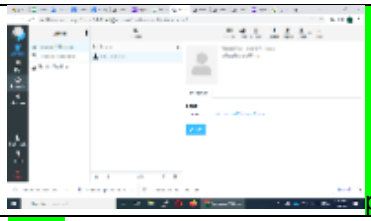
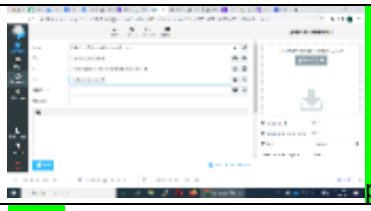
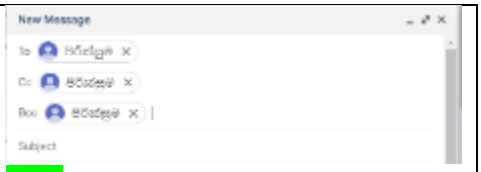
Enhancing Self Certification Guide using additional software tools for testing

Code	Description		
MUA.1	EAI addresses can be saved to address book	Can be checked by GUI	 pass
MUA.2	EAI addresses in address book display address local part as Unicode with proper handling of RTL and LTR strings	Can be checked by GUI	pass
MUA.3	EAI addresses in address book display address domain part as Unicode	Can be checked by GUI	pass
MUA.5	EAI addresses recalled from address book (e.g., via autocomplete) display address local part as Unicode	Can be checked by GUI	 pass
MUA.6	EAI addresses recalled from address book (e.g., via autocomplete) display address domain part as Unicode	Can be checked by GUI	pass
MUA.7	Address book text processing (search etc) supports Unicode	Can be checked by GUI	
MUA.8a	Address book search finds U-Labels when search text is in A-Label form, and vice versa	Can be checked by GUI	can't find U-labels when search text in A-Label form
MUA.8b	Address book entry creation supports Unicode even if the email address was generated from a message using A-Labels	Can be checked by GUI	pass
MUA.9	Originator fields accept EAI addresses	Can be checked by GUI	pass
MUA.10	Originator fields display EAI address local part as Unicode	Can be checked by GUI	 pass
MUA.11	Originator fields display EAI address domain part as Unicode	Can be checked by GUI	 pass
MUA.12	Destination address fields accept EAI addresses	Can be checked by GUI	 pass

MUA.13	Destination address fields display EAI address local part as Unicode	Can be checked by GUI	 pass
MUA.14	Destination address fields display EAI address domain part as Unicode	Can be checked by GUI	pass
MUA.15	Unstructured header fields accept Unicode	Can be checked by GUI	pass
MUA.16	EAI mailto link targets are supported	Can be checked by GUI	
MUA.17	Message text linkifies EAI values	Can be checked by GUI	
MUA.18	SMTP server address may be IDN		
MUA.19	SMTP server address can be specified by U-label		
MUA.20	SMTP server address displayed as Unicode		
MUA.21	Connection to SMTP server at IDN address is supported		pass
MUA.22	Username can be provided as Unicode		
MUA.23	Username displayed as Unicode		
MUA.24	EAI originator header values are transmitted to SMTPUTF8 server	Can be checked by GUI	pass
MUA.25	EAI destination address header values are transmitted to SMTPUTF8 server	Can be checked by GUI	pass
MUA.26	Unicode unstructured header values are transmitted to SMTPUTF8 server		pass
MUA.27	EAI originator header values are transmitted to non-SMTPUTF8 server as ASCII		pass
MUA.28	EAI destination address header values are transmitted to non-SMTPUTF8 server as ASCII		
MUA.29	Unicode unstructured header values are transmitted to non-SMTPUTF8 server as ASCII		
MUA.30	Message-ID of EAI message submitted to non-SMTPUTF8 server is ASCII-only		
MUA.31	SMTPUTF8 parameter is provided with MAIL command for EAI messages		
MUA.32	SMTPUTF8 parameter is not provided with MAIL command for non-EAI messages		
MUA.33	Multipart MIME message parts of type message/global are recognized		pass
MUA.34	Local part of EAI values in atoms are displayed as Unicode	Can be checked by GUI	pass
MUA.35	Domain part of EAI values in atoms are displayed as Unicode	Can be checked by GUI	pass
MUA.36	Message lines longer than 998 characters are limited to 998 octets	Can be checked by GUI	pass

