

How do query and fragment components relate to URNs?

Illustrating the controversy with certspec (urn:cert)

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Example of the Controversy in urn:cert

- [draft-seantek-certspec-03](#): A URN Namespace for Certificates
- Identifies a PKIX certificate in a textual way
- Useful for security and identification purposes
- Replaces proprietary preferences
- Easy to copy-and-paste; easy for users to write
- Examples:
`urn:cert:SHA-1:3ea3f070773971539b9dbf1b98c54be3a4f0f3c8`
`urn:cert:issuersn:cn=AcmeIssuingCompany,st=California,c=US;0134F1`

RFC 2141 vs. URNBIS

- [draft-seantek-certspec-00](#) used [RFC 2141](#).
- ? and # were reserved, and SHOULD NOT have appeared in a URN, but could (issuer and serial number spec). So, OK in -00:
 - urn:cert:issuersn:1.3.6.1.4.1.1466.0=#04024869, cn=The Who?;2A
- Then [URNBIS](#) came out
- So, rewrote rules in [-01](#), [-02](#), and [-03](#)
- ? and # CANNOT be in the URN; it MUST be %-encoded
 - urn:cert:issuersn:1.3.6.1.4.1.1466.0=%2304024869, cn=The Who%3F;2A

What ? and # could mean (in draft-03)

Proposal—not critical to certs spec—see [Section 7](#)

- # is still fragment: identifies part of the resource. #subject, #spki...
 - Might be useful for UAs to highlight particular parts of a specific certificate
- ? can be used for “whatever”
 - Cannot be used as an input to a resource dereferencing process, because the URN scheme “target” (urn:cert = single certificate) is not active content
 - `http://www.bookstore.com/isbn/0-345-80348-5?size=big` makes sense: asking the server (naming authority) to do something “big” with “size”
 - `urn:cert:isbn:0-345-80348-5?size=big` does not make sense: what service (naming authority) is being asked to do something? Answer: **none**.

What ? could mean (in draft-03): Continued

Proposal—not critical to certs spec—see [Section 7](#)

- Query component ? may convey certificate attributes (certattrs)
 - metadata about the cert that is not intrinsic to the cert
 - Examples: friendly name, local key identifier, other PKCS #9 (RFC 2985), PKCS #11, PKCS #12 attributes
- Conceptually allowable
 - The query component does not affect URN equivalence
 - ?friendlyName=Foo augments, and does not change, the thing being identified, namely, the certificate (in URNBIS)!

So what is it?

Are ? and # part of URNs?

Are URNs URIs?