



Department of Information Technology,
Ministry of Communications and Information Technology,
Government of India, New Delhi

Draft Policy Document For

INTERNATIONALIZED DOMAIN NAMES

Language: NEPALI



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RECORD OF CHANGES

***A - ADDED M - MODIFIED D - DELETED**

VERSION NUMBER	DATE	PAGES AFFECTED	A* M D	TITLE OR BRIEF DESCRIPTION	COMPLIANCE VERSION OF MAIN POLICY DOCUMENT
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1. AUGMENTED BACKUS-NAUR FORMALISM (ABNF)

1.1 Declaration of variables

Dash → Hyphen -

Digit → Indo-Arabid digits [0-9]

C → Consonant

M → Matra

V → Vowel

D → Anusvara / Bindu

B → Chandrabindu / Anunasika

X → Visarga

Y → Avagraha

H → Halanta / Virama

1.2 ABNF Operators

S. No.	Symbols	Functions
1	“/”	Alternative
2	“[]”	Optional
3	“*”	Variable Repetition
4	“ () ”	Sequence Group

In what follows the Vowel Sequence and the Consonant Sequence pertinent to Nepali are given.

1.3 The Vowel Sequence

A vowel sequence is made up of a single vowel. It may be followed but not



necessarily (optionally) by an Anuswara (D), Chandrabindu (B) or a Visarga (X) The number of D, B or X which can follow a V in Nepali may be restricted to one. The possibility of a Visarga following a Chandrabindu or Anuswara is ruled out, since it is used only in Vedic and in Bangla script. The vowel sequence in Nepali is therefore V [D |B | X]

Examples :

V अ

V[D] अं

V[B] अँ

V[X] अः

1.4 Consonant Sequence

A consonant sequence admits the following shapes:

1. A single consonant (C)

Example: क

2. A consonant optionally followed by dependent vowel sign[M] or anuswara[D] Chandrabindu[B] or visarga[X] or Halanta [H]

C[M|D|B|X|H]

Example:

C[M] कि

C[D] कं

C[B] कँ

C[X] कः

C[H] क् (Pure Consonant)

2.a. A CM sequence can be optionally followed by D, B or X (CM)[D|B|X]

Example:

CM[D] कीं

CM[B] काँ

CM[X] कीः



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3. A sequence of consonants (up to 4) joined by Halanta *3(CH)C

Example:

CHCHCHC न्त्रय न+क्+र+य

Subsets

3.a. The combination may be followed by M , D,B or X

Example:

CHC[M] क्की क् क् की

CHC[D] क्कं क् क् कं

CHC[B] क्कँ क् क् कँ

CHC[X] क्कः क् क् कः

3.b. *3(CH)CM may be followed by a D, B or X

Example:

CHCM[D] क्की क् क् की ं

CHCM[B] क्की क् क् की ँ

CHCM[X] क्कीः क् क् की ः

The final canonical structure of the consonant sequence in IDN can be defined in ABNF as:

*3(CH)C[H|D|B|X][M[D|B|X]]

It should be noted that in the case of Sanskrit the possible sequence could be:

*4(CH)C[H|D|B|X][M[D|B|X]]

as exemplified in the word:

कात्स्न्य

Although this is possible, it is not used in neo-Prakrits unless a potential client chooses it as a possible IDN.



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1.5 ABNF Applied to the IDN

The formalism can be applied to create/validate IDN labels. So a valid IDN label can be defined as follows.

Vowel-sequence \rightarrow V [D | B | X]

Consonant-sequence \rightarrow *3(CH)C [H|D|B|X |M[D | B | X]]

Sequence \rightarrow consonant-sequence[Y] | vowel-sequence[Y]

IDN-label \rightarrow (sequence | digit) * ([dash] (sequence |digit))



2. RESTRICTION RULES

The ABNF is generic in nature and when applied to a specific language/script certain restriction rules apply. In other words, in a given language some of the Formalism structures do not necessarily apply. To take care of such cases restriction rules are set in place. These restrictions will help to fine-tune the ABNF.