MUA.37	Can retrieve messages from EAI mailbox	Can be checked by GUI	pass
MUA.38	User can send and receive messages from EAI mailboxes	Can be checked by GUI	pass

IMAP.1	Server address can be specified by A-label		pass
IMAP.2	Server address can be specified by U-label		pass
IMAP.3	Server address displayed as Unicode		pass
IMAP.4	Connection to IMAP server at IDN address is supported		pass
IMAP.5	Username can be provided as Unicode		
IMAP.6	Username displayed as Unicode		
IMAP.7	AUTHENTICATE command is used for authentication		
IMAP.8	UTF8=ACCEPT is enabled		
IMAP.9	SEARCH command does not specify charset		
IMAP.10	APPEND command uses UTF8 extension		pass
IMAP.11	*IMAP folder* with UTF-8 name can be created		pass
IMAP.12	UTF-8 *IMAP folder* names can be accessed		pass
IMAP.13	Unicode *IMAP folder* names display as Unicode		pass
IMAP.14	Messages in *IMAP folder* with Unicode name can be retrieved		pass
IMAP.15	Message with EAI address in originator header is accessible		pass
IMAP.16	Message with EAI address in destination address header is accessible		pass
IMAP.17	Message with Unicode value in unstructured text header is accessible		pass
IMAP.18	Messages can be stored in folders (IMAP "mailboxes") ~~mailbox~~ with Unicode name		pass
IMAP.19	Message with EAI address in originator header can be stored		pass
IMAP.20	Message with EAI address in destination address header can be stored		pass
IMAP.21	Message with Unicode value in unstructured text header can be stored		pass
IMAP.1	Server address can be specified by A-label		pass

POP.1	Server address can be specified by A-label		pass
POP.2	Server address can be specified by U-label		pass
POP.3	Server address displayed as Unicode		pass
POP.4	Connection to POP server at IDN address is supported		pass
POP.5	Username can be provided as Unicode		pass
POP.6	Username displayed as Unicode		pass
POP.7	Connection to server with Unicode username is supported		pass
POP.8	UTF8 mode is enabled		pass
POP.9	STLS command is not used in UTF8 mode		pass
POP.10	Message with EAI address in originator header is accessible		pass
POP.11	Message with EAI address in destination address header is accessible		pass
POP.12	Message with Unicode value in unstructured text header is accessible		pass

MSA.1	SMTPUTF8 capability is advertised		pass
MSA.2	8BITMIME capability is advertised		pass
MSA.3	EHLO command argument is transmitted as ASCII		pass
MSA.4	SMTPUTF8 parameter is provided with MAIL command for EAI messages		pass
MSA.5	EAI reverse path values are transmitted to SMTPUTF8 server		pass
MSA.6	EAI forward path values are transmitted to SMTPUTF8 server		pass
MSA.7	EAI originator header values are transmitted to SMTPUTF8 server		pass
MSA.8	EAI destination address header values are transmitted to SMTPUTF8 server		pass
MSA.9	Unicode unstructured header values are transmitted to SMTPUTF8 server		pass
MSA.10	SMTPUTF8 parameter is not provided for non-EAI messages		
MSA.11	EAI messages sent to non-SMTPUTF8 server are returned to sender as undeliverable, or transformed		pass
MSA.12	EAI reverse path values are transmitted to non-SMTPUTF8 server as ASCII		
MSA.13	EAI forward path values are transmitted to non-SMTPUTF8 server as ASCII		
MSA.14	EAI originator header values are transmitted to non-SMTPUTF8 server as ASCII		

