



1. APIs

An API, or application programming interface, is a set of defined rules that enable different applications to communicate with each other.



3. CDISC LIBRARY

[LIBRARY.CDISC.ORG/BROWSER](https://library.cdisc.org/browser)

CDISC Library uses linked data and a REST API to deliver CDISC standards metadata to software applications;

HOW TO ACCESS CDISC LIBRARY USING SAS?

```
4 filename response "&temp_path.\response.json" ;
5 proc http
6     url="https://library.cdisc.org/api/mdr/sdtmig/3-4/datasets/DM"
7     out=response;
8     headers
9         "api-key"="INSERT YOUR API KEY"
10        "Accept"="application/json";
11 run;
12
13 libname space JSON fileref=response ;
14 proc copy inlib=space outlib=work;
15 run;
```

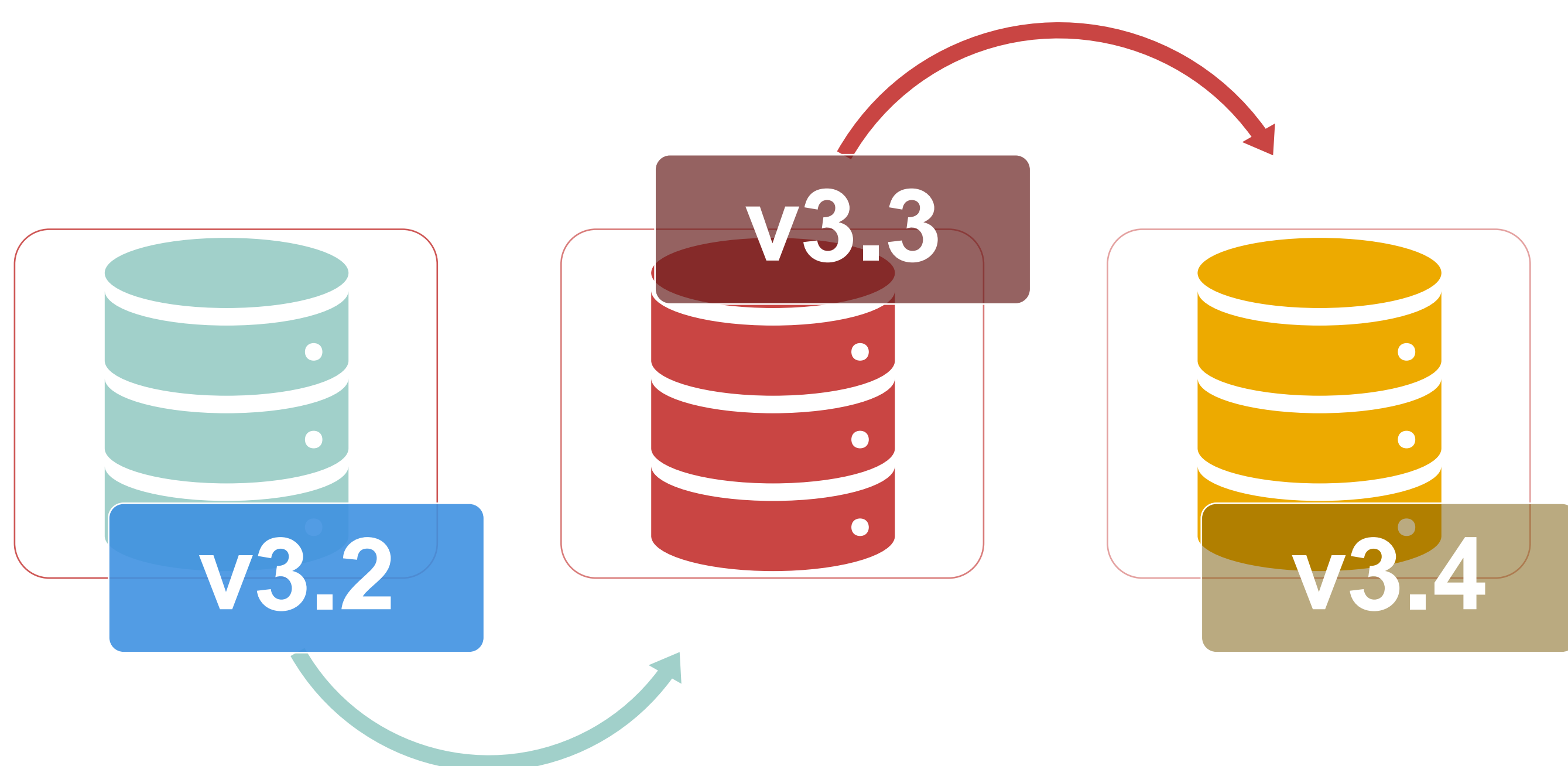
Establishing a remote connection between the CDISC Library server and your SAS local client requires an HTTP request. This connection is done with the PROC HTTP procedure by specifying the CDISC Library API Endpoint in the URL statement. The authentication phase is handled through a unique API Key to validate the request to the server. The response is in JSON format and afterward converted to a usable SAS dataset.



