RELEASE 5
MANUAL FOR LIBRARIANS

Database Reports

Module 4

John Hendry

COUNTER

CONTENTS

INTRODUCTION

The COUNTER Code of Practice is designed so that publishers and vendors provide consistent and credible usage data. Libraries can compare data from different vendors and publishers, and use the figures as a basis for justifying the cost of past and future purchases.

You can view a friendly guide introducing the Code of Practice Release 5 for librarians at: https://www.projectcounter.org/friendly-guides-release-5/

This manual is designed to help librarians to understand the usage statistics for databases.

CONTENT IN DATABASES

Let us start with something simple. To understand how COUNTER measures database usage, it is helpful to think about content in two ways:

- content that can be downloaded
- other information that is not downloaded

Let us look at these in a little more detail.

DOWNLOADABLE CONTENT (Full Content)

In general, when we measure downloadable content, this can be things such as:

- Articles in journals
- Theses
- Chapters from a book
- Complete books
- Factual content, such as meteorological data, chemical compounds or physical properties
- Numeric content, such as economic or industrial statistics

For convenience, COUNTER refers to all of these as *items*. More importantly, we refer to this as *full content*. The user can click to download that content onto their laptop or device.

OTHER INFORMATION

In addition to full content, databases can also contain *other information* that is not counted as full content. This includes things like:

- Abstracts or summaries of specific items
- Information to help you navigate to other details
- Information about the author or the institution responsible

NEW METRICS

In Release 5, there are two new metrics that are used to count the activity on a database:

- Total metrics
- Unique metrics

We shall look at each of these in turn.

TOTAL METRICS

First, let us look at the Total metrics and see how they work for our two different types of content. The Total metrics in Release 5 are:

- **Total_Item_Requests**. This counts every click where a user downloads the *full content* of an item (article, table of statistics, etc) from the database.

- **Total_Item_Investigations**. This also counts every click where a user downloads the *full content* of an item (article, table of statistics, etc) from a database. But, in addition, it counts clicks on *other information* (abstracts, etc) and clicks on links to other details like clicks on link resolvers.

In short, a *Request* is a click to download full content. An *Investigation* is a click that downloads full content or displays other information. Broadly speaking, *Investigations* count overall activity on a database. *Requests* count only downloads of full content.

Let's look at this in practice.

Sam is on a database of archaeological information. They are investigating ancient Malia and they find the following information:

- Agora: a thesis by R. Olic
- Artisanal workshops: two articles, one by I. Elia and one by R. Olic

    1. Sam clicks on the abstract of the thesis. Then they click to download the thesis itself.
       Total_Item_Investigations = 2
       Total_Item_Requests = 1

    2. They click on the abstract of the article by Elia.
       Total_Item_Investigations = 1
       Total_Item_Requests = 0

    3. **They click on a summary biography of Olic, then the abstract of the article, and finally on the article itself to download it.**
       Total_Item_Investigations = 3
       Total_Item_Requests = 1

Sam made 6 clicks in all. But they only downloaded content twice (once in step 1 and once in step 3). So the totals when you add up the counts for all three steps are:

- **Total_Item_Investigations** = 6
- **Total_Item_Requests** = 2

UNIQUE METRICS

These metrics give you another way of counting these clicks.

- **Unique_Item_Requests**. This counts clicks to download the full content of an item (article, etc). However, it only counts one click to download per item per session. If the user downloads the same item two times or more in a session, only the first click is counted. (We shall look briefly at sessions later in this manual.)
- **Unique_Item_Investigations**. This counts clicks on information and clicks to download. But again, it only counts one click per item per session. If the user clicks on two pieces of information about the same item in a session (for example), only the first click is counted.

In short, repeated clicks on the same item are not counted.

This is useful because not all databases present information and content in the same way; some naturally generate more clicks than others, simply because of the user interface. So the Unique metrics give you a more consistent way of measuring activity on items in different databases.

Now we can go back to Sam's activity on the archaeological database, and we can see how this is counted on the two Unique metrics.

First of all, remember that there are three downloadable items (a thesis and two articles) as well as other information (such as abstracts and summary biographies) that can be investigated.

Let us look at each step again.

1. Sam clicks on the abstract of the thesis. Then they click to download the thesis itself.
   Unique_Item_Investigations = 1 (the download click is for the same item, so it is not counted)
   Unique_Item_Requests = 1 (only the download is counted)

2. They click on the abstract of the article by Elia.
   Unique_Item_Investigations = 1 (this is a separate item, so it is counted)
   Unique_Item_Requests = 0

3. They click on the summary biography of Olic, then the abstract of the article, and finally on the article itself to download it.
   Unique_Item_Investigations = 1 (this is a separate item; the first click is counted, but not the second or third)
   Unique _Item_Requests = 1 (the download is counted)

So the totals we have for all three steps are:

- **Unique_Item_Investigations** = 3 (three separate items were investigated)
- **Unique_Item_Requests** = 2 (two separate items were downloaded)

You can see that this gives you very different counts for the same activity. Because these metrics do not count every click, they are very useful; repeated clicks on the same content are not counted. So this provides a more effective way of comparing activity across databases that have different user interfaces.

