

**Message manager add-on for SAP SMS
365, enterprise service**
Automator User Guide
June 2013

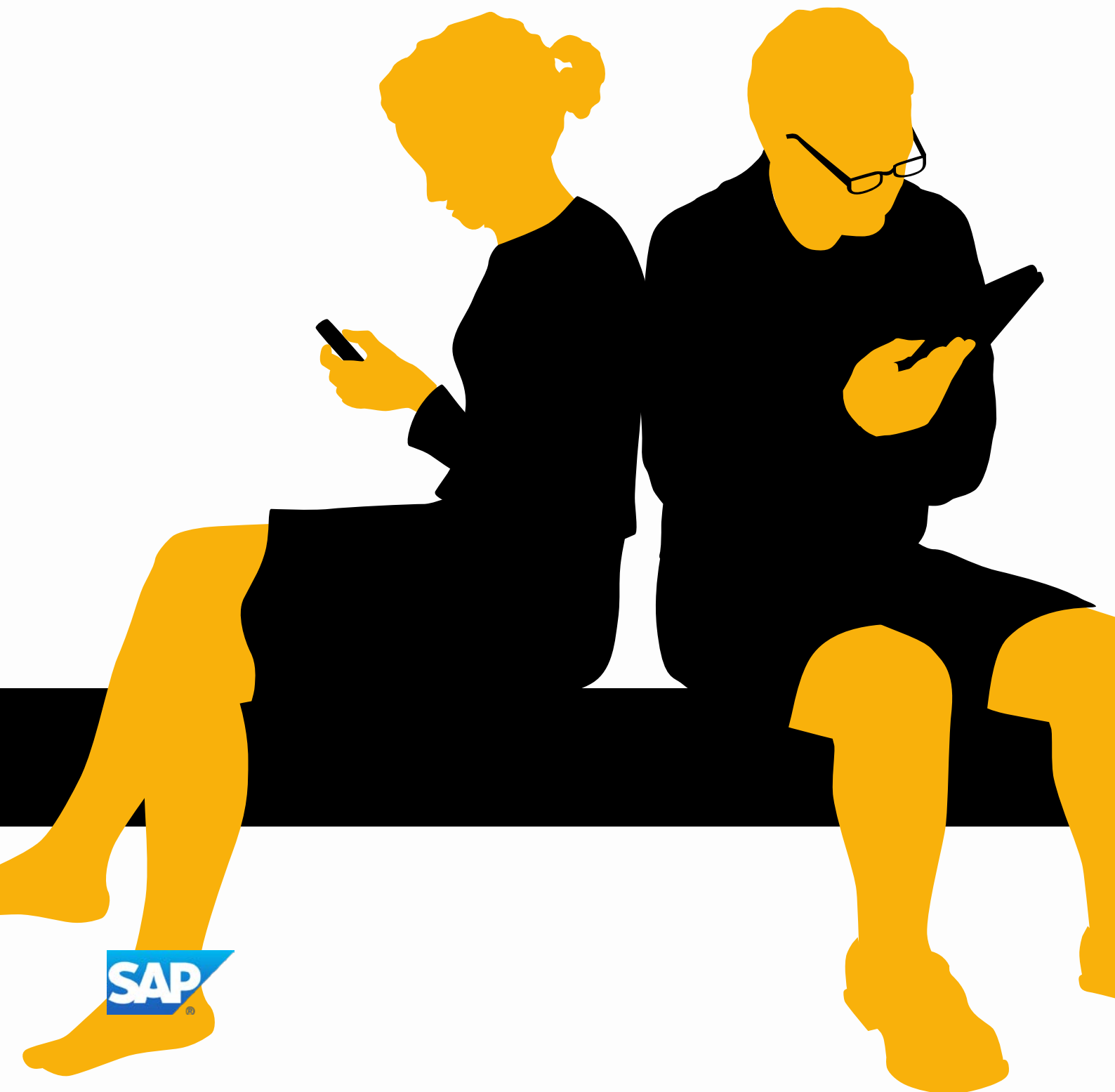


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WORKING WITH THE AUTOMATOR

The Campaign Automator allows Content Providers (CPs) to be able to automate the list creation and schedule campaign process instead of having to configure it using the web interface.

CPs send both subscriber lists and configuration files to SAP using sFTP/FTP. Information is added to logs while the Automator picks up the .csv and configuration file for processing.

