

## Purpose

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Propose a new URI syntax for public facing URL's that exist related to handle redirects and datastream dissemination and delivery.

## GET API Service

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In RUcore release R5.2 a new service was implemented named **GET**. This service offers datastream access of an object. This service was designed to be used by other applications for accessing datastreams and offer three methods outlined below.

Start URL for service will be <http://rucore.libraries.rutgers.edu/api/get>

### Method for accessing datastreams

Name: **{default}**

Required: **Object ID, datastream ID**

Note that for Object ID the 'rutgers-lib' namespace is not required and is imposed by the API if not supplied.

Output format: **mime-type of requested datastream**

Examples of URL syntax:

To request the MODS1 datastream of an object the following syntax is used:

<http://rucore.libraries.rutgers.edu/api/get/rutgers-lib:12345/mods> - returns the MODS1 datastream

or

<http://rucore.libraries.rutgers.edu/api/get/rutgers-lib:12345/mods/1> - returns the MODS1 datastream

To request an enumerated datastream the following syntax is used:

<http://rucore.libraries.rutgers.edu/api/get/rutgers-lib:12345/pdf/2> - returns the PDF-2 datastream

Not providing a numeric value in the request syntax is interrupted by the API as a request for the numeric value 1.

### Method for accessing a brief list of datastreams associated with an object

Name: **brieflist**

Required: **Object ID**

Output format: **XML(default), JSON or serialized PHP**

Example of URL syntax for accessing a 'brieflist' of datastreams

<http://rucore.libraries.rutgers.edu/api/get/rutgers-lib:12345/brieflist/>

In this example a ‘brieflist’ of datastreams related to this object will be returned. A ‘brieflist’ is defined in the API’s configuration file and is meant to return a list of datastreams that might be linked from a brief record display. The data returned contains datastream labels, mime-type, http status codes and size in most cases. Note that inline datastreams do not have size returned.

### Method for accessing a full list of datastreams associated with an object

Name: **fulllist**

Required: **Object ID**

Output format: XML(default), JSON or serialized PHP

Example of URL syntax for accessing a ‘fulllist’ of datastreams

<http://rucore.libraries.rutgers.edu/api/get/rutgers-lib:12345/fulllist/>

In this example a ‘fulllist’ of datastreams related to this object will be returned. A ‘fulllist’ is defined in the API’s configuration file and is meant to return a list of datastreams that might be linked from a full record display. The data returned contains datastream labels, mime-type, http status codes and size in most cases. Note that inline datastreams do not have size returned.

## Dissemination & Delivery

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Dissemination of object information and datastreams will be moved to a new URI structure. This service will be used by end users to view Complete Records, MARC records, datastreams and disseminated datastreams; i.e. FLV video inside of a Flash video player. The dissemination will use the GET API outlined above to access the datastreams of an object.

A suffix will need to be determined under which all object dissemination will occur. This suffix will appear as a directory under the <http://rucore.libraries.rutgers.edu> URI. The approved suffix will be **rutgers-lib**.

**rutgers-lib** - <http://rucore.libraries.rutgers.edu/rutgers-lib/>

The syntactical formula for the new URI structure is:

{base URI} / {suffix} / {object identifier} / {datastream identifier} / {sequence number} / {action}

**base URI** – required

The value: `http://rucore.libraries.rutgers.edu`

**suffix** – required

The value: `rutgers-lib`

**object identifier** – required

An integer value corresponding to the object being queried for

**datastream identifier** – optional

A registered datastream identifier

**sequence number** – optional

An integer value corresponding to the sequence number of the datastream be queried for.

**action** – optional

An action to perform on the object and datastream identifier parts supplied

Below are some examples of the URL syntax that will be implemented. For the purposed of the examples the 'rutgers-lib' candidate was used.

**Showfed.php display, i.e. handle redirect**

**Current:** <http://mss3.libraries.rutgers.edu/dlr/showfed.php?pid=rutgers-lib:12345>

**Proposed:** <http://rucore.libraries.rutgers.edu/rutgers-lib/12345/>

**Complete record action**

**Current:** <http://mss3.libraries.rutgers.edu/dlr/output.php?ds=Full&type=FULL&demono=rutgers-lib:12345>

**Proposed:** <http://rucore.libraries.rutgers.edu/rutgers-lib/12345/complete/>

**MARC record action**

**Current:** <http://mss3.libraries.rutgers.edu/dlr/output.php?ds=DC&type=MARC&demono=rutgers-lib:12345>

**Proposed:** <http://rucore.libraries.rutgers.edu/rutgers-lib/12345/marc/>

**PDF-1 from an object access**

This would stream the PDF-1 datastream using the GET API with no additional manipulation.