COUNTING BOOKS INSTEAD OF SECTIONS (Unique_Title metrics)

There are two ways of measuring how books are used. One is to measure the usage at Section level (books and chapters) and the other is to measure the usage of complete books (Title Level).

For example, if a book has 10 chapters (Sections), each downloadable as a separate file, the user has to download all 10 to view the whole book. That would be a **Unique_Item_Requests** count of 10. However, if the same book is available on another platform as a single file, the user would only need to make one download to view the whole book, so the **Unique_Item_Requests** count would be 1.

That makes comparisons difficult. So we need metrics that count usage for the whole book. Allow us to introduce you to two further Unique metrics, which are only used for books:

- **Unique_Title_Requests**. This counts clicks to download the full content of a book. However, it only counts one download per book (Title) per session. For example, if the user downloads two different chapters of the same book in a session, only the first download is counted.

- **Unique_Title_Investigations**. This also counts clicks to download the full content of a book, but it also counts clicks on information about a book or a section of a book. Again, it does not count repeated clicks on the same book in the same session. So, if the user clicks to view information on Section 1, then clicks to view information on Section 2, and finally clicks to download the full content of Section 2, only the first click is counted.

So, in our earlier example of the book with 10 chapters:

- the user downloads the first 5 chapters:
  Unique_Item_Requests = 5 (in this example, this measures the usage of the individual chapters in the book)
  Unique_Title_Requests = 1 (this measures the usage of the whole book)

- two separate users download all 10 chapters:
  Unique_Item_Requests = 20 (in this example, this measures the usage of the individual chapters in the book)
  Unique_Title_Requests = 2 (this measures the usage of the whole book—and so can be directly compared to other books at title level)

Unique_Title_Requests gives you a consistent way of counting book usage, regardless of which type of platform the book is available on.

For more detailed information on how COUNTER metrics are applied to books, we recommend Module 1 of our Manual for Librarians: Books: Understanding Metrics and Standard Views.

DENIAL METRICS

As well as these main metrics, COUNTER also counts Denials—incidents where users attempted to access information that is not covered by the relevant license. We shall see these when we look at the reports later in this manual.

SO FAR…

So far, we have established that COUNTER metrics count two different types of content; informally, we have called these *full content* and *other information*.

Investigation metrics count clicks on both types of content and Requests metrics only count clicks to download full content.

Total metrics count every relevant click for the type of content. Unique metrics do not count repeated clicks on the same item. This is designed to give you a fairer way of comparing counts across different platforms and user interfaces.

DIFFERENT TYPES OF DATABASES

Databases take many forms, but, broadly speaking, COUNTER distinguishes three main types that we would like to highlight here:

- **Full-content database.** This is a single database that contains full-content for downloading. For example, this could be a factual database, which contain sets of factual and/or numeric information, such as biological properties, meteorological data or economic statistics.

- **Aggregated full-content database**. This is typically a database that offers different types of content, such as the complete text of books, dissertations, journals, magazines, newspapers or other kinds of text document.

- **Abstract and Indexing databases**. As we have seen, some databases are services that enable you to find content. They provide short or summary information about an item and, in many cases, links to the full content. These databases do not hold the full content itself; they simply offer a way of locating the full content that you need. The full content itself is held on a separate platform.

The important distinction between a full-content database and the other two types is:

- for a full-content database, the Data_Type is always Database
- for other databases, the Data_Type depends on the type of content in the database. Counter distinguishes between:
    - A&I_Database
    - Aggregated_Full_Content
    - Discovery_Service
    - eBook_Collection
    - Multimedia_Collection

COUNTING FOR ABSTRACT AND INDEXING DATABASES

Next, you need to know that Abstract and Indexing databases are different from the other types of database that provide COUNTER reports. They are designed to help you find content, but they do not hold that content themselves.

Because this type of database has no full content to download, they do not generate counts for **Total_Item_Requests, Unique_Item_Requests** or **Unique_Title_Requests**.

When a user clicks on a link to content in an Abstract and Indexing database, the link takes the user to the content, which is on a different platform.

When this happens, the click is counted as an Investigation on the Abstract and Indexing database, and it is counted as both an Investigation and a Request on the platform where the full content is stored.

