.dd G 'at' HH:mm:ss z"	2001.07.04 AD at 12:08:56 PDT
"EEE, MMM d, ''yy"	Wed, Jul 4, '01
"h:mm a"	12:08 PM
"hh 'o''clock' a, zzzz"	12 o'clock PM, Pacific Daylight Time
"K:mm a, z"	0:08 PM, PDT
"yyyyy.MMMMMdd GG hh:mm aaa"	02001.July.04 AD 12:08 PM
"EEE, d MMM yyyy HH:mm:ss Z"	Wed, 4 Jul 2001 12:08:56 -0700
"yyMMddHHmmssZ"	010704120856-0700

- The formalism of the *DateLanguage* filter is as follows (**ISO Language Code**):

aa	Afar
ab	Abkhazian
af	Afrikaans
am	Amharic
ar	Arabic

as	Assamese
ay	Aymara
az	Azerbaijani
ba	Bashkir
be	Byelorussian
bg	Bulgarian
bh	Bihari
bi	Bislama
bn	Bengali, Bangla
bo	Tibetan
br	Breton
ca	Catalan
co	Corsican
cs	Czech
cy	Welsh
da	Danish
de	German
dz	Bhutani
el	Greek
en	English
eo	Esperanto
es	Spanish
et	Estonian
eu	Basque
fa	Persian
fi	Finnish
fj	Fiji
fo	Faroeese
fr	French
Frisian	
ga	Irish
gd	Scots, Gaelic
gl	Galician
gn	Guarani
gu	Gujarati
ha	Hausa
he	Hebrew (formerly iw)
hi	Hindi
hr	Croatian
hu	Hungarian
hy	Armenian
ia	Interlingua
id	Indonesian (formerly in)
ie	Interlingue
ik	Inupiak
is	Icelandic
it	Italian
iu	Inuktitut
ja	Japanese
jw	Javanese
ka	Georgian
kk	Kazakh
kl	Greenlandic
km	Cambodian
kn	Kannada
ko	Korean
ks	Kashmiri

ku	Kurdish
ky	Kirghiz
la	Latin
ln	Lingala
lo	Laothian
lt	Lithuanian
lv	Latvian, Lettish
mg	Malagasy
mi	Maori
mk	Macedonian
ml	Malayalam
mn	Mongolian
mo	Moldavian
mr	Marathi
ms	Malay
mt	Maltese
my	Burmese
na	Nauru
ne	Nepali
nl	Dutch
no	Norwegian
oc	Occitan
om	(Afan) Oromo
or	Oriya
pa	Punjabi
pl	Polish
ps	Pashto, Pushto
pt	Portuguese
qu	Quechua
rm	Rhaeto-Romance
rn	Kirundi
ro	Romanian
ru	Russian
rw	Kinyarwanda
sa	Sanskrit
sd	Sindhi
sg	Sangho
sh	Serbo-Croatian
si	Sinhalese
sk	Slovak
sl	Slovenian
sm	Samoan
sn	Shona
so	Somali
sq	Albanian
sr	Serbian
ss	Siswati
st	Sesotho
su	Sundanese
sv	Swedish
sw	Swahili
ta	Tamil
te	Telugu
tg	Tajik
th	Thai
ti	Tigrinya
tk	Turkmen

tl	Tagalog
tn	Setswana
to	Tonga
tr	Turkish
ts	Tsonga
tt	Tatar
tw	Twi
ug	Uighur
uk	Ukrainian
ur	Urdu
uz	Uzbek
vi	Vietnamese
vo	Volapuk
wo	Wolof
xh	Xhosa
yi	ji)
yo	Yoruba
za	Zhuang
zh	Chinese
zu	Zulu

- The formalism of the *DateCountry* filter is as follows (**ISO Country Code.**) :

Country	A 2	A 3	Number
AALAND ISLANDS	AX	ALA	248
AFGHANISTAN	AF	AFG	004
ALBANIA	AL	ALB	008
ALGERIA	DZ	DZA	012
AMERICAN SAMOA	AS	ASM	016
ANDORRA	AD	AND	020
ANGOLA	AO	AGO	024
ANGUILLA	AI	AIA	660
ANTARCTICA	AQ	ATA	010
ANTIGUA AND BARBUDA	AG	ATG	028
ARGENTINA	AR	ARG	032
ARMENIA	AM	ARM	051
ARUBA	AW	ABW	533
AUSTRALIA	AU	AUS	036
AUSTRIA	AT	AUT	040
AZERBAIJAN	AZ	AZE	031
BAHAMAS	BS	BHS	044
BAHRAIN	BH	BHR	048
BANGLADESH	BD	BGD	050
BARBADOS	BB	BRB	052
BELARUS	BY	BLR	112
BELGIUM	BE	BEL	056
BELIZE	BZ	BLZ	084
BENIN	BJ	BEN	204
BERMUDA	BM	BMU	060
BHUTAN	BT	BTN	064
BOLIVIA	BO	BOL	068
BOSNIA AND HERZEGOWINA	BA	BIH	070
BOTSWANA	BW	BWA	072
BOUVET ISLAND	BV	BVT	074
BRAZIL	BR	BRA	076
BRITISH INDIAN OCEAN TERRITORY	IO	IOT	086
BRUNEI DARUSSALAM	BN	BRN	096