MSA.15	EAI destination address header values are transmitted to non-SMTPUTF8 server as ASCII		
MSA.16	Unicode unstructured header values are transmitted to non-SMTPUTF8 server as ASCII		
MSA.17	Message-ID of EAI message transmitted to non-SMTPUTF8 server is ASCII-only		
MSA.18	EAI Originator Header domain name U-labels are converted acceptably to A-labels		
MSA.19	EAI Originator Header domain name U-labels are converted to A-labels compliant with [IDNA 2008]		
MSA.20	EAI Destination Address Header domain name U-labels are converted acceptably to A-labels		
MSA.21	EAI Destination Address Header domain name U-labels are converted to A-labels compliant with [IDNA 2008]		

MTA.1	SMTPUTF8 capability is advertised	Can be checked by telnet 110. Refer step – 1.0	pass
MTA.2	8BITMIME capability is advertised		pass
MTA.3	EHLO command argument is transmitted as ASCII		pass
MTA.4	SMTPUTF8 parameter is provided for EAI messages		pass
MTA.5	Trace information includes domain in U-label form		pass
MTA.6	Trace information indicates SMTPUTF8 protocol		pass
MTA.7	EAI reverse path values are transmitted to SMTPUTF8 server		pass
MTA.8	EAI forward path values are transmitted to SMTPUTF8 server		pass
MTA.9	EAI originator header values are transmitted to SMTPUTF8 server		pass
MTA.10	EAI destination address header values are transmitted to SMTPUTF8 server		pass
MTA.11	Unicode unstructured header values are transmitted to SMTPUTF8 server		pass
MTA.12	SMTPUTF8 parameter is not provided for non-EAI messages		pass
MTA.13	EAI messages sent to non-SMTPUTF8 server are rejected		pass
MTA.14	EAI Originator Header domain name U-labels are converted acceptably to A-labels		pass
MTA.15	EAI Originator Header domain name U-labels are converted to A-labels compliant with [IDNA 2008]		pass
MTA.16	EAI Destination Address Header domain name U-labels are converted acceptably to A-labels		pass

MTA.17	EAI Destination Address Header domain name U-labels are converted to A-labels compliant with [IDNA 2008]		pass

MDA.1	Mail server is capable of creating and hosting mailboxes with EAI mailbox names		pass
MDA.2	Mail server is configured by default to create and host mailboxes with EAI mailbox names		pass
MDA.3	Trace information includes domain in U-label form		pass
MDA.4	Trace information indicates SMTPUTF8 protocol		pass
MDA.5	Message with EAI address in originator header is delivered		pass
MDA.6	Message with EAI address in destination address header is delivered		pass
MDA.7	Message with UTF-8 value in unstructured header is delivered		pass
MDA.8	MDA is capable of delivering messages to local EAI mailbox		pass

MDA-I.1	UTF-8 username is accepted via IMAP	Refer STEP – 3.0 (IMAP)	A1 CAPABILITY
MDA-I.2	IMAP UTF8=ACCEPT or UTF8=ONLY capability is advertised		A1 CAPABILITY
MDA-I.3	IMAP AUTHENTICATE command is supported or LOGIN accepts UTF-8		A1 CAPABILITY
MDA-I.4	IMAP ENABLE UTF8=ACCEPT command is accepted		A1 CAPABILITY
MDA-I.5	IMAP SEARCH command with CHARSET specification is rejected		A2 SEARCH CHARSET UTF-8 ALL
MDA-I.6	IMAP APPEND UTF8 command is accepted		A2 APPEND INBOX {10+} From: user@example.com To: recipient@example.com Subject: Test This is a test
MDA-I.7	IMAP APPEND preserves Unicode header values		A3 APPEND INBOX {n} From: sender@example.com To: recipient@example.com Subject: موضوع Date: Fri, 12 May 2023 09:00:00 +0000 This is the message body. (Replace {n} with the appropriate length of the email message and ensure that the Subject or other header values contain Unicode characters.)
MDA-I.8	IMAP CREATE command with non-ASCII folder name is accepted		A2 CREATE "INBOX/سلام" (Replace "INBOX/سلام" with the desired folder name that contains non-ASCII characters.)
MDA-I.9	IMAP SELECT command with non-ASCII folder name is accepted		A2 SELECT "INBOX/سلام"
MDA-I.10	IMAP EXAMINE command with non-ASCII folder name is accepted		A2 EXAMINE "INBOX/سلام"
MDA-I.11	IMAP SUBSCRIBE command with non-ASCII folder name is accepted		A2 SUBSCRIBE "INBOX/سلام"
MDA-I.12	IMAP LIST response includes non-ASCII folder name		A2 LIST "" "*"
MDA-I.13	IMAP LSUB response includes non-ASCII folder names		A2 LSUB "" "*"