Let's look at that in stages.

1. On the Abstract and Indexing Database Alpha, Sam searches for *Malia*. This lists two dissertations about temples. They click on the abstract of the first dissertation. For Database Alpha, the counts are:
   Total_Item_Investigations = 1
   Total_Item_Requests = 0
   Unique_Item_Investigations = 1
   Unique_Item_Requests = 0

2. They now click on the abstract of the second dissertation. Then they click on a link that displays information about the archaeological dig (which is classified as other information).
   For Database Alpha, the counts are:
   Total_Item_Investigations = 2
   Total_Item_Requests = 0
   Unique_Item_Investigations = 1 (both clicks are about the same item, so only the first click is counted)
   Unique_Item_Requests = 0

3. They click on the link to the second dissertation. This takes them to the full text of the dissertation on Database Beta. For this click on Database Alpha, the counts are:
   Total_Item_Investigations = 1
   Total_Item_Requests = 0 (the full content is not on this database)
   Unique_Item_Investigations = 0 (the item has already been investigated with the previous two clicks, so this is not a Unique click)
   Unique_Item_Requests = 0
   But the click is also counted for Database Beta, because this is the location of the full content. The counts for Database Beta are:
   Total_Item_Investigations = 1 (downloads are always counted as investigations)
   Total_Item_Requests = 1 (the click downloads the full text of the item)
   Unique_Item_Investigations = 1
   Unique_Item_Requests = 1 (the click downloads the full text of the item)

So the totals we have for all three steps are:

	Total_Item_ Investigations	Total_Item_ Requests	Unique_Item_ Investigations	Unique_Item_ Requests
Database Alpha	4	0	2	0
Database Beta	1	1	1	1

As we promised at the beginning of all this, there are no counts for the Requests metrics in Database Alpha, which is the Abstract and Indexing database.

Only the last click counts for Database Beta. Because the click downloads full content, it is counted by all four metrics.

However, very often, a link in the Abstract and Indexing database takes the user to a page on a full-content database—not the full content itself). For example:

1. Sam clicks on a link in Database Alpha. This takes them to a page on Database Beta.
   For Database Alpha, the counts are:
   Total_Item_Investigations = 1
   Total_Item_Requests = 0
   Unique_Item_Investigations = 1 (let us assume that Sam has not investigated this item before)
   Unique_Item_Requests = 0
   For Database Beta, the counts are:
   Total_Item_Investigations = 1
   Total_Item_Requests = 0
   Unique_Item_Investigations = 1
   Unique_Item_Requests = 0

2. Now, Sam clicks on a link in the page on Database Beta to download the full content.
   For Database Beta, the counts are:
   Total_Item_Investigations = 1 (downloads are always counted as investigations)
   Total_Item_Requests = 1 (the click downloads the full text of the item)
   Unique_Item_Investigations = 0 (the item has already been investigated with the previous click)
   Unique_Item_Requests = 1

So the totals we have for all three steps are:

	Total_Item_ Investigations	Total_Item_ Requests	Unique_Item_ Investigations	Unique_Item_ Requests
Database Alpha	1	0	1	0
Database Beta	2	1	1	1

Only the first click counts for Database Alpha.

The first click also counts as an Investigation for Database Beta, even though the user actually clicked on the interface in Database Alpha. The second click counts as both an Investigation and a Request on Database Beta.

SEARCHES

Platforms typically have more than one database available on them.

For this reason, COUNTER counts three different types of search for each database:

- **Regular**. This is where a user makes a search on a platform, and has the ability to choose which database or databases to search through. At its simplest, the user searches on a single database, but it can also cover multiple databases in a single search.
The search is performed on the platform's user interface and the results are returned on the same user interface.

- **Automated**. This is where the user makes a search on a platform, but has no control over which databases are searched. The search automatically covers every available database—but note—if only one database is available, then this is always counted as a Regular search.
The search is performed on the platform's user interface and the results are returned on the same user interface.

- **Federated**. There are applications that allow users to make a single search across one or more platforms. Any search originating from these applications is counted as a federated search.

REGULAR SEARCH – *example*

Freddie is working on a platform that provides access to 25 databases. The search interface enables him to choose which of these databases he wants to search through.

Freddie searches for the phrase *Pitt-Hopkins syndrome*. He checks which databases are suitable and selects *Neurological Disorders* and *Neuroscience*. Then he clicks to start the search.

For each of these two databases, this gives a count of **Searches_Regular** = 1.

Now Freddie clears the search. He enters the phrase *Pitt-Hopkins syndrome* again, but this time, doesn't select any specific database. Then he clicks to search.

In this case, all 25 databases on the platform will have a count of **Searches_Regular** = 1.

