

Workgroup: Network Working Group
Internet-Draft:
draft-dconmy-notes-uri-scheme-02
Published: 18 March 2022
Intended Status: Informational
Expires: 19 September 2022
Authors: D. Conmy
HCL Software

The 'notes' URI Scheme for viewing HCL Notes/Domino resources

Abstract

This document describes the 'notes' URI scheme. Specifically, it lays out the syntactic components and how those components are used by URI resolution to locate and view or edit a Notes resource, typically an application and/or document.

Status of This Memo

This Internet-Draft is submitted in full conformance with the provisions of BCP 78 and BCP 79.

Internet-Drafts are working documents of the Internet Engineering Task Force (IETF). Note that other groups may also distribute working documents as Internet-Drafts. The list of current Internet-Drafts is at <https://datatracker.ietf.org/drafts/current/>.

Internet-Drafts are draft documents valid for a maximum of six months and may be updated, replaced, or obsoleted by other documents at any time. It is inappropriate to use Internet-Drafts as reference material or to cite them other than as "work in progress."

This Internet-Draft will expire on 19 September 2022.

Copyright Notice

Copyright (c) 2022 IETF Trust and the persons identified as the document authors. All rights reserved.

This document is subject to BCP 78 and the IETF Trust's Legal Provisions Relating to IETF Documents (<https://trustee.ietf.org/license-info>) in effect on the date of publication of this document. Please review these documents carefully, as they describe your rights and restrictions with respect to this document. Code Components extracted from this document must include Revised BSD License text as described in Section 4.e of the Trust Legal Provisions and are provided without warranty as described in the Revised BSD License.

Table of Contents

- [1. Goals](#)
- [2. Conventions and Definitions](#)
- [3. Applications and/or Protocols which use this URI Scheme Name](#)
- [4. Syntax Rules](#)
 - [4.1. General Syntax](#)
 - [4.2. ABNF Grammar](#)
 - [4.3. Special Cases and Default Values](#)
 - [4.3.1. If a Server is not specified and an application or document is to be located](#)
 - [4.3.2. If a Server is specified but not available](#)
 - [4.3.3. If a view or folder is not supplied](#)
 - [4.3.4. If a view or form name is supplied](#)
 - [4.3.5. If a viewUNID or folderUNID of 0 is supplied](#)
 - [4.3.6. If OpenForm is specified](#)
 - [4.4. Encoding Rules](#)
 - [4.4.1. Case sensitivity of URI components](#)
- [5. Examples](#)
 - [5.1. Application Examples](#)
 - [5.2. Document Examples](#)
 - [5.3. Application User Interface Examples](#)
- [6. Security Considerations](#)
- [7. IANA Considerations](#)
- [8. Appendix A: Registration Template](#)
- [9. References](#)
 - [9.1. Normative References](#)
 - [9.2. Informative References](#)
- [Author's Address](#)

1. Goals

The primary goal of the 'notes' URI is to view or edit a resource. Typically, a 'notes' URI would be encountered in MIME Email which contains links to other applications and/or documents residing on Domino server(s). A 'notes' URI can also be used with operating system clipboard operations to share a link with a native application or a browser application.

When a 'notes' URI is clicked, a local installation of an application that supports the protocol will be launched and the resource will be located and shown.

2. Conventions and Definitions

The key words "MUST", "MUST NOT", "REQUIRED", "SHALL", "SHALL NOT", "SHOULD", "SHOULD NOT", "RECOMMENDED", "NOT RECOMMENDED", "MAY", and "OPTIONAL" in this document are to be interpreted as described in

BCP 14 [[RFC2119](#)] [[RFC8174](#)] when, and only when, they appear in all capitals, as shown here.

3. Applications and/or Protocols which use this URI Scheme Name

All HCL Notes, HCL Nomad, HCL Client Application Access, IBM Client Application Access, IBM Notes and Lotus Notes clients since 1999 have supported the 'notes' URI scheme. [[HCLDomino](#)]

4. Syntax Rules

4.1. General Syntax

The 'notes' URI comes in several forms described below.

