

LGR Toolset User Guide (Basic Mode)



IDN Program
November 2023

Availability of LGR Toolset

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- Online deployment
 - Visit <https://lgrtool.icann.org/>
- Open source package(s) release with BSD license
 - Released at github: [lgr-core](#), [lgr-django](#), [munidata](#), [picu](#)
- For queries or feedback
 - Email to IDNProgram@icann.org
- For further details, visit the [LGR Toolset webpage](#) or www.icann.org/idn

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Landing Page

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Validate Label(s)
Against an LGR

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Label Forms

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Agenda Details

- **Landing Page**
 - The interface with all modes

- **Validate label(s) against an LGR - Basic Mode**
 - Validate label against the selected LGR
 - Validate a single label
 - Check label(s) for collision with existing TLD
 - Include mix-script variant label
 - Validate label(s) by uploading the file

- **Label Forms**
 - Manual input
 - Uploading the list
 - Downloading the result

Landing Page

Landing Page of the LGR tool

- A user guide with more information is published on the [LGR Tool webpage](#).
- Go to link - Use the **Label Generation Rules Tool**

🏠 LGR Tools

Tasks

Help ▾

🔍 Label forms

👤 lgr-user ▾

Welcome to the LGR (Label Generation Ruleset) Tools

Select your mode:

Basic Mode

✓ Validate label(s) against an LGR

🔍 Review IDN table(s)

🔧 Advanced LGR Tools

Advanced Mode

IDN Table Reviewing

Validate Label(s) Against an LGR

– Basic Mode

Validate Label(s) Against an LGR

Step 1: Click the “Validate label(s) against an LGR” to validate labels.



Welcome to the LGR (Label Generation Ruleset) Tools

Select your mode:



If you have questions, please contact globalsupport@icann.org

English (en)

Click to start using the
Validate Label(s)
Against an LGR
- Basic Mode

Validate Label(s) Against an LGR

Step 2: Select the LGR and Input the Label(s)

Label Validation Tool

Validate label(s) against

lgr-5-common-26may22-en.xml

2-1. Select required version of RZ-LGR

View LGR as [XML](#) | [HTML](#)

View RZ-LGR version as XML or HTML

 [Upload a list of labels](#)

Label

3. Two ways to input label(s)
3.a. Enter a single label manually
3.b. Upload a list of labels

Check for collision with existing TLDs

Include mixed script variants

To add or remove new label manually

Validate

Validate Label(s) Against an LGR

Step 3: Select Optional Checks and Click 'Validate'

Label Validation Tool

Validate label(s) against

lgr-5-common-26may22-en.xml

[View LGR as XML](#) | [HTML](#)

 [Upload a list of labels](#)

Label

4. Check if the label collides with existing TLDs

Check for collision with existing TLDs

Include mixed script variants

5. Check if mixed script variants are needed

Validate

6. Press "Validate" to get results

Validate a Single Label (Example 1)

Example 1: Validating a label “app” against the Latin Script RZ-LGR without performing collision check or including the mixed script variant calculation.

Label Validation Tool

Add label “app” →

Select “Latin script LGR” →

When both boxes are unchecked →

Validate label(s) against View LGR as [XML](#) | [HTML](#)

[Upload a list of labels](#)

⊗ +

Label can be in U-Label or A-Label form or a list of code points.

Check for collision with existing TLDs

Include mixed script variants

Validate a Single Label (Example 1 - output)

Example 1: Validating a label “app” against the Latin Script RZ-LGR without performing collision check or including the mixed script variant calculation.

The output shows validity

app

✓ VALID

U-label	Disposition	Code point sequence	
app app	valid	U+0061 (a) U+0070 (p) U+0070 (p)	Show / hide log

[Action index: 9] <action disp="valid" comment="catch all (default action) @"/>

Validate a Single Label (Example 1 - output)

The output shows variants, excluded mixed-script variants

Variant labels (including original as last)

5 variant label(s) generated.
By disposition: blocked: 4, valid: 1

ápp
xn--pp-lia blocked U+00E1 (á) U+0070 (p) U+0070 (p) [Show / hide log](#)

[Action index: 2] <action disp="blocked" any-variant="blocked" comment="any variant label containing blocked variants is blocked" />

ápp
xn--hxa6ba blocked U+03AC (á) U+03C1 (p) U+03C1 (p) [Show / hide log](#)

[Action index: 2] <action disp="blocked" any-variant="blocked" comment="any variant label containing blocked variants is blocked" />

app
xn--mxa6aa blocked U+03B1 (a) U+03C1 (p) U+03C1 (p) [Show / hide log](#)