After a subscriber list group is created and a campaign is scheduled, an email is sent to the CP notifying them of the process status.

NOTE: CPs must provide their IP addresses in order to register it with SAP firewall. Please contact your account manager for further information.

Understanding the Subscriber List File

The first row of the subscriber list file represents the data header, while the first column represents the subscriber MSISDN in international format. Only the MSISDN column is mandatory. Additional columns are optional, as long as the data is separated by semi-colons (;). The maximum number of columns is 10. The list type of the subscriber list should be set to the default settings and will be handled by the Automator application.

In the sample file below, columns are defined as **MSISDN**, **Name**, and **Balance**.



Figure 1: Sample Subscriber List File

Understanding the Configuration File

The sample configuration file below is in XML format and it needs to be saved in **Unicode** encoding format. The hub account used by the task is the **default** account which needs to be defined in the user account.

```
<?xml version="1.0" encoding="utf-16"?>
<AutomatorConfig>
  <UserInfo>
    <LoginID>username</LoginID>
    <Email>email@example.com</Email>
  </UserInfo>
  <SubscriberListInfo>
    <FileName>CarWinners.txt</FileName>
    <ListName>Car Winners</ListName>
    <Encoding>UTF8</Encoding>
    <AllowDuplicateMSISDN>true</AllowDuplicateMSISDN>
  </SubscriberListInfo>
  <Tasks>
    <AutomatorTask>
      <TaskName>Car Winners Campaign</TaskName>
      <TimeZone>GMT Standard Time</TimeZone>
      <MessageContent>
        <Encoding>UTF8</Encoding>
        <Message>Dear [P]Name[/P] you have won a [P]Car[/P]</Message>
        <TPOA>12345</TPOA>
      </MessageContent>
      <Schedule>
        <StartTime>NOW</StartTime>
      </Schedule>
      <MailNotification>
        <NotifyWhenTaskConfirm>true</NotifyWhenTaskConfirm>
        <NotifyWhenTaskStart>true</NotifyWhenTaskStart>
        <NotifyWhenTaskEnd>true</NotifyWhenTaskEnd>
      </MailNotification>
    </AutomatorTask>
  </Tasks>
</AutomatorConfig>
```

Figure 2: Sample Xml Configuration File

About the XML Header

The header is fixed for all configuration files. If any item is modified, especially the encoding, the Automator Service may interpret the file incorrectly.

```
<?xml version="1.0" encoding="utf-16"?>
```

Figure 3: Sample XML Header

About the UserInfo Section

The **UserInfo** section contains the user authentication and contact information.

```
<UserInfo>
  <LoginID>jbloggs</LoginID>
  <Email>email@example.com</Email>
</UserInfo>
```

Figure 4: Sample UserInfo Section

Attributes of the **UserInfo** section include:

- **Login ID** – (required) Login ID to Application Manager
- **Email** – (optional) User's contact email address where processing status is sent

About the SubscriberListInfo Section

The **SubscriberListInfo** section contains the user authentication and contact information.

```
<SubscriberListInfo>
  <FileName>CarWinners.txt</FileName>
  <ListName>Car Winners</ListName>
  <Encoding>UTF8</Encoding>
  <AllowDuplicateMSISDN>true</AllowDuplicateMSISDN>
</SubscriberListInfo>
```

Figure 5: Sample SubscriberListInfo Section

Attributes of the **SubscriberListInfo** section include:

- **FileName** – (required) Uploaded subscriber list file name
- **ListName** – (required) Name of the subscriber list to be created in Application Manager
- **Encoding** – (required) Type of encoding for the subscriber list: **UTF8** (default) or **UCS2**
- **AllowDuplicateMSISDN** – (required) Indicator for accepting or rejecting duplicate MSISDNs on the subscriber list: **True** or **False** (default)

About the Tasks Section

The **Tasks** section contains the task information.

```
<Tasks>
  <AutomatorTask>
    <TaskName>Car Winners Campaign</TaskName>
    <TimeZone>GMT Standard Time</TimeZone>
    <MessageContent>
      <Encoding>UTF8</Encoding>
      <Message>Dear [P]Name[/P] you have won a [P]Car[/P]</Message>
      <TPOA>12345</TPOA>
    </MessageContent>
    <Schedule>
      <StartTime>NOW</StartTime>
    </Schedule>
    <MailNotification>
      <NotifyWhenTaskConfirm>true</NotifyWhenTaskConfirm>
      <NotifyWhenTaskStart>true</NotifyWhenTaskStart>
      <NotifyWhenTaskEnd>true</NotifyWhenTaskEnd>
    </MailNotification>
  </AutomatorTask>
</Tasks>
```

