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[3.10] [gh-80222](#): Fix email address header folding with long quoted-string ([GH-122753](#)) ([GH-129111](#))

Email generators using `email.policy.default` could incorrectly omit the quote (`'`) characters from a quoted-string during header refolding, leading to invalid address headers and enabling header spoofing. This change restores the quote characters on a bare-quoted-string as the header is refolded, and escapes backslash and quote chars in the string. (cherry picked from commit [5aaf416](#))

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[3.10](#) (#129111) · v3.10.20 ... v3.10.17

1 parent [cfaee20](#) commit a4ef689

3 files changed

+51 -1 ●●●●● ●

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Lib/email/_header_value_parser.py



@@ -95,8 +95,16 @@

95 95 NLSET = {'\n', '\r'}

96 96 SPECIALSNL = SPECIALS | NLSET

97 97

98 +

99 + def make_quoted_pairs(value):

100 + """Escape dquote and backslash for use within a quoted-string."""

101 + return str(value).replace('\\', '\\\\').replace('"', '\\"')

102 +

103 +

98 104 def quote_string(value):

99 - return '"' + str(value).replace('\\', '\\\\').replace('"', r'\\"') + '"'

105 + escaped = make_quoted_pairs(value)

106 + return f'"{escaped}"'

107 +

100 108

101 109 # Match a RFC 2047 word, looks like =?utf-8?q?someword?='

102 110 rfc2047_matcher = re.compile(r''



@@ -2848,6 +2856,15 @@ def _refold_parse_tree(parse_tree, *, policy):



2848 2856 if not hasattr(part, 'encode'):

2849 2857 # It's not a terminal, try folding the subparts.

2850 2858 newparts = list(part)

2859 + if part.token_type == 'bare-quoted-string':

2860 + # To fold a quoted string we need to create a list of
terminal

2861 + # tokens that will render the leading and trailing quotes

2862 + # and use quoted pairs in the value as appropriate.

2863 + newparts = (
2864 + [ValueTerminal('"' , 'ptext')] +
2865 + [ValueTerminal(make_quoted_pairs(p), 'ptext')
2866 + for p in newparts] +
2867 + [ValueTerminal('"' , 'ptext')])

2851 2868 if not part.as_ew_allowed:

2852 2869 wrap_as_ew_blocked += 1

2853 2870 newparts.append(end_ew_not_allowed)



...est/test_email/test__header_value_parser.py



@@ -2946,6 +2946,33 @@ def

test_address_list_with_unicode_names_in_quotes(self):

```

2946 2946         '=?utf-8?q?H=C3=BCbsch?= Kaktus <beautiful@example.com>,\n'
2947 2947         '=?utf-8?q?bei=C3=9Ft_bei=C3=9Ft?= <biter@example.com>\n')
2948 2948
2949 +     def test_address_list_with_specials_in_long_quoted_string(self):
2950 +         # Regression for gh-80222.
2951 +         policy = self.policy.clone(max_line_length=40)
2952 +         cases = [
2953 +             # (to, folded)
2954 +             ("Exfiltrator <spy@example.org> (unclosed comment?"
2955 +              <to@example.com>',
2956 +              "Exfiltrator <spy@example.org> (unclosed\n'
2957 +              ' comment?" <to@example.com>\n'),
2958 +             ("Escaped \" chars \\\" in quoted-string stay escaped"
2959 +              <to@example.com>',
2960 +              "Escaped \" chars \\\" in quoted-string\n'
2961 +              ' stay escaped" <to@example.com>\n'),
2962 +             ('This long display name does not need quotes <to@example.com>',
2963 +              'This long display name does not need\n'
2964 +              ' quotes <to@example.com>\n'),
2965 +             ("Quotes are not required but are retained here"
2966 +              <to@example.com>',
2967 +              "Quotes are not required but are\n'
2968 +              ' retained here" <to@example.com>\n'),
2969 +             ("A quoted-string, it can be a valid local-part"@example.com',
2970 +              "A quoted-string, it can be a valid\n'
2971 +              ' local-part"@example.com\n'),
2972 +             ("local-part-with-specials@but-no-fws.cannot-fold"@example.com',
2973 +              "local-part-with-specials@but-no-fws.cannot-
2974 +              fold"@example.com\n'),
2975 +         ]
2976 +         for (to, folded) in cases:
2977 +             with self.subTest(to=to):
2978 +                 self._test(parser.get_address_list(to)[0], folded,
2979 +                             policy=policy)

```

```
2949 2976     def test_address_list_with_specials_in_encoded_word(self):
2950 2977         # An encoded-word parsed from a structured header must remain
2951 2978         # encoded when it contains specials. Regression for gh-121284.
```



...24-08-06-11-43-08.gh-issue-80222.wfR4BU.rst



... @@ -0,0 +1,6 @@

```
1 + Fix bug in the folding of quoted strings when flattening an email message using
2 + a modern email policy. Previously when a quoted string was folded so that
3 + it spanned more than one line, the surrounding quotes and internal escapes
4 + would be omitted. This could theoretically be used to spoof header lines
5 + using a carefully constructed quoted string if the resulting rendered email
6 + was transmitted or re-parsed.
```

Comments 0