[Action index: 2] <action disp="blocked" any-variant="blocked" comment="any variant label containing blocked variants is blocked" />

app
xn--80a6aa blocked U+0430 (a) U+0440 (p) U+0440 (p) [Show / hide log](#)

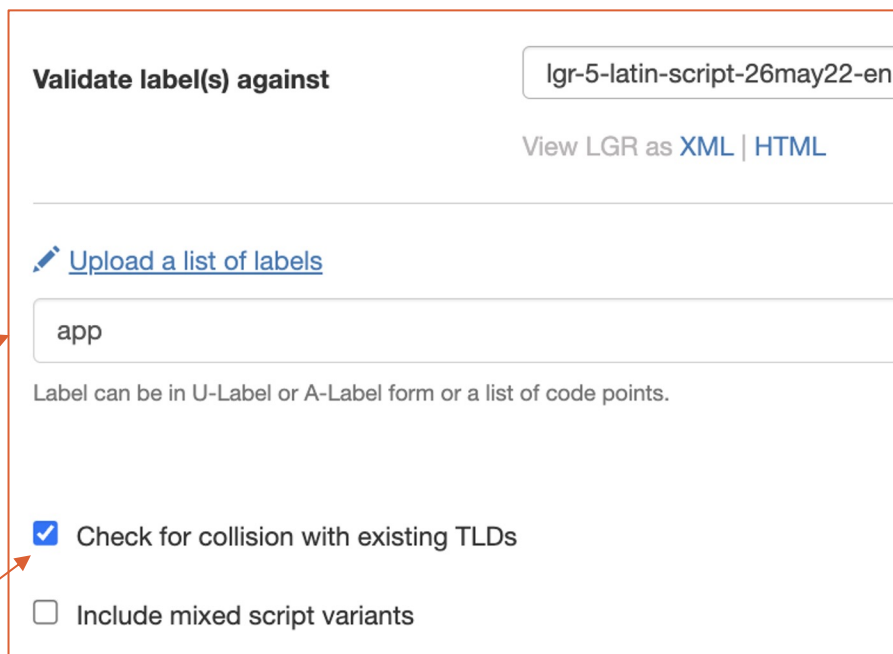
[Action index: 2] <action disp="blocked" any-variant="blocked" comment="any variant label containing blocked variants is blocked" />

app
app valid U+0061 (a) U+0070 (p) U+0070 (p) [Show / hide log](#)

[Action index: 9] <action disp="valid" comment="catch all (default action)" />

Validate a Single Label (Example 2)

Example2: Validating a label “app” against the Latin Script RZ-LGR with performing collision check and without including the mixed script variant calculation.



Validate label(s) against

[View LGR as XML | HTML](#)

[Upload a list of labels](#)

Label can be in U-Label or A-Label form or a list of code points.

Check for collision with existing TLDs

Include mixed script variants

Input label
“app”

When Collision
Check is selected

Select
“Latin script RZ LGR”

Validate a Single Label (Example 2 - output)

Example2: Validating a label “app” against the Latin Script RZ-LGR with performing collision check and without including the mixed script variant calculation.

Result of
Checking
Collision

✘ The input label or its variant labels collide with an existing TLD or its variant TLDs.

Collision

The label is in the TLDs list


The rest will be the same result as Example 1

Validate a Single Label (Example 3)

Example3: Validating a label “app” against the Latin Script RZ-LGR with performing both collision check and calculating mixed script variant.

Validate label(s) against

[View LGR as XML](#) | [HTML](#)

 [Upload a list of labels](#)

Label can be in U-Label or A-Label form or a list of code points.

Check for collision with existing TLDs

Include mixed script variants

Select
“Latin script RZ
LGR”

Input label
“app”

When both
Collision Check
and Include
Mixed Script
variants are
selected

Validate a Single Label (Example 3 - output)

Example3: Validating a label “app” against the Latin Script RZ-LGR with performing both collision check and calculating mixed script variant.

Result of
Checking
Collision

✘ The input label or its variant labels collide with an existing TLD or its variant TLDs.

Collision

The label is in the TLDs list

Validate a Single Label (Example 3 - output)

Variant labels (including original as last)

45 variant label(s) generated.

By disposition: blocked: 44, valid: 1

app	valid	U+0061 (a) U+0070 (p) U+0070 (p)	Show / hide log
app			

[Action index: 9] <action disp="valid" comment="catch all (default action) ☹"/>

Too many variant labels to be displayed in the browser. You can download the whole results in .csv.

