AsterionDB User's Guide

Copyright © 2024 by AsterionDB Inc. All Rights Reserved

1.1 Title, Copyright Information & Trademark Notices

Primary Author: Steve Guilford

This work and all derivatives are copyrighted by AsterionDB, Inc. - 2024

This document is not warranted to be error-free and may be updated and/or enhanced at any time. Current versions are available on-line.

'DbObscura®' and 'DbStreamer®' are trademarks of AsterionDB Inc.

Oracle® is a trademark of Oracle Corporation

Nginx® is a trademark of Nginx Inc.

All other trademarked terms are the property of their respective owners.

Table of Contents

1.1 Title, Copyright Information & Trademark Notices....2
2 Acknowledgments....6
2.1 Parents....6
2.2 Webb & Tulane....6
2.3 Glenn Barber....6
2.4 Friends....6
2.5 Oracle Corp....6
3 Introduction....7
3.1 What is AsterionDB....7
3.2 How AsterionDB Came to Be....7
3.2.1 The Early Days....7
3.2.2 The Transition....7
3.2.3 The Pivot....8
3.2.4 The Revelation....8
3.2.5 A Focus, Target Defined....9
3.2.6 AsterionDB....9
4 Rationale....10
4.1 A New Paradigm Is Needed....10
4.2 Eliminate the Traditional Hierarchical File System....10
4.3 Keywords and Values Identify Assets – No More File Names....10
4.4 Implement an Architecture That Is More Secure and Reliable....10
5 Features....11
5.1 Modern Single Page Application Web Interface....11
5.2 Intelligent Keyword/Value Tagging....11
5.3 Path Parser....11
5.4 Object Query/Retrieval....11
5.5 File Based Access....11
5.6 Built-in Streaming....11
5.7 Object Versions....12
5.8 Object Immutability....12
5.9 Object Sharing....12
5.10 API Access....12
6 Installation....13
6.1 OCI Installation – Autonomous Database....13
6.2 OCI Installation – Non-Autonomous Database....13
6.3 Standalone Installation....14
6.4 On Premises Installations....14
6.5 Edge Deployment (OCI)....14
7 System Startup, Shutdown & Monitoring....15

Copyright © 2024 by AsterionDB Inc. All Rights Reserved

7.1 Framework Components....15
7.2 AsterionDB Web Application....15
8 Getting Started....16
8.1 Logging into AsterionDB....16
8.2 The Objects Page....17
8.3 The Upload Tab....18
8.4 The Button Bar....19
8.5 Uploading a File....21
8.6 Object Properties....22
8.7 Viewing an Object....23
8.8 Keywords, Keyword Groups & Suggested Values....24
8.9 Create a Keyword Group....24
8.10 Create & Associate Keywords with the Group....25
8.11 Adjust Keyword Value Handling....26
8.12 Creating Suggested Values....27
9 Cataloging Your Objects....29
9.1 Assigning Keywords....29
9.2 Setting Keyword Values....29
9.3 Setting Keywords for Multiple Objects....30
10 Retrieving Cataloged Objects....31
10.1 Selecting a Keyword....32
10.2 Selecting a Keyword Value....32
10.3 Adding Another Query Term....33
10.4 Matching Any or All....34
11 The File-System Gateway....35
11.1 Setting File Name Usability Limits....35
11.2 Generating a File Name....36
11.3 Using a Generated File Name....36
12 Secure Web Links....38
12.1 A Secure Web Link Use Case....38
12.2 Generating a Secure Web Link....38
12.3 Setting Parameters for a Secure Web Link....38
13 Object Sharing....40
14 Object Versions....41
14.1 Transforming an Object....41
14.2 Version History - New Versions....41
14.3 File System Gateway Support....41
14.4 Web Links for Versioned Objects....42
15 Streaming History....43
16 Gateway History....44
17 Deleted Objects....45

Copyright © 2024 by AsterionDB Inc. All Rights Reserved

18 Shared Objects....46
18.1 Querying Shared Objects....46
18.2 Working with Shared Objects....46
19 Enrolling New Objects in AsterionDB....48
20 Parsing Source Paths....50
21 Managing Your User Profile....54
21.1 Managing Your User Info....54
21.2 Changing Your Email Address....54
21.3 Changing Your Password....55
21.4 Setting Your Preferences....55
21.5 Viewing Your Login History....57
21.6 Streaming History....57
21.7 Gateway History....58
22 Admin Menu....60
22.1 Website Admin....60
....60
22.2 Object Types....62
22.3 User Administration....64
22.3.1 Creating/Enrolling a New User....64
23 API Error Log....66

Copyright © 2024 by AsterionDB Inc. All Rights Reserved

2 Acknowledgments

2.1 Parents

Where would I be without the support and inspiration of my parents. From my father, a Harvard trained lawyer that would have rather spent all of his free time flying old WWII fighters and Korean Era Jets than practicing law. To my mother who was an early trailblazer, business owner and real estate developer before it was fashionable for women to do so.

2.2 Webb & Tulane

Fortunately for me, I got a first-class education in life and scholastic curriculum at The Webb School of California. Truly one of the most significant events and periods in my life. I graduated in 1980.

Two years at Tulane University proved to be enough for me. After my sophomore year and two semesters of computer programming, I knew what I wanted to do. Coincidentally, I stopped playing with model airplanes around the same time I started playing with computers.

2.3 Glenn Barber

After Tulane, I spent two weeks at a computer software firm in Sherman Oaks, California, teaching myself Cobol on a Wang-VS. The head of the firm saw me hanging out and figured he'd give me something useful to do. I've never really gone for a job interview. I wouldn't be where I'm at today if not for Glenn.

2.4 Friends

All of my friends that I've collected over the years: you've all meant so much.

2.5 Oracle Corp.

What more can I say other than the fact that Larry Ellison and Co. have built the best platform for this kind of innovation.

Copyright © 2024 by AsterionDB Inc. All Rights Reserved

3 Introduction

3.1 What is AsterionDB

AsterionDB is an integrated set of applications and framework components that enable a relational database to effectively store, work with and serve unstructured data. This removes one of the most troublesome and persistent limitations of the traditional relational database - managing unstructured data.

What we can effectively now do is move all of your data files out of directories and into the database. By doing so we eliminate the reliance on static file names. But, how do you find your data? We provide mechanisms that allow you to keyword tag your 'objects' and search based on how you've created your keyword/value pairs. Now that these files have been moved out of the directories and we've abandoned the static file names, they become 'objects'!

So, now that your objects are in the database and there are no more files in your directories, you have effectively eliminated the mechanisms that hackers, viruses and ransom ware rely uponIf there are no files in your directories how does a hacker steal your data? How does ransom ware propagate and infect files?

3.2 How AsterionDB Came to Be

3.2.1 The Early Days

Back in the days of floppy disks and 80Mb. hard drives (1992), a company called MingleWood Data Systems created and sold an IVR/ACD application – SQL*VOX. SQL*VOX was tightly integrated into the Oracle Database and made it extremely simple to write interactive voice response applications that interacted directly with data in the database.

SQL*VOX found a home at a number of companies and ran 24 hours a day, 7 days a week in a server environment. MingleWood Data Systems held support contracts with major companies for, in some instances, a decade or more.

3.2.2 The Transition

By 2007 SQL*VOX had become a legacy application. However, after entertaining a ‘simple’ modification request from a customer, a key discovery was made that ultimately led to the complete redesign of SQL*VOX. The thing that stood out was the ability to directly control the voice boards that talk on the phone from PL/SQL.

This was a key innovation because it then allowed all of the application logic that would otherwise exist in the middle tier to move to the data layer. In effect, we had made the database smarter by allowing it to do things it previously was precluded from doing.

Copyright © 2024 by AsterionDB Inc. All Rights Reserved

But, it didn’t help. The realization soon set in after all that work that even with an innovative architecture the ship had sailed on IVR/ACD systems.

3.2.3 The Pivot

Taking what was innovate from the modifications to SQL*VOX, a new product, the Database Plugin Server was created in 2011With a new focus and direction Minglewood Data Systems morphed into a new company called Database Plugins.

The Database Plugin Server allows programmers to extend the logical capability of databases by plugging external foreign logic into the DB. This led to integrating an open source software package called FFMpeg, the Swiss Army Knife of multimedia toolkits. into the DB. Doing so gave the database the ability to recognize pretty much every multimedia format under the sun. Things like audio, video, images and even computer/video-game specific media formats were now easily recognized and understood by the DB.

This next led to storing the media data in the database - something we were already familiar with from our experience storing voice data for IVR applications. But now we're storing things like images, audio, video and so forth. Looking around for a web server that could stream directly from the database we were initially disappointed but eventually pleased to find that there were no web servers that provided the desired capabilities. So, another new product was born - DbStreamer - a software component that just streams content from the database over an HTTP/S connection. What good is it to store your videos in the database if you can't stream them out directly? Problem solved.

Great!!! We've got media in the database and a way to stream it out to a web page. What's next? Well, one of the things people do with media is trans-code and convert it from one format to another. That's when the big discovery took place. You see, it seems silly to export the data from the database, shove it through the converter, take the output and put it into the database and then clean up all of our file system artifacts. This, naturally, led to the creation of a file system gateway, DbObscura, that allows us to generate a file name on the fly for the object in the database. Generate a file name for input and a file name for output and just like magic we can make the converter read and write to and from the database without it even knowing the difference!

3.2.4 The Revelation

Wow...so now we can store our media files in the database and work with them as if they were files on an as-needed basis. That sure seemed neat. If that was not enough we soon realized that if there are no more files in your directories, how does a hacker steal information from the file system? How does a computer virus or ransom ware carry out attacks and propagate? Seems as though they are now out of luck.

With this revelation Database Plugins, which was once Minglewood Data Systems, morphed again into AsterionDB - what we are today.

Copyright © 2024 by AsterionDB Inc. All Rights Reserved

Certainly, even though one realizes that they could eliminate the traditional file system, that's a long way from actually doing so. When you think about it, it's a tall order to replace a pillar of computer science. To that end, a significant amount of time was spent exploring the limits of this technology. An open-source video editor was modified to work within this new paradigm and other exploratory projects were pursued.

3.2.5 A Focus, Target Defined

By 2016, AsterionDB started to pivot to producing a commercially viable product, based on the underlying streaming, plugin and obscure gateway technologies, that replaces the file system. In late 2016 a proof of concept system was running and the Oracle Cloud was becoming a more viable option for deployment.

Also of significance was the release of the 'React' libraries and adoption of Single Page Application technologies. These innovations allowed JavaScript programmers to create web applications that looked and felt much like a native desktop application.

In 2017 the Oracle Cloud Infrastructure (OCI) became a viable, capable platform. With a minimum of effort AsterionDB was able to verify product compatibility and support upon the OCI. We have been streaming content and supporting unstructured data within the database on the OCI since the summer of 2017.

3.2.6 AsterionDB

AsterionDB was released for public availability in early 2019

AsterionDB provides a comprehensive environment that allows users and applications to manage and integrate unstructured data directly within a database.

Copyright © 2024 by AsterionDB Inc. All Rights Reserved

4 Rationale

4.1 A New Paradigm Is Needed

Have you ever stopped to consider that the technology that was invented back in the 60's to manage a half-megabyte of data on a floppy is still in use today, storing peta-bytes of information in the cloud? Yes, the traditional file system is the ultimate legacy technology.

But, here's the rub. Everybody knows how to interface to the traditional file system. When I say everybody, that includes your favorite virus and ransom ware. The file system forces us to conform to how it wants to store information. This ubiquity and prevalence has a direct bearing on many of the cyber-security incidents we hear of on a nearly daily basis.

4.2 Eliminate the Traditional Hierarchical File System

How can we eliminate the file system? There's a tremendous amount of infrastructure that has been built up to take advantage of the file system. Some how, we've got to find a way to take all of those existing applications and workflows and integrate them into a new paradigm. When you think about it, it's a very find needle one has to thread in order to bring about a paradigm shift such as this.

AsterionDB is the first product implemented that breaks away from the traditional file system! It does not rely upon the file system for any static storage of information. All of our data is in one place - the Oracle Database.

Now, since we don't have file names anymore, we can use file names on a dynamic, as needed basis. Together with the DbObscura File System Gateway technology, we can generate a file name on the fly, feed it to a program and go on with our lives.

4.3 Keywords and Values Identify Assets – No More File Names

I hear what you are saying, if we have no more file names, how do I find my assets. Well, if you think about it, your file name, with all of those directories and sub-directories is nothing more than a set of keyword/value pairs. You probably have a directory for client, project, etc. You can take that model and create keyword/value pairs that are used to tag and identify your assets. AsterionDB provides mechanisms that allow you to tag your assets. Query and searching facilities are also provided.

4.4 Implement an Architecture That Is More Secure and Reliable

So, now that we don't have a file system anymore, we can implement cohesive, simple, secure and resilient systems.

Copyright © 2024 by AsterionDB Inc. All Rights Reserved

5 Features

5.1 Modern Single Page Application Web Interface

AsterionDB features a modern, Single Page Application style web app that provides desktop like functionality from within a browser. The features of this web app are available with all major browsers and platforms.

5.2 Intelligent Keyword/Value Tagging

Groups of keywords can be created. These groups of keywords can be global in nature, applying to all object types, or specific to a particular type of object.

Keyword values can be drawn from a static list, suggested from a dynamic list or entered in without consideration given to previous values.

5.3 Path Parser

Keywords can be derived from existing file path specifications by using the integrated path-parser functionality. This allows you to associate a specific path element (i.e. sub-directory) as a keyword/value pair. Using this feature allows you to quickly and easily capture the meta-data that you have already expressed in your existing files names and directory structures.

5.4 Object Query/Retrieval

The web application provides a mechanism that allows you to query for objects based on the assigned keyword and values. Column filtering is enabled allowing a further refinement of returned objects. Column sorting provides the means to quickly focus your returned sets on the most relevant objects.

5.5 File Based Access

The integrated services of the DbObscura File System Gateway allows applications to access objects in the database as if they were a file. Unlike other object storage systems, AsterionDB allows you to work directly with the data with out the clumsy overhead of downloading and uploading content from the object store.

5.6 Built-in Streaming

The integrated services of the DbStreamer Streaming Component allows for the seamless streaming of content from the database. Content streaming covers a lot more than simply viewing videos and images. Any object, when downloaded for example, can be streamed. Features are built in that allow you to generate web links that stream or download content as appropriate.

Copyright © 2024 by AsterionDB Inc. All Rights Reserved

5.7 Object Versions

AsterionDB can track object versions. This feature allows you, for instance, to generate one link that will always return the most recent version of the object. In addition, the system automatically generates a new version of an object when it is accessed as a file for modification.

5.8 Object Immutability

Objects can be marked as immutable. This prevents any changes to content or associated meta-data.

5.9 Object Sharing

Objects can be shared among users of AsterionDB.

5.10 API Access

AsterionDB provides a callable REST based API making it easy to integrate into existing applications.

Copyright © 2024 by AsterionDB Inc. All Rights Reserved

6 Installation

There are several ways to install and access AsterionDB. The method you chose will be determined by where your database ‘lives’ and how you connect to networked or local resources.

AsterionDB can be installed on premises, in the cloud and at the edge. You can use AsterionDB with all versions of the Oracle database after Oracle19c (i.e. Autonomous, Enterprise Edition, Standard Edition, OracleXE). The installation process is largely the same in each case, differing primarily in how the connection to the database is established.

AsterionDB can be installed behind a load balancer to enable secure HTTPS access over the web. You can also access AsterionDB through tunneled ports or directly via port 8080 when on a local network.

AsterionDB can be installed in any cloud platform – we are not limited to Oracle Cloud Infrastructure (OCI). Our documented installation process for cloud implementations refer to Oracle Cloud. For other cloud platforms, the installation process would very closely parallel the documentation for an On Premises Installation.

A brief outline the installation process follows:

- Ascertain the connection string and DBA credentials for your target database
- Create a compute node with the AsterionDB software from the Oracle Marketplace or from the AsterionDB Docker repository.
- Configure the compute node so that it can connect to the database.
- Run the /home/asterion/asterion/oracle/admin/updateConfig.sh script.
- Run the /home/asterion/asterion/oracle/admin/applyConfig.sh script.

The easiest way to understand how to install AsterionDB is to perform or watch a cloud installation using Oracle Autonomous Database by referencing the documentation and video linked below.

6.1 OCI Installation – Autonomous Database

For detailed information regarding the installation of AsterionDB using Oracle Cloud Infrastructure (OCI) and the Autonomous Database, including a video guide, refer to the following web page:

https://asteriondb.com/getting-started/

6.2 OCI Installation – Non-Autonomous Database

For detailed information regarding the installation of AsterionDB using Oracle Cloud Infrastructure (OCI) and a database running as a Virtual Machine (i.e. non-Autonomous Database) refer to the following web page:

Copyright © 2024 by AsterionDB Inc. All Rights Reserved

https://asteriondb.com/vm-database-install/

6.3 Standalone Installation

For detailed information regarding the installation of AsterionDB as a standalone instance (i.e. single compute) refer to the following web page:

https://asteriondb.com/stand-alone-install/

6.4 On Premises Installations

Detailed instructions for performing an on premises installation is available by request. Please contact us at support@asteriondb.com

6.5 Edge Deployment (OCI)

AsterionDB is compatible with Oracle's Roving Edge Infrastructure. You can create your workload components, including an installation of AsterionDB, as you would for any other Rover compatible technology and export that configuration to the Roving Edge.

Please contact us at support@asteriondb.com for more information.

Copyright © 2024 by AsterionDB Inc. All Rights Reserved

7 System Startup, Shutdown & Monitoring

7.1 Framework Components

AsterionDB is integrated into the Linux systemctl facility. This makes it easy to start, stop and monitor AsterionDB's framework components.

AsterionDB is configured to ensure that the framework components will start up automatically upon system boot-up.

There are three services that make up the AsterionDB framework:

1. **dbTwig** – the middle-tier listener that handles the traffic between HTTP (your network) and SQL (your database)
2. **dbObscura** – the file system gateway, handles file based access to data in the database
3. **dbStreamer** – the database streaming server, handles HTTP based request

These services can be administered separately or together when connected with admin privileges (e.g. sudo):

- **systemctl start dbTwig dbStreamer dbObscura**
- **systemctl stop dbTwig dbStreamer dbObscura**
- **systemctl status dbTwig dbStreamer dbObscura**

7.2 AsterionDB Web Application

AsterionDB utilizes **nginx** to serve our integrated web application. The web application utilizes a mount point in the file system that overlays the standard content in '**/usr/share/nginx/html**'.