Figure 6: Sample Tasks with Send NOW Section

Attributes of the **Task** section include:

- **AutomatorTask** – (required) Collection of Automator tasks

About the AutomatorTask Subsection

The **Task** subsection contains the details of an Automator task. Attributes of the **Task** subsection include:

- **TaskName** – (required) Name of the task to be created
- **TimeZone** – (required) Time zone ID used for the task
- **Filter** – (optional) Filter applied to the subscribers list (text filtering only)
- **Filter.ColumnName** – (required if **Filter** is present) Target subscriber list column name on which to filter
- **Filter.Operator** – (required if **Filter** is present) Comparison operator applied to the filter: **Matches**, **Contains**, **Start With**, and **End With**
- **Filter.Value** – (required if **Filter** is present) Search value applied to the filter
- **Schedule** – (required) Schedule for message sending
- **Schedule.StartTime** – (required) Start time for schedule corresponding with the specified TimeZone: Format = **day month year hh:mm AM/PM** (must be at least 15 minutes later than current time), e.g 08 Aug 2008 08:18 AM or **"NOW"** to send immediately.
- **MailNotification** – (optional) Mail notification
- **MailNotification.NotifyWhenTaskConfirm** – (optional) Indicator for requiring an email when a task is confirmed: **True** or **False** (default)
- **MailNotification.NotifyWhenTaskStart** – (optional) Indicator for requiring an email when a task has started: **True** or **False** (default)

- **MailNotification.NotifyWhenTaskEnd** – (optional) Indicator for requiring an email when a task is completed: **True** or **False** (default)
- **MessageContent** – (required) Message text (simple text) to be sent to subscribers; complex messages that include dynamically inserted parameters is contained in the **MessageContent.Message** attribute
- **MessageContent.TPOA** – (optional) TPOA used for the message
- **MessageContent.Message** – (required) Message text in which column names can be wrapped with **[P]ColumnName[/P]** to mark this as a parameter; actual contents are replaced with the column value when the message is sent
- **MessageContent.AssetID** – (optional) When you use the AssetID it will take all the message details(message, tpoa, encoding etc.) from a template that has already been created by the user in the Templates section of message manager web GUI. The values contained in the template will overwrite what is defined in the XML file if there is any duplicate information. See example in Figure 12.

NOTE: **MSISDN** is a default parameter for all subscriber lists.

- **MessageContent.Encoding**—(optional) USC2 encoding must be used if any parameter from a USC2 subscriber list is used; otherwise content sent to subscribers may not be readable (**UTF8** (default) or **UCS2**)

Sending Messages with Text Message Content Type

```
<MessageContent>
  <TextMessage>
    <AssetType>TextMessage</AssetType>
    <OriginalMessage>TM Message Test</OriginalMessage>
    <TPOA>22222</TPOA>
    <OperatorID>4</OperatorID>
    <Encoding>UTF8</Encoding>
    <SessionID>aaabbb123</SessionID>
    <IsLongMessage>false</IsLongMessage>
    <IsStaticMessage>false</IsStaticMessage>
  </TextMessage>
</MessageContent>
```

Figure 7: Sample MessageContent Using a Text Message Content Type

Attributes for this type of **MessageContent** include:

- **MessageContent.TextMessage.AssetType** – (required) Type of Content: **TextMessage**
- **MessageContent.TextMessage.TPOA** – (optional) TPOA used for sending the message
- **MessageContent.TextMessage.OperatorID** – (optional) Operator ID used for sending the message
- **MessageContent.TextMessage.SessionID** – (optional) Session ID used for sending the message
- **MessageContent.TextMessage.OriginalMessage** – (required) Message text in which column names can be wrapped with [P]ColumnName[/P] to mark this as a parameter; actual contents are replaced with the column value when the message is sent

NOTE: MSISDN is a default parameter for all subscriber lists.