BULGARIA	BG	BGR	100
BURKINA FASO	BF	BFA	854
BURUNDI	BI	BDI	108
CAMBODIA	KH	KHM	116
CAMEROON	CM	CMR	120
CANADA	CA	CAN	124
CAPE VERDE	CV	CPV	132
CAYMAN ISLANDS	KY	CYM	136
CENTRAL AFRICAN REPUBLIC	CF	CAF	140
CHAD	TD	TCD	148
CHILE	CL	CHL	152
CHINA	CN	CHN	156
CHRISTMAS ISLAND	CX	CXR	162
COCOS (KEELING) ISLANDS	CC	CCK	166
COLOMBIA	CO	COL	170
COMOROS	KM	COM	174
CONGO, Democratic Republic of (was Zaire)	CD	COD	180
CONGO, Republic of	CG	COG	178
COOK ISLANDS	CK	COK	184
COSTA RICA	CR	CRI	188
COTE D'IVOIRE	CI	CIV	384
CROATIA (local name: Hrvatska)	HR	HRV	191
CUBA	CU	CUB	192
CYPRUS	CY	CYP	196
CZECH REPUBLIC	CZ	CZE	203
DENMARK	DK	DNK	208
DJIBOUTI	DJ	DJI	262
DOMINICA	DM	DMA	212
DOMINICAN REPUBLIC	DO	DOM	214
ECUADOR	EC	ECU	218
EGYPT	EG	EGY	818
EL SALVADOR	SV	SLV	222
EQUATORIAL GUINEA	GQ	GNQ	226
ERITREA	ER	ERI	232
ESTONIA	EE	EST	233
ETHIOPIA	ET	ETH	231
FALKLAND ISLANDS (MALVINAS)	FK	FLK	238
FAROE ISLANDS	FO	FRO	234
FIJI	FJ	FJI	242
FINLAND	FI	FIN	246
FRANCE	FR	FRA	250
FRENCH GUIANA	GF	GUF	254
FRENCH POLYNESIA	PF	PYF	258
FRENCH SOUTHERN TERRITORIES	TF	ATF	260
GABON	GA	GAB	266
GAMBIA	GM	GMB	270
GEORGIA	GE	GEO	268
GERMANY	DE	DEU	276
GHANA	GH	GHA	288
GIBRALTAR	GI	GIB	292
GREECE	GR	GRC	300
GREENLAND	GL	GRL	304
grenada	GD	GRD	308
GUADELOUPE	GP	GLP	312
GUAM	GU	GUM	316
GUATEMALA	GT	GTM	320
GUINEA	GN	GIN	324
GUINEA-BISSAU	GW	GNB	624
GUYANA	GY	GUY	328

HAITI	HT	HTI	332
HEARD AND MC DONALD ISLANDS	HM	HMD	334
HONDURAS	HN	HND	340
HONG KONG	HK	HKG	344
HUNGARY	HU	HUN	348
ICELAND	IS	ISL	352
INDIA	IN	IND	356
INDONESIA	ID	IDN	360
IRAN (ISLAMIC REPUBLIC OF)	IR	IRN	364
IRAQ	IQ	IRQ	368
IRELAND	IE	IRL	372
ISRAEL	IL	ISR	376
ITALY	IT	ITA	380
JAMAICA	JM	JAM	388
JAPAN	JP	JPN	392
JORDAN	JO	JOR	400
KAZAKHSTAN	KZ	KAZ	398
KENYA	KE	KEN	404
KIRIBATI	KI	KIR	296
KOREA, DEMOCRATIC PEOPLE'S REPUBLIC OF	KP	PRK	408
KOREA, REPUBLIC OF	KR	KOR	410
KUWAIT	KW	KWT	414
KYRGYZSTAN	KG	KGZ	417
LAO PEOPLE'S DEMOCRATIC REPUBLIC	LA	LAO	418
LATVIA	LV	LVA	428
LEBANON	LB	LBN	422
LESOTHO	LS	LSO	426
LIBERIA	LR	LBR	430
LIBYAN ARAB JAMAHIRIYA	LY	LBY	434
LIECHTENSTEIN	LI	LIE	438
LITHUANIA	LT	LTU	440
LUXEMBOURG	LU	LUX	442
MACAU	MO	MAC	446
MACEDONIA, THE FORMER YUGOSLAV REPUBLIC OF	MK	MKD	807
MADAGASCAR	MG	MDG	450
MALAWI	MW	MWI	454
MALAYSIA	MY	MYS	458
MALDIVES	MV	MDV	462
MALI	ML	MLI	466
MALTA	MT	MLT	470
MARSHALL ISLANDS	MH	MHL	584
MARTINIQUE	MQ	MTQ	474
MAURITANIA	MR	MRT	478
MAURITIUS	MU	MUS	480
MAYOTTE	YT	MYT	175
MEXICO	MX	MEX	484
MICRONESIA, FEDERATED STATES OF	FM	FSM	583
MOLDOVA, REPUBLIC OF	MD	MDA	498
MONACO	MC	MCO	492
MONGOLIA	MN	MNG	496
MONTSERRAT	MS	MSR	500
MOROCCO	MA	MAR	504
MOZAMBIQUE	MZ	MOZ	508
MYANMAR	MM	MMR	104
NAMIBIA	NA	NAM	516
NAURU	NR	NRU	520
NEPAL	NP	NPL	524
NETHERLANDS	NL	NLD	528
NETHERLANDS ANTILLES	AN	ANT	530