4.2. ABNF Grammar

The full ABNF (certain values are included by reference from [[RFC2396](#)]):

```

notes-uri      = "notes:" (formDoc | formDocNew |
                        formApp1 | formApp2 | formApp3 |
                        formUI)
formDoc        = "://" [server] "/" application "/" (viewUNID | folde
formDocNew     = "://" [server] "/" application "/" name "?OpenForm"
formApp1       = "://" [server] "/" application
formApp2       = "://" [server] "/" application "/" (viewUNID | folde
formApp3       = "://" [server] "/" application "/" name "?" queryEle
formUI         = "///ClientBookmark?" uiElement

server         = hostname
hostname       = // as specified in {{RFC2396}}

application    = (appReplicaID | appFileAndPath)
appReplicaID   = 16*HEXDIG
appFileAndPath = 1*(unreserved | escaped)(".nsf" | ".ntf")

viewUNID       = (32*HEXDIG | "0")
folderUNID     = (32*HEXDIG | "0")
docUNID        = 32*HEXDIG

name           = 1*(unreserved | escaped)
queryDoc       = ("EditDocument" | "OpenDocument")
queryElement   = ("OpenFrameset" | "OpenView")
uiElement      = ("OpenDatabases" | "OpenReplication" | "OpenWorkspa
parameter      = ("view=" viewUNID)

unreserved     = alphanum | allowedmark
alphanum       = // as specified in {{RFC2396}}
allowedmark    = "-" | "_" | "~" | "(" | ")"
escaped        = "%" hex hex
hex            = "0" | "1" | "2" | "3" | "4" | "5" | "6" | "7" |
                "8" | "9" | "A" | "B" | "C" | "D" | "E" | "F"

```

4.3. Special Cases and Default Values

4.3.1. If a Server is not specified and an application or document is to be located

In the case where the 'notes' URI does not contain a named server and the appReplicaID is specified, the client application SHOULD locate the specified application.

In the case where the 'notes' URI does not contain a named server and an appFileAndPath is specified, the client applicaiton SHOULD locate a local copy of the application.

4.3.2. If a Server is specified but not available

In the case where the 'notes' URI does contain a named server and the named server is currently unreachable, the client application MAY locate the resource on an alternate server as if the server were not specified. See [Section 4.3.1](#)

4.3.3. If a view or folder is not supplied

In the case where the 'notes' URI does not contain a viewUNID, folderUNID or name, and the application initially shows a view or folder, the client application WILL choose a default.

4.3.4. If a view or form name is supplied

Where available, a view or form alias should be used instead of the name shown in the user interface. [[HCLDominoNamingAView](#)]

4.3.5. If a viewUNID or folderUNID of 0 is supplied

In this case, the document is still opened.

4.3.6. If OpenForm is specified

A 'notes' URI of type formDocNew will create a new document in the user interface using the specified form.

4.4. Encoding Rules

The server, appFileAndPath and name must be encoded using the UTF-8 encoding scheme, and any octet that is not one of the permitted characters per the above grammar MUST instead be represented by a "%" followed by two characters from the <hex> character set above. The two characters give the hexadecimal representation of that octet.

The maximum length of a view or form name is 64 bytes after decoding.

4.4.1. Case sensitivity of URI components

The values of server, appFileAndPath and name are case insensitive. For clarity, the actual case of the underlying resource SHOULD be used but is not REQUIRED.

5. Examples

5.1. Application Examples

notes:///1234567890ABCDEF

This example would locate and view an application
appReplicaID=1234567890ABCDEF

notes://server1.example.com/1234567890ABCDEF

This example would view an application
appReplicaID=1234567890ABCDEF
on server server1.example.com

notes://server1.example.com/1234567890ABCDEF/1234567890ABCDEF1234567890A

This example would open a view with
viewUNID=1234567890ABCDEF1234567890ABCDEF
in appReplicaID=1234567890ABCDEF
on server server1.example.com and navigate to

notes://server1.example.com/By%20Author?OpenView

This example would open a view with
name "By Author"
in appReplicaID=1234567890ABCDEF
on server server1.example.com and

notes://server1.example.com/1234567890ABCDEF/MainFrameset?OpenFrameset&v

This example would open a frameset with
name "MainFrameset" and
viewUNID=1234567890ABCDEF1234567890ABCDEF
in appReplicaID=1234567890ABCDEF
on server server1.example.com and