- **MessageContent.TextMessage.Encoding**—(optional) USC2 encoding must be used if any parameter from a USC2 subscriber list is used; otherwise content sent to subscribers may not be readable (**UTF8** (default) or **UCS2**)
- **MessageContent.TextMessage.IsLongMessage**—(optional) Indicator specifying whether the message contains more than 160 characters (UTF8) or more than 70 characters (UCS2): **True** or **False** (default)
- **MessageContent.TextMessage.IsStaticMessage**—(optional) Indicator specifying whether the message contains one or more parameters: **True** or **False** (default)

Sending Messages with URL Message Content Type

```
<MessageContent>
  <TextMessage>
    <AssetType>URLMessage</AssetType>
    <TPOA>22222</TPOA>
    <OperatorID>4</OperatorID>
    <Encoding>UTF8</Encoding>
    <URL>http://example.com/mytext.txt</URL>
    <IsLongMessage>>false</IsLongMessage>
    <MTLimit>9</MTLimit>
  </TextMessage>
</MessageContent>
```

Figure 8: Sample MessageContent Using a URL Message Content Type

Attributes for this type of **MessageContent** include:

- **MessageContent.URLMessage.AssetType** – (required) Type of Content: **URLMessage**
- **MessageContent.URLMessage.TPOA** – (optional) TPOA used for sending the message
- **MessageContent.URLMessage.OperatorID** – (optional) Operator ID used for sending the message
- **MessageContent.TextMessage.SessionID** – (optional) Session ID used for sending the message
- **MessageContent.URLMessage.URL** – (required) URL from which to retrieve message content
- **MessageContent.URLMessage.Encoding** – (optional) USC2 encoding must be used if any parameter from a USC2 subscriber list is used; otherwise content sent to subscribers may not be readable (**UTF8** (default) or **UCS2**)
- **MessageContent.URLMessage.IsLongMessage** – (optional) Indicator specifying whether the message contains more than 160 characters (UTF8) or more than 70 characters (UCS2): **True** or **False** (default)
- **MessageContent.URLMessage.MTLimit** – (optional) Maximum number of MT messages: Integer values **1** (default)-**9**

Sending Messages with WAP Message Content Type

```
<MessageContent>
  <WAPMessage>
    <AssetType>WAPMessage</AssetType>
    <TPOA>12345</TPOA>
    <OperatorID>4</OperatorID>
    <SessionID>acb123</SessionID>
    <ContentURL>http://example.com</ContentURL>
    <DescriptiveText>wap message</DescriptiveText>
    <HubURL>http://ppg.sybase365.com/account/account.sms</HubURL>
    <HubHash>dxN1cm5hbWU6cGFzc3dvcnQ=</HubHash>
    <IsStaticMessage>>false</IsStaticMessage>
  </WAPMessage>
</MessageContent>
```

Figure 9: Sample MessageContent Using a WAP Message Content Type

Attributes for this type of **MessageContent** include:

- **MessageContent.WAPMessage.AssetType** – (required) Type of Content: **WAPMessage**
- **MessageContent.WAPMessage.TPOA** – (optional) TPOA used for sending the message
- **MessageContent.WAPMessage.OperatorID** – (optional) Operator ID used for sending the message
- **MessageContent.TextMessage.SessionID** – (optional) Session ID used for sending the message
- **MessageContent.WAPMessage.ContentURL** – (required) URL from which to retrieve the WAP message content
- **MessageContent.WAPMessage.DescriptiveText** – (required) Descriptive text of the WAP message content
- **MessageContent.WAPMessage.HubURL** – (required) URL of the hub account used to send the message
- **MessageContent.WAPMessage.HubHash** – (required) Hub account credentials, base 64 encoded.
- **MessageContent.WAPMessage.IsStaticMessage** – (optional) Indicator specifying whether the message contains one or more parameters

