

## ASCII Encoding for Domain Names

[draft-andrews-dns-ascii-01.txt](#)

### **1. Status of This Memo**

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### **2. Abstract**

[RFC 1035 [Section 5.1](#)] describes how to encode domain names as character strings. It however allows non printable characters to be used. It also allows for encodings of text files which would not survive intact ftp ASCII mode transfers, different end of line conventions. This document addresses these problems by stating where octal escapes MUST be used.

While a applications MUST continue to read the full range as expressed by [RFC 1035 5.1]. They MUST emit only this selected subset.

### **3. Encoding**

Octets within the follow ranges are encoded as backslash followed by three octal digits, 0x00 - 0x20, 0x7f - 0xff.

e.g.

```
0x00, \000  
0x1f, \177  
0xff, \377
```

Period (".") when NOT used as a domain separator is encoded as the sequence backslash period, e.g. "\.". Un-escaped periods indicate label separators.

Backslash ("\") is encoded as two consecutive backslashes, e.g. "\\".

Double quotes ('"') should always be represented as backslash quote as a common nameserver implementation mis-parses strings containing quotes, e.g. '\"'.

Semi-colon (";") should always be encoded as backslash semi-colon otherwise it will be interpreted as a comment. e.g. "\;".

Space may be a literal space when the string is enclosed by double quotes.

All other characters represent their literal ASCII encoding eighth bit not set.

#### **4. Security**

This draft introduces no known security problems. It may however remove some latent security problems in applications where the encoding is NOT reversible leading to unexpected changes in domain names.

#### **4. References**

[RFC-1035]

P. Mockapetris, ``DOMAIN NAMES - IMPLEMENTATION AND SPECIFICATION'', RFC-1035, ISI, November 1987.

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