AUTOMATED SEARCH – *example*

Now, imagine a similar platform with access to 25 databases. However, on this platform, the user has no ability to control which databases are searched. Every database is searched every time a search is made.

When Freddie searches for *Pitt-Hopkins syndrome*, these are counted as automated searches. All 25 databases on the platform will have a count of **Searches_Automated** = **1**.

AVAILABLE DATABASES

Counts are only maintained for the databases you are licensed to use.

For example, your institution uses a platform that has 10 databases; however, you only have a license for four of those databases. It is possible that your system is set up so that your users can only see and search through those four databases.

In this case, assuming users are not able to select which databases they search through, searches will always be counted as **Searches_Automated**, and each search counts as 1 for each of the four databases you are licensed to use. The other six databases on the platform are not searched, and no counts are generated for them.

DISCOVERY SERVICES

Searches from Discovery Services are counted in a similar way.

- Where the user is able to choose the databases that are searched, these are counted as **Searches_Regular**.
- Where the user is not able to select which databases are searched, these are counted as **Searches_Automated.**
- Where an external application uses an API to perform a search on the Discovery Service, then the search is counted as **Searches_Federated**.

REPEATED CLICKS – SEARCH METRICS ARE AN EXCEPTION

COUNTER applies the following generic rule; if a user clicks on a link and then clicks on the same link again within 30 seconds, this is considered a repeated click (sometimes referred to as a double-click). The repeated click is not counted.

This is to avoid overcounting in situations where the internet is slow and users are likely to click more than once on the same link if there is a slow response.

For example, a click at 10:01:00 and a second click at 10:01:29 are considered as a repeated click. Only one click is counted.

However, a click at 10:01:00 and a second click at 10:01:35 are counted as two separate single clicks.

What you need to know now is that this generic rule does not apply to searches. If a user clicks twice, three times or more to trigger the same search within 30 seconds, each click is counted as a search. The three Search metrics are exceptions to the rule.

Note that there are no Unique metrics for searches. If a user makes the same search twice in quick succession, it is counted twice on all the databases that were searched through.

ONE SEARCH OR MANY?

For clarity, we have used the simplest examples of searches to explain how the counts work. However, you need to know that different user interfaces can create very different numbers. For example:

- **Bento-box/multi-tab user interfaces**. In this type of user interface, a single search by the user performs searches across one or more resources. The results are displayed either in a set of boxes on the results page (Bento Boxes), or on separate tabbed pages. Although the user has only performed a single search to do this, the interface performs multiple searches and presents multiple result sets; each of these searches is counted.

- **Faceted interfaces**. If you make a word search in a faceted user interface, then the search returns some results, plus some links that enable you to refine the search. (Technically, these links are known as facets.)

  For example, a search for Beethoven might provide links (facets) to *Early Period*, *Middle Period* and *Late Period*. Clicking on a link (facet) then provides a more precise search in that area.

  In these user interfaces, the initial search is counted, plus every click on a link (facet) that performs a more refined search.

- **Multiple internal searches that present a single set of results**. In some cases, when a user makes a search, the content site performs multiple searches to present a single set of results with the most relevant data first. The multiple internal searches are counted as a single search. This is because a single result set is provided.

- **Search links**. Where a link to a topic is displayed anywhere in an interface, and clicking on the link automatically performs a search to present a result set, the click counts as a search.

- **Subject lists**. If a user browses a subject authority file and then clicks the subject link or command to **View Articles**, that final click to present article results is counted as a search. (Note that the activity of browsing a subject list is not counted).

This makes it difficult to compare searches between different platforms. Some interfaces will simply have higher counts than others for potentially very similar usage.

SESSIONS BY LOGIN AND HOURLY SESSIONS

The Unique metrics are counted on the basis of activity within a session, so the way sessions are handled on a platform affects the way they are counted.

A session usually starts when a user first accesses a platform or logs in, and the session ends when the user logs out or the session is timed out.

Some platforms do not use sessions. In this case, for the COUNTER reports, the day is divided into 24 one-hour slices. All usage from the same IP address with the same user agent within the same one-hour slice is regarded as one session. But if the user is active, for example, between 10:50 and 11:15, this is counted as two sessions (the second beginning at 11:00).

AUTOMATIC SESSION TIME-OUTS

Sometimes, users are timed out if they are inactive for a specific period. They have to log back in again to continue working. This begins a new session—so it affects the counts.

Here is an example:

1. A user downloads an item from a database and spends more than 40 minutes reading it and taking notes.

2. Meanwhile, the platform session times out after 30 minutes of inactivity.

3. The user logs back in again and starts a new session; the user clicks to view the same article again.

Let's look at the two **Requests** metrics for this scenario.

