

Draft Policy Document For

INTERNATIONALIZED DOMAIN NAMES

Language: KANNADA



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

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-Arabic digits [0-9]
C	→ Consonant
M	→ Matra
V	→ Vowel
D	→ Anusvara
X	→ Visarga
Y	→ Avagraha
H	→ Halant / 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 Kannada are given. To facilitate use , equivalents in Devanagari are provided.

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) or a Visarga (X) The number of D or X which can follow a V in Kannada may be restricted to one.

The vowel sequence in Kannada is therefore V [D | X]

Examples :

V	ಅ	ಆ
V[D]	ಅಂ	ಆಂ
V[X]	ಅಃ	ಆಃ

1.4 Consonant Sequence

A consonant sequence admits the following shapes:

1. A single consonant (C)

Example

C	ಕ	ಕ
---	---	---

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

C[M|D|X|H]

Example:

C[M]	ಕಿ	ಕಿ
C[D]	ಕಂ	ಕಂ
C[X]	ಕಃ	ಕಃ
C[H]	ಕ್	ಕ್ (Pure Consonant)

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

Example:

CM[D]	कै०	कीं
CM[X]	विः	वीः

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

Example:

CHCHCHC नैऋत् → न्+रु+रु+य न्+क्+रु+य

Subsets

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

Example:

CHC[M]	कृ०	क्की	क् क ी
CHC[D]	कृ०	क्कं	क् क ं
CHC[X]	कृः	क्कः	क् क ः

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

CHCM[D|X]

Example:

CHCM[D]	कृ०	क्कीं	क् क ी ं
CHCM[X]	कृः	क्कीः	क् क ी ः



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1.5 ABNF Applied to KANNADA IDN

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

Vowel Sequence \rightarrow V[D|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 Kannada the following rules apply:

1.H | D|X |M canot occur in the beginning of an IDN domain name

Example:

ಹೆ	ಕ್
ಹೆ	ಕಿ
ಹಂ	ಕಂ
ಹಃ	ಕಃ

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 wherever supported by the OS.

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

Example:

ಅಹ	ಅಕ್
ಕಂಹ	ಕಂಕ್
ಕಃಹ	ಕಃಕ್
ಕಿಹ	ಕಿಕ್
1ಹ	1ಕ್

-ॐ

-ॐ

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

Example:

कॐॐ

कंॐ

कःॐ

कःॐ

कॐॐॐ

कींॐ

कॐःॐ

कीःॐ

अॐॐॐ

अंॐ

अःॐ

अःॐ

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

Example:

कॐॐॐ

कीी

5. M is not permitted after V

Example:

कॐॐ

ईा

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

Example:

कॐः

कंः

कःॐ

कःॐ

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

3. EXAMPLES

Following are the some examples of KANNADA IDN Label.

Combination	Example	Word With Combination
C	ಕ	ಕಮಲ
CH	ತ್	ಭಾರತ್
CM	ಚಾ	ಚಾಪೆ
CD	ಪಂ	ಪಂಡಿತ
CX	ಥ:	ತಥ:
CMD	ಚಂ	ಚಂದಿರ
CMX	ದು:	ದು:ಖ
CHC	ವ್ಯ	ಕಾವ್ಯ
CHCHC	ಪ್ರ	ಶಾಸ್ತ್ರ
V	ಅ	ಅನೆ
VD	ಅಂ	ಅಂಗ



4. LANGUAGE TABLE : KANNADA¹

	0C8	0C9	0CA	0CB	0CC	0CD	0CE	0CF
0		ಐ 0C80	ಠ 0C81	ಠ 0C82	ಠ 0C83		ಋ 0C84	
1			ಠ 0C85	ಠ 0C86	ಠ 0C87		ಠ 0C88	ಠ 0C89
2	ಠ 0C8A	ಠ 0C8B	ಠ 0C8C	ಠ 0C8D	ಠ 0C8E		ಠ 0C8F	ಠ 0C90
3	ಠ 0C91	ಠ 0C92	ಠ 0C93	ಠ 0C94	ಠ 0C95		ಠ 0C96	ಠ 0C97
4		ಠ 0C98	ಠ 0C99		ಠ 0C9A			
5	ಠ 0C9B	ಠ 0C9C	ಠ 0C9D	ಠ 0C9E		ಠ 0C9F		
6	ಠ 0CA0	ಠ 0CA1	ಠ 0CA2	ಠ 0CA3	ಠ 0CA4	ಠ 0CA5	ಠ 0CA6	
7	ಠ 0CA7	ಠ 0CA8	ಠ 0CA9	ಠ 0CAB	ಠ 0CAC		ಠ 0CAD	
8	ಠ 0CAE	ಠ 0CAF	ಠ 0CB0	ಠ 0CB1	ಠ 0CB2		ಠ 0CB3	
9	ಠ 0CB4	ಠ 0CB5		ಠ 0CB6			ಠ 0CB7	
A	ಠ 0CB8	ಠ 0CB9	ಠ 0CBA		ಠ 0CBB		ಠ 0CBC	
B	ಠ 0CBD	ಠ 0CBE	ಠ 0CBF		ಠ 0CC0		ಠ 0CC1	
C	ಠ 0CC2	ಠ 0CC3	ಠ 0CC4	ಠ 0CC5	ಠ 0CC6		ಠ 0CC7	
D		ಠ 0CC8	ಠ 0CC9	ಠ 0CCA	ಠ 0CCB		ಠ 0CCD	
E	ಠ 0CCE	ಠ 0CCF	ಠ 0CD0	ಠ 0CD1		ಠ 0CD2	ಠ 0CD3	
F	ಠ 0CD4	ಠ 0CD5	ಠ 0CD6	ಠ 0CD7			ಠ 0CD8	