Sample Automator Configuration Files

UCS2 Example

```
<?xml version="1.0" encoding="utf-16"?>
<AutomatorConfig>
  <UserInfo>
    <LoginID>jbloggs</LoginID>
    <Email>email@example.com</Email>
  </UserInfo>
  <SubscriberListInfo>
    <FileName>UCS2List.txt</FileName>
    <ListName>HowAreYou</ListName>
    <Encoding>UTF8</Encoding>
    <AllowDuplicateMSISDN>true</AllowDuplicateMSISDN>
  </SubscriberListInfo>
  <Tasks>
    <AutomatorTask>
      <TaskName>How are you</TaskName>
      <TimeZone>Singapore Standard Time</TimeZone>
      <MessageContent>
        <Encoding>UCS2</Encoding>
        <Message>Dear [P]Name[/P] 你好吗? </Message>
        <TPOA>12345</TPOA>
      </MessageContent>
      <Schedule>
        <StartTime>NOW</StartTime>
      </Schedule>
      <MailNotification>
        <NotifyWhenTaskConfirm>true</NotifyWhenTaskConfirm>
        <NotifyWhenTaskStart>true</NotifyWhenTaskStart>
        <NotifyWhenTaskEnd>true</NotifyWhenTaskEnd>
      </MailNotification>
    </AutomatorTask>
  </Tasks>
</AutomatorConfig>
```

Figure 10: Sample Automator Configuration File for UCS2 Message

Filter Example

```
<?xml version="1.0" encoding="utf-16"?>
<AutomatorConfig>
  <UserInfo>
    <LoginID>jbloggs</LoginID>
    <Email>email@example.com</Email>
  </UserInfo>
  <SubscriberListInfo>
    <FileName>MasterList.txt</FileName>
    <ListName>Master</ListName>
    <Encoding>UTF8</Encoding>
    <AllowDuplicateMSISDN>true</AllowDuplicateMSISDN>
  </SubscriberListInfo>
  <Tasks>
    <AutomatorTask>
      <TaskName>Lucky Seven Campaign</TaskName>
      <TimeZone>GMT Standard Time</TimeZone>
      <Filter>
        <ColumnName>MSISDN</ColumnName>
        <Operator>Contains</Operator>
        <Value>7</Value>
      </Filter>
      <MessageContent>
        <Encoding>UTF8</Encoding>
        <Message>Dear [P]Name[/P] you have won a prize!</Message>
        <TPOA>12345</TPOA>
      </MessageContent>
      <Schedule>
        <StartTime>NOW</StartTime>
      </Schedule>
      <MailNotification>
        <NotifyWhenTaskConfirm>true</NotifyWhenTaskConfirm>
        <NotifyWhenTaskStart>true</NotifyWhenTaskStart>
        <NotifyWhenTaskEnd>true</NotifyWhenTaskEnd>
      </MailNotification>
    </AutomatorTask>
  </Tasks>
</AutomatorConfig>
```

Figure 11: Sample Automator Configuration File with Filter

Template Example

```
<?xml version="1.0" encoding="utf-16"?>
<AutomatorConfig>
  <UserInfo>
    <LoginID>jbloggs</LoginID>
    <Email>email@example.com</Email>
  </UserInfo>
  <SubscriberListInfo>
    <FileName>JulySubscribers.txt</FileName>
    <ListName>July Subscribers</ListName>
    <Encoding>UTF8</Encoding>
    <AllowDuplicateMSISDN>true</AllowDuplicateMSISDN>
  </SubscriberListInfo>
  <Tasks>
    <AutomatorTask>
      <TaskName>MarketingJuly</TaskName>
      <TimeZone>GMT Standard Time</TimeZone>
      <MessageContent>
        <AssetID>373</AssetID>
      </MessageContent>
      <Schedule>
        <StartTime>NOW</StartTime>
      </Schedule>
      <MailNotification>
        <NotifyWhenTaskConfirm>true</NotifyWhenTaskConfirm>
        <NotifyWhenTaskStart>true</NotifyWhenTaskStart>
        <NotifyWhenTaskEnd>true</NotifyWhenTaskEnd>
      </MailNotification>
    </AutomatorTask>
  </Tasks>
</AutomatorConfig>
```