- The **Total_Item_Requests** count will be 2—one for downloading the item in the first session, and one for downloading it in the second session.

- The **Unique_Item_Requests** count will also be 2. Even though the same item was downloaded, the second download occurred during a separate session—so it is counted again. If this all took place in a single session, the **Unique_Item_Requests** would only be 1.

DATABASE MASTER REPORT AND ITS STANDARD VIEWS

As for all COUNTER reports, the Database Master Report can be filtered so that you see only what you need and exactly what you need. There are also two Standard Views for measuring activity on and usage of databases:

- DR_D1 shows all the Total metrics, plus all three Search metrics
- DR_D2 shows where users were denied access to databases because their institution had no license for the content, or because simultaneous use (concurrency) licenses were exceeded

These views are provided in the following formats:

- Microsoft Excel spreadsheet or TSV file (Tab-Separated Values)
- JSON via SUSHI (JSON is a machine-readable format used for automatically downloaded files)

For database usage, we shall first look at the two Standard Views in turn. Then we shall look at the Database Master Report.

DR_D1 – DATABASE SEARCH AND ITEM USAGE

This Standard View gives you five metrics for each database.

- Searches_Automated
- Searches_Regular
- Searches_Federated
- Total_Item_Investigations
- Total_Item_Requests

Each metric is displayed on a separate line. However, note that metrics that have a count of zero for the reporting period are not displayed. So some databases could show fewer than five lines.

Note also that the Unique metrics are not included in this Standard View. You can find these in the Database Master Report.

In the following example, we have hidden some of the columns to simplify the display.

Database	Publisher	Metric_Type	Reporting_Period_Total	Jan-2020	Feb-2020	Mar-2020
Medieval Agrarian History	Historia	Searches_Automated	838776	290938	300239	247599
Medieval Agrarian History	Historia	Searches_Regular	1719	463	761	495
Medieval Agrarian History	Historia	Total_Item_Investigations	405	172	177	56
Goldilocks Audit	Xcosmos	Searches_Regular	566	126	235	205
Goldilocks Audit	Xcosmos	Total_Item_Investigations	125	74	47	4
Goldilocks Audit	Xcosmos	Total_Item_Requests	111	73	34	4
Sidereal Resources	Xcosmos	Searches_Automated	3524	1203	1244	1077
Sidereal Resources	Xcosmos	Searches_Regular	1215	331	447	437
Sidereal Resources	Xcosmos	Total_Item_Investigations	310	93	140	77
Sidereal Resources	Xcosmos	Total_Item_Requests	174	67	74	33

This example covers a platform with two publishers:

- Historia, which has one database—Medieval Agrarian History
- Xcosmos, which has two databases—Goldilocks Audit and Sidereal Resources

Consider the searches first. Look at Medieval Agrarian History. We can see that this has 1719 regular searches over the period. These come from the database's standard user interface. But it also has more than 83 thousand automated searches. These come from a Discovery Service that does not allow the user to select which databases are searched.

Now look at the two databases on the Xcosmos publisher: Goldilocks Audit and Sidereal Resources. If we compare these, we can see that they have been used in very different ways.

You can see that Goldilocks Audit has only counted regular searches (566). There are no automated searches and no federated searches (so there are no lines for these in the report).

Lower down, most of the searches on Sidereal Resources (3524 of them) were automated searches. There have also been 1215 regular searches. Do **not** add up the counts for the searches—this will not give you a useful number for comparison.

Now we can move on to the metrics that count clicks.

Medieval Agrarian History has 405 Investigations for the period (**Total_Item_Investigations** = 405). There are no downloads (there is no line for this in the report, **Total_Item_Requests** must be zero), which suggests this is an Abstract and Indexing database.

The two Xcosmos databases can be compared with caution here. Overall, Sidereal Resources has had more activity—310 **Total_Item_Investigations** for the period compared to 125 for Goldilocks Audit. However, note that for Goldilocks Audit, an investigation almost always results in a click to

download information: 111 of the 125 investigations were downloads. Sidereal Resources has a much lower conversion rate (174 from 310)—but this could simply be due to the user interface.

The recommended method for judging and comparing database usage is to look at the Unique metrics, which are shown in the Database Master Report. We shall examine these later in this manual.

DR_D2 – DATABASE ACCESS DENIED

This Standard View shows instances where users have been unable to gain access to content in databases. Before we look at an example, let us consider briefly how Denials are counted.

Two types of access refusal are logged:

- **No_License**. This indicates where a user has attempted to access content in a database, but your institution has no license to view that content.
- **Limit_Exceeded**. Some licenses only allow a maximum number of simultaneous accesses to a title or a platform. This metric indicates where that limit has been exceeded.