In the case of Nepali the following rules apply:

1. H | D|B|X |M cannot occur in the beginning of an IDN domain name

Example:

क्

ंक

ँक

ःक

िक

As can be seen they will result automatically in a “golu” marking an invalid character. This is an intrinsic property of the Indic syllable and is quasi automatically applied.

2. H is not permitted after V, D,B, X, M, digit and dash

Example:

अ्

कं

कँ

कः

कि

l

-



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3. Number of D,B or X permitted after consonant-sequence or vowel-sequence or M is restricted to one

Example:

कं

कँ

कः

कीं

कौं

कीः

अं

अँ

अः

4. Number of M permitted after consonant-sequence is restricted to one

Example: कीी

5. M is not permitted after V

Example: ईा

6. The combination of Anusvara+Visarga, chandrabindu+Anusvara, chandrabindu+visarga and vice-versa is not permissible.

Example:

कः

कँः

कः

7. There are only two combinations are possible with Consonant र (0931)

Examples:

CHC च र् य

CHC ह र् ह

8. A consonant syllable that is intended to end with Halant [H] can only be followed by Hyphen, digit or Avagraha [Y].



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3. EXAMPLES

Combination	Example	Word With Combination
C	च	चमक
CH	म्	अहम्
CM	दा	उदार
CD	सं	संग
CB	सँ	सँग
CX	नः	पुनः
CMD	सिं	सिंहासन
CMB	चाँ	चाँप
CMX	दुः	दुःखद
CHC	व्य	व्यतित
CHCHC	न्त्र	यन्त्रकार
V	आ	आज
VD	अं	अंश
VB	आँ	आँखें
VX	ईः	कटाईः



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4. LANGUAGE TABLE: NEPALI¹

0900

Devanagari

097F

	090	091	092	093	094	095	096	097
0	ऐ	ठ	र	ी	ॐ	ॐ	ॐ	ॐ
1	ॐ	आ	ड	र	उ	ॐ	ॐ	ॐ
2	ॐ	ओ	ढ	ल	ॐ	ॐ	ॐ	अँ
3	ॐ	ओ	ण	ळ	ॐ	ॐ	ॐ	
4	ऐ	औ	त	ळ	ॐ	ॐ	ॐ	
5	अ	क	थ	व	ॐ		॥	
6	आ	ख	द	श	ॐ		ॐ	
7	इ	ग	ध	ष	ॐ		ॐ	
8	ई	घ	न	स	ॐ	क	र	
9	उ	ड	न	ह	ॐ	ख	ॐ	
A	ऊ	च	प		ॐ	ग	ॐ	
B	ॐ	छ	फ		ॐ	ज	ॐ	ग
C	ॐ	ज	ब	ॐ	ॐ	ड	ॐ	ज
D	ॐ	झ	भ	ॐ	ॐ	ढ	ॐ	ॐ
E	ॐ	ञ	म	ॐ		फ	ॐ	ड
F	ॐ	ट	य	ॐ		य	ॐ	ब

Nepali

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¹ Characters marked in yellow are not applicable to the language.



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5. NOMENCLATURAL DESCRIPTION TABLE OF NEPALI LANGUAGE TABLE

Chandrabindu/Anunasika (B)		
0901	ँ	DEVANAGARI SIGN CANDRABINDU = anunasika
Anusvara/Bindu (D)		
902	ं	DEVANAGARI SIGN ANUSVARA = bindi
Visarga (X)		
0903	ः	DEVANAGARI SIGN VISARGA
Independent vowels (V)		
0905	अ	DEVANAGARI LETTER A
0906	आ	DEVANAGARI LETTER AA
0907	इ	DEVANAGARI LETTER I
0908	ई	DEVANAGARI LETTER II
0909	उ	DEVANAGARI LETTER U
090A	ऊ	DEVANAGARI LETTER UU
090B	ऋ	DEVANAGARI LETTER VOCALIC R
090F	ए	DEVANAGARI LETTER E
0910	ऐ	DEVANAGARI LETTER AI
0913	ओ	DEVANAGARI LETTER O
0914	औ	DEVANAGARI LETTER AU
Consonants (C)		
0915	क	DEVANAGARI LETTER KA