MDA-I.14	Folder with non-ASCII name can be created via IMAP		A2 CREATE "INBOX/سلام"
MDA-I.15	Folder with non-ASCII name can be subscribed via IMAP		A2 SUBSCRIBE "INBOX/سلام"
MDA-I.16	Messages in folder with non-ASCII name are accessible via IMAP		A2 SELECT "INBOX/سلام"
MDA-I.17	Message with EAI address in originator header can be stored via IMAP		A2 SELECT INBOX
MDA-I.18	Message with EAI address in destination address header can be stored via IMAP		- A2 SELECT INBOX A3 APPEND INBOX {size} From: John Doe <john@example.com> To: Jane Smith <jane@example.com> Subject: Test Message Content-Type: text/plain; charset=UTF-8 This is a test message.
MDA-I.19	Message with Unicode value in unstructured header can be stored via IMAP		pass
MDA-I.20	Message with EAI address in originator header is accessible via IMAP		pass
MDA-I.21	Message with EAI address in destination address header is accessible via IMAP		pass
MDA-I.22	Message with Unicode value in unstructured header is accessible via IMAP		pass

MDA-P.1	POP UTF8 USER capability is advertised	Refer STEP – 2.0 (POP)	pass
MDA-P.2	POP UTF8 command is accepted		pass
MDA-P.3	POP UTF8 USER command is accepted		pass
MDA-P.4	POP STLS command is rejected in UTF8 mode		pass
MDA-P.5	POP LIST command reports size of Unicode message as octet count		pass
MDA-P.6	Unicode username is accepted via POP		pass
MDA-P.7	Message with Unicode value in originator header is accessible via POP		pass
MDA-P.8	Message with Unicode value in destination address header is accessible via POP		pass
MDA-P.9	Message with Unicode value in unstructured header is accessible via POP		pass

MSP.1	Local part of address containing Unicode can be configured		pass
MSP.2	Local part of address containing Unicode is available by default		pass
MSP.3	Domain part of address containing Unicode can be configured		pass
MSP.4	Domain part of address containing Unicode is available by default		pass
MSP.5	Email addresses containing Unicode are displayed as Unicode		pass
MSP.6	Supports provision of an ASCII-equivalent alias, for use with an EAI mailbox, on user request		pass
MSP.7	Mailbox name containing Unicode is accepted		pass
MSP.8	Mailbox name containing Unicode is displayed as entered		pass
MSP.9	Address with local part containing Unicode receives messages		pass
MSP.10	Address with domain part containing Unicode receives messages		pass
MSP.11	Address with local part containing Unicode sends messages		pass
MSP.12	Address with domain part containing Unicode sends messages		pass

TOOL.1	Accepts email addresses and domain names from any writing system and displays the correct glyphs where applicable		pass
TOOL.2	Product must always display email local parts, and domain names as UTF-8. For emphasis, domain names must be displayed as U-Labels.		pass
TOOL.3	Product fully supports (stores, accepts, displays, etc) as Unicode in all appropriate email structures such as headers, addresses, and subject lines.		pass