In principle, counting Denials enables you to see demand for databases to which you might want to subscribe in the future. However, it is only a partial guide. This is because the number of Denials often depends on the user interface of the specific platform or database.

Example. Your institution has licenses for 3 databases on a platform, but the platform itself has 6 databases. If the platform has been set up so that your users are only ever able to see or search through the licensed databases, then there will never be a **No_License** count for the other three.

Also note, for any platform that doesn't offer licenses that limit simultaneous access, you will never see a count for **Limit_Exceeded**.

In effect, just because there are no Denial metrics, it doesn't mean there is no demand. Your users might not know what they can't see.

So, let's look at an example of Standard View DR_D2. For convenience, we have hidden some of the columns from view.

Database	Publisher	Platform	Metric_Type	Reporting_Period_Total	Jan-2020	Feb-2020	Mar-2020
Infectious Diseases	Gamma	PPα	No_License	100	25	30	45
Zoology World	Arcturus	ZooHost	Limited_Exceeded	1	0	1	0

In this example, we can see that users are regularly trying to access unlicensed content on the PPalpha platform. This is worth investigating—it looks like there is strong demand for a license.

There is one instance of **Limit_Exceeded** in February for Zoology World, so you might want to check if there are any further instances in the next quarter's report.

THE DATABASE MASTER REPORT

For each database, the Database Master Report shows the three Search metrics, all the Total and Unique metrics, plus the two Denial metrics.

The report is more useful if you filter it in the following way:

- **Access_Method**=Regular
- **Attributes_To_Show**=Data_Type

Here is an example, where, for convenience, we have hidden some columns.

Database	Publisher	Data_Type	Metric_Type	Reporting_ Period_Total	Jan-2020	Feb-2020	Mar-2020
Goldilocks Audit	Xcosmos	Database	Searches_Regular	566	126	235	205
Goldilocks Audit	Xcosmos	Book	Total_Item_Investigations	125	74	47	4
Goldilocks Audit	Xcosmos	Book	Total_Item_Requests	111	73	34	4
Goldilocks Audit	Xcosmos	Book	Unique_Item_Investigations	49	29	16	4
Goldilocks Audit	Xcosmos	Book	Unique_Item_Requests	49	29	16	4
Goldilocks Audit	Xcosmos	Book	Unique_Title_Investigations	34	20	11	3
Goldilocks Audit	Xcosmos	Book	Unique_Title_Requests	34	20	11	3
Sidereal Resources	Xcosmos	Database	Searches_Automated	3524	1203	1244	1077
Sidereal Resources	Xcosmos	Database	Searches_Regular	1215	331	447	437
Sidereal Resources	Xcosmos	Book	Total_Item_Investigations	6	0	6	0
Sidereal Resources	Xcosmos	Book	Unique_Item_Investigations	4	0	4	0
Sidereal Resources	Xcosmos	Book	Unique_Title_Investigations	4	0	4	0
Sidereal Resources	Xcosmos	Journal	Total_Item_Investigations	280	83	123	74
Sidereal Resources	Xcosmos	Journal	Total_Item_Requests	171	67	74	30
Sidereal Resources	Xcosmos	Journal	Unique_Item_Investigations	184	56	75	53
Sidereal Resources	Xcosmos	Journal	Unique_Item_Requests	123	44	58	21
Sidereal Resources	Xcosmos	Other	Total_Item_Investigations	3	0	3	0
Sidereal Resources	Xcosmos	Other	Unique_Item_Investigations	3	0	3	0
Sidereal Resources	Xcosmos	Thesis_or_ Dissertation	Total_Item_Investigations	21	10	8	3
Sidereal Resources	Xcosmos	Thesis_or_ Dissertation	Total_Item_Requests	3	0	0	3
Sidereal Resources	Xcosmos	Thesis_or_ Dissertation	Unique_Item_Investigations	13	4	6	3
Sidereal Resources	Xcosmos	Thesis_or_ Dissertation	Unique_Item_Requests	3	0	0	3

This example covers the same period as our example in Standard View DR_D1. We can see the two Xcosmos databases—Goldilocks Audit and Sidereal Resources.

For each database on the platform, there are Search metrics for the whole database. These are followed by Total and Unique metrics for each Data_Type available on the database. This enables you to see which ones have the most activity. The Goldilocks Audit database only has books, whereas Sidereal Resources offers Books, Journals, Other and Thesis_or_Dissertations.

First, look at the Search metrics for the two databases, which are (reassuringly) identical to those we saw in Standard View DR_D1. In the top line, you can see the 566 regular searches over the period for Goldilocks Audit, for example.