NEW CALEDONIA	NC	NCL	540
NEW ZEALAND	NZ	NZL	554
NICARAGUA	NI	NIC	558
NIGER	NE	NER	562
NIGERIA	NG	NGA	566
NIUE	NU	NIU	570
NORFOLK ISLAND	NF	NFK	574
NORTHERN MARIANA ISLANDS	MP	MNP	580
NORWAY	NO	NOR	578
OMAN	OM	OMN	512
PAKISTAN	PK	PAK	586
PALAU	PW	PLW	585
PALESTINIAN TERRITORY, Occupied	PS	PSE	275
PANAMA	PA	PAN	591
PAPUA NEW GUINEA	PG	PNG	598
PARAGUAY	PY	PRY	600
PERU	PE	PER	604
PHILIPPINES	PH	PHL	608
PITCAIRN	PN	PCN	612
POLAND	PL	POL	616
PORTUGAL	PT	PRT	620
PUERTO RICO	PR	PRI	630
QATAR	QA	QAT	634
REUNION	RE	REU	638
ROMANIA	RO	ROU	642
RUSSIAN FEDERATION	RU	RUS	643
RWANDA	RW	RWA	646
SAINT HELENA	SH	SHN	654
SAINT KITTS AND NEVIS	KN	KNA	659
SAINT LUCIA	LC	LCA	662
SAINT PIERRE AND MIQUELON	PM	SPM	666
SAINT VINCENT AND THE GRENADINES	VC	VCT	670
SAMOA	WS	WSM	882
SAN MARINO	SM	SMR	674
SAO TOME AND PRINCIPE	ST	STP	678
SAUDI ARABIA	SA	SAU	682
SENEGAL	SN	SEN	686
SERBIA AND MONTENEGRO	CS	SCG	891
SEYCHELLES	SC	SYC	690
SIERRA LEONE	SL	SLE	694
SINGAPORE	SG	SGP	702
SLOVAKIA	SK	SVK	703
SLOVENIA	SI	SVN	705
SOLOMON ISLANDS	SB	SLB	090
SOMALIA	SO	SOM	706
SOUTH AFRICA	ZA	ZAF	710
SOUTH GEORGIA AND THE SOUTH SANDWICH ISLANDS	GS	SGS	239
SPAIN	ES	ESP	724
SRI LANKA	LK	LKA	144
SUDAN	SD	SDN	736
SURINAME	SR	SUR	740
SVALBARD AND JAN MAYEN ISLANDS	SJ	SJM	744
SWAZILAND	SZ	SWZ	748
SWEDEN	SE	SWE	752
SWITZERLAND	CH	CHE	756
SYRIAN ARAB REPUBLIC	SY	SYR	760
TAIWAN	TW	TWN	158
TAJIKISTAN	TJ	TJK	762
TANZANIA, UNITED REPUBLIC OF	TZ	TZA	834

THAILAND	TH	THA	764
TIMOR-LESTE	TL	TLS	626
TOGO	TG	TGO	768
TOKELAU	TK	TKL	772
TONGA	TO	TON	776
TRINIDAD AND TOBAGO	TT	TTO	780
TUNISIA	TN	TUN	788
TURKEY	TR	TUR	792
TURKMENISTAN	TM	TKM	795
TURKS AND CAICOS ISLANDS	TC	TCA	796
TUVALU	TV	TUV	798
UGANDA	UG	UGA	800
UKRAINE	UA	UKR	804
UNITED ARAB EMIRATES	AE	ARE	784
UNITED KINGDOM	GB	GBR	826
UNITED STATES	US	USA	840
UNITED STATES MINOR OUTLYING ISLANDS	UM	UMI	581
URUGUAY	UY	URY	858
UZBEKISTAN	UZ	UZB	860
VANUATU	VU	VUT	548
VATICAN CITY STATE (HOLY SEE)	VA	VAT	336
VENEZUELA	VE	VEN	862
VIET NAM	VN	VNM	704
VIRGIN ISLANDS (BRITISH)	VG	VGB	092
VIRGIN ISLANDS (U.S.)	VI	VIR	850
WALLIS AND FUTUNA ISLANDS	WF	WLF	876
WESTERN SAHARA	EH	ESH	732
YEMEN	YE	YEM	887
ZAMBIA	ZM	ZMB	894
ZIMBABWE	ZW	ZWE	716