4. HOW TO IMPLEMENT APIs TO YOUR WORKFLOW?

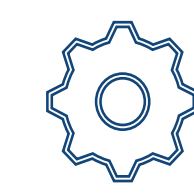
b. SDTM VERSION COMPARISON TOOL

Leveraging the data retrieved by the CDISC Library can improve operational processes by developing advanced tools CDISC enable. A comparison of multiple versions of the same SDTM domain is an example of how CDISC Library can be implemented inside a statistical programming process. This tool facilitates the "Upgrade" process of an SDTM domain to a different version, providing all the required information to the statistical programmer within an Excel spreadsheet.



CONCLUSION

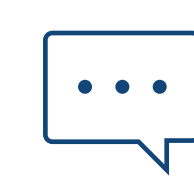
APIs are the future of connecting multiple applications, unlocking endless possibilities for innovation and growth across industries, including Healthcare. Although it has potential, this new technology requires the implementation of best practices put in place with the definition of Standard Operating Procedures (SOPs). Therefore, best practices have a key role to prevent the risk of malicious use whereas unlock its true potential for innovation.



2. PROC HTTP

It is a powerful SAS procedure for creating HTTP requests to establish a communication between client and server

```
PROC HTTP URL="URL-to-target</redirect/n>"
  <METHOD=<">http-method<">
  <authentication-type-options>
  < caching-options>
  < header-options>
  < proxy-server-connection-options>
  < web-server-authentication-options>
  < EXPECT_100_CONTINUE>
  < FOLLOWLOC | NOFOLLOWLOC>
  < HTTP_TOKENAUTH>
  < IN=< fileref | FORM (arguments) | MULTI <options> (parts) | "string">>
  < MAXREDIRECTS=<n>
  < OUT=< fileref>
  < QUERY=("parm1"="value1" "parm2"="value2" ...)>
```



4. HOW TO IMPLEMENT APIs TO YOUR WORKFLOW?

a. AUTOMATE NOTIFICATION ON MICROSOFT TEAMS

PROC HTTP can send custom messages to Teams group chat via a HyperText Transfer Protocol (HTTP) request to the Teams API endpoint. This enables automated notifications or alerts, such as status updates or error messages, to be posted in a specific Teams channel.