Figure 12: Sample Automator Configuration File with **AssetID**

TIME ZONES**Table 1:** Available Timezones

ID	Display Name	Base UTC Offset
Greenwich Standard Time	(GMT) Casablanca, Monrovia	00:00:00
GMT Standard Time	(GMT) Greenwich Mean Time: Dublin, Edinburgh, Lisbon, London	00:00:00
W. Europe Standard Time	(GMT+01:00) Amsterdam, Berlin, Bern, Rome, Stockholm, Vienna	01:00:00
Central Europe Standard Time	(GMT+01:00) Belgrade, Bratislava, Budapest, Ljubljana, Prague	01:00:00
Romance Standard Time	(GMT+01:00) Brussels, Copenhagen, Madrid, Paris	01:00:00
Central European Standard Time	(GMT+01:00) Sarajevo, Skopje, Warsaw, Zagreb	01:00:00
W. Central Africa Standard Time	(GMT+01:00) West Central Africa	01:00:00
GTB Standard Time	(GMT+02:00) Athens, Beirut, Istanbul, Minsk	02:00:00
E. Europe Standard Time	(GMT+02:00) Bucharest	02:00:00
Egypt Standard Time	(GMT+02:00) Cairo	02:00:00
South Africa Standard Time	(GMT+02:00) Harare, Pretoria	02:00:00
FLE Standard Time	(GMT+02:00) Helsinki, Kyiv, Riga, Sofia, Tallinn, Vilnius	02:00:00
Israel Standard Time	(GMT+02:00) Jerusalem	02:00:00
Arabic Standard Time	(GMT+03:00) Baghdad	03:00:00
Arab Standard Time	(GMT+03:00) Kuwait, Riyadh	03:00:00
Russian Standard Time	(GMT+03:00) Moscow, St. Petersburg, Volgograd	03:00:00
E. Africa Standard Time	(GMT+03:00) Nairobi	03:00:00
Iran Standard Time	(GMT+03:30) Tehran	03:30:00
Arabian Standard Time	(GMT+04:00) Abu Dhabi, Muscat	04:00:00
Caucasus Standard Time	(GMT+04:00) Baku, Tbilisi, Yerevan	04:00:00
Afghanistan Standard Time	(GMT+04:30) Kabul	04:30:00
Ekaterinburg Standard Time	(GMT+05:00) Ekaterinburg	05:00:00
West Asia Standard Time	(GMT+05:00) Islamabad, Karachi, Tashkent	05:00:00
India Standard Time	(GMT+05:30) Chennai, Kolkata, Mumbai, New Delhi	05:30:00
Nepal Standard Time	(GMT+05:45) Kathmandu	05:45:00

ID	Display Name	Base UTC Offset
N. Central Asia Standard Time	(GMT+06:00) Almaty, Novosibirsk	06:00:00
Central Asia Standard Time	(GMT+06:00) Astana, Dhaka	06:00:00
Sri Lanka Standard Time	(GMT+06:00) Sri Jayawardenepura	06:00:00
Myanmar Standard Time	(GMT+06:30) Rangoon	06:30:00
SE Asia Standard Time	(GMT+07:00) Bangkok, Hanoi, Jakarta	07:00:00
North Asia Standard Time	(GMT+07:00) Krasnoyarsk	07:00:00
China Standard Time	(GMT+08:00) Beijing, Chongqing, Hong Kong, Urumqi	08:00:00
North Asia East Standard Time	(GMT+08:00) Irkutsk, Ulaan Bataar	08:00:00
Singapore Standard Time	(GMT+08:00) Kuala Lumpur, Singapore	08:00:00
W. Australia Standard Time	(GMT+08:00) Perth	08:00:00
Taipei Standard Time	(GMT+08:00) Taipei	08:00:00
Tokyo Standard Time	(GMT+09:00) Osaka, Sapporo, Tokyo	09:00:00
Korea Standard Time	(GMT+09:00) Seoul	09:00:00
Yakutsk Standard Time	(GMT+09:00) Yakutsk	09:00:00
Cen. Australia Standard Time	(GMT+09:30) Adelaide	09:30:00
AUS Central Standard Time	(GMT+09:30) Darwin	09:30:00
E. Australia Standard Time	(GMT+10:00) Brisbane	10:00:00
AUS Eastern Standard Time	(GMT+10:00) Canberra, Melbourne, Sydney	10:00:00
West Pacific Standard Time	(GMT+10:00) Guam, Port Moresby	10:00:00
Tasmania Standard Time	(GMT+10:00) Hobart	10:00:00
Vladivostok Standard Time	(GMT+10:00) Vladivostok	10:00:00
Central Pacific Standard Time	(GMT+11:00) Magadan, Solomon Is., New Caledonia	11:00:00
New Zealand Standard Time	(GMT+12:00) Auckland, Wellington	12:00:00
Fiji Standard Time	(GMT+12:00) Fiji, Kamchatka, Marshall Is.	12:00:00
Tonga Standard Time	(GMT+13:00) Nuku'alofa	13:00:00
Azores Standard Time	(GMT-01:00) Azores	-01:00:00
Cape Verde Standard Time	(GMT-01:00) Cape Verde Is.	-01:00:00
Mid-Atlantic Standard Time	(GMT-02:00) Mid-Atlantic	-02:00:00
E. South America Standard Time	(GMT-03:00) Brasilia	-03:00:00