Kannada

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

5. NOMENCLATURAL DESCRIPTION TABLE OF KANNADA LANGUAGE TABLE

Unicode Value	Character	Character Name
ANUSVARA (D)		
0C82	◌ಂ	KANNADA SIGN ANUSVARA
VISARGA (X)		
0C83	◌ಃ	KANNADA SIGN VISARGA
KANNADA VOWELS (V)		
0C85	ಅ	KANNADA LETTER A
0C86	ಆ	KANNADA LETTER AA
0C87	ಇ	KANNADA LETTER I
0C88	ಈ	KANNADA LETTER II
0C89	ಉ	KANNADA LETTER U
0C8A	ಊ	KANNADA LETTER UU
0C8B	ಋ	KANNADA LETTER VOCALIC R



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0C8C	ಁ	KANNADA LETTER VOCALIC L
0C8E	ಎ	KANNADA LETTER E
0C8F	ಏ	KANNADA LETTER EE
0C90	ಐ	KANNADA LETTER AI
0C92	ಒ	KANNADA LETTER O
0C93	ಓ	KANNADA LETTER OO
0C94	ಔ	KANNADA LETTER AU
CONSONANTS (C)		
0C95	ಕ	KANNADA LETTER KA
0C96	ಖ	KANNADA LETTER KHA
0C97	ಗ	KANNADA LETTER GA
0C98	ಘ	KANNADA LETTER GHA
0C99	ಙ	KANNADA LETTER NGA
0C9A	ಚ	KANNADA LETTER CA



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0C9B	ಚ	KANNADA LETTER CHA
0C9C	ಜ	KANNADA LETTER JA
0C9D	ಝ	KANNADA LETTER JHA
0C9E	ಞ	KANNADA LETTER NYA
0C9F	ಟ	KANNADA LETTER TTA
0CA0	ಠ	KANNADA LETTER TTHA
0CA1	ಡ	KANNADA LETTER DDA
0CA2	ಢ	KANNADA LETTER DDHA
0CA3	ಣ	KANNADA LETTER NNA
0CA4	ತ	KANNADA LETTER TA
0CA5	ಥ	KANNADA LETTER THA
0CA6	ದ	KANNADA LETTER DA
0CA7	ಧ	KANNADA LETTER DHA



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0CA8	ನ	KANNADA LETTER NA
0CAA	ಫ	KANNADA LETTER PA
0CAB	ಫ	KANNADA LETTER PHA
0CAC	ಬ	KANNADA LETTER BA
0CAD	ಭ	KANNADA LETTER BHA
0CAE	ಮ	KANNADA LETTER MA
0CAF	ಯ	KANNADA LETTER YA
0CB0	ರ	KANNADA LETTER RA
0CB1	ಠ	KANNADA LETTER RRA
0CB2	ಲ	KANNADA LETTER LA
0CB3	ಱ	KANNADA LETTER LLA
0CB5	ವ	KANNADA LETTER VA
0CB6	ಶ	KANNADA LETTER SHA



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0CB7	ಷ	KANNADA LETTER SSA
0CB8	ಸ	KANNADA LETTER SA
0CB9	ಹ	KANNADA LETTER HA
VOWEL SIGNS (MATRAS) (M)		
0CBE	಼	KANNADA VOWEL SIGN AA
0CBF	ಿ	KANNADA VOWEL SIGN I
0CC0	ೀ	KANNADA VOWEL SIGN II
0CC1	ು	KANNADA VOWEL SIGN U
0CC2	ೂ	KANNADA VOWEL SIGN UU
0CC3	್ರ	KANNADA VOWEL SIGN VOCALIC R
0CC6	ೇ	KANNADA VOWEL SIGN E
0CC7	ೀ	KANNADA VOWEL SIGN EE
0CC8	ೈ	KANNADA VOWEL SIGN AI
0CCA	ೊ	KANNADA VOWEL SIGN O



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0CCB	ಓ	KANNADA VOWEL SIGN OO
0CCC	ಔ	KANNADA VOWEL SIGN AU
0CE2	ಌ	KANNADA VOWEL SIGN VOCALIC L
VIRAMA (H)		
0CCD	ಋ	KANNADA SIGN VIRAMA
AVAGRAHA (Y)		
0CBD	ಽ	KANNADA SIGN AVAGRAHA

6. VARIANT TABLE

VARIANTS		
 0C97+0CCD+0C97	 0C97+0CCD+0CB2	
 0CA6+0CCD+0CA6	 0CA6+0CCD+0CA7	
 0CAC+0CCD+0CA6	 0CAC+0CCD+0CA7	 0CAC+0CCD+0CB2
 0CA5+0CBF	 0CA6+0CBF	 0CA7+0CBF
 0CAC+0CBF	 0CAD+0CBF	
 0CAF+0CC6	 0C9D+0CC6	



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7. EXPERTS/BODIES CONSULTED

Expertise provided by C-DAC Thiruvananthapuram.



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8. PROPOSED ccTLD FOR KANNADA

India (Bhārat) localized in Kannada - ಇಂಡೀಯೆ

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