SAS Updates 1/13, 11:02 PM

Summary:

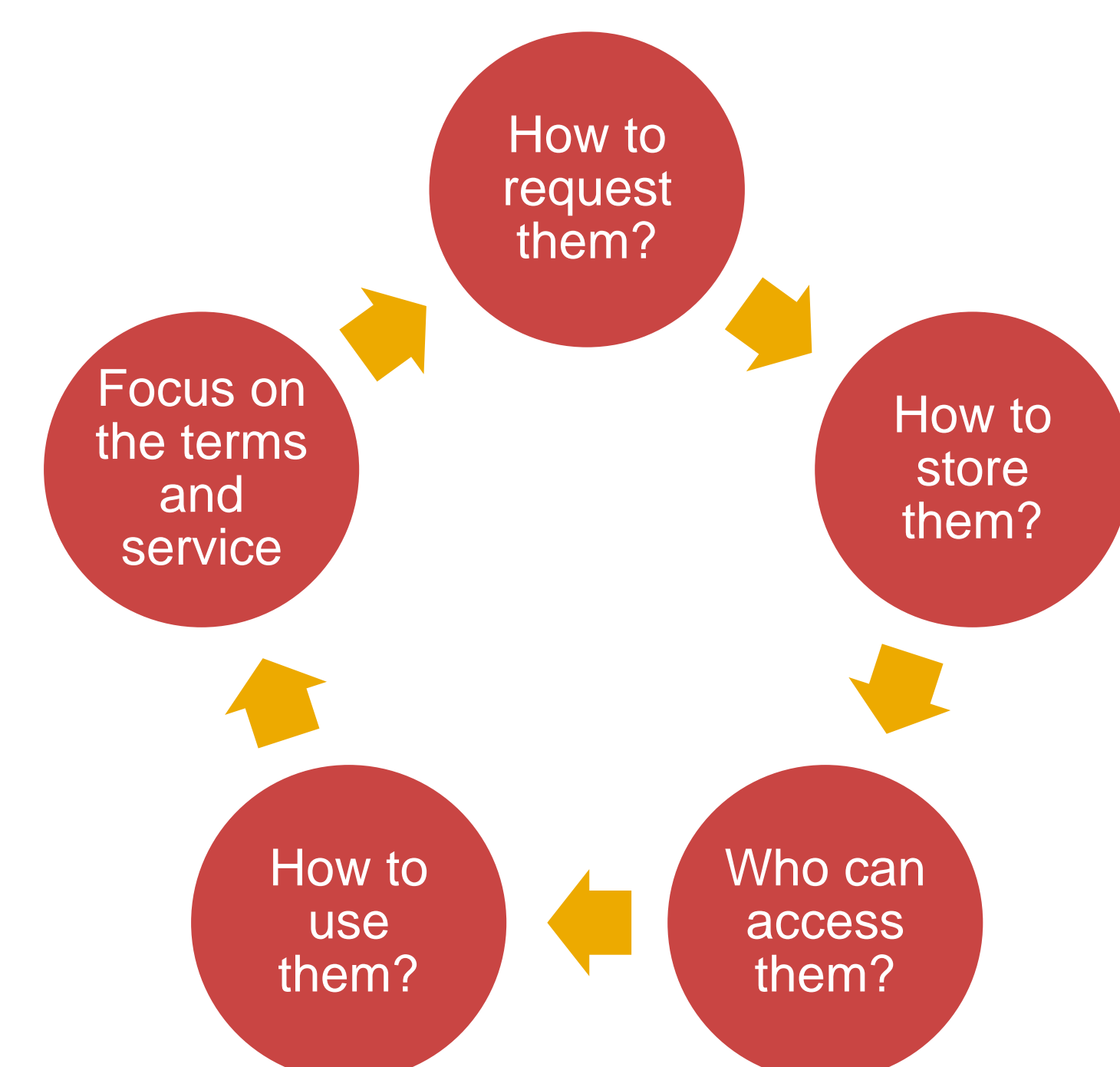
PRODUCTION

13JAN23:23:02:40

| TYPE | table |
|-------------|-------|
| N. ERRORS | 1 |
| N. WARNINGS | 2 |



5. BEST PRACTICES FOR API USAGE (SOP)



An application programming interface (API) key is a unique identifier used to authenticate a user, or developer. This means that (API) keys are link to a user and as a company, we HAVE TO prevent malicious use of them.

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