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IUTF8 Terminal Mode in Secure Shell (SSH)
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Abstract

This document specifies a value for the widely used IUTF8 bit in the Secure Shell terminal modes encoding.

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[1.](#) Introduction

The Secure Shell (SSH) connection protocol [[RFC4254](#)] provides an encoding for terminal modes, used in the "pty-req" channel request type.

A commonly used terminal mode is IUTF8, which indicates that the terminal driver should assume that terminal I/O uses the UTF-8 character encoding. This is typically used by the kernel's terminal driver on the server to decide how many bytes of input to treat as a single logical character during line editing.

SSH currently does not provide an encoding for IUTF8. This document specifies one.

[2.](#) Conventions Used in this Document

The key phrases "SHOULD" and "MAY" in this document are to be interpreted as described in [[RFC2119](#)].

[3.](#) New terminal mode

The opcode value 42 is defined for the IUTF8 terminal mode.

As [[RFC4254](#)] [section 8](#) specifies for all opcodes in the range 1 to 159, it is therefore followed by a single uint32 argument. The value 0 indicates that the IUTF8 mode is disabled, and the value 1 indicates that it is enabled.

As with all other encoded terminal modes, the client SHOULD transmit a value for this mode if it knows about one, and the server MAY ignore it.

4. IANA Considerations

This document augments the "Encoding of Terminal Modes" list in [section 8 of \[RFC4254\]](#).

IANA is requested to update the SSH encoded terminal modes registry with the following additional entry:

opcode	mnemonic	description
-----	-----	-----
42	IUTF8	Terminal input and output is assumed to be encoded in UTF-8.

Figure 1

5. Security Considerations

The security considerations of [\[RFC4254\]](#) apply. This additional terminal mode encoding is believed to have no security implications differing from the existing set of encoded terminal modes.

6. Acknowledgements

The authors are indebted to Colin Watson for originally suggesting this terminal mode in 2006, and David Madore and Jakub Jelen for prior implementation efforts.

This document was written using the xml2rfc tool described in [\[RFC2629\]](#).

7. References

7.1. Normative References

- [RFC2119] Bradner, S., "Key words for use in RFCs to Indicate Requirement Levels", [BCP 14](#), [RFC 2119](#), DOI 10.17487/RFC2119, March 1997, <<http://www.rfc-editor.org/info/rfc2119>>.
- [RFC4254] Ylonen, T. and C. Lonvick, Ed., "The Secure Shell (SSH) Connection Protocol", [RFC 4254](#), DOI 10.17487/RFC4254, January 2006, <<http://www.rfc-editor.org/info/rfc4254>>.

7.2. Informative References

- [RFC2629] Rose, M., "Writing I-Ds and RFCs using XML", [RFC 2629](#), DOI 10.17487/RFC2629, June 1999, <<http://www.rfc-editor.org/info/rfc2629>>.

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