ID	Display Name	Base UTC Offset
SA Eastern Standard Time	(GMT-03:00) Buenos Aires, Georgetown	-03:00:00
Greenland Standard Time	(GMT-03:00) Greenland	-03:00:00
Newfoundland Standard Time	(GMT-03:30) Newfoundland	-03:30:00
Atlantic Standard Time	(GMT-04:00) Atlantic Time (Canada)	-04:00:00
SA Western Standard Time	(GMT-04:00) Caracas, La Paz	-04:00:00
Pacific SA Standard Time	(GMT-04:00) Santiago	-04:00:00
SA Pacific Standard Time	(GMT-05:00) Bogota, Lima, Quito	-05:00:00
Eastern Standard Time	(GMT-05:00) Eastern Time (US & Canada)	-05:00:00
US Eastern Standard Time	(GMT-05:00) Indiana (East)	-05:00:00
Central America Standard Time	(GMT-06:00) Central America	-06:00:00
Central Standard Time	(GMT-06:00) Central Time (US & Canada)	-06:00:00
Mexico Standard Time	(GMT-06:00) Guadalajara, Mexico City, Monterrey	-06:00:00
Canada Central Standard Time	(GMT-06:00) Saskatchewan	-06:00:00
US Mountain Standard Time	(GMT-07:00) Arizona	-07:00:00
Mexico Standard Time 2	(GMT-07:00) Chihuahua, La Paz, Mazatlan	-07:00:00
Mountain Standard Time	(GMT-07:00) Mountain Time (US & Canada)	-07:00:00
Pacific Standard Time	(GMT-08:00) Pacific Time (US & Canada); Tijuana	-08:00:00
Alaskan Standard Time	(GMT-09:00) Alaska	-09:00:00
Hawaiian Standard Time	(GMT-10:00) Hawaii	-10:00:00
Samoa Standard Time	(GMT-11:00) Midway Island, Samoa	-11:00:00
Dateline Standard Time	(GMT-12:00) International Date Line West	-12:00:00

UTF8 ENCODING – SUPPORTED CHARACTERS

The table below lists all supported characters for using UTF8 Encoding when sending a message. CPs should send messages using the UCS2 Encoding if the message body contains any other character.

Description	Visual Character on the phone
SPACE	
EXCLAMATION MARK	!
QUOTATION MARK	"
NUMBER SIGN	#
DOLLAR SIGN	\$
PERCENT SIGN	%
AMPERSAND	&
APOSTROPHE	'
LEFT PARENTHESIS	(
RIGHT PARENTHESIS)
DIGIT ZERO	0
DIGIT ONE	1
DIGIT TWO	2
DIGIT THREE	3
DIGIT FOUR	4
DIGIT FIVE	5
DIGIT SIX	6
DIGIT SEVEN	7
DIGIT EIGHT	8
DIGIT NINE	9
COMMERCIAL AT	@
LATIN CAPITAL LETTER A	A
LATIN CAPITAL LETTER B	B
LATIN CAPITAL LETTER C	C
LATIN CAPITAL LETTER D	D
LATIN CAPITAL LETTER E	E
LATIN CAPITAL LETTER F	F
LATIN CAPITAL LETTER G	G
LATIN CAPITAL LETTER H	H