5.2. Document Examples

notes://server1.example.com/1234567890ABCDEF/1234567890ABCDEF1234567890A

This example would view a document with
docUNID=1234567890ABCDEF1234567890FEDCBA
from viewUNID=1234567890ABCDEF1234567890ABCDEF
in appReplicaID=1234567890ABCDEF
on server server1.example.com

notes:///1234567890ABCDEF/1234567890ABCDEF1234567890ABCDEF/1234567890ABC

This example would view a document with
docUNID=1234567890ABCDEF1234567890FEDCBA
from viewUNID=1234567890ABCDEF1234567890ABCDEF
after locating appReplicaID=1234567890ABCDEF

notes://server1.example.com/teamroom%2Fourteamroom.nsf/1234567890ABCDEF1

This example would view a document with
docUNID=1234567890ABCDEF1234567890FEDCBA
from viewUNID=1234567890ABCDEF1234567890ABCDEF
in appPathAndFile=teamroom/ourteamroom.nsf
on server server1.example.com

notes://server1.example.com/1234567890ABCDEF/1234567890ABCDEF1234567890A

This example would edit a document with
docUNID=1234567890ABCDEF1234567890FEDCBA
from viewUNID=1234567890ABCDEF1234567890ABCDEF
in appReplicaID=1234567890ABCDEF
on server server1.example.com

notes://server1.example.com/1234567890ABCDEF/MainTopic?OpenForm

This example would create a new document with
form name "MainTopic"
in appReplicaID=1234567890ABCDEF
on server server1.example.com

5.3. Application User Interface Examples

notes:///ClientBookmark?OpenWorkspace

This example would launch/focus the client application and navigate

notes:///ClientBookmark?OpenReplication

This example would launch/focus the client application and navigate

notes:///ClientBookmark?OpenDatabases

This example would launch/focus the client application and navigate

6. Security Considerations

All operations initiated as a result of locating and viewing a
'notes' URI are done so under the access rights of the user logged

into the client application. All access restrictions including application access control list [[HCLDominoACL](#)], readers fields [[HCLDominoReadersField](#)] and execution control lists [[HCLDominoECL](#)] are in effect when locating the application and/or document referred to by a 'notes' URI.

7. IANA Considerations

The IANA is asked to register the URL registration template found in [Section 8](#) in accordance with [[RFC7595](#)]

8. Appendix A: Registration Template

Resource Identifier (RI) Scheme name: notes

Status: provisional

Scheme syntax: [Section 4](#)

Encoding considerations: [Section 4.4](#)

Intended usage: [Section 1](#)

Applications and/or protocols which use this scheme: [Section 3](#)

Interoperability considerations: None not specified

Security considerations: [Section 6](#)

9. References

9.1. 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, <<https://www.rfc-editor.org/info/rfc2119>>.

[[RFC2396](#)] Berners-Lee, T., Fielding, R., and L. Masinter, "Uniform Resource Identifiers (URI): Generic Syntax", RFC 2396, DOI 10.17487/RFC2396, August 1998, <<https://www.rfc-editor.org/info/rfc2396>>.

[[RFC3978](#)] Bradner, S., Ed., "IETF Rights in Contributions", RFC 3978, DOI 10.17487/RFC3978, March 2005, <<https://www.rfc-editor.org/info/rfc3978>>.

[[RFC7595](#)] Thaler, D., Ed., Hansen, T., and T. Hardie, "Guidelines and Registration Procedures for URI Schemes", BCP 35, RFC

7595, DOI 10.17487/RFC7595, June 2015, <<https://www.rfc-editor.org/info/rfc7595>>.

[RFC8174] Leiba, B., "Ambiguity of Uppercase vs Lowercase in RFC 2119 Key Words", BCP 14, RFC 8174, DOI 10.17487/RFC8174, May 2017, <<https://www.rfc-editor.org/info/rfc8174>>.

9.2. Informative References

[HCLDomino] "HCL Domino", n.d., <https://en.wikipedia.org/wiki/HCL_Domino>.

[HCLDominoACL] HCL, "The database access control list", December 2021, <https://help.hcltechsw.com/domino/12.0.0/admin/conf_thedatabaseaccesscontrollist_c.html>.

[HCLDominoECL] HCL, "The execution control list", December 2021, <https://help.hcltechsw.com/domino/12.0.0/admin/conf_theexecutioncontrollist_t.html?hl=ecl>.

[HCLDominoNamingAView] HCL, "Naming a view or folder", December 2021, <https://help.hcltechsw.com/dom_designer/12.0.0/basic/H_ABOUT_NAMING_A_VIEW.html>.

[HCLDominoReadersField] HCL, "Using a Readers field to restrict access to specific documents", December 2021, <https://help.hcltechsw.com/dom_designer/12.0.0/basic/H_ABOUT_RESTRICTING_ACCESS_TO_SPECIFIC_DOCUMENTS_USING_A_READERS_FIELD.html>.

Author's Address

Doug Conmy
HCL Software
300 Apollo Drive
Chelmsford, MA 01824
United States of America

Email: dconmy@pnp-hcl.com