You can use the following commands to mount and unmount the web application when connected as an admin:

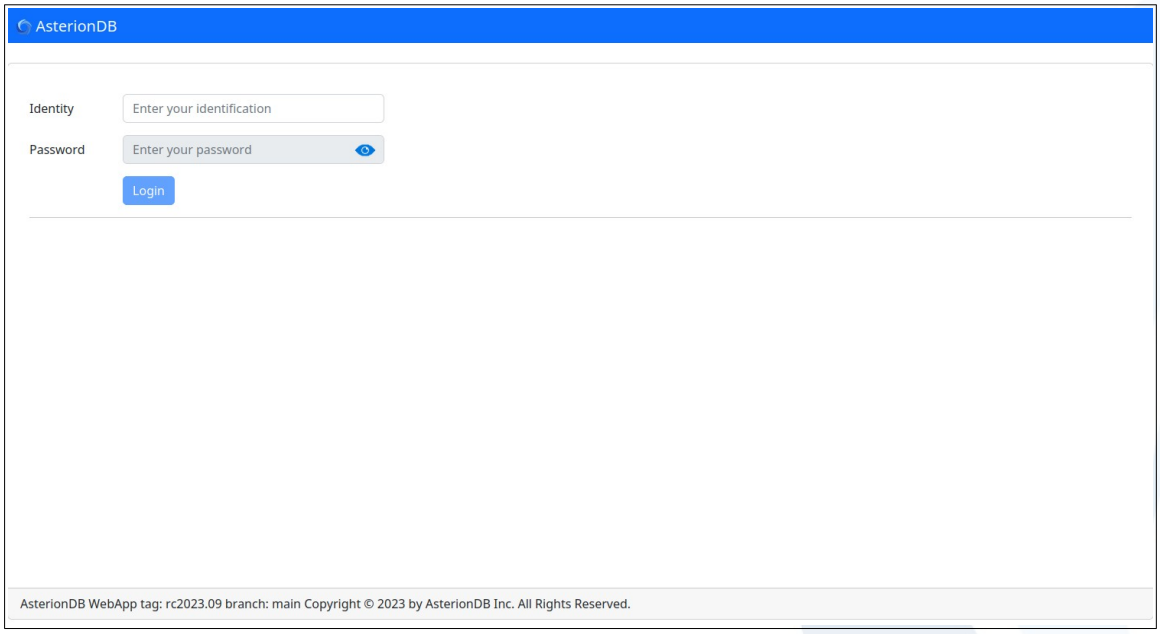
- **mount /usr/share/nginx/html**
- **umount /usr/share/nginx/html**

Copyright © 2024 by AsterionDB Inc. All Rights Reserved

8 Getting Started

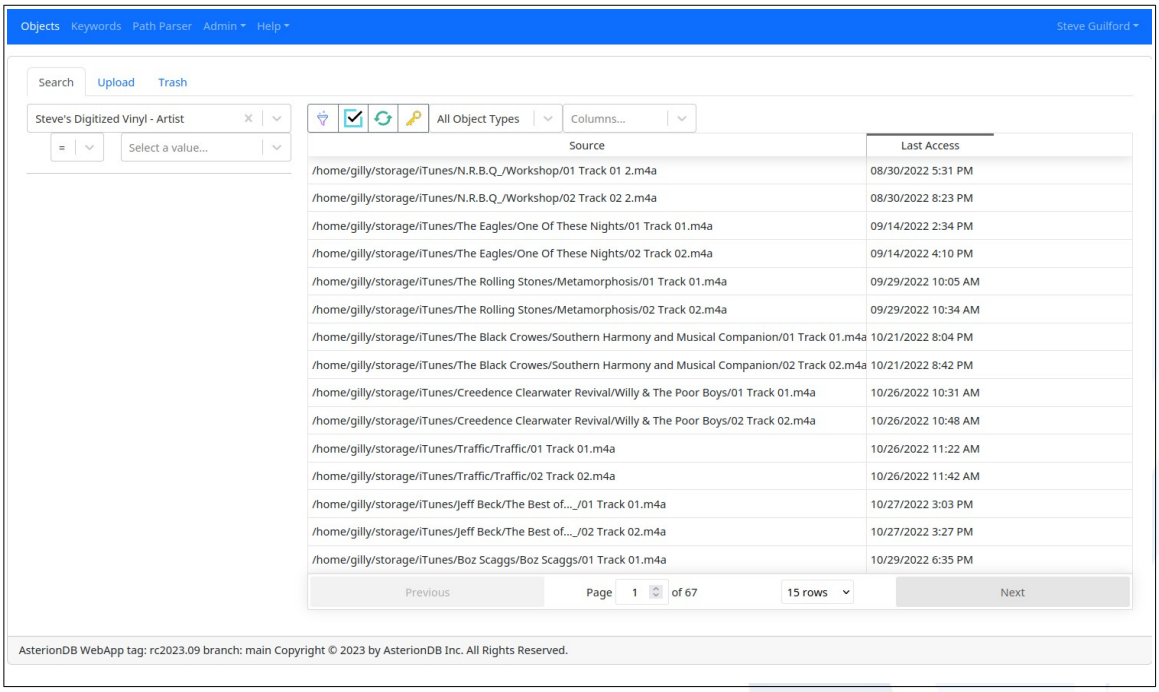
8.1 Logging into AsterionDB

In order to access AsterionDB, you will have to login. You can use your username or the email address that was specified when your account was created.



8.2 The Objects Page

Most of your interaction with AsterionDB will take place in the Objects page:



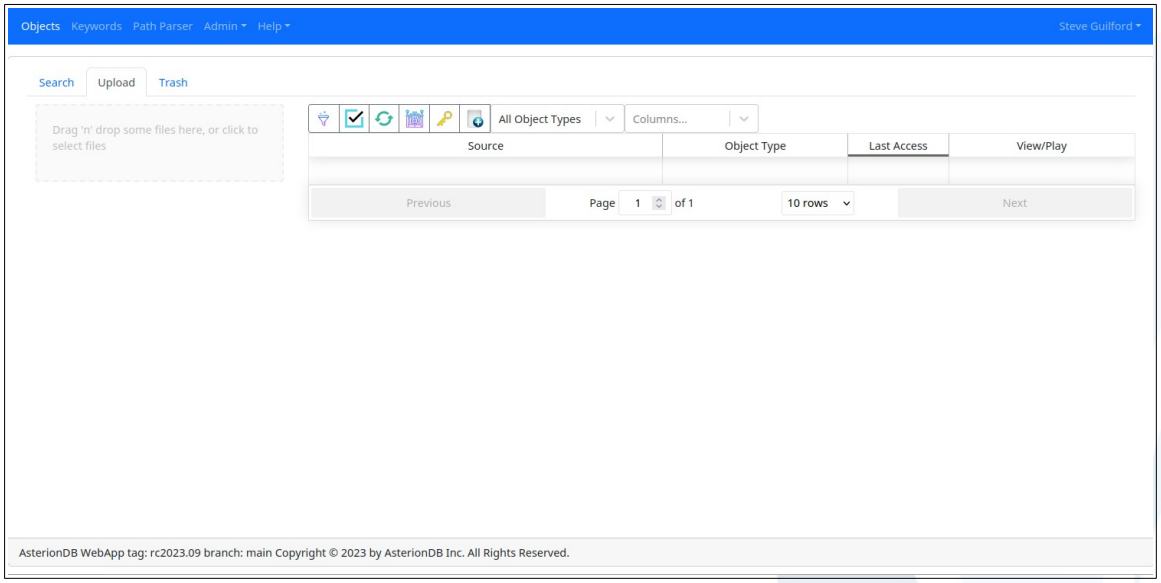
This page allows you to search, view and share objects. The main Objects screen uses a tabbed interface to minimize the amount of page switching and reduce screen clutter. There are tabs for:

- **Search** - You can search for objects that you have tagged with keyword/value pairs from this tab
- **Upload** - You can upload new objects into AsterionDB on this tab. Objects stay on this tab until you assign one or more keyword/value pairs. Once you have assigned some keyword/value pairs the objects can be found on the 'Search' tab.
- **Trash** - Restore or purge objects from this tab.
- **Shared** - If object sharing has been enabled and you have been granted permission to view shared objects, you will be able to access objects that have been shared with you from this tab. This tab only appears if object sharing has been enabled.

Copyright © 2024 by AsterionDB Inc. All Rights Reserved

8.3 The Upload Tab

This chapter is presented to you as if you were a new user looking to upload, catalog and work with your content. Here's an example of what the upload tab will look like when you access the system for the first time:



8.4 The Button Bar

A button bar is presented at the top of the area that displays the objects in AsterionDB:

Each tab (Search, Upload, etc) has its own set of buttons and elements. The buttons and elements in the button bar show above, from left to right, are:

Filter Button

This button will open up filter fields below the column headers. You use these fields to filter returned rows for a specific value.

This button appears on every tab.

Toggle Select

This button will toggle the rows that have been selected. You can use this button to perform a 'Select All' operation as well. To do so, start by having no rows selected - use Control-Click to de-select a row if necessary - and then press the Toggle Select button. This button appears on every tab.

Refresh

This will refresh the display of objects returned from AsterionDB. You will use this button to manually fetch records from AsterionDB when you are working with large data sets and have the auto-query feature turned off.

This button appears on every tab.

Enable/Disable Gateway

This button appears on the Upload tab and only if you have 'Enable Gateway Elements' checked in your user preferences

Use this button to enable or disable the AsterionDB Gateway. The gateway is a one-way directory that allows you to directly ingest content through the file system by simply dropping files and directories into the drop-directory.

This button appears on the Upload tab only.

Assign Keywords

This button allows you to access the keywords assigned to the objects you have selected. You can use this button to associate keywords with multiple objects in one operation.

This button appears on the Search and Upload tabs.

Share Objects

Copyright © 2024 by AsterionDB Inc. All Rights Reserved

This button will only appear if the system administrator has enabled sharing and you are granted permission to share objects. Pressing this button allows you to set the sharing properties for one or more objects.

Secure Web Link

Pressing this button will allow you to access the Secure Web Link screen where you can generate a secure web link for the selected row. Note that this button will not appear if you have not selected a row or selected more than one row.

This button appears on the Search and Upload tabs.

Enroll Content

This button appears on the Upload tab and only if you have 'Enable Gateway Elements' checked in your user preferences

This button will bring up the Enroll Content screen. Using this screen you can generate a file name that can be used to create a new object in AsterionDB. This file name can be handed off to a program or used at the command line.

This button appears on the Upload tab only.

File Types

This drop-down button will allow you to limit the returned objects to the selected file-types.

This element appears on every tab.

Column Selector

This drop-down button allows you to select/de-select the columns that are shown.

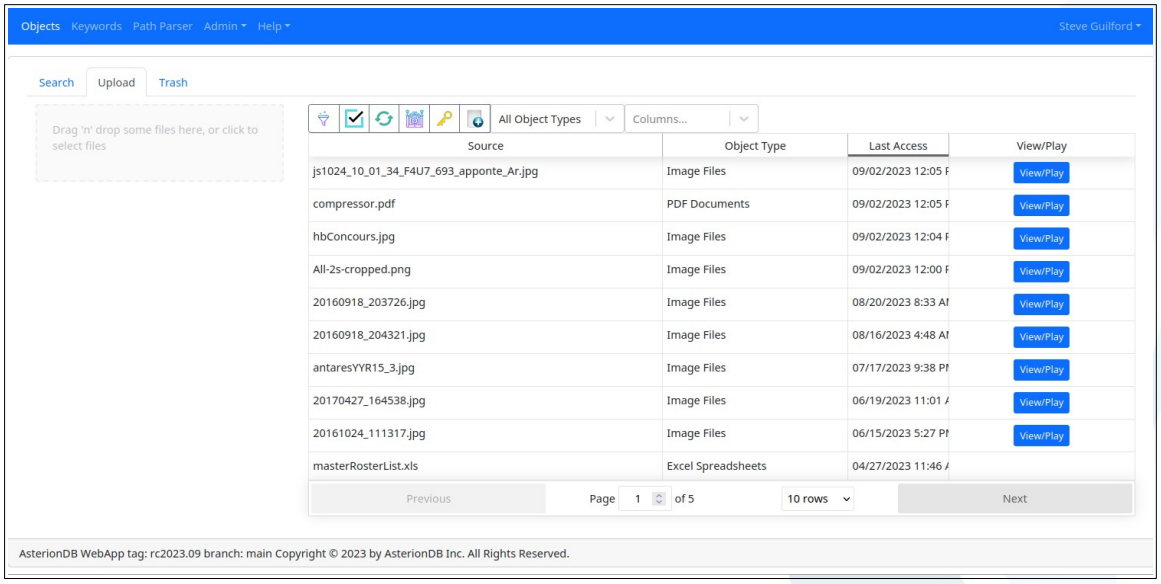
This element appears on every tab.

Copyright © 2024 by AsterionDB Inc. All Rights Reserved

8.5 Uploading a File

The Upload tab is where you ingest new content into AsterionDB. A file-upload widget is available on the left side of the page. You can drag-and-drop content into the drop-zone or press the 'Select Files' button to upload files. You can ingest multiple files and files of differing types in one operation.

When files are ingested into AsterionDB, the system examines the file-type, as defined by the file-extension, and will reject any file-types that have not been enabled by AsterionDB Administrator.

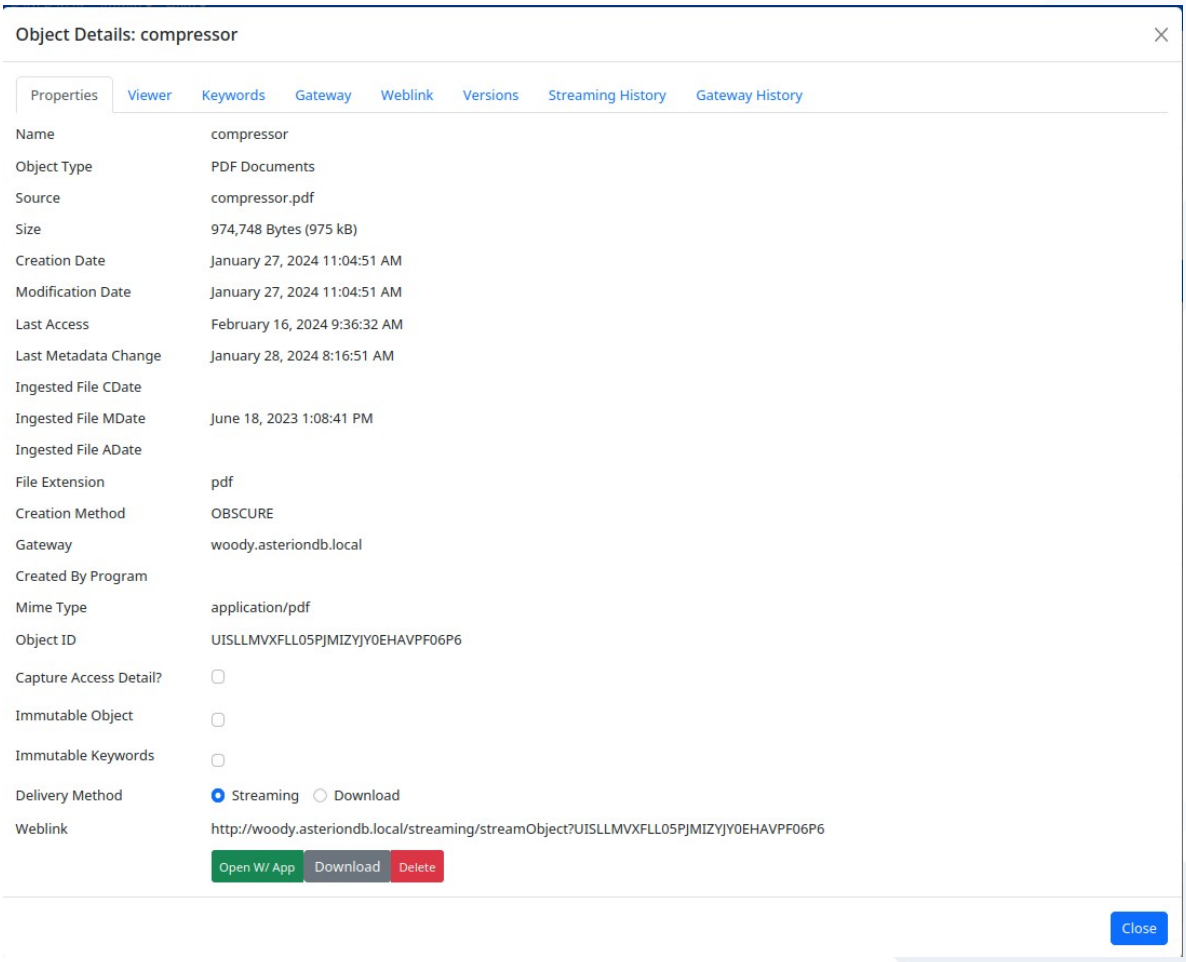


Copyright © 2024 by AsterionDB Inc. All Rights Reserved

8.6 Object Properties

By double-clicking on the row, or using the right-click context menu, you can access the object's properties. The properties are presented using a modal, tabbed display. The tabs allow you to access the object's details, a viewer, keywords, gateway and web link functions, sharing, versions and streaming history

Here's an example of the object's details:



On this tab you have access to a static link for the object. This link can be generated for streaming (if the object is playable media) or for download (e.g. archive objects). Click on the link to copy it to your paste buffer.

There is a checkbox to capture access detail. This allows you to track the read/write details for each and every file-based access to an object.

You can also toggle the Immutable Object flag which prevents any and all changes to the object. Immutable objects can not be deleted or altered in any way. Changes to versioned objects is also disallowed.

Copyright © 2024 by AsterionDB Inc. All Rights Reserved

In a similar fashion, the Immutable Keywords flag prevents changes to the keywords and values associated with an object.

Buttons to delete the object and download the object directly are also provided.

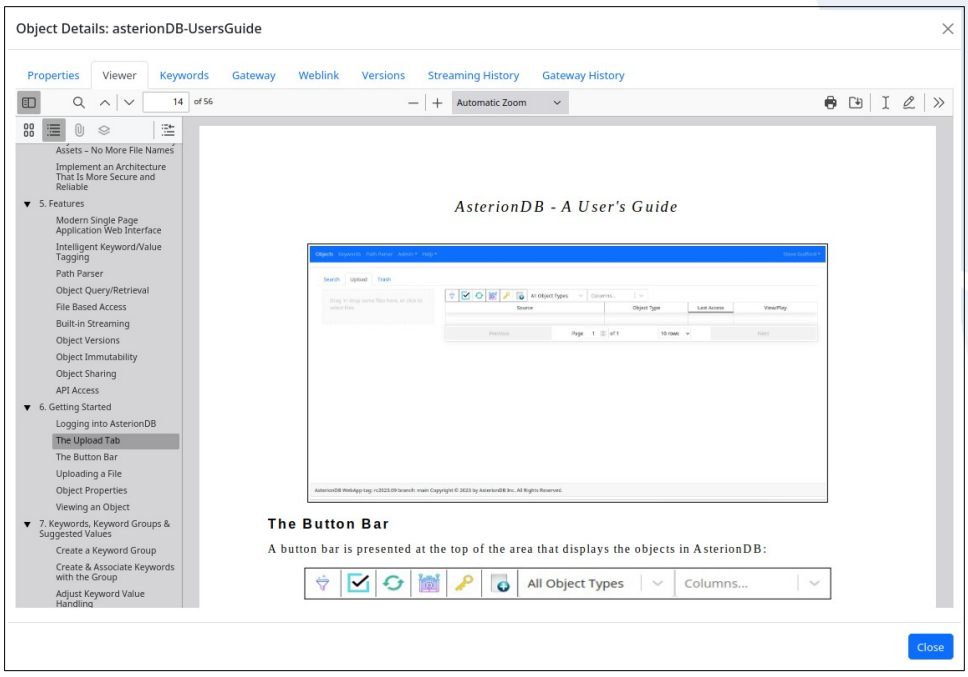
Of note are the 'Ingested File Cdate/Mdate/Adate values. These values represent the original file's status change date, modification date, and last access date (respectively) and are only available for content ingested through the DbObscura File System Gateway. These values are not populated from web-ingested content

8.7 Viewing an Object

An integrated object viewer is available on the 'Viewer' tab. Note that support for viewing an object is determined by the browser and underlying operating system capabilities. You will find variance among browsers and operating systems in their support for multimedia formats. That said, the most popular and prevalent formats are typically supported across the board. It's the more esoteric formats that may be lacking in support. Currently the following object types are supported by the Object Viewer:

- Audio
- Video
- Images
- PDFs
- Text files

Here's a PDF:



8.8 Keywords, Keyword Groups & Suggested Values

Now that you have content in AsterionDB you need a way to catalog, tag, query and retrieve your objects. AsterionDB provides a mechanism that allows you to qualify and tag your objects with keywords and values.

