

Notes on “URI Schemes and Web Protocols”

(Tag issue [[schemeProtocols49](#)])

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Status

- First draft 16 June 2005
(<http://www.w3.org/2001/tag/doc/schemeProtocols-2005-06-16.html>)
- Latest draft 16 June 2005
(<http://www.w3.org/2001/tag/doc/schemeProtocols-2005-11-21.html>)

Tradeoffs

- Web Architecture allows flexibility for general case
- Common practice is scheme implies protocol family
 - This matters to users and to deployed software
- There are downsides to requiring multiple URIs when the same resource is supported by multiple protocols

Overall approach

- Rules: what the Web architecture allows you to do
- Guidelines: suggested common practice(*)

(*) In some cases, there are pros and cons to a given implementation choice. In such cases guidelines explain advantages of each.

Rules

- Server: ([R1](#)) any resource can in principle be served with any protocol, but...
 - ...([R2](#)) must serve faithfully (I.e. retrieve representations or update state of named resource).
 - ([R3](#)) Scheme sets expectations for integrity (http and https are therefore different...not all protocols are appropriate in all cases)
- Client: ([R7](#)) it's always safe to attempt access to any resource using any protocol
 - Modulo integrity concerns...a compromised HTTP implementation may not reliably fail access to an https resource.

General Server Guidelines

- ([G4](#)) Serving with protocol associated w/scheme is desirable
 - Users expect this
 - Supports dispatching on Scheme
- ([G5](#)) Serve existing schemes with new protocols
 - No need to change links or create 2 URIs for the same resource when using new protocols
 - Specifically: ([G6](#)) support http scheme if possible

General User Agent Guidelines

- Heuristic: ([G8](#)) choose protocol based on scheme
- ([G9](#)) Don't attempt access with untrustworthy protocols (accessing https://example.org with HTTP is risky)