TOOL.6	Product may send messages from international email addresses, and may receive messages at international email addresses, as appropriate for the product's functionality		pass
TOOL.7	If product functionality depends on assignment of a domain name, that domain name can be an international domain name		pass
TOOL.8	If product can be contacted by email, it can be contacted by internationalized email addresses.		pass
TOOL.9	If product hosts email mailboxes, it can host or be contacted by internationalized email addresses.		pass
TOOL.10	Product localized to support languages with RTL scripts correctly displays email addresses in RTL scripts		pass
TOOL.11	Product can receive messages from any valid international email addresses, and receive, store, and process that address without corruption		pass

Visit the web site: https://universalacceptance.lk/tools/_index.html to convert Unicode to Punycode and revert to original.

Refer ID	Steps
1.0	• Open CMD or any other telnet supported terminal. • Type the following command: telnet <hostname> <port>, replacing <hostname> with the domain or IP address of the server you want to connect to, and <port> with the specific port number you want to test. For example, to connect to a mail server on port 25, you can use telnet example.com 25. • If the connection is successful, you will see a message indicating that you are connected to the server. You can now interact with the server. • Depending on the specific service you are testing, you can enter commands or send data to the server to perform various tasks. For example, if you are testing an SMTP server, you can use commands like EHLO, HELO, MAIL FROM, RCPT TO, etc. to simulate an email conversation
2.0 (POP)	• When the server advertises the "UTF8 USER" capability, it indicates that usernames containing non-ASCII characters encoded in UTF-8 can be used for authentication. • To authenticate with a server that supports the "UTF8 USER" capability, you can provide the username encoded in UTF-8 when sending the USER command during the POP authentication process. • Type the following command to initiate a Telnet session with the POP server: “telnet pop.example.com 110 “ • Replace pop.example.com with the hostname or IP address of the POP server you want to connect to. • Check if the server advertises the "UTF8 USER" capability by typing the command: “CAPA” • Look for the "UTF8 USER" capability in the server's response. If it is present, you can proceed with the authentication process using a UTF-8 encoded username. • Send the USER command with the UTF-8 encoded username by typing the following command: “USER user@example.com“ • Replace user@example.com with the UTF-8 encoded username you want to use. • Press Enter to send the command to the server. • By following these steps, you can authenticate with the POP server using Telnet in the Command Prompt, including the use of a UTF-8 encoded username if the server supports the "UTF8 USER" capability.
3.0 (IMAP)	• Open the Command Prompt on your computer. • Type the following command to initiate a Telnet session with the IMAP server: “telnet imap.example.com 143” • Replace imap.example.com with the hostname or IP address of the IMAP server you want to connect to. Use the appropriate port number (usually 143 for unencrypted IMAP or 993 for IMAP over SSL/TLS). • Issue the CAPABILITY command to check for the supported authentication mechanisms. Type the following command: “A1 CAPABILITY“ • Press Enter to send the command to the server. Note that A1 is a placeholder for a unique tag or identifier you choose.

	• The server will respond with a list of supported capabilities, including the supported authentication mechanisms. Look for the presence of the "AUTHENTICATE" capability or any indication that the "LOGIN" command accepts UTF-8 encoded credentials. • If the "AUTHENTICATE" capability is listed or the server explicitly mentions UTF-8 support for "LOGIN", you can proceed with the authentication process using Telnet commands. • Use the appropriate command based on the capabilities indicated. For example, if "AUTHENTICATE" is supported, you can use it with the desired authentication mechanism (e.g., "PLAIN", "LOGIN", etc.). If "LOGIN" accepts UTF-8, you can directly use it with UTF-8 encoded credentials. • Follow the steps for authentication based on the specific command and encoding mechanism supported by the server. • Continue with the IMAP session as needed, issuing further commands to retrieve or manage email messages