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0916	ख	DEVANAGARI LETTER KHA
0917	ग	DEVANAGARI LETTER GA
0918	घ	DEVANAGARI LETTER GHA
0919	ङ	DEVANAGARI LETTER NGA
091A	च	DEVANAGARI LETTER CA
091B	छ	DEVANAGARI LETTER CHA
091C	ज	DEVANAGARI LETTER JA
091D	झ	DEVANAGARI LETTER JHA
091E	ञ	DEVANAGARI LETTER NYA
091F	ट	DEVANAGARI LETTER TTA
0920	ठ	DEVANAGARI LETTER TTHA
0921	ड	DEVANAGARI LETTER DDA
0922	ढ	DEVANAGARI LETTER DDHA
0923	ण	DEVANAGARI LETTER NNA
0924	त	DEVANAGARI LETTER TA
0925	थ	DEVANAGARI LETTER THA
0926	द	DEVANAGARI LETTER DA
0927	ध	DEVANAGARI LETTER DHA
0928	न	DEVANAGARI LETTER NA
092A	प	DEVANAGARI LETTER PA
092B	फ	DEVANAGARI LETTER PHA
092C	ब	DEVANAGARI LETTER BA



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092D	भ	DEVANAGARI LETTER BHA
092E	म	DEVANAGARI LETTER MA
092F	य	DEVANAGARI LETTER YA
0930	र	DEVANAGARI LETTER RA
0931	ः	DEVANAGARI LETTER RRA • half form is represented as Eyelash RA.
0932	ल	DEVANAGARI LETTER LA
0935	व	DEVANAGARI LETTER VA
0936	श	DEVANAGARI LETTER SHA
0937	ष	DEVANAGARI LETTER SSA
0938	स	DEVANAGARI LETTER SA
0939	ह	DEVANAGARI LETTER HA
Dependent vowel signs (Matras)(M)		
093E	ा	DEVANAGARI VOWEL SIGN AA
093F	ि	DEVANAGARI VOWEL SIGN I • stands to the left of the consonant
0940	ी	DEVANAGARI VOWEL SIGN II
0941	ु	DEVANAGARI VOWEL SIGN U
0942	ू	DEVANAGARI VOWEL SIGN UU
0943	ृ	DEVANAGARI VOWEL SIGN VOCALIC R
0945	ँ	DEVANAGARI VOWEL SIGN CANDRA E = candra
0947	े	DEVANAGARI VOWEL SIGN E
0948	ै	DEVANAGARI VOWEL SIGN AI



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094B	ो	DEVANAGARI VOWEL SIGN O
094C	ौ	DEVANAGARI VOWEL SIGN AU
Various signs: Halant (H)		
094D	्	DEVANAGARI SIGN VIRAMA = halant (the preferred name) • suppresses inherent vowel
Avagraha (Y)		
093D	s	DEVANAGARI SIGN AVAGRAHA



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6. VARIANT TABLE

VARIANTS		
र 0931+ 094D	- 002D	
द्र 0926+094D +0917	द्र 0926+094D +0930	द्र 0926+094D +0928
ढ 0926+094D+0927	ढ 0926+094D+0918	
ष्ट 0937+094D+091F	ष्ठ 0937+094D+0920	
श्व 0936+094D+0935	श्च 0936+094D+0930+094D+0935	
श्न 0936+094D+0928	श्न 0936+094D+0930+094D+0928	
श्च 0936+094D+091A	श्च 0936+094D+0930+094D+091A	
श्ल 0936+094D+0932	श्ल 0936+094D+0930+094D+0932	
त 0924+094D+0924	त 0924	



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ॐ 0901	ॐ 0945+0902
द्व 0926+094D+0935	द्व 0926+094D+092C



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7. EXPERTISE/BODIES CONSULTED

Expertise provided through the script grammar of Nepali provided by Dr G S Nepal Head Department of Nepali. North Bengal Academy and further approved by Nepali Academy. The layout was further ratified at PRSG's held in New Delhi as well as in Pune.



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8. PROPOSED ccTLD FOR NEPALI

India (Bhārat) localized in Nepali - भारत

Note: You can send your feedbacks to ids-feedback@cdac.in