[Download results in CSV](#)

Download the result in the file, which shows variants, including mixed-script variants in a table format

Validate Labels by Uploading the File (Example 4)

Label Validation Tool

Validate label(s) against

lgr-5-arabic-script-26may22-en

View LGR as [XML](#) | [HTML](#)

 [Manually input label\(s\)](#)

Upload the file with a list of labels

Choose file example4.txt

File should be a text file encoded in UTF-8 and using 0x0A line ending. It must contain one label per line in U-Label or A-Label form or as a list of code points. Comments begin with '#'

Check for collision with existing TLDs

Include mixed script variants

Validate

Validate Labels by Uploading the File (Example 4 – input)

Input file with labels

Downloads/example4.txt ↕

#VALID Labels

لذیذ

نجوم

جمیل

حبیبی

#INVALID Labels

مییہ

شکر

Validate Labels by Uploading the File (Example 4 – output)

Validate label(s) against

lgr-5-arabic-script-26may22-en

View LGR as [XML](#) | [HTML](#)

 [Manually input label\(s\)](#)

No file chosen

File should be a text file encoded in UTF-8 and using 0x0A line ending. It must contain one label per line in U-Label or A-Label form or as a list of code points. Comments begin with '#'

- Check for collision with existing TLDs
- Include mixed script variants

1. Results and status of list of labels will be present on the Task Status Page

Your request was sent successfully, the validation task processing can take minutes, even hours. You can follow your task progression on the [task status page](#).

Validate

Validate Labels by Uploading the File (Example 4 - output)

Tasks

Tasks are ordered from newest to latest

Annotate labels on LGR 5	July 25, 2023, 5:05 p.m.	 Download report	Success		The report expires in 15 days
Review of 1 IDN table	July 21, 2023, 6:57 a.m.	 Download report	Success		The report expires in 11 days
Review of 1 IDN table	July 17, 2023, 10:05 a.m.	 Download report	Success		The report expires in 3 days
Review of 1 IDN table	July 13, 2023, 2:55 p.m.	 Download report	Success		The report expires in 3 days

Status bar shows the status of task (the latest report on top)

Click on the download link on the homepage to get the "Diff labels of two LGRs" results

File life

When you delete a task, the corresponding report is not deleted

 Delete completed tasks

Validate Labels by Uploading the File (Example 4 - output)

Output file of labels validation

Downloads/20231114_061655_annotation_lgr-5-arabic-script-26may22-en.tx

```
|valid : لذيد  
valid : نجوم  
valid : جميل  
valid : حبيبي  
invalid : مَيِّه  
Code point U+0640 not in repertoire  
Code point U+064E not in repertoire  
Code point U+0640 not in repertoire  
Code point U+064E not in repertoire  
invalid : شكر  
Code point U+FEB7 not in repertoire  
Code point U+FEDC not in repertoire  
Code point U+FEAE not in repertoire
```

Label Forms

A label, U label against IDNA2008

Label Forms

- Type in a label or upload a list of labels

Click to start using the Label forms function



↑ LGR Tools Tasks Help ▾ **Label forms** lgr-user ▾

Welcome to the LGR (Label Generation Ruleset) Tools

Select your mode:

- ✓ **Validate label(s) against an LGR**
- Review IDN table(s)
- Advanced LGR Tools

If you have questions, please contact globalsupport@icann.org

English (en) ▾ Go

This function is available for all modes in the LGR tool. The purpose of this is to provide the U-label/ A-label and codepoints of the input label(s).

Label Forms

Display all label forms

Label

Label can be in U-Label or A-Label form or a list of code points.

Check labels one by one



Click to see the result label form



Display forms

Get label forms on a list of labels

Labels

Choose file No file chosen

File should be a text file encoded in UTF-8 and using 0x0A line ending. It must contain one label per line in U-Label or A-Label form or as a list of code points. Comments begin with '#'

Download forms

Label Forms - Input One Label (Example 1 - valid)

Display all label forms

1. Input is Unicode label

Label

李子

Label can be in U-Label or A-Label form or a list of code points.

2. Click to see the result

Display forms

Code point sequence

U-label

A-label

U+674E U+5B50

李子

xn--i8sx2z

Code point sequence, U-label, A-label - all 3 forms will be generated based on the input

Label Forms - Input One Label (Example 1 - invalid)

Display all label forms

Warning Note

李子。 is invalid as it contains full stop (dot).

1. Input is Unicode label

Label

李子。

Label can be in U-Label or A-Label form or a list of code points.

2. Click to see the result

Display forms

Code point sequence

U-label

A-label

U+674E U+5B50 U+3002

-

-

Code point sequence will be generated,
U-label, A-label forms will not be generated.

Label Forms - Input One Label (Example 2 - valid)

Display all label forms

1. Input is Code point sequence

Label

U+101D U+1031 U+1006 U+102C

Label can be in U-Label or A-Label form or a list of code points.