Now look at the Total and Unique metrics. For each database, each Data_Type has a line for:

- Total_Item_Investigations
- Total_Item_Requests
- Unique_Item_Investigations
- Unique_Item_Requests

If books are available on the database, there are additional lines for Data_Type Book:

- Unique_Title_Investigations
- Unique_Title_Requests

But remember that if any metric is zero for the period of the report, there is no line in the report. For example, there are no lines for **No_License** or **Limit_Exceeded** for any Data_Type.

For Goldilocks Audit, we can see that only one Data_Type has been active—Books. All six metrics have registered activity, so there are six lines for Books in the report. The **Total_Item_Investigations** and **Total_Item_Requests** for the period are, of course, the same as we saw in the Standard View DR_D1. The **Unique_Title_Requests** measures activity for books, not sections. If several different sections of one book are downloaded by a user in a session, this still only counts as one Request for the whole book. Here we see that 34 books have been downloaded either in whole or in part or both.

The **Unique_Title_Requests** metric here is the best one for measuring book usage on an aggregated full-text database. You could also use the Title Master Report and its Standard View TR_B1 to examine book usage in more detail. These are described in Module 1 of our Manual for Librarians: Books: Understanding Metrics and Standard Views.

For Abstract and Indexing databases, we recommend you use the **Unique_Item_Investigations** metric.

If you look at the Sidereal Resources database, first note the two Search metrics. There have been no federated searches.

Under the Search metrics, you can see that there has been activity on several different Data_Types. The following all had investigations, but no requests:

- Books
- Journals
- Other

But the Data_Type **Thesis_or_Dissertation** had 21 Investigations and 3 Requests over the whole period. Looking further down (the last two lines), you can see that 13 of the Investigations were unique, and 3 items were downloaded.

COMPARING COUNTS BETWEEN RELEASE 4 AND RELEASE 5

If you want to spot trends by comparing counts from Release 5 reports with earlier reports from Release 4, the following information is useful:

DB1 AND DR_D1

- You can directly compare the Release 4 **Regular Searches** count to **Searches_Regular** in Release 5.

- Broadly speaking, you can compare the count for **Searches-federated and automated** in Release 4 to the sum of **Searches_Automated** and **Searches_Federated** in Release 5.

- You can, with great caution, compare either one of the Release 4 metrics **Result Clicks** or **Record Views** with the Release 5 **Total_Item_Investigations** for an A&I database. Be very careful, however (see the detailed explanation below). This does not work for full-content and aggregated full-content databases. This is because in Release 5, a Request is also an Investigation, but in Release 4, Requests (downloads) were not counted as Record Views. Never add the two Release 4 metrics together to make the comparison.

DB2 AND DR_D2

- You can compare the Release 4 count for **Access denied: concurrent/simultaneous user licence limit exceeded** with the metric **Limit_Exceeded** in the Standard View DR_D2 in Release 5.

- You can compare the Release 4 count for **Access denied: content item not licenced** with the metric **No_License** in the Standard View DR_D2 in Release 5.

RECORD VIEWS AND RESULT CLICKS VS. INVESTIGATIONS

In Release 4 these two metrics were reported in Database Reports:

Record Views: reported the number of times the detailed metadata of records within a database were viewed, irrespective of whether these records were reached from a set of search results on the platform or from a link-in from an external source. Record Views did not

count views of the content item (e.g., full text), but counted views of the detailed metadata display. Typical examples of Record Views counted are views of abstracts, descriptive data on molecular structures, and chemical reactions.

Result Clicks: were counted when a link included in a search result on the platform was clicked, irrespective of whether that link took the user to an internal record within the database searched (e.g., full text or an abstract/detailed display), or to an external resource (e.g., an OpenURL link such as "findit@mylibrary", or a document delivery form).

By including clicks on links to external resources, the Result Clicks metric was intended to demonstrate the value of a given database even when a record from that database is not being viewed. Be aware that two metrics can reflect the same action by the user—for example, when a user clicks on a search result to view the details of a record.

Is there a Release 5 equivalent to Record Views and Result Click?

These metrics do not have an exact equivalent in Release 5. Item_Investigations counts all user actions counted by Record Views and Result Clicks, but only once, and it counts additional actions not counted by Record Views and Result Clicks. See the table below for some examples on how user actions are counted by these metrics.

As a result, there can be a significant difference between the counts in Release 4 and Release 5 reports on many platforms, and it is difficult to make any comparison.

Aggregated full-text and full content databases

It is not possible to compare Release 4 and Release 5 reports for aggregated full-text and full content databases. This is because Item_Investigations captures not only the user actions which resulted in Record Views and Result Clicks, but also other user actions that were not counted in Release 4. For example, viewing a PDF full text using a direct link from an external source was not counted as a Result Click or a Record View, but it is counted as an Investigation.