**Current:** <http://mss3.libraries.rutgers.edu/dlr/outputds.php?pid=rutgers-lib:12345&mime=application/pdf&ds=PDF-1&authuser=unknownuser&authtype=eppn>

**Proposed:** <http://rucore.libraries.rutgers.edu/rutgers-lib/12345/pdf/1/>

**Flash video from an object in a video player action**

This would access the FLV-1 file using the GET API and play it back using a video player.

**Current:** <http://mss3.libraries.rutgers.edu/disseminators/flvplayer.php?pid=rutgers-lib:12345&mime=video/x-flv&ds=FLV-1>

**Proposed:** <http://rucore.libraries.rutgers.edu/rutgers-lib/12345/flv/1/play/>

**Flash video from an object in an embeddable video player action**

This would access the FLV-1 datastream using the GET API and play it back using an embedded video player.

**Current:** *Currently no URI syntax exists for an embedded player*

**Proposed:** <http://rucore.libraries.rutgers.edu/rutgers-lib/12345/flv/1/embed/>

### **DjVu-1 from an object access**

This would stream the DJVU-1 datastream using the GET API with no additional manipulation.

**Current:** <http://mss3.libraries.rutgers.edu/dlr/outputds.php?pid=rutgers-lib:12345&ds=DJVU-1>

**Proposed:** <http://rucore.libraries.rutgers.edu/rutgers-lib/12345/djvu/1/>

### **DjVu-1 from an object in a DjVu applet action**

This would access the DJVU-1 datastream using the GET API and play it back in the DjVu Java applet.

**Current:** <http://mss3.libraries.rutgers.edu/disseminators/outputdjvu.php?pid=rutgers-lib:12345&ds=DJVU-1>

**Proposed:** <http://rucore.libraries.rutgers.edu/rutgers-lib/12345/djvu/1/applet/>

## **Migration and Deprecation**

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To enable this change the URI syntax of existing and future objects the following will need to be acted upon.

- Currently all object handles will need to be changed to redirect to the new syntax.
- Future objects ingested will need to use the new syntax; WMS will need to be reconfigured to enable this.
- Google Scholar indexing will need to be directed to the new syntax and it is expected that any sitemap files will be moved under the rucore.libraries.rutgers.edu URI structure as well.

Deprecation and removal of support for the old URI syntax is recommended using the following steps.

### **Initial implementation, R7.2**

When a request is made to the old URI syntax a message is displayed stating this URI has been replaced with a new URI. The new URI will be listed, in clickable form, on the page and the user can use to navigate.

### **Following Version**

When a request is made to the old URI syntax an automatic redirect to the appropriate URI is performed. Web statistics will need to be analyzed to determine how many of these requests are performed.

### **Removing Support**

When an acceptable number of requests are not directed at the old URI syntax complete removal of support for that functionality is to be performed.

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## Implementation

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### WMS

When ingesting a new resource via WMS a handle is created and registered with the handle server. The URI syntax generated for the handle redirect in WMS will need to follow the new format. This change in syntax will require a change in code.

### Persistent URL Migration/Creation

During the same release, R7.2, handles will be replaced with DOI's as our preferred persistent URL technology. When replacing the persistent URL in an objects metadata to a DOI the DOI will redirect the user to the new URL format.

### Search Results Display

In search result screen once handles are updated the action of clicking on a handle will be updated automatically. The 'Complete Record' links found in all full record results will need to be updated to the new URI format. Also, all datastream links will need to be updated to the new URI format. These changes can be accomplished through the file constructs in the configuration menus. No code changes are need, only configuration changes.

### Record Display

In the record display the links to 'Complete Record' and all other datastream access will need to be updated to the new URI format.

### Sitemaps

Scripts in dlr/EDIT that generate the Google sitemaps need to be edited to update so that new location of the resource is reflected in sitemaps that are generated. Also, the sitemaps that are generated need to be moved from their current location under the dlr/EDIT application to appear under the rucore.libraries.rutgers.edu URI.

### URL Rewriting

An .htaccess file will be written and delivered to support URL rewriting to the new URI syntax outlined in the Dissemination & Delivery section of this document.