2. Click to see the result

Display forms

Code point sequence	U-label	A-label
U+101D U+1031 U+1006 U+102C	ᄁᄂᄃᄄ	xn--tid9b4bs

Code point sequence, U-label, A-label - all 3 forms will be generated based on the input

Label Forms - Input One Label (Example 2 - invalid)

Display all label forms

Warning Note

၆၀၃၃၀. is invalid as it contains full stop (dot).

1. Input is Unicode label

Label

U+101D U+1031 U+1006 U+102C U+3002

Label can be in U-Label or A-Label form or a list of code points.

2. Click to see the result

Display forms

Code point sequence	U-label	A-label
U+101D U+1031 U+1006 U+102C U+3002	-	-

Code point sequence will be generated,
U-label, A-label forms will not be generated.

Label Forms - Input a List of Labels (Example 3)

Upload file to check the list of labels
(in txt format)

Get label forms on a list of labels

Labels

Choose file No file chosen

File should be a text file encoded in UTF-8 and using 0x0A line ending. It must contain one label per line in U-Label or A-Label form or as a list of code points. Comments begin with '#'

Download forms

Download the result file of Label forms
(in csv format)

Label Forms - Input a List of Labels (Example 3 - Input)



example3.txt

Downloads/example3.txt ↕

```
#Code points - valid
U+1005 U+102D U+1014 U+103A
#Code points - invalid
U+1005 U+102D U+1014 U+103A U+002D
#Unicode - valid
ရတနာ
#Unicode - invalid
ရတ--နာ
#Punycode - valid
xn--ridd1ji0d
#Punycode - invalid
xn--vi8hua2f
```

- Input file format is .txt.
- Input can be one label per line.
- Each label can be in
 - Code point sequence
 - Unicode
 - Punycode
- The lines beginning with '#' are comments and will not be processed.

Label Forms - Input a List of Labels (Example 3 - Output)

Input	Code point sequence	U-label	A-label	Note
U+1005 U+102D U+1014 U+103A	U+1005 U+102D U+1014 U+103A	စီနီ	xn--sid4a9d7b	-
U+1005 U+102D U+1014 U+103A U+002D	U+1005 U+102D U+1014 U+103A U+002D	-	-	စီနီ- is invalid due to hyphen restrictions in the RFC5891 as it ends with a hyphen-minus.
ရတနာ	U+101B U+1010 U+1014 U+102C	ရတနာ	xn--3idit4e	-
ရတ--နာ	U+101B U+1010 U+002D U+002D U+1014 U+102C	-	-	ရတ--နာ is invalid due to hyphen restrictions in the RFC5891 as it contains hyphen-minus in the third and fourth positions.
xn--ridd1ji0d	U+1006 U+102D U+102F U+1004 U+103A	ဆိုင်	xn--ridd1ji0d	-
xn--vi8hua2f	U+D83C U+DF55 U+D83C U+DF5F U+D83C U+DF79	-	-	'utf-8' codec can't encode characters in position 55-60: surrogates not allowed

- Output csv: *U-label* and *A-label* forms will be generated when
 - Input is Code point sequence and valid
 - Input is U-label and valid
 - Input is A-label and valid

Label Forms - Input a List of Labels (Example 3 - Output)

Input	Code point sequence	U-label	A-label	Note
U+1005 U+102D U+1014 U+103A	U+1005 U+102D U+1014 U+103A	စီနီ	xn--sid4a9d7b	-
U+1005 U+102D U+1014 U+103A U+002D	U+1005 U+102D U+1014 U+103A U+002D	-	-	စီနီ- is invalid due to hyphen restrictions in the RFC5891 as it ends with a hyphen-minus.
ရတနာ	U+101B U+1010 U+1014 U+102C	ရတနာ	xn--3idit4e	-
ရတ--နာ	U+101B U+1010 U+002D U+002D U+1014 U+102C	-	-	ရတ--နာ is invalid due to hyphen restrictions in the RFC5891 as it contains hyphen-minus in the third and fourth positions.
xn--ridd1ji0d	U+1006 U+102D U+102F U+1004 U+103A	ဆိုင်	xn--ridd1ji0d	-
xn--vi8hua2f	U+D83C U+DF55 U+D83C U+DF5F U+D83C U+DF79	-	-	'utf-8' codec can't encode characters in position 55-60: surrogates not allowed

- Output csv: Notes will be generated, (with no A-label or U-label) when
 - Input is Code point sequence and IDNA2008-non-compliant
 - Input is U-label and IDNA2008-non-compliant
 - Input is A-label and IDNA2008-non-compliant

Engage with ICANN and IDN Program



Thank You and Questions

Reach us at: IDNProgram@icann.org

Website: icann.org/idn



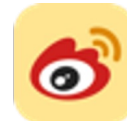
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