A&I databases

With great caution, it is possible to compare Release 4 and Release 5 reports for A&I databases. Item_Investigations can be compared to either Result Clicks *or* Record Views.

Care is needed because In Release 4 there are some actions that were counted both as Result Clicks *and* Record Views, and some user actions that were only Result Clicks or only Record Views. For example, viewing an abstract could be counted as both a Record View and a Result Click.

As a result, only one of these metrics alone can be compared with Item_Investigations. **The sum of Record Views or Results Clicks should not be used when making comparisons.**

Which metric is more suitable for a comparison depends on the platform and the user interface, especially on the links offered for search results (which might result in Result Clicks but not Record Views) and whether there are links from external sources to detailed metadata views (which might result in Record Views but not Result Clicks).

Database type	User action	Release 4	Release 5
Aggregated full-text and full content databases **A&I databases**	View abstract	Record View Result Click (when originating from a search result on the platform)	Investigation
Aggregated full-text and full content databases **A&I databases**	Link to link resolver	Not counted as Record View Result Click (when originating from a search result on the platform)	Investigation
Aggregated full-text and full content databases **A&I databases**	View Cited references	Not counted as a Record View Result Click (when originating from a search result on the platform)	Investigation
Aggregated full-text and full content databases	View HTML full text	Not counted as a Record View Result Click (when originating from a search result on the platform)	Investigation / Request
Aggregated full-text and full content databases	View PDF	Not counted as a Record View Result Click (when originating from a search result on the platform)	Investigation / Request
Aggregated full-text and full content databases	View Multimedia Content	Not counted as a Record View Result Click (when originating from a search result on the platform)	Investigation / Request
Aggregated full-text and full content databases	View Article Preview	Record View Result Click (when originating from a search result on the platform)	Investigation

SUMMARY

- COUNTER metrics count two different types of content; we have called these *full content* and *other information*.

- Investigation metrics count clicks on both types of content and Requests metrics only count clicks to download full content.

- Total metrics count every relevant click for the type of content. Unique metrics do not count repeated clicks on the same item. This is designed to give you a fairer way of comparing counts across different platforms and user interfaces.

- **Unique_Item_Requests** counts clicks to download full content, but it only counts one click per item per session. If the user downloads the same item multiple times in a session, only the first click is counted. **Unique_Item_Investigations** counts clicks on other information and clicks to download. But again, it only counts one click per item per session. Further clicks on the same content are not counted.

- **Unique_Title_Requests** and **Unique_Title_Investigations** count unique clicks on the basis of whole books, as opposed to individual chapters or sections. You can view these on the Database Master Report.

- For an Abstract and Indexing database, you should never see any count for requests metrics. These databases do not have full content to download.

- Three different types of search are counted for each database: **Regular**, where a user can choose which database or databases to search; **Automated**, where the user has no control over which databases are searched; **Federated**, where an application makes a single search across one or more platforms. Note that there are no Unique metrics for searches.

- The generic rule for repeated clicks does not apply to searches. If a user clicks twice, three times or more to search within 30 seconds, each click is counted as a search.

- There are two Standard Views of the Database Master Report: DR_D1 Database Search and Item Usage, and DR_D2 Database Access Denied.

- The Database Master Report is best viewed filtered with **Access_Method**=**Regular** and **Attributes_To_Show**=**Data_Type**. This enables you to view activity on the full range of different items on each database.

- You can directly compare **Searches_Regular** in DR_D1 to the **Regular Searches** count in Release 4.

  You can compare the sum of **Searches_Automated** and **Searches_Federated** to the count for **Searches**-**federated and automated** in Release 4.

  You can, with great caution, compare either one of the Release 4 metrics **Result Clicks** or **Record Views** with the Release 5 **Total_Item_Investigations** for an A&I database. But this

does not work for aggregated full-content databases - in Release 5, a Request is also an Investigation, but in Release 4, they were not counted as Record Views. Never add the two Release 4 metrics together to make the comparison.

- To compare Access Denied across Release 4 and Release 5:
  Use the Release 5 Standard View DR_D2.

- Compare **Limit_Exceeded** to the Release 4 count for **Access denied: concurrent/simultaneous user licence limit exceeded**.

- Compare **No_License** to the Release 4 count for **Access denied: content item not licenced**.

We hope you have found this helpful.

About the author

Over a long career, **John Hendry** has written about everything from Art and Austrian wine through to Z codes for financial markets.

He has made a speciality of presenting complex matter, including PhD theses, in clear and simple terms that make them accessible to a broader audience. Many of his technical manuals have received awards from user groups and independent surveys.