Description	Visual Character on the phone
LATIN CAPITAL LETTER I	I
LATIN CAPITAL LETTER P	P
LATIN CAPITAL LETTER Q	Q
LATIN CAPITAL LETTER R	R
LATIN CAPITAL LETTER S	S
LATIN CAPITAL LETTER T	T
LATIN CAPITAL LETTER U	U
LATIN CAPITAL LETTER V	V
LATIN CAPITAL LETTER W	W
LATIN CAPITAL LETTER X	X
LATIN CAPITAL LETTER Y	Y
LATIN SMALL LETTER A	a
LATIN SMALL LETTER B	b
LATIN SMALL LETTER C	c
LATIN SMALL LETTER D	d
LATIN SMALL LETTER E	e
LATIN SMALL LETTER F	f
LATIN SMALL LETTER G	g
LATIN SMALL LETTER H	h
LATIN SMALL LETTER I	i
LATIN SMALL LETTER P	p
LATIN SMALL LETTER Q	q
LATIN SMALL LETTER R	r
LATIN SMALL LETTER S	s
LATIN SMALL LETTER T	t
LATIN SMALL LETTER U	u
LATIN SMALL LETTER V	v
LATIN SMALL LETTER W	w
LATIN SMALL LETTER X	x
LATIN SMALL LETTER Y	y
ASTERISK	*

Description	Visual Character on the phone
PLUS SIGN	+
COMMA	,
HYPHEN-MINUS	-
FULL STOP	.
FORWARD SLASH	/
COLON	:
SEMICOLON	;
LESS THAN	<
EQUALS	=
GREATER THAN	>
QUESTION MARK	?
LATIN CAPITAL LETTER J	J
LATIN CAPITAL LETTER K	K
LATIN CAPITAL LETTER L	L
LATIN CAPITAL LETTER M	M
LATIN CAPITAL LETTER N	N
LATIN CAPITAL LETTER O	O
LATIN CAPITAL LETTER Z	Z
LOW LINE	_
LATIN SMALL LETTER J	j
LATIN SMALL LETTER K	k
LATIN SMALL LETTER L	l
LATIN SMALL LETTER M	m
LATIN SMALL LETTER N	n
LATIN SMALL LETTER O	o
LATIN SMALL LETTER Z	z
INVERTED EXCLAMATION POINT	¡
POUND STERLING	£
GENERAL CURRENCY SYMBOL	¤
YEN	¥
SECTION SIGN	§

Description	Visual Character on the phone
INVERTED QUESTION MARK	¿
LATIN CAPITAL LETTER A WITH DIAERESIS	Ä
LATIN CAPITAL LETTER A WITH RING ABOVE	Å
LATIN CAPITAL LETTER AE	Æ
LATIN CAPITAL LETTER C WITH CEDILLA	Ç
LATIN CAPITAL LETTER E WITH ACUTE	É
LATIN CAPITAL LETTER N WITH TILDE	Ñ
LATIN CAPITAL LETTER O WITH DIAERESIS	Ö
LATIN CAPITAL LETTER O WITH STROKE	Ø
LATIN CAPITAL LETTER U WITH DIAERESIS	Ü
LATIN SMALL LETTER SHARP S	ß
LATIN SMALL LETTER A WITH GRAVE	à
GREEK CAPITAL LETTER DELTA	Δ
GREEK CAPITAL LETTER THETA	Θ
LATIN SMALL LETTER A WITH DIAERESIS	ä
LATIN SMALL LETTER A WITH RING ABOVE	å
LATIN SMALL LETTER AE	æ
LATIN SMALL LETTER E WITH GRAVE	è
LATIN SMALL LETTER E WITH ACUTE	é
GREEK CAPITAL LETTER LAMDA	Λ
GREEK CAPITAL LETTER XI	Ξ
LATIN SMALL LETTER I WITH GRAVE	ì
GREEK CAPITAL LETTER PI	Π
GREEK CAPITAL LETTER PHI	Φ
GREEK CAPITAL LETTER PSI	Ψ
LATIN SMALL LETTER N WITH TILDE	ñ
LATIN SMALL LETTER O WITH GRAVE	ò
GREEK CAPITAL LETTER GAMMA	Γ
LATIN SMALL LETTER O WITH DIAERESIS	ö
LATIN SMALL LETTER O WITH STROKE	ø
LATIN SMALL LETTER U WITH GRAVE	ù

Description	Visual Character on the phone
GREEK CAPITAL LETTER OMEGA	Ω
GREEK CAPITAL LETTER SIGMA	Σ
LATIN SMALL LETTER U WITH DIAERESIS	ü
LEFT CURLY BRACKET	{
RIGHT CURLY BRACKET	}
BACK SLASH	\
LEFT SQUARE BRACKET	[
TILDE	~
RIGHT SQUARE BRACKET]
EURO SIGN	€
VERTICAL LINE	
CIRCUMFLEX ACCENT	^

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