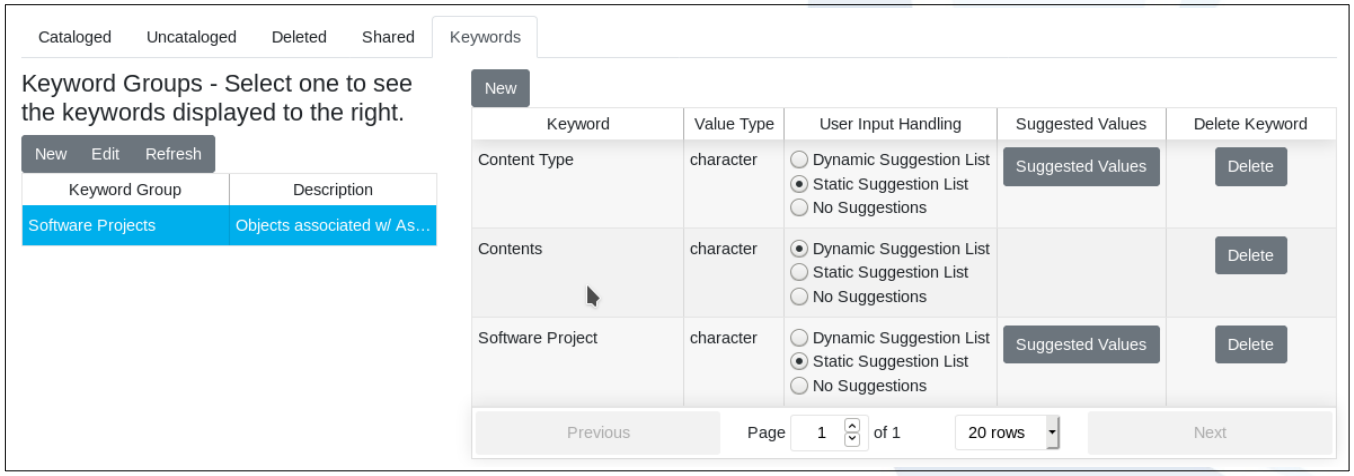
If you think of it, your directory path is a series of keyword and value pairs. Consider the following:

```
/softwareProjects/objVault/testData/masterRosterList.odt
```

You could just as easily say that the object is qualified by these properties:

- It's part of AsterionDB Project.
- The type of content is test data that is utilized by AsterionDB Project.
- The object contains a Master Roster List.

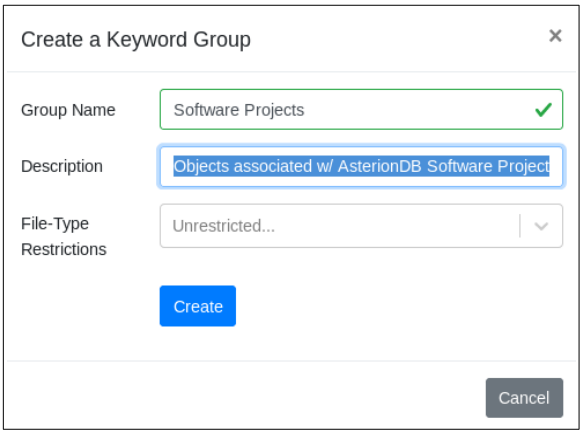
Considering things this way leads us to envisioning a group of keywords that all relate to the AsterionDB Project.



8.9 Create a Keyword Group

To create a keyword group such as this press the New button (to the left of the page) to enter the appropriate information. Note that keyword groups can be restricted to a specific file-types but in this instance we are going to have all sorts of associated objects so we'll leave the keyword group unrestricted.

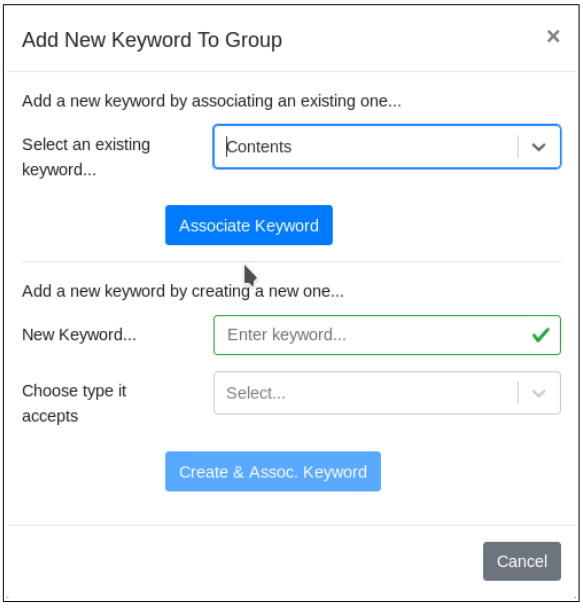
Copyright © 2024 by AsterionDB Inc. All Rights Reserved



8.10 Create & Associate Keywords with the Group

With the group created, select it on the left hand side and then press the New button to create a new keyword. The first keyword we will create is for the 'contents' of the file

Keywords can be used in more than one keyword group. You can easily imagine how the keyword 'contents' could apply for objects that are associated with your software projects as well as objects that are part of another group. To support this functionality you can either create a new keyword or associate an already existing keyword. The 'contents' keyword is rather common so you'll probably find it in your list of existing keywords.



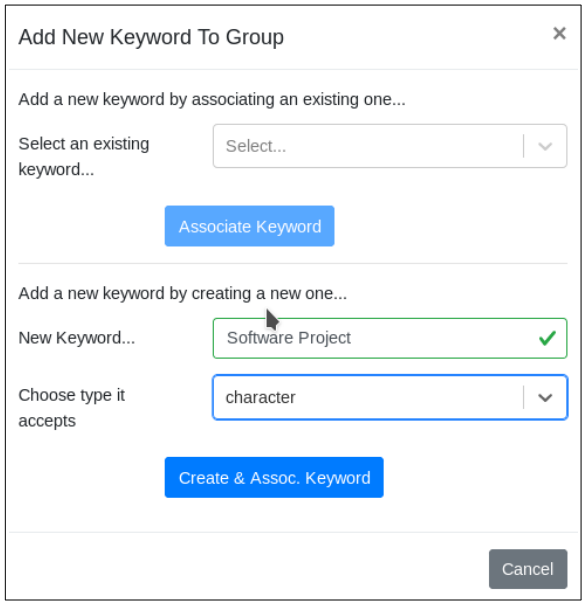
We also need a keyword to track the software project. There probably is not a keyword for this already so we'll go ahead and create one. Keywords values can be of the following types:

- character
- date
- floating point

Copyright © 2024 by AsterionDB Inc. All Rights Reserved

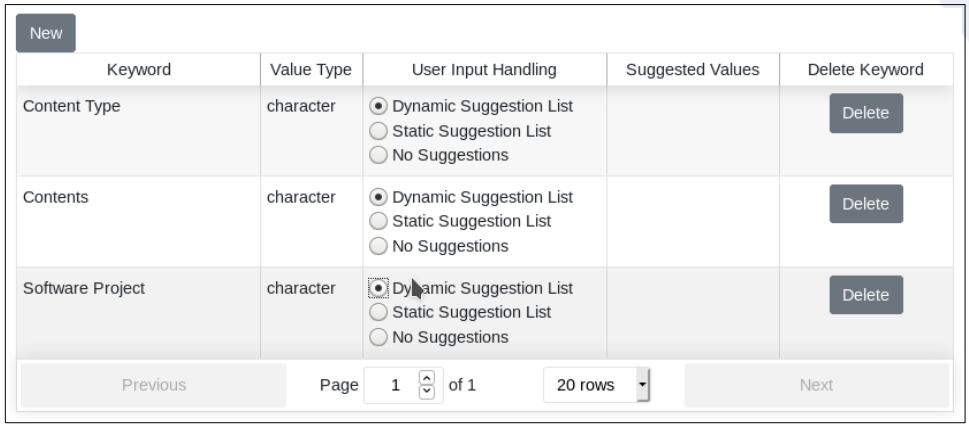
- integer
- json
- time
- timestamp
- true or false
- yes or no

This example shows how we are creating a keyword for 'Software Project' and it will accept character string values.



8.11 Adjust Keyword Value Handling

With an additional keyword created for 'Content Type' we'll have a set of keywords assigned to our 'Software Projects' keyword group that looks like this:



Copyright © 2024 by AsterionDB Inc. All Rights Reserved

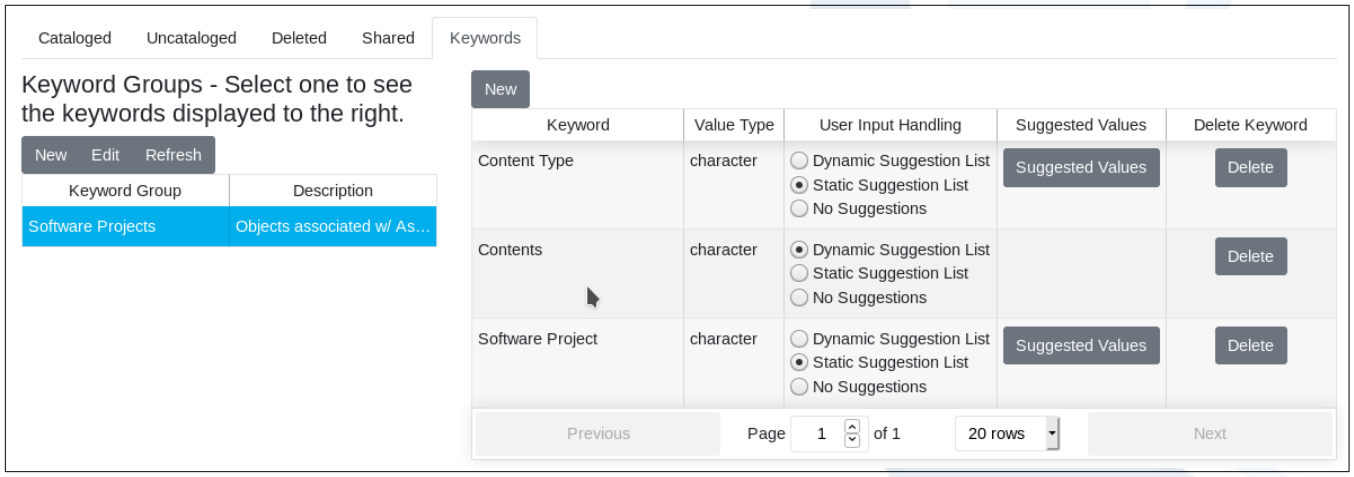
We can now adjust how the system will accept values for these keywords. There are three ways that keyword values can be handled:

1. Offer a static list of values
2. Offer a dynamic list of values to which you can add new values to on-the-fly
3. Offer no suggestions

We can use this handling to our advantage when it comes to structuring how objects get tagged. In this example, we have a set of software projects that we're working on (e.g. a static list) and limited set of content types (e.g. test data, scripts, etc.)The 'content' of course is probably all over the map as far as values goes so we'll want to allow the users to pick from a dynamic set of suggested values

'No Suggestions' is useful for things like serial numbers where the value is not known in advance and it is not likely to repeat.

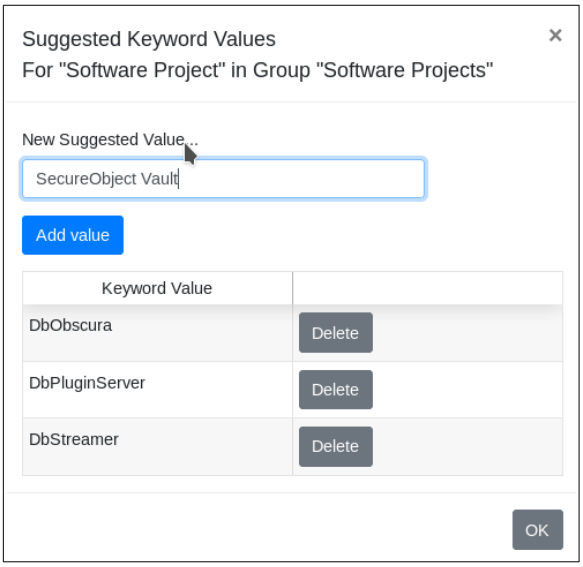
We will toggle the radio buttons to set the input handling for 'Content Type' and 'Software Project' and have a screen that appears like this:



8.12 Creating Suggested Values

Pressing the 'Suggested Values' button will bring us to a modal where we can build our list of suggested values. Here's an example:

Copyright © 2024 by AsterionDB Inc. All Rights Reserved



It is important to note that deleting a suggested value will not remove that value from any objects to which it has been associated to. To do so, you will need to query AsterionDB for that keyword/value pair and change or remove the association.

Copyright © 2024 by AsterionDB Inc. All Rights Reserved

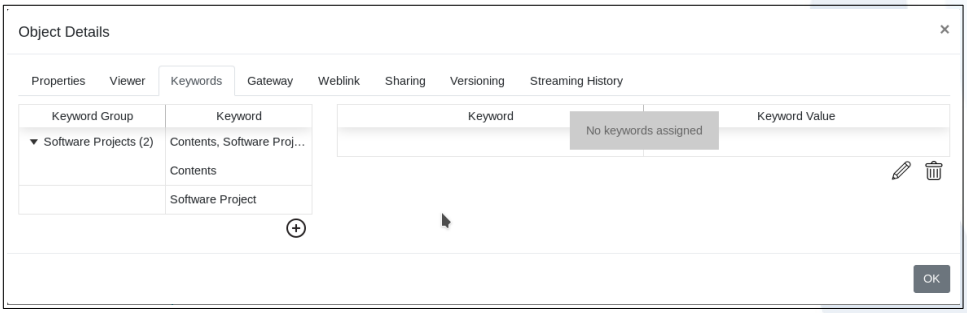
9 Cataloging Your Objects

As we've discussed, tagging your objects with keyword/value pairs allows you to query and retrieve your objects from AsterionDB. We have two types of objects (deleted objects notwithstanding) - cataloged and uncataloged/uploaded objects. By associating keywords and values with an object its status transitions from uncataloged/uploaded to cataloged. You will notice that objects 'move' off of the Upload tab after you have associated keywords and values with them.

9.1 Assigning Keywords

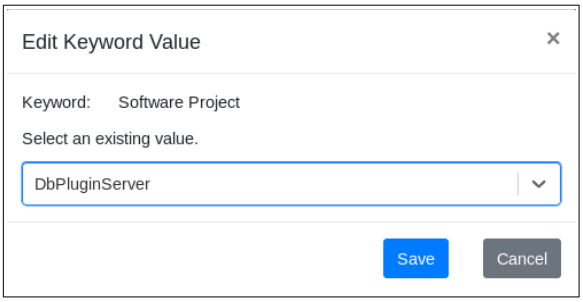
Returning to the Upload tab on AsterionDB screen, we can double-click on our object to access the Objects Details Modal. Navigating to the Keywords tab allows us to associate keywords and values with our object.

On the left-hand side you will see all of your keyword groups. You have to expand the keyword group in order to see the individual keywords



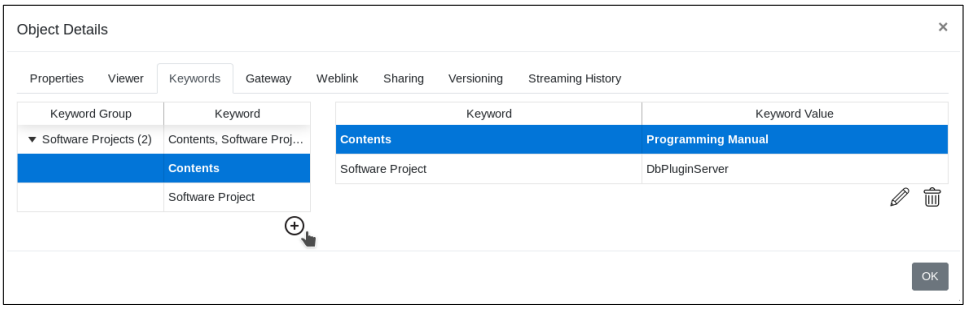
9.2 Setting Keyword Values

Double clicking on the keyword will allow you to associate the keyword with the object and set the keyword value. In this case we will select the Software Project keyword and an existing value to be associated with our object.



Here's what the modal screen will look like after a couple of keywords and values have been set.

Copyright © 2024 by AsterionDB Inc. All Rights Reserved



It is worthwhile to note that unlike the traditional file system, objects do not necessarily have to be tagged with a unique set of keywords and values. What this means in practical terms is that you can tag your objects to one degree at first and then expand upon those associations at a later time.

You can edit the keyword value by double-clicking on the row or by hitting the 'edit' button. You can also remove a keyword/value association by pressing the 'delete' button.

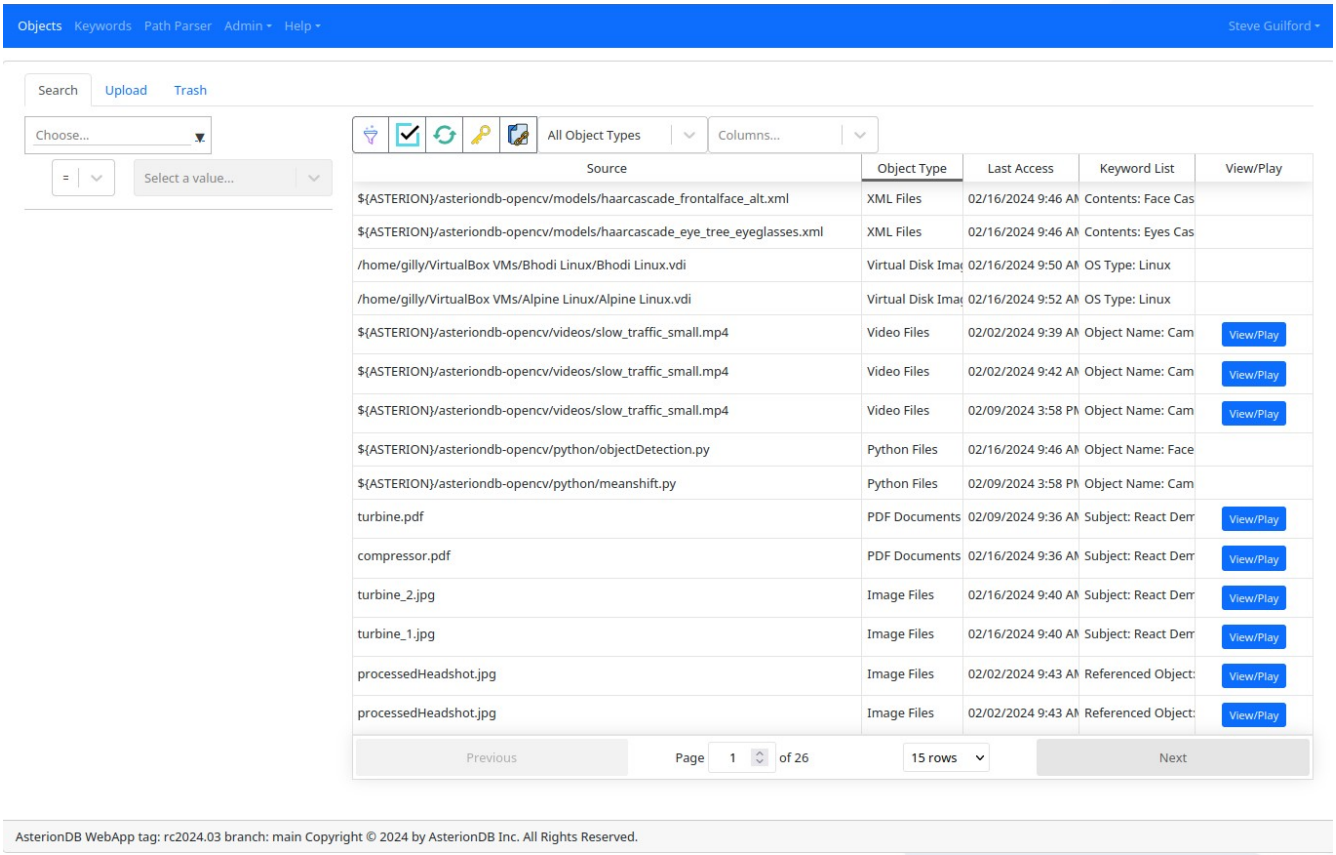
9.3 Setting Keywords for Multiple Objects

You can associate keyword/value pairs with more than one object at a time. To do so, select the desired objects and press the Keywords button (see the section on the button bar)When working with multiple objects the keyword/value pairs shown are only the ones that are in common among all of the selected objects.

Copyright © 2024 by AsterionDB Inc. All Rights Reserved

10 Retrieving Cataloged Objects

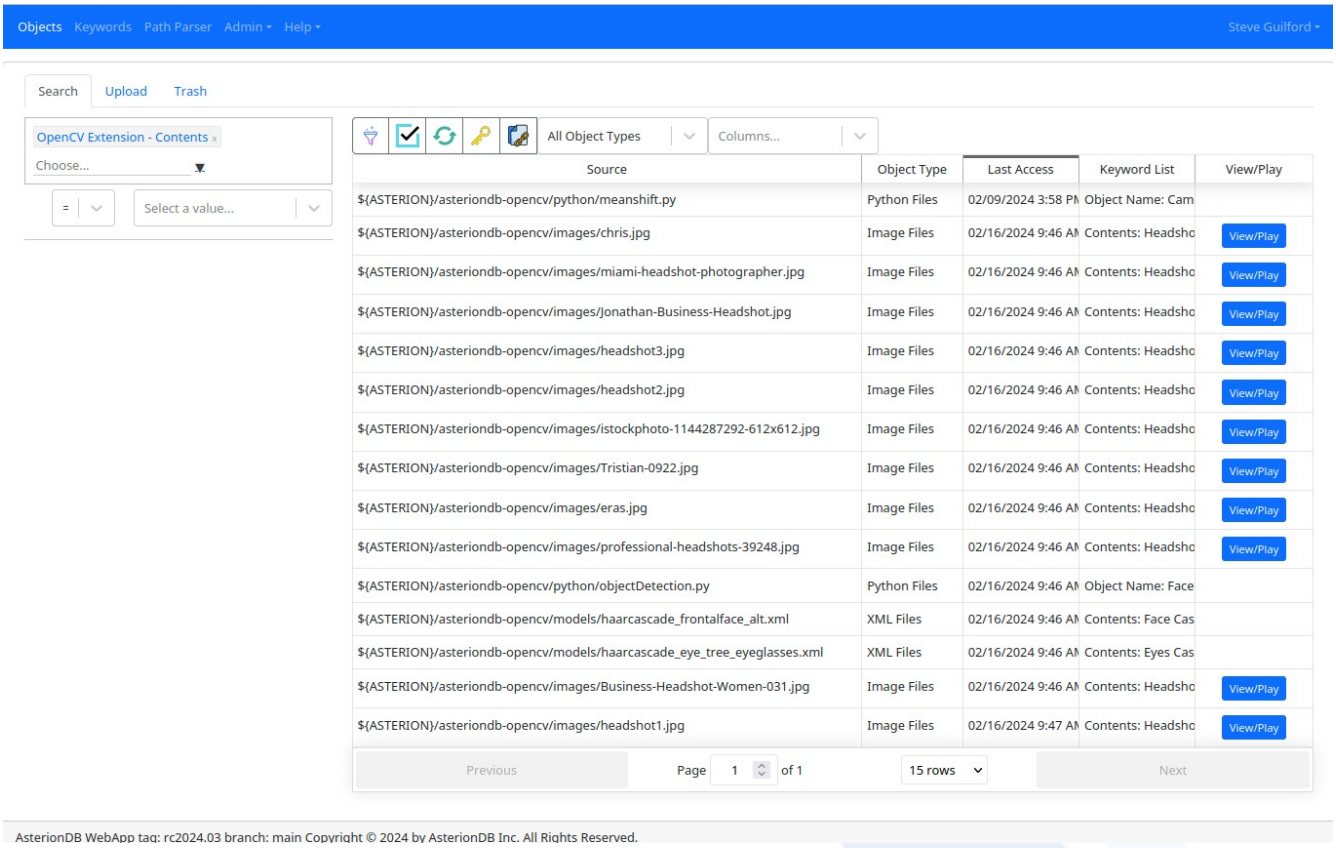
Now that we have associated some keywords and values with a few objects in AsterionDB we can search among the cataloged objects for the items we want. Remember, once an object has been associated with some keywords, it becomes a cataloged object and you will find it on the Search tab. Navigating to the Search tab you will see a Query Builder on the left-hand side of the page.



Initially, the Query Builder has fields that allow you to select the keyword, a keyword value and an operator value (i.e. equal, not-equal).

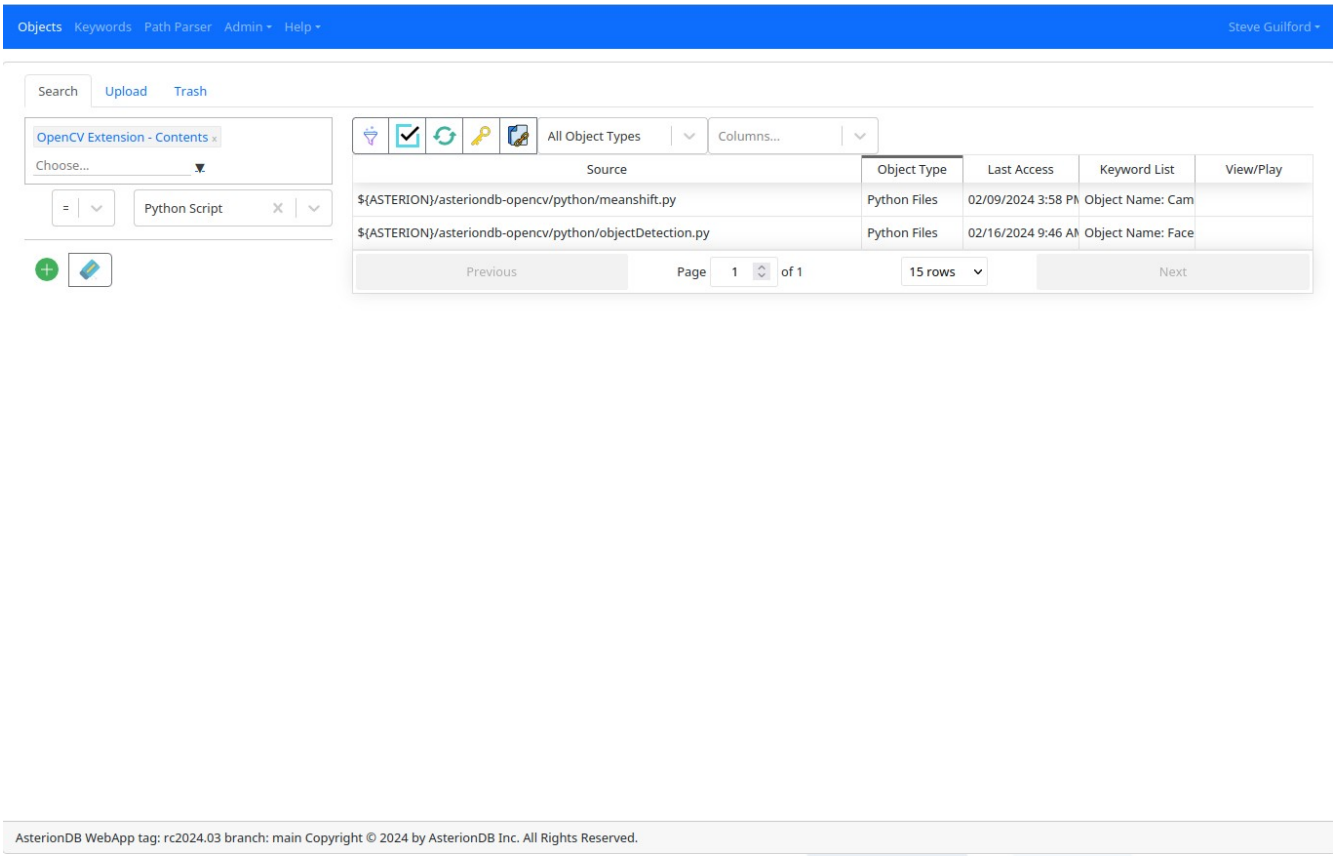
10.1 Selecting a Keyword

Selecting a keyword from the drop-down list will allow us to then select a value. You will also notice that the returned set of objects narrows after selecting a keyword.



10.2 Selecting a Keyword Value

Selecting a keyword value further narrows down the set of objects returned.

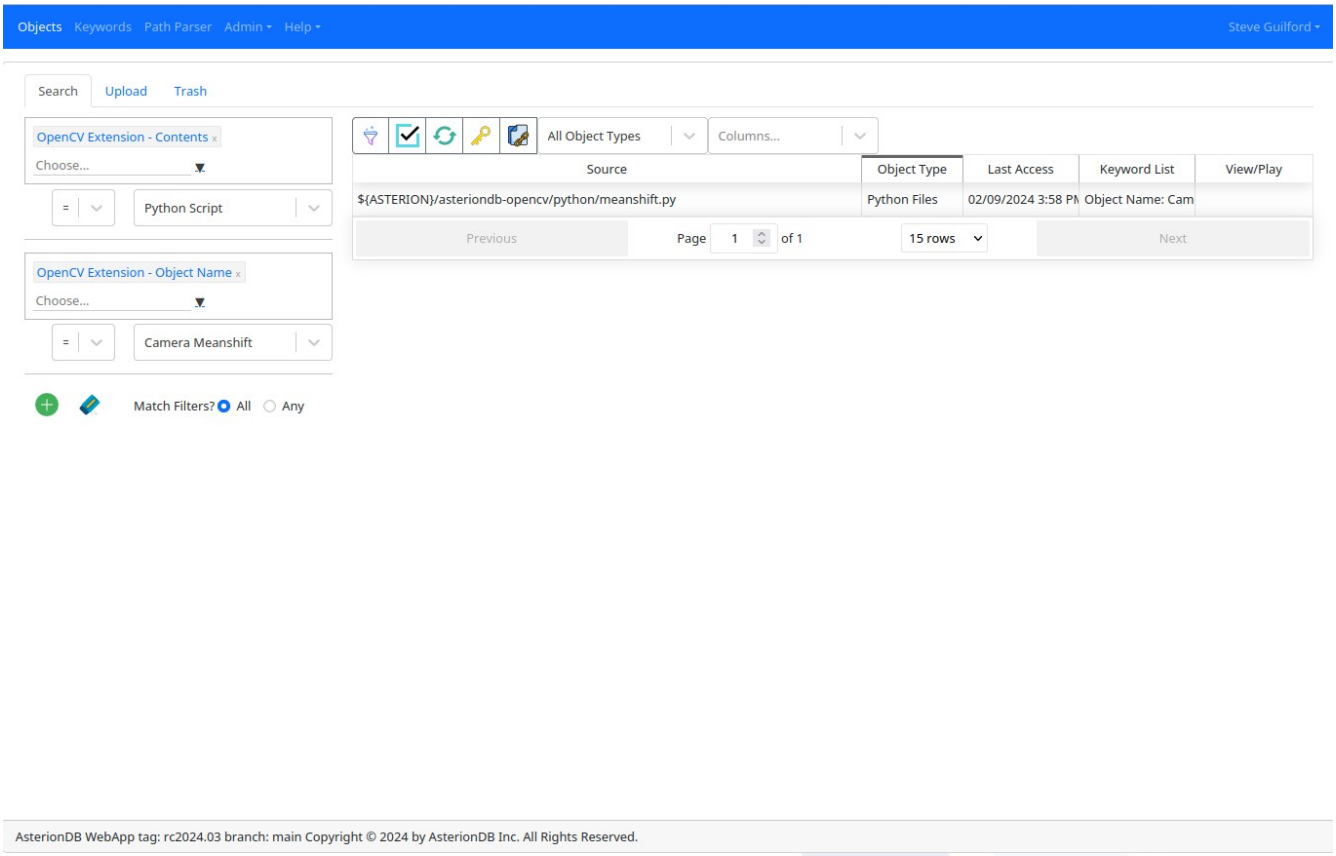


You can also change the equivalence operator (i.e. equal, not-equal) to tailor your search.

You will also see that additional buttons have appeared. These buttons allow you to add another query term or clear all of the query terms.

10.3 Adding Another Query Term

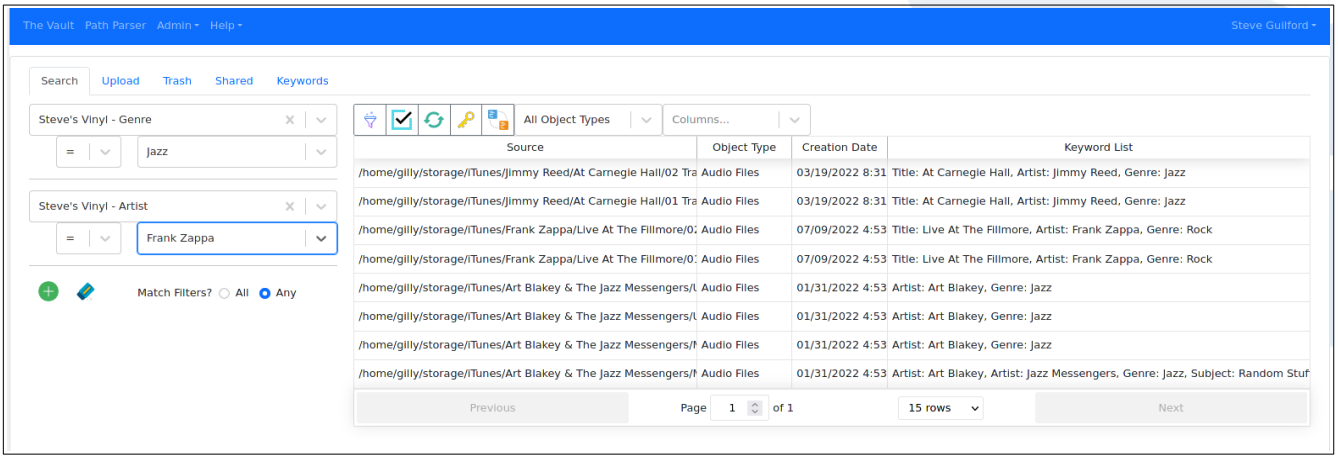
Pressing the 'Add Filter' button that is below the keyword value drop-down will allow you to enter in another keyword/value. Here's an example:



You can press the 'x' character in the drop downs to clear a filter value or remove it entirely.

10.4 Matching Any or All

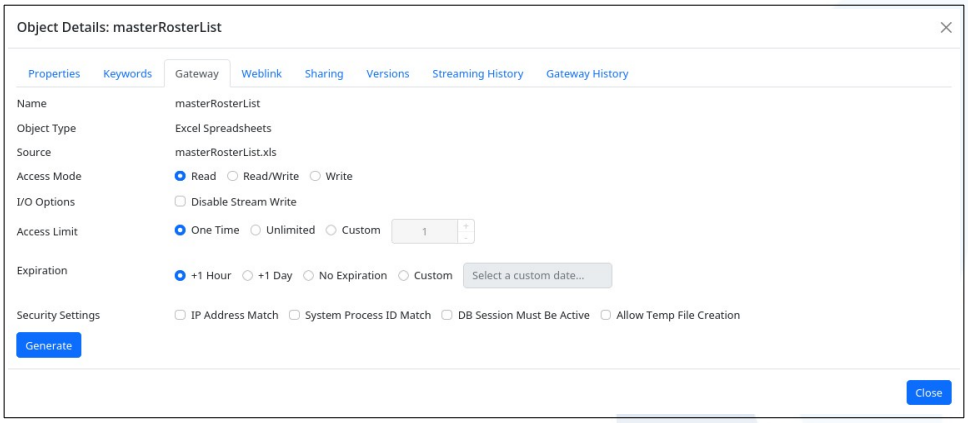
You will also notice an additional set of options to set the ‘Match Filters’. This provides a simple and/or condition whenever multiple keyword/tag pairs are specified. Here is an example where we are matching any of the specified keyword/tag pairs:



11 The File-System Gateway

The functionality described in this section is enabled by checking the option 'Enable Gateway Elements' in your user profile. To utilize the gateway functionality you must have an instance of the DbObscura File System Gateway running on your computer. Consult the DbObscura documentation for information on installing and configuring the file system gateway on your computer.

The Gateway tab of the Object Details modal provides the means by which you can generate a file name for an object in AsterionDB:



11.1 Setting File Name Usability Limits

The Gateway tab allows you to govern how the file names are used by setting some parameters.

Access Mode

You can restrict access to the file to read, write or read/write operations.

Access Limit

You can restrict the number of times a file name can be used (referenced in an 'open' statement) to a specific number of uses.

I/O Options

Turning off the stream-write feature may be needed for applications that ping-pong around in the file while writing data.

Expiration Date

You can cause the file name to expire after a specified period of time by specifying a Expiration Date value.

IP Address Match

If checked, the IP address of the server that uses the generated file name must match the IP address of the computer that consumes the file name.

Copyright © 2024 by AsterionDB Inc. All Rights Reserved

System Process ID Match

If checked, the System Process ID of the process that uses the generated file name must match or be a child of the process that generated the file name.

Session Must Be Active

If checked, the database session that generated the file name must be active at the time the file name is used.

Allow Temp File Creation

Some programs will create a temporary file during a save operation. While temporary files should go into the operating system's temporary directory, not all programs follow this standard. Instead, they will create a temporary file within the same directory that the file it is operating upon is located in. The temporary file may have a name that is derived from the actual file name but with a specific extension.

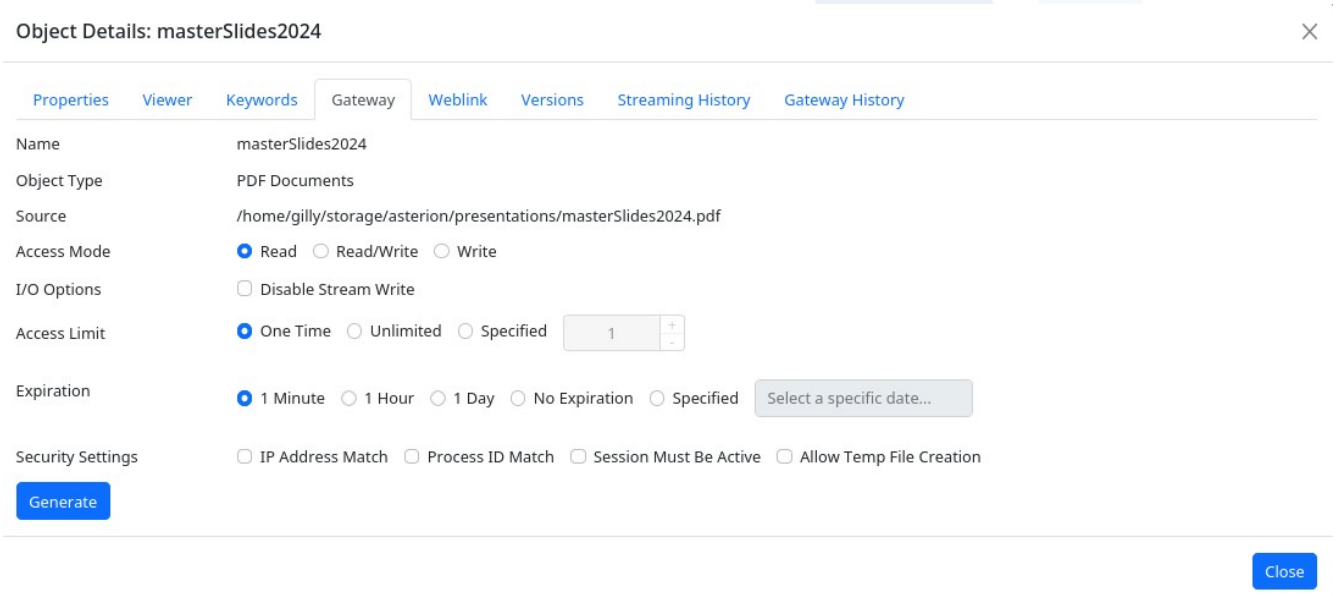
If checked, the program using the generated file name will be able to create a 'temporary' file.

The temporary file will be located in the operating system's temporary directory (e.g. /tmp, c:\temp).

See the discussion on temporary file support in the section on maintaining your AsterionDB website profile -

11.2 Generating a File Name

Here's what the screen will look like after you've generated a file name:



11.3 Using a Generated File Name

Press the COPY button to copy the file name into your paste buffer. You can then use the file name on a command line or anywhere else a filename is used. For example:

Copyright © 2024 by AsterionDB Inc. All Rights Reserved

```
evince /mnt/dbObscuraOra/QOR...LBh/XiO...WKEe.pdf
```


Copyright © 2024 by AsterionDB Inc. All Rights Reserved

12 Secure Web Links

There are two types of web links that AsterionDB will generate:

- Static web links that do not expire
- Secure web links with access rights that can be set through specified parameters

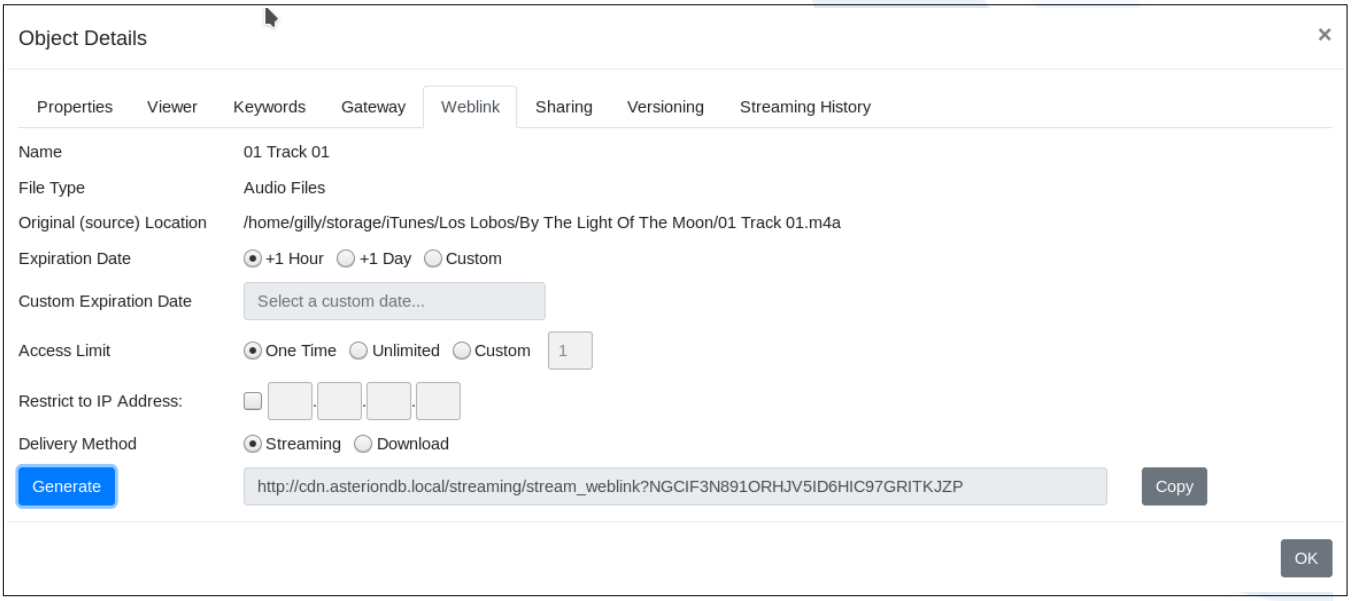
12.1 A Secure Web Link Use Case

Generating secure web links has several use cases. Here is a good one. We are all familiar with how prevalent it is for people to include attachments in emails. This is a problem in that if the emails get hacked, the hacker gets all of the attachments. What we can do with the secure link is include that in an email instead of the attachment. The link is generated for one time use, or maybe to expire after an hour or perhaps it is tied to a specific IP address. The recipient of the email will know to access the link upon receipt.

With this mechanism we can protect against hackers receiving sensitive information that may be included in attachments.

12.2 Generating a Secure Web Link

You will find the static link on the Object Details - Properties tab. You will generate a secure web link by accessing the Object details - Weblink tab. An example is shown below:



12.3 Setting Parameters for a Secure Web Link

The parameters that you can specify are:

Expiration Date

Copyright © 2024 by AsterionDB Inc. All Rights Reserved

The web link has an expiration date. You can set the link to expire in one hour, one day, to never expire or to expire at a specific date and time.

Access Limit

You can limit the number of times the link can be accessed.

Restrict To IP Address

You can restrict the use of the link to a specified IP address.

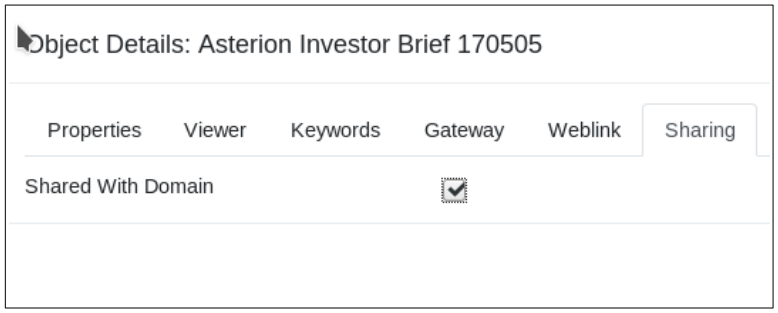
Delivery Method

If the object can be 'streamed' to a browser/player/application, the user interface will present a set of radio buttons to select how the secure web link is to be generated. A 'streaming' link will cause the link to automatically come up in a browser/player/application. A 'download' link will cause the browser to offer a 'Save As' screen allowing you to save the object to a local file.

Copyright © 2024 by AsterionDB Inc. All Rights Reserved

13 Object Sharing

To share an object, access the Sharing tab of the Object Details modal and select the check box.



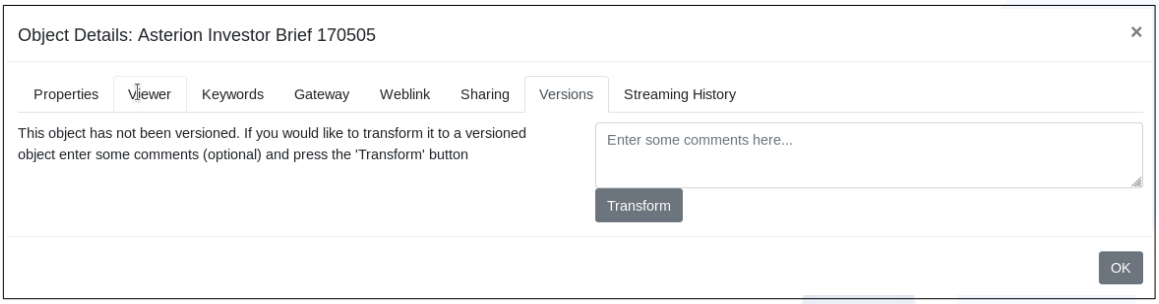
Copyright © 2024 by AsterionDB Inc. All Rights Reserved

14 Object Versions

AsterionDB will keep track of object versions. Objects by default are not versioned. In order to keep object versions you must transform an object into a versioned object.

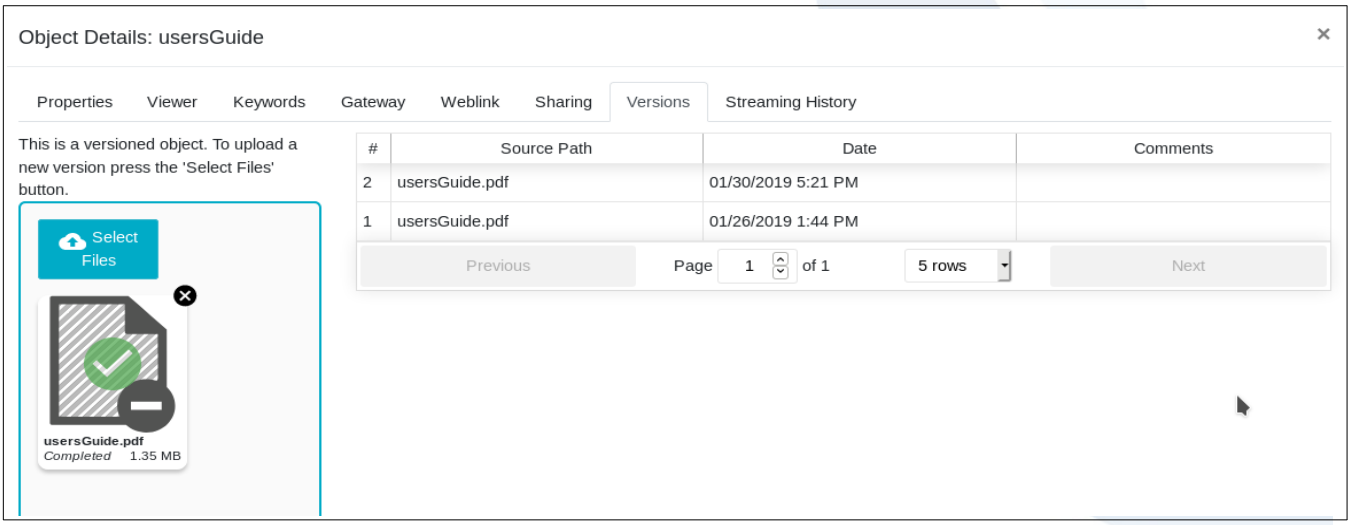
14.1 Transforming an Object

The Versions tab of the Object Details modal allows you to transform and manage a versioned object. The first step is to transform a non-versioned object into one that is versioned. To do so, enter some comments (optional) and press the Transform button.



14.2 Version History - New Versions

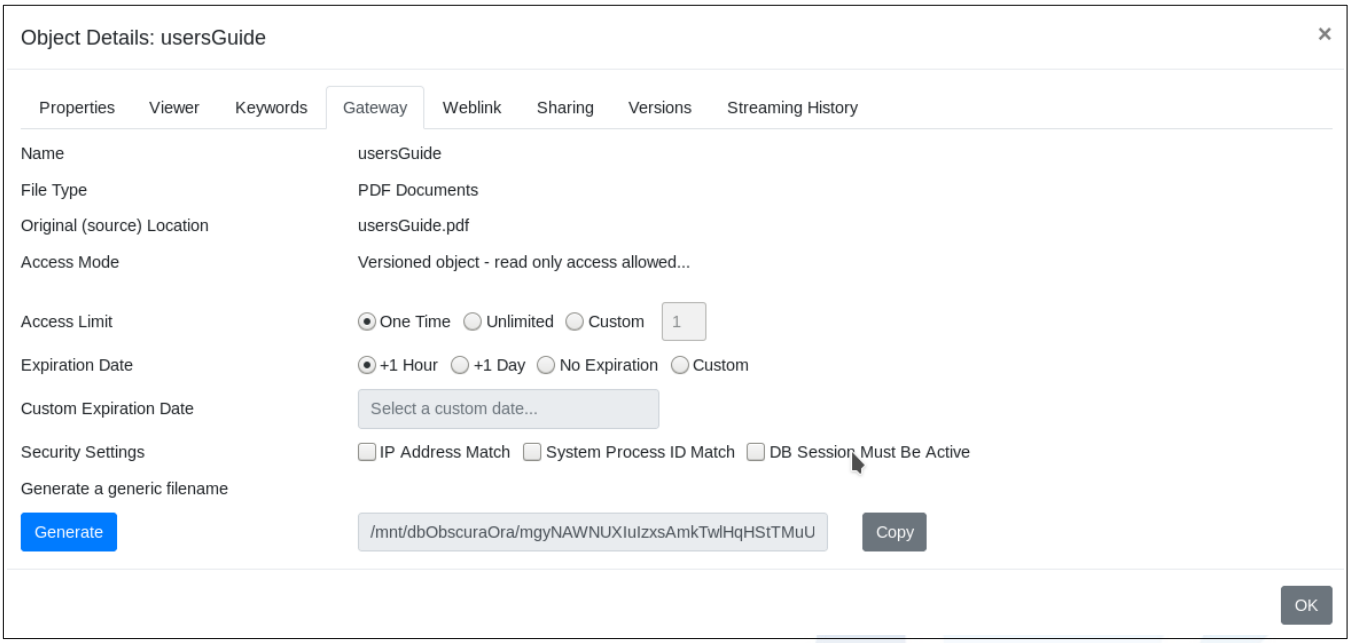
Once an object has been transformed into a versioned object you can view the objects version history and upload new versions of the object. Notice how the Versions tab has changed to present the version history and provide a drop-zone / file-upload area.



14.3 File System Gateway Support

File names generated for a versioned object are always 'read only'. The file name will also always access the most recent, current version of the object.

Copyright © 2024 by AsterionDB Inc. All Rights Reserved



14.4 Web Links for Versioned Objects

The web links generated for versioned objects will always access the most recent, current version of the object.

Copyright © 2024 by AsterionDB Inc. All Rights Reserved

15 Streaming History

You can access a full history of all of the times an object has been streamed by selecting the 'Streaming History' tab of the Object Details modal. Some of the columns are obvious. The non-obvious columns are:

Server

The host name of the server that streamed the content.

Weblink

If the content was accessed by a secure link, the link value is in this column. This column will be blank if a static link was used to access the content.

IP4 Address

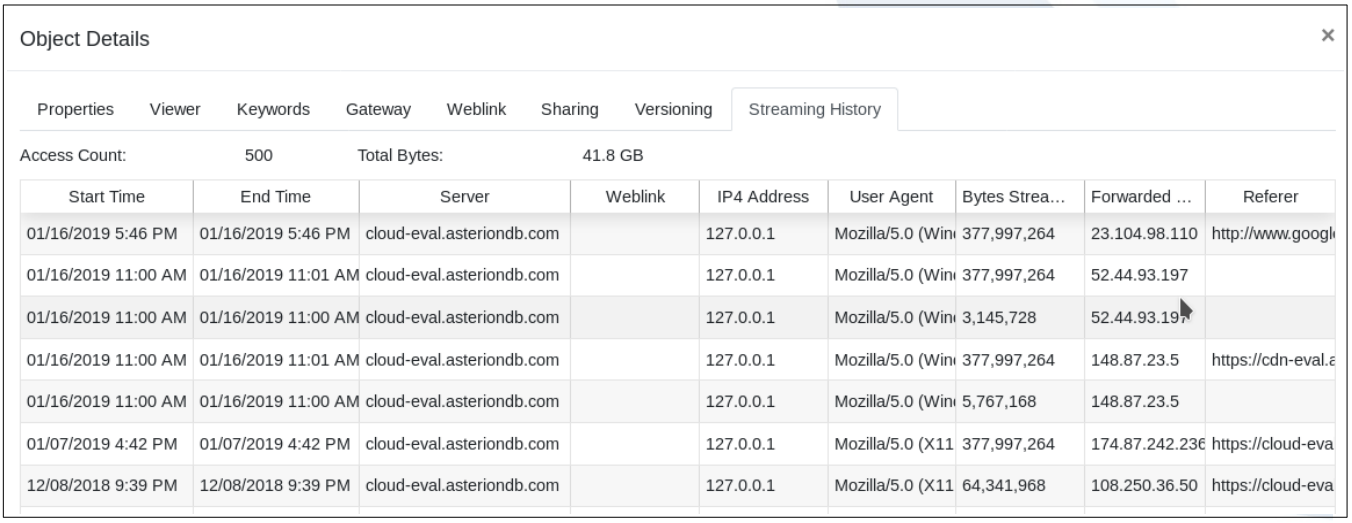
The requesting client's IP4 address. Note that if your installation uses a proxy-server, the proxy-server's IP4 address will be indicated here. The actual client's IP4 Address is in the Forwarded For column.

Forwarded For

If your installation uses a proxy-server, the IP4 address of the client that requested the content is indicated here.

Referer

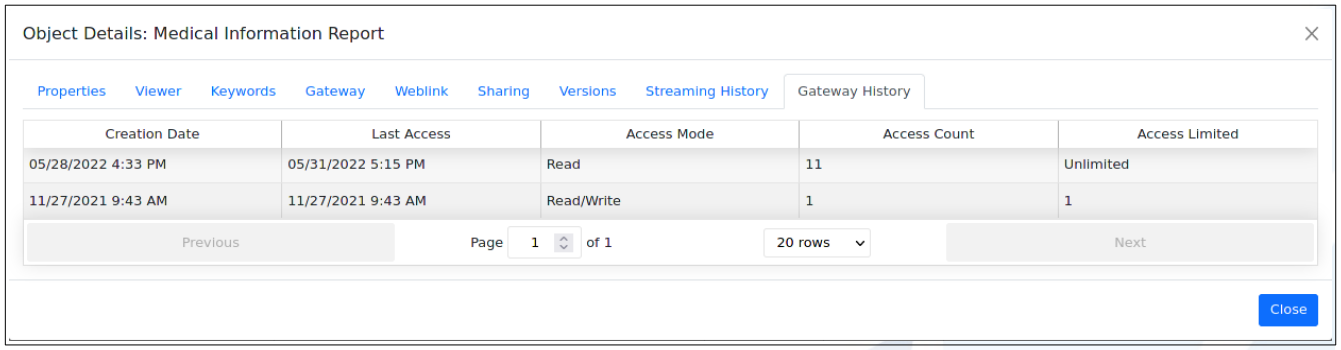
This is the HTTP Referer header value. It is an optional value that is not always present. If it is present, the value indicates the web page that contained the link for the content.



Copyright © 2024 by AsterionDB Inc. All Rights Reserved

16 Gateway History

The Gateway History tab allows you to see all of the times that an object was accessed as a file via the DbObscura File System Gateway:



Copyright © 2024 by AsterionDB Inc. All Rights Reserved

17 Deleted Objects

Deleted objects are really just in the trash! You have to purge them in order to actually delete and free up the resources associated with an object. You can view the objects in your 'recycle bin' by accessing the Trash tab.

You can search for objects as you would normally by entering the relevant keyword/value pairs in the query-builder

Deleted objects however can not be viewed, streamed or otherwise worked with. You can view the meta-data and keyword/value pairs associated with the object but these values can not be changed

Objects can be restored from the Trash tab and they can be purged as well. Purging an object, as mentioned, removes all resources, meta-data and disassociates the keyword/value pairs from the object.

Restoring and purging of objects is accomplished through the context menu (useful for working on multiple objects at once) and from the Properties tab of the Object Details modal.

Copyright © 2024 by AsterionDB Inc. All Rights Reserved

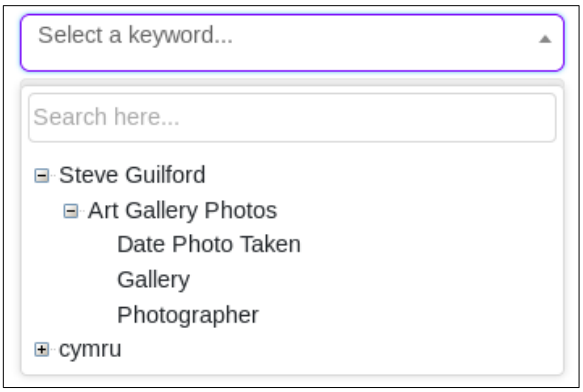
18 Shared Objects

Note: Object sharing is an optional feature that is enabled by your system administrator.

Objects that have been shared with you can be found on the Shared tab.

18.1 Querying Shared Objects

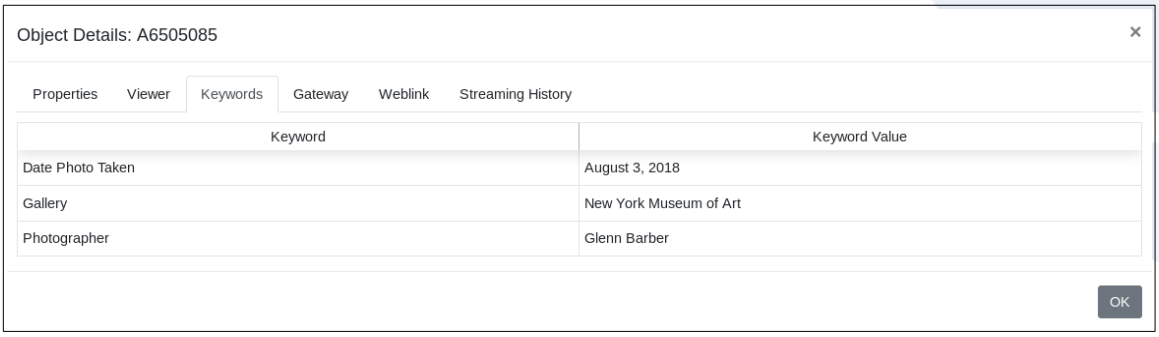
This tab presents a modified query builder which allows you to search for objects based upon the keyword/value pairs associated by the owner of the object. Here's an example:



You can see how the keywords are grouped by owner. You have to expand the owner node and then expand the keyword-group node in order to select a keyword to search by.

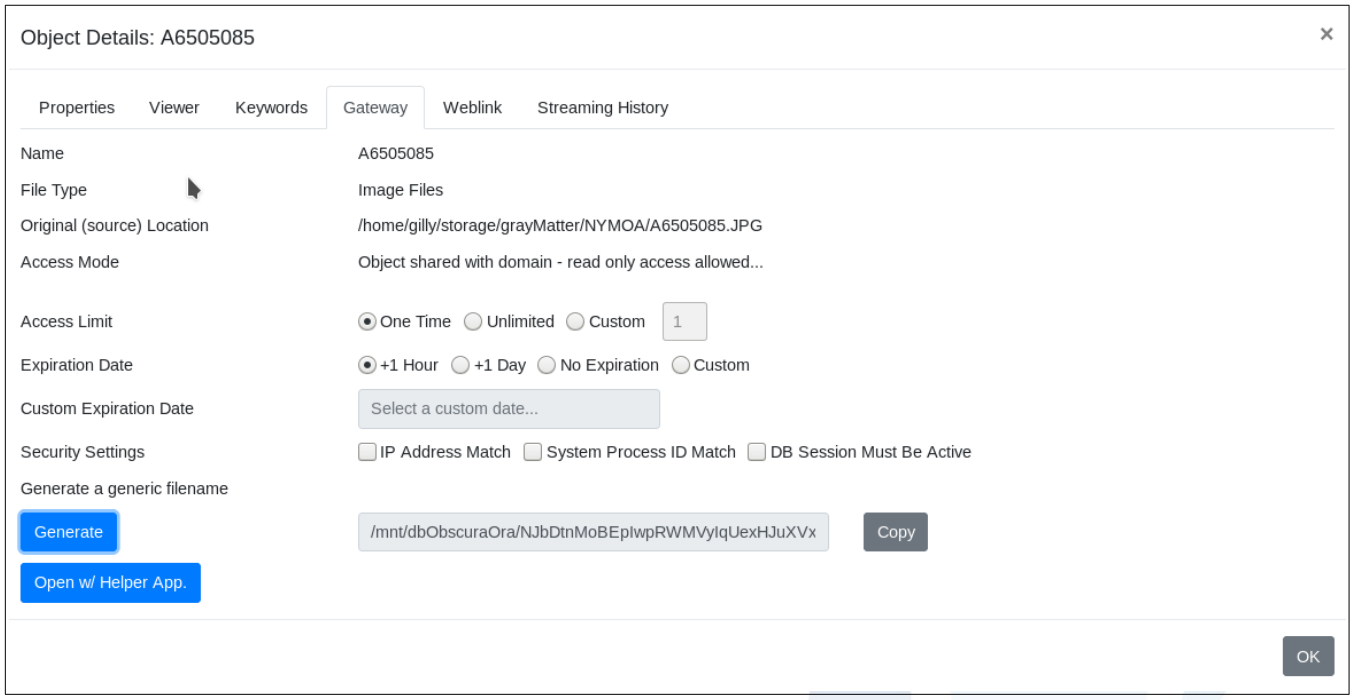
18.2 Working with Shared Objects

The Object Details modal for shared objects presents a subset of the functionality that you would normally find for your own objects. This release of AsterionDB supports shared objects at the domain level - you can share your objects with everybody in your (email) domain. Users accessing objects that have been shared globally have read-only access privileges. They can not change a globally shared object. Accordingly, the Keyword tab allows you to view the associated keyword/value pairs.



If you generate a file name for a globally shared object the access mode will be restricted to read-only:

Copyright © 2024 by AsterionDB Inc. All Rights Reserved

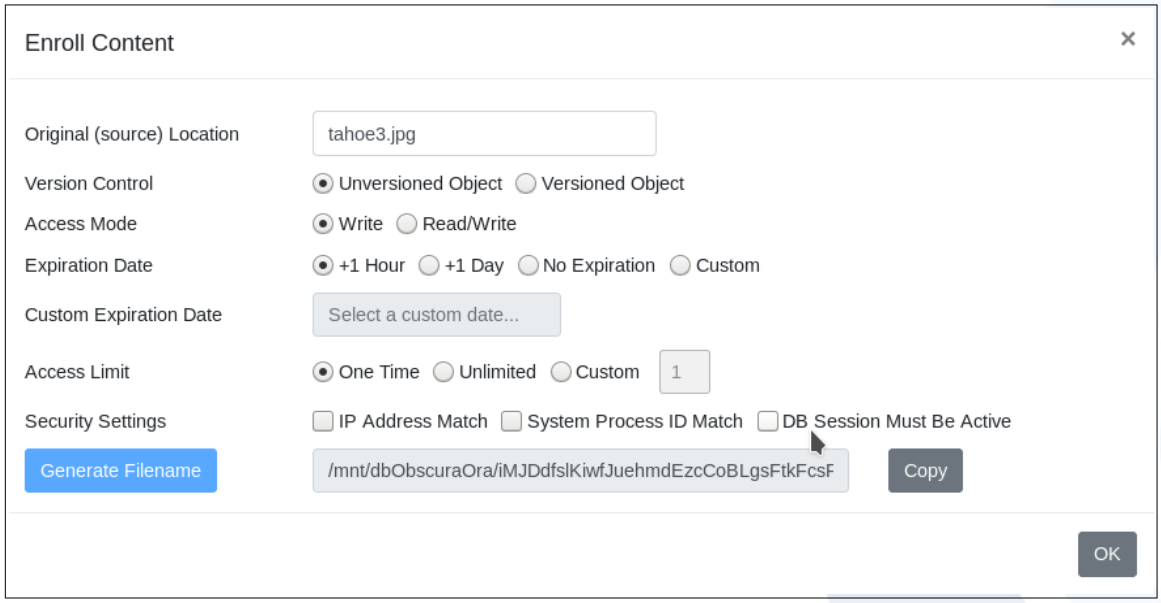


Copyright © 2024 by AsterionDB Inc. All Rights Reserved

19 Enrolling New Objects in AsterionDB

The functionality described here is enabled by checking the option 'Enable Gateway Elements' in your user profile.

The Enroll Content button on the button bar brings you to a screen that allows you to create a new object in AsterionDB. This screen requires that you enter in the original source location (or name) of the content. Pressing the Generate Filename button will generate a file name that you can use in a program or on the command line.



The following parameters allow you to tailor how the file name can be used:

Access Mode

You can restrict access to the file to write or read/write operations.

Access Limit

You can restrict the number of times a file name can be used (referenced in an 'open' statement) to a specific number of uses.

Expiration Date

You can cause the file name to expire after a specified period of time by specifying a Expiration Date value.

IP Address Match

If checked, the IP address of the server that uses the generated file name must match the IP address of the computer that consumes the file name.

System Process ID Match

Copyright © 2024 by AsterionDB Inc. All Rights Reserved

If checked, the System Process ID of the process that uses the generated file name must match or be a child of the process that generated the file name.

DB Session Must Be Active

If checked, the database session that generated the file name must be active at the time the file name is used.

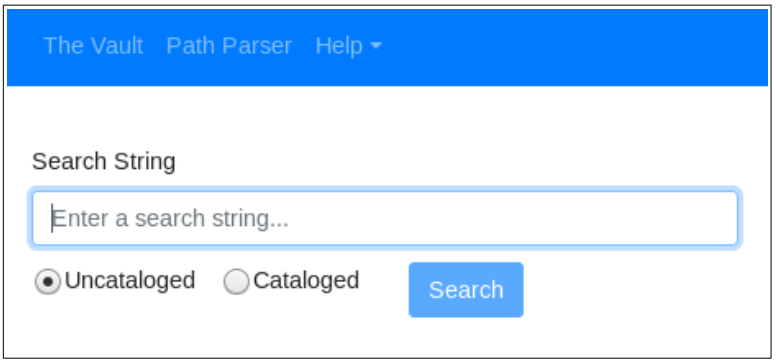
Copyright © 2024 by AsterionDB Inc. All Rights Reserved

20 Parsing Source Paths

AsterionDB includes an integrated Path Parser that allows you to quickly turn the meta-data embedded in your directory paths into searchable keyword/value pairs. Remember though that path information is typically only available for objects that are ingested through the DbObscura File System gateway. It is not possible, due to the limitations of web-browser design, to determine the full path of an object that is uploaded by AsterionDB's web application.

Upon entering the Path Parser screen you will be presented with a entry field that you use to specify your search string. We use the '%' character as a wildcard.

The screen defaults to searching through un-cataloged (e.g. recently uploaded, un-tagged) objects



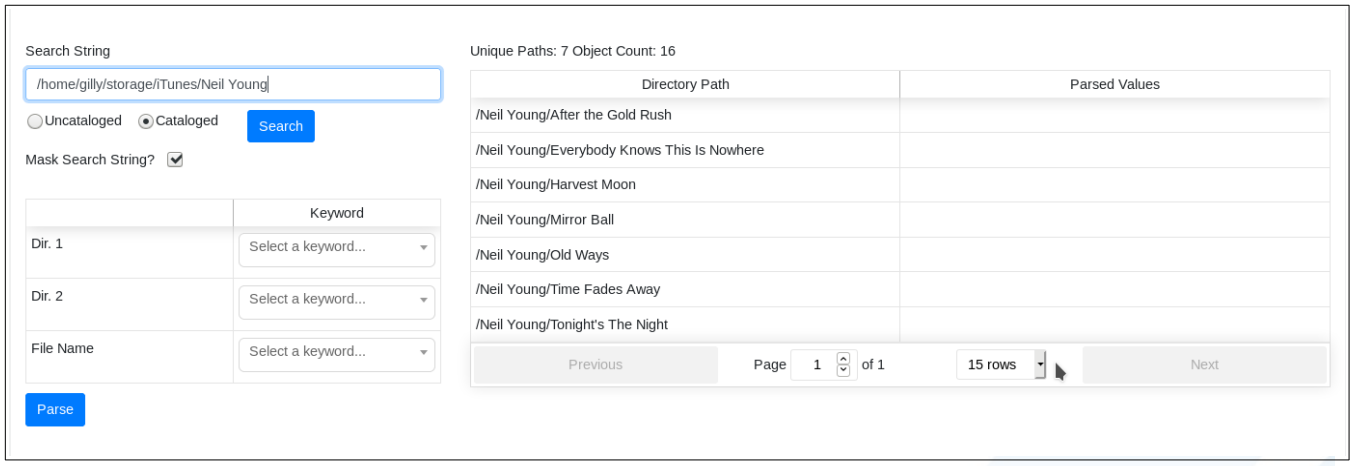
You may find it necessary to include a forward or backward slash to indicate Linux vs. Windows paths. If you enter a search term that returns objects ingested from both Windows and Linux machines, a pop-up notification will be displayed warning you of this fact.

This screen is designed to show you the unique paths returned by your search string. It does not show you each individual object found by your search string

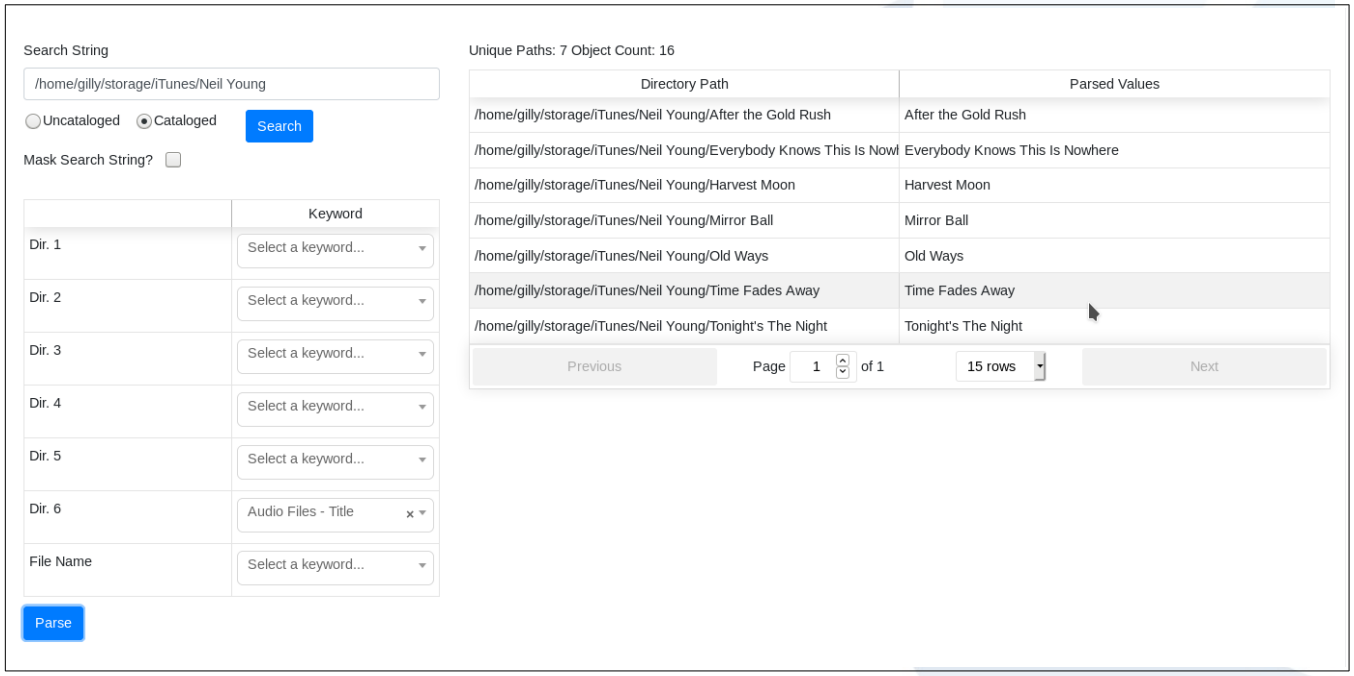
After entering a search string, you will use the Path Parser screen to associate sub-directory elements to specific keywords where the sub-directory value becomes the keyword value.

By default, the screen will mask off your search string. Here is an example of what the Path Parser screen will look like after entering in a search string:

Copyright © 2024 by AsterionDB Inc. All Rights Reserved



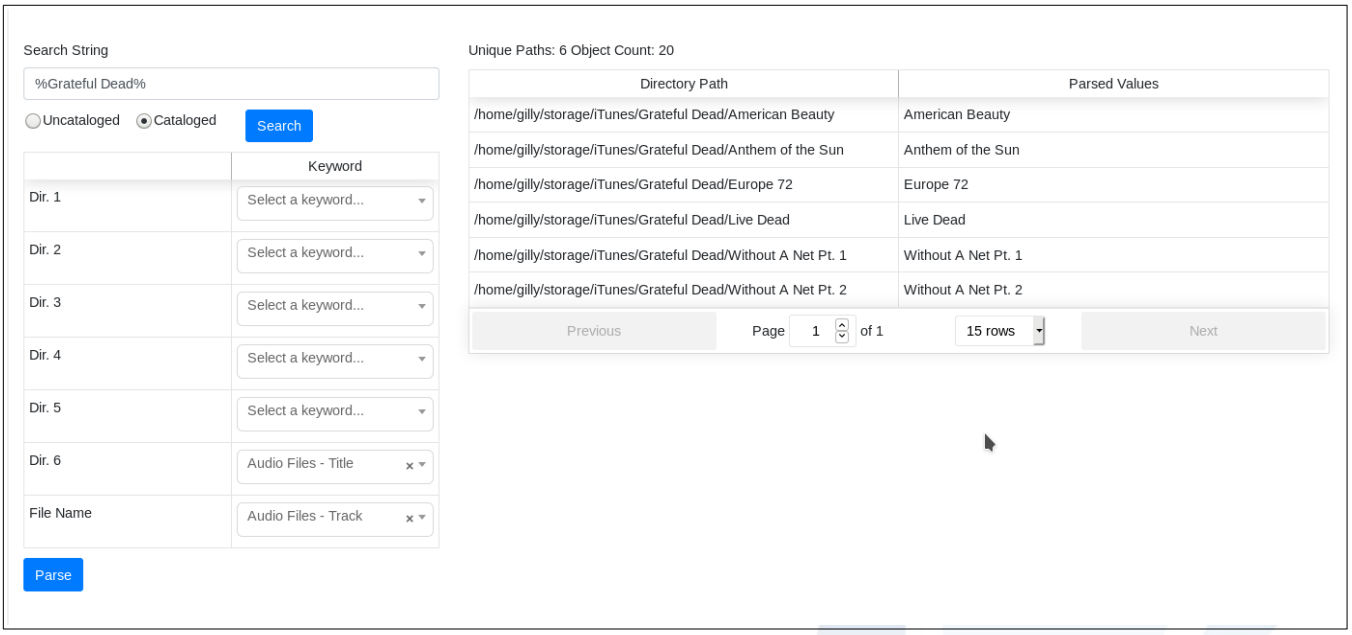
You can uncheck the Mask Search String check-box if you prefer to see the full path.



Here's an example of the Path Parser string after entering in a search term with a wild card - the '%' character. If you specify a wild card in your search string the Mask Search String check box will not be displayed and the search string will not be masked off.

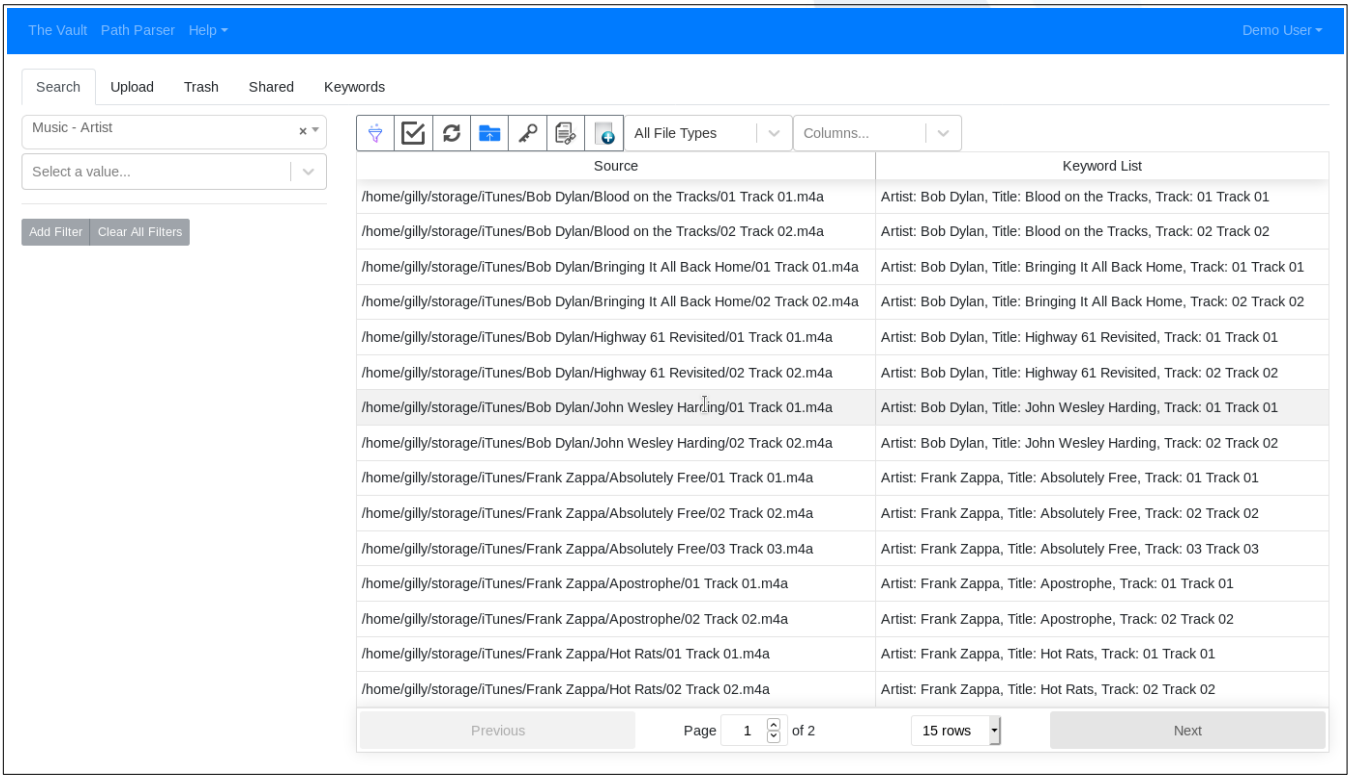
You will see how we have specified that the sixth directory element is the Album Title and that the file-name for each object will be the Track value. The parsing results are shown to the right of the columns so that you can verify that the values parsed properly.

Copyright © 2024 by AsterionDB Inc. All Rights Reserved



Note that we do not show you the result of parsing the file-name due to the fact that your search results may return hundreds if not thousands of individual objects within a relatively limited number of individual sub-directories.

Pressing the Parse button will perform the actual work of parsing the directory paths. If you parse paths for un-cataloged objects remember that you will now find those objects in the 'Search' tab as they are now considered cataloged objects.



Copyright © 2024 by AsterionDB Inc. All Rights Reserved

Finally, there is a feature in the context menu that allows you to remove all keywords for an object. If you find that you did not parse the directory paths properly, you can always remove the keywords from the objects you just parsed and start over

As you might expect, the Last Metadata Change data is set for each object parsed. This gives you an easy way to find your most recently parsed objects in order to verify (or correct) the values extracted from the parsed directory paths.

Copyright © 2024 by AsterionDB Inc. All Rights Reserved

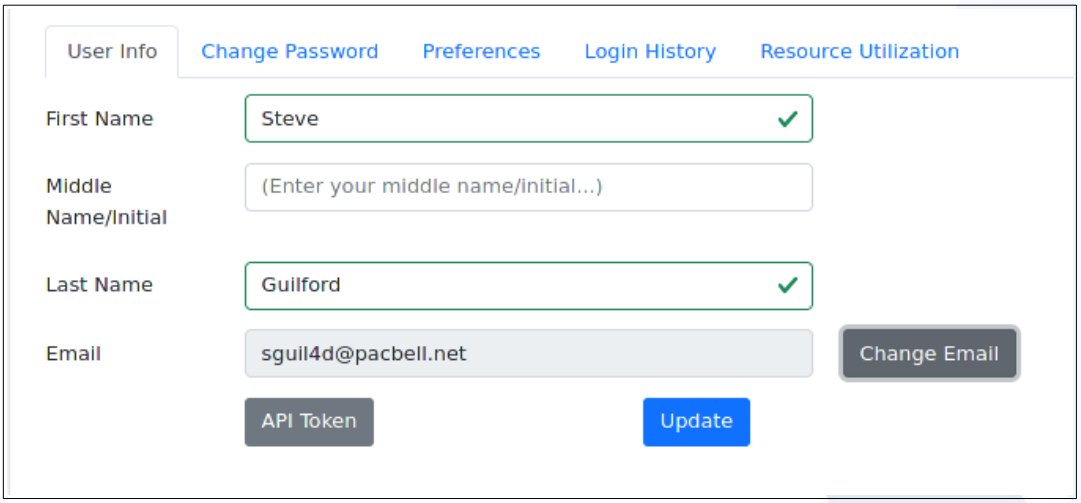
21 Managing Your User Profile

At the upper right hand corner of AsterionDB's user interface you will find a pull down menu labeled with your user name. From this menu you can access your user profile, streaming history and log out of the user interface.

Accessing your user profile allows you to set your user info, change your password, set preferences and view your login history. Your user profile is presented using a tabbed modal interface.

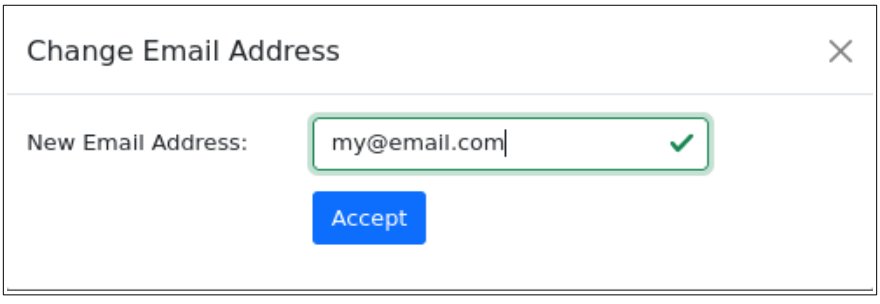
21.1 Managing Your User Info

The User Info tab allows you to maintain your personal information.



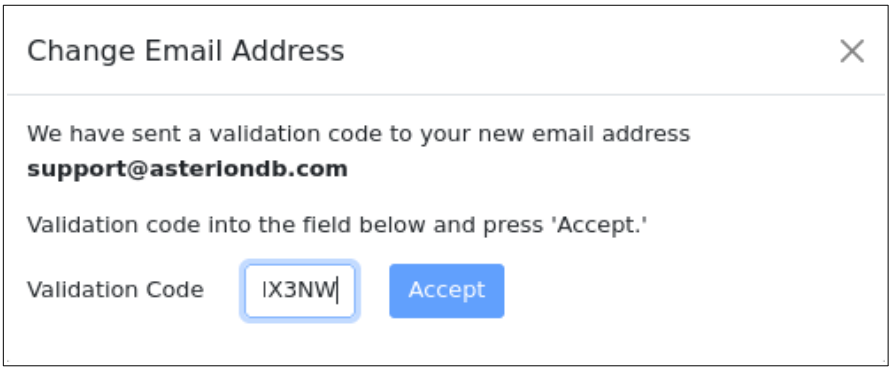
21.2 Changing Your Email Address

Press the ‘Change Email’ button to begin the process of changing your email address. A modal will open allowing you to input your new email address. Your new email must be unique and **NOT** previously registered with AsterionDB. Enter your new email address and press ‘Accept’.



After pressing ‘Accept’ a new modal will appear and AsterionDB will send an email to your new email address with a confirmation code. You must provide in the next step to verify your new email address. The confirmation code will expire 20 minutes after being sent. If your code expires, simply restart the change process.

Copyright © 2024 by AsterionDB Inc. All Rights Reserved



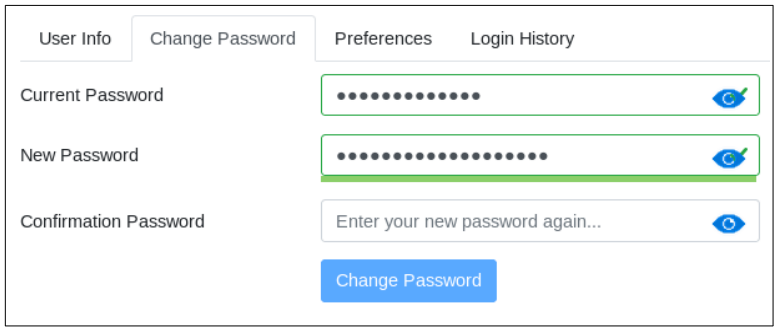
Press ‘Accept’ to complete the verification process.

If you do not complete the verification process your email address will remain unchanged.

21.3 Changing Your Password

The Change Password tab is where you can change your password. You can also change your password from the login screen but that process requires you to respond to an email in order to verify your identity.

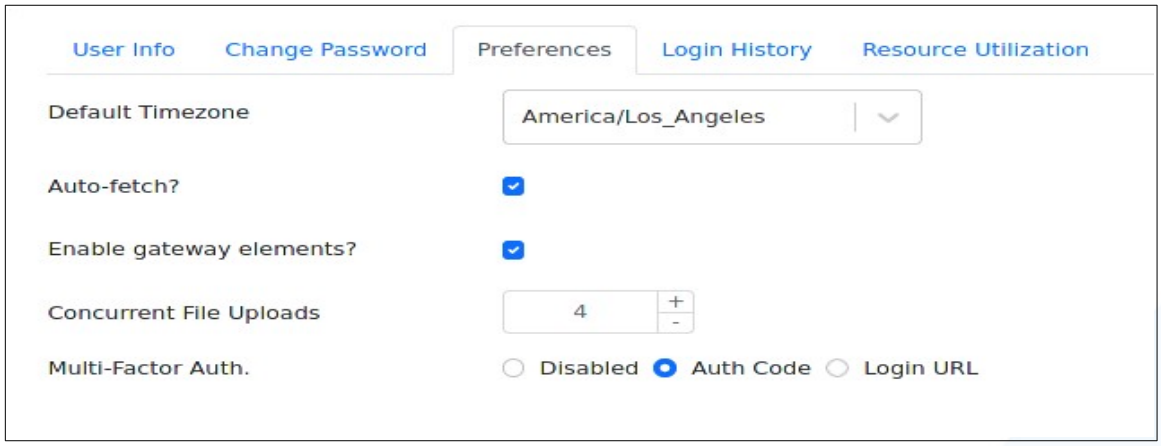
In order to change your password from this tab you will need to know your current password. You will also have to enter a new, strong password twice before the Change Password button will be enabled. You will know that your password is strong enough when the indicator bar turns green as you can see in the image below:



21.4 Setting Your Preferences

The Preferences tab allows you to customize the functionality of AsterionDB's user interface.

Copyright © 2024 by AsterionDB Inc. All Rights Reserved



Default Timezone

The system will determine your default timezone during the sign-up process. We use this value internally in the system to provide properly adjusted times when sending emails and other instances that call for a date/time presentation.

If for some reason the timezone is not determined properly during installation you can adjust the value here.

Automatically Fetch Objects

Checking the Auto Fetch check box causes AsterionDB to fetch a result set of objects from AsterionDB automatically. This can be troublesome in environments that have large data sets. In that case what you want to do is disable Auto Fetch and use the Refresh button on the toolbar to query AsterionDB after you have entered in some query terms. What you want to avoid is having AsterionDB fetch objects without having some query terms to restrict the returned objects.

Enable Gateway Elements

There are several buttons and tabs that are relevant to those installations that utilize the DbObscura File System Gateway. By default, these elements are not enabled. If you are using the DbObscura File System Gateway then you will want to enable these elements by checking this box.

The web application tries to sniff out your DbObscura Gateway client. If it can not, a pop-up modal window will appear asking you to provide the name of your gateway client.

Concurrent File Uploads

The AsterionDB web interface allows you to specify the maximum number of files to simultaneously upload. Limiting the number of files uploaded may be necessary when running with Oracle’s Always Free Autonomous Database.

Multi-Factor Authentication

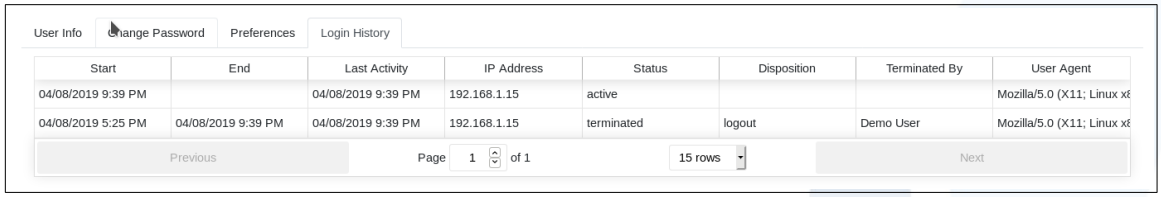
Copyright © 2024 by AsterionDB Inc. All Rights Reserved

AsterionDB supports two types of multi-factor authentication. Note that SMTP must be enabled to support the sending of authorization codes and unique login-urls.

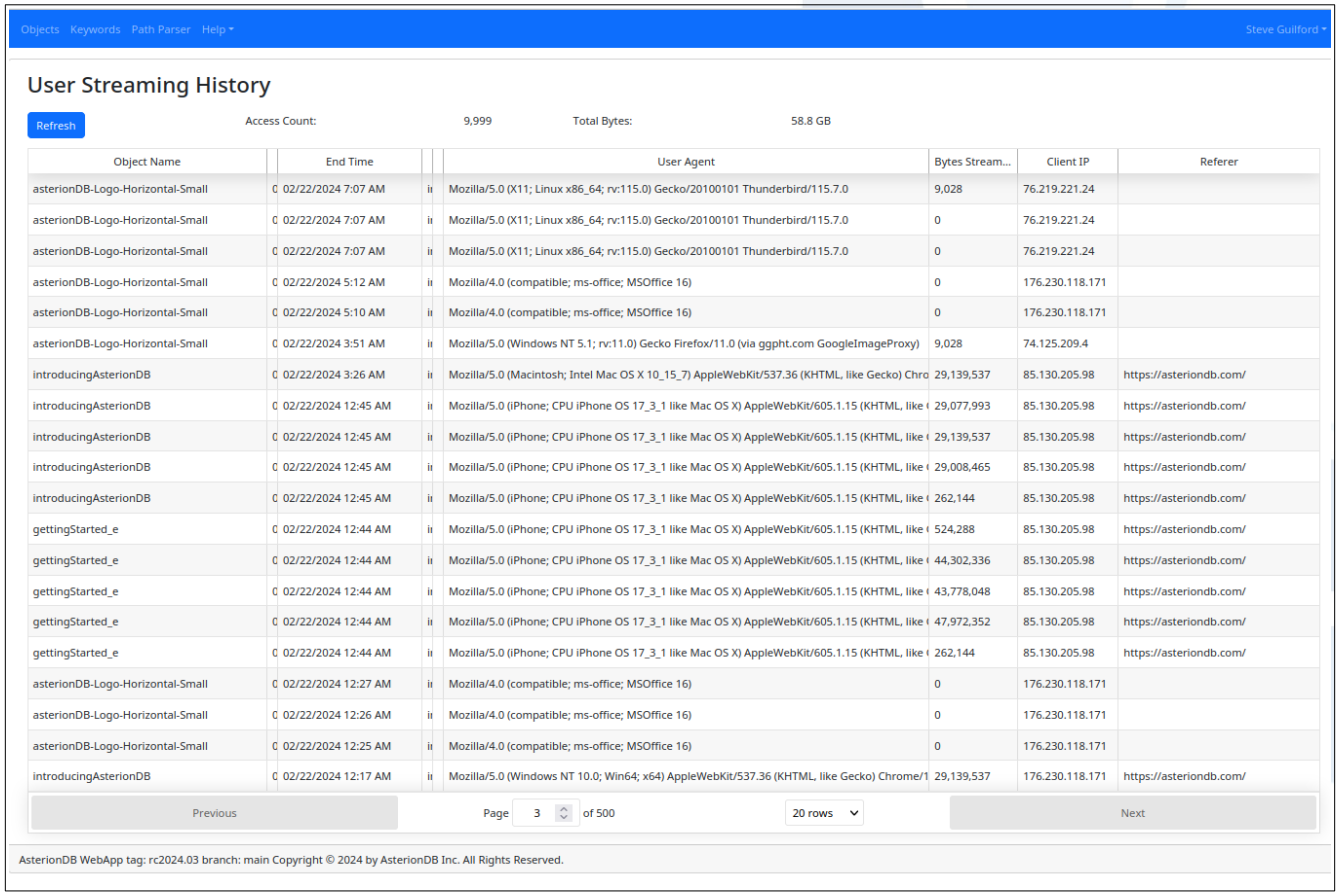
1. **Authorization Code** – a unique authorization code that will be sent to the user's email address. The authorization code expires 5 minutes after being sent.
2. **Unique Login URL** – a unique login URL will be sent to the user's email address. The URL expires 5 minutes after being sent.

21.5 Viewing Your Login History

A history of your login attempts, successful and unsuccessful, is provided for your convenience. It is accessed from your User Profile's Login History tab.



21.6 Streaming History



A history of all of the objects streamed from your account is provided by a selection on your User menu. Some of the columns are obvious. The non-obvious columns are:

Server

The host name of the server that streamed the content.

Weblink

If the content was accessed by a secure link, the link value is in this column. This column will be blank if a static link was used to access the content.

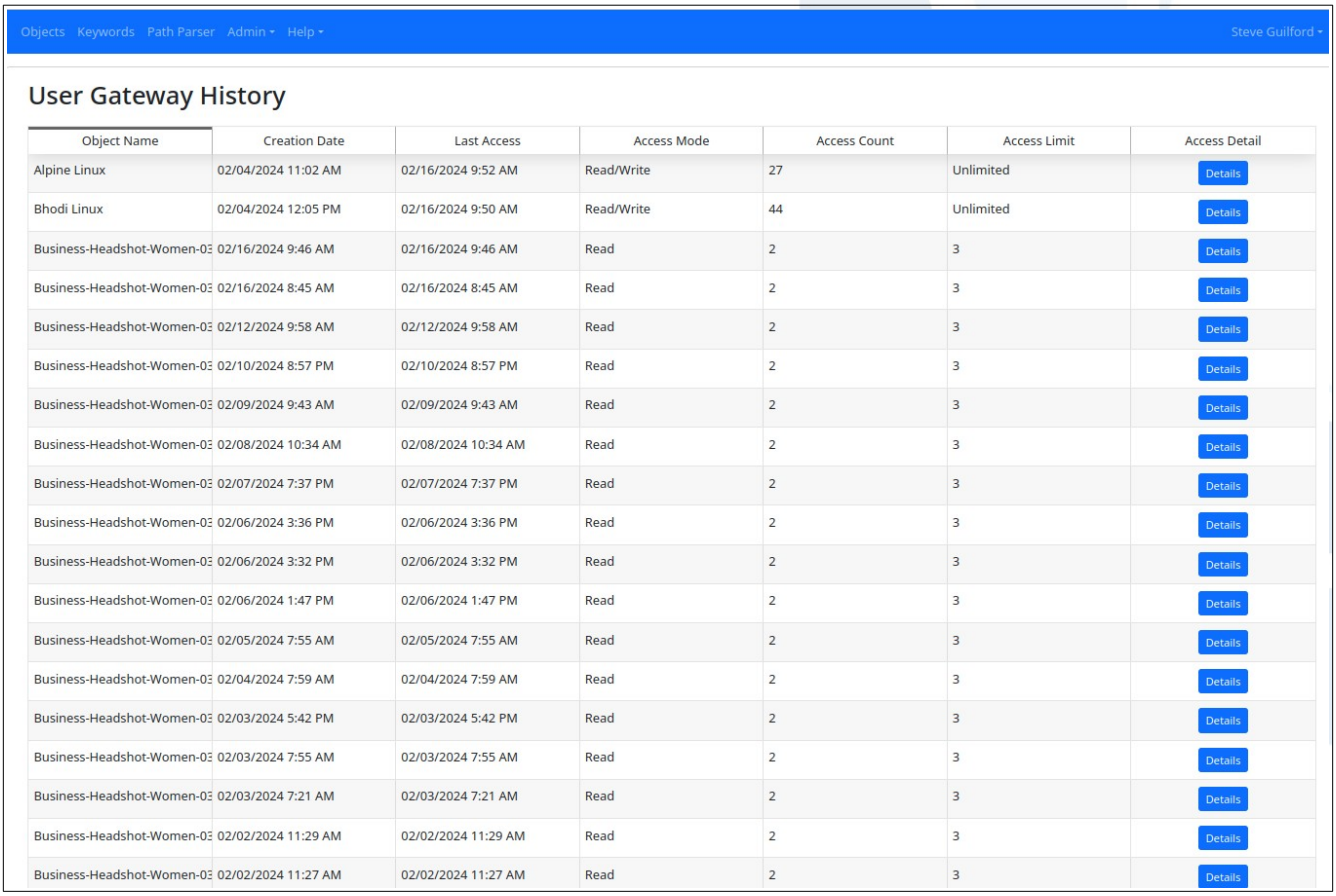
Client IP

The requesting client's IP4 address. Note that if your installation uses a proxy-server, the proxy-server's IP4 address will be indicated here. The actual client's IP4 Address is in the Forwarded For column.

Referer

This is the HTTP Referer header value. It is an optional value that is not always present. If it is present, the value indicates the web page that contained the link for the content.

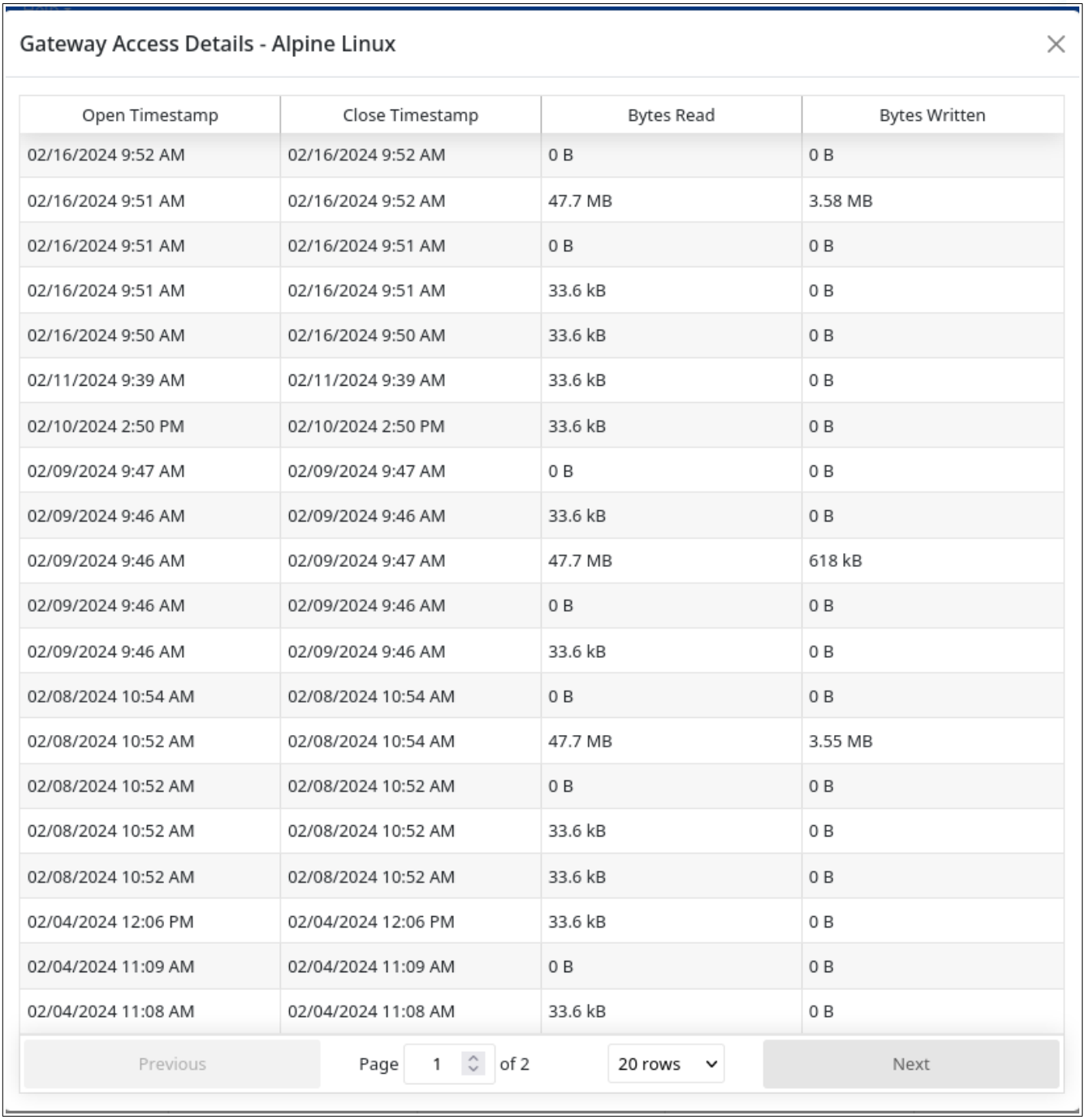
21.7 Gateway History



Copyright © 2024 by AsterionDB Inc. All Rights Reserved

You can view a log of all of the objects that have been accessed by the DbObscura File System Gateway by selecting the Gateway History option from your User menu.

For those objects where the individual access details are captured, the ‘Details’ button will bring up a modal with the captured information:

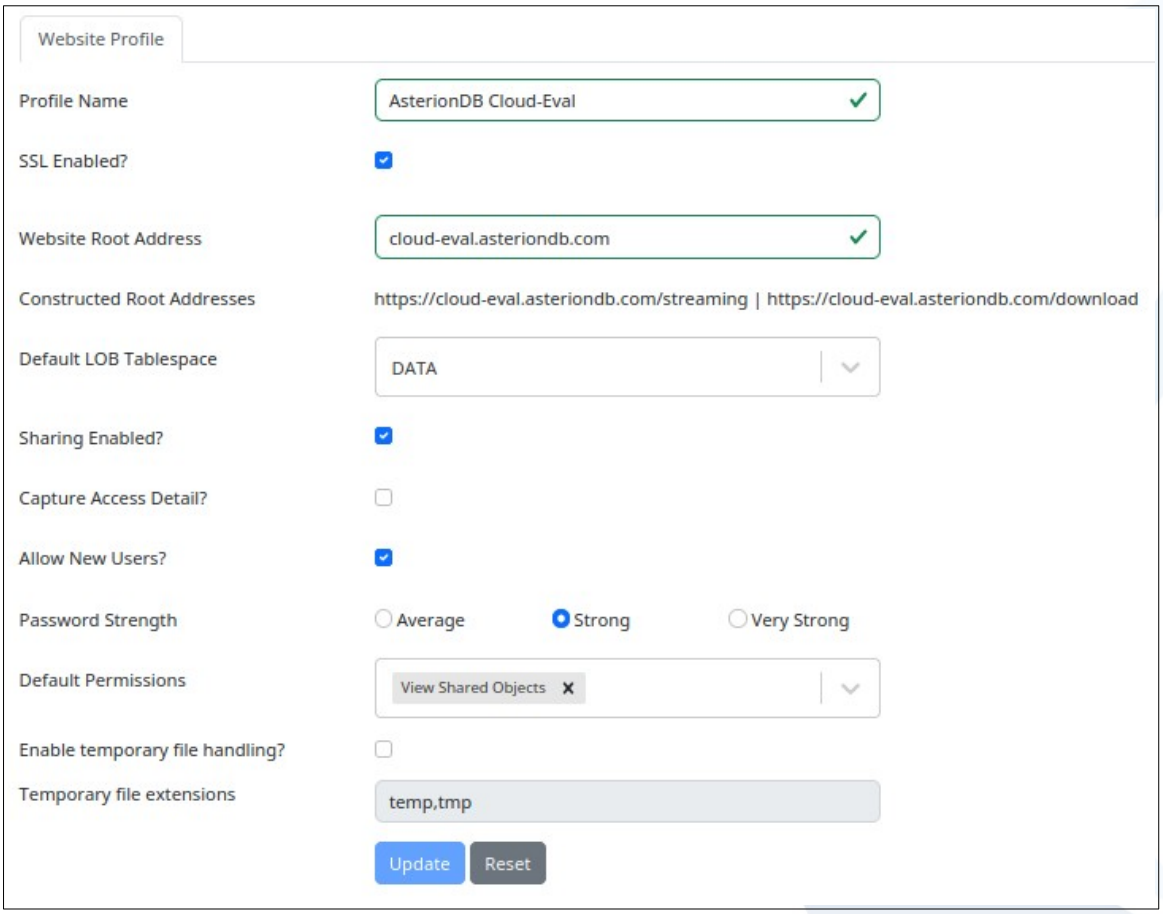


Copyright © 2024 by AsterionDB Inc. All Rights Reserved

22 Admin Menu

The system owner/administrator will be able to access the Admin menu. This menu allows you to tailor and monitor your installation of AsterionDB.

22.1 Website Admin



From the website admin page you will be able to tailor your system profile.

Profile Name	The name of your AsterionDB installation can be set here. This value will be shown at the top of the web page.
SSL Enabled	If your installation of AsterionDB will be behind an SSL enabled load balancer, check this box. This setting controls which value is used when constructing web links (e.g. http vs. https).
Website Root Address	This value is used when constructing web links.
Default LOB Tablespace	You can specify the default tablespace to use for LOB data. This value is utilized on the Object Types administration page.
Sharing Enabled	You can enable sharing of objects among users of your installation of

Copyright © 2024 by AsterionDB Inc. All Rights Reserved

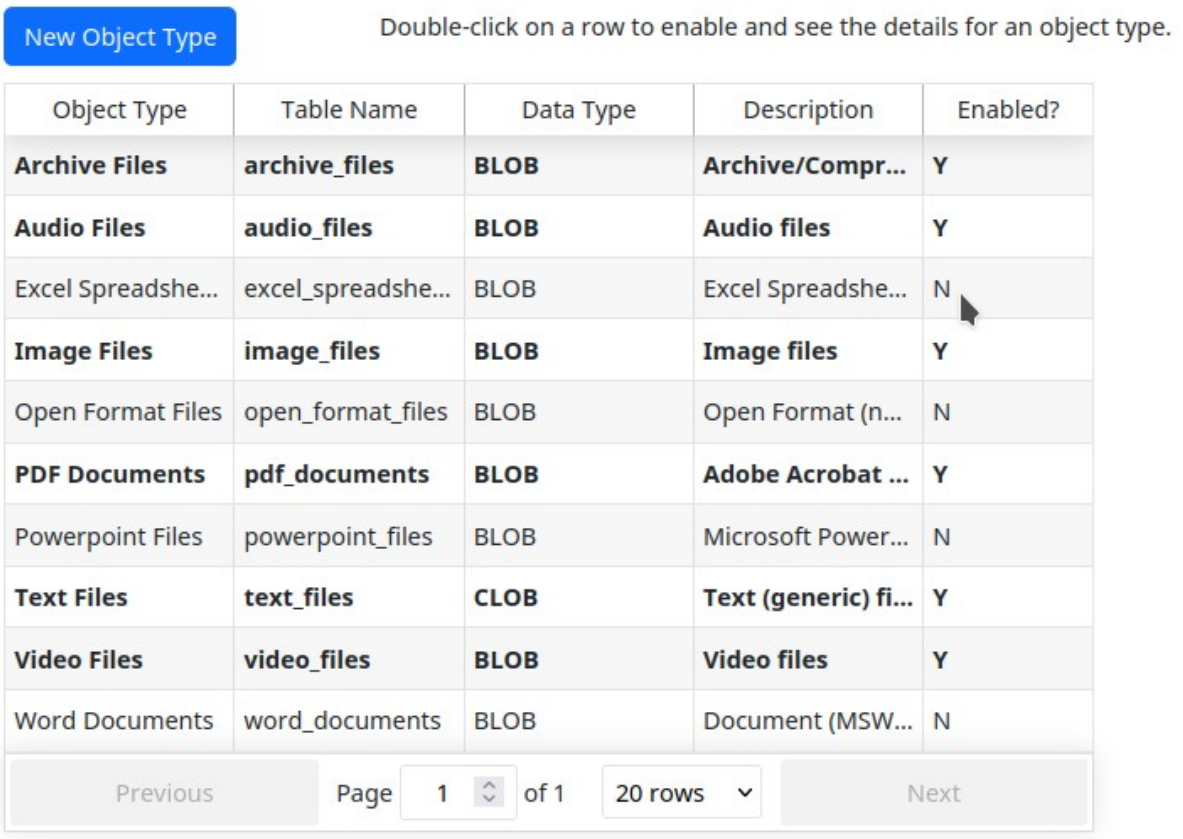
	AsterionDB. You will have to grant any needed sharing privileges to individual users after enabling the sharing of objects.
Capture Access Detail	You can enable the system-wide capture of gateway access details by selecting this option.
Allow New Users	To enable a multi-user installation of AsterionDB, check this box.
Password Strength	You can specify the required strength for a user password by selecting the appropriate radio-button.
Default Privileges	You can specify any default privileges to assign to new users in this field.

Copyright © 2024 by AsterionDB Inc. All Rights Reserved

22.2 Object Types

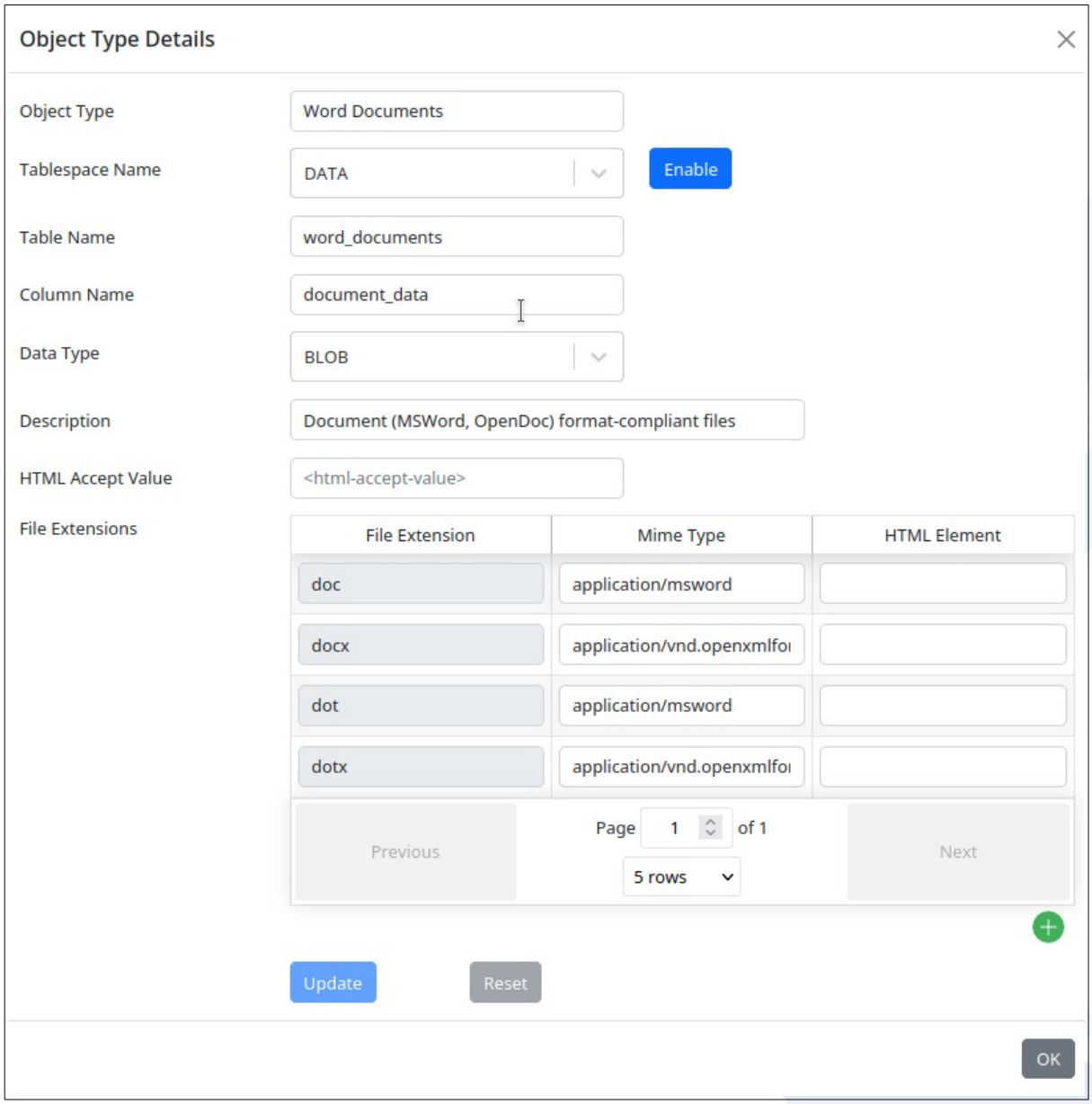
AsterionDB takes a restrictive approach when it comes to the types of objects (i.e. files) that can be stored in the database. You have to specifically enable an object type before it can be stored in AsterionDB.

The '**Object Types**' page on the Admin menu allows you to specify the types of objects, and their associated extensions, that will be accepted by the system. The AsterionDB installation process will create some comment object types that you can enable. Under an Autonomous database installation, some of these object-types are enabled by default, as you can see from this screenshot:



Double clicking on a row, or pressing the New Object Type button will bring you to the detail modal. From this modal you can define and enable the object type.

Copyright © 2024 by AsterionDB Inc. All Rights Reserved



Most of the fields on this screen are self explanatory. The ‘Table Name’ specifies the name of the table that the data will be stored in. Note that you can select either BLOB or CLOB data types.

The ‘HTML Accept Value’ field is used for audio, image and video object types. The value instructs a browser to use default pattern matching when accepting audio, image or video data. See the discussion at https://developer.mozilla.org/en-US/docs/Web/HTML/Attributes/accept for more information.

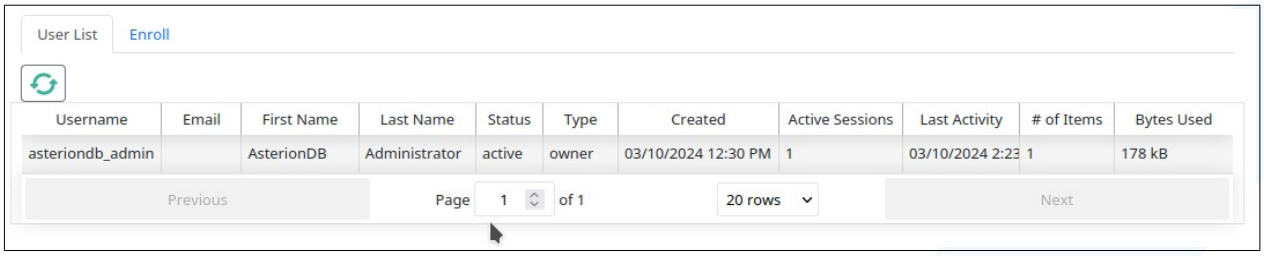
You must specify at least one file extension in order to create the object type. Do not include a leading period ‘.’ with the specified file extension. You will also need to supply a valid mime-type, which defaults to ‘application/octet-stream’. The mime-type indicates the data type to browsers that receive streamed data from AsterionDB.

You have to create the object type first before you can enable it.

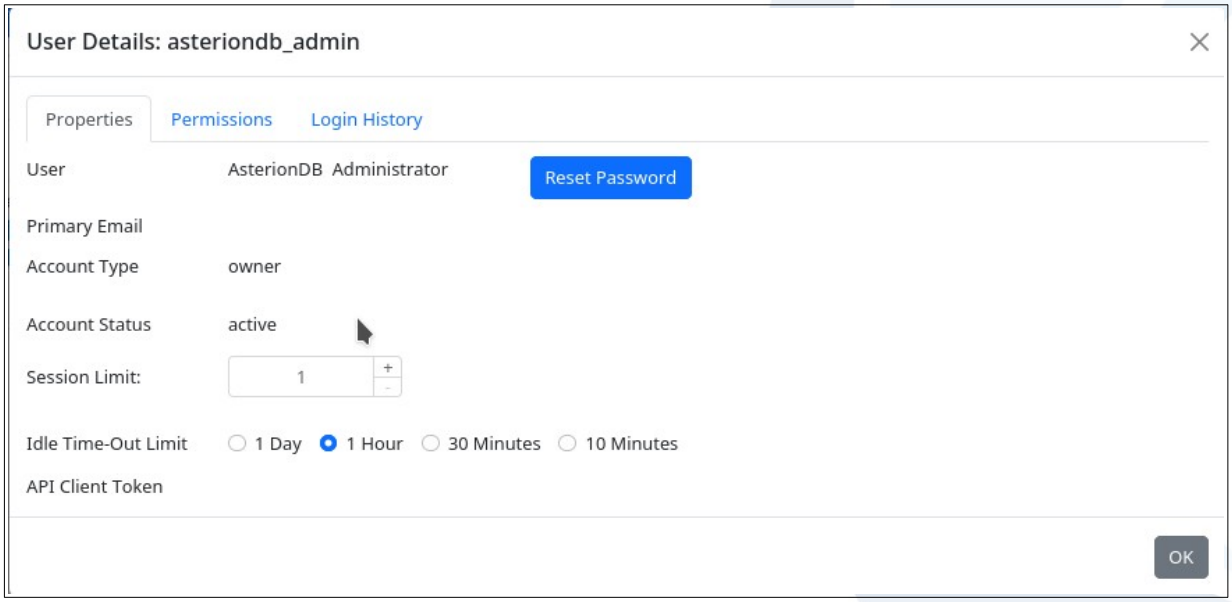
Copyright © 2024 by AsterionDB Inc. All Rights Reserved

22.3 User Administration

The User Administration page allows you to view the registered users of your AsterionDB installation. When you install AsterionDB, there is only one user created – the administrator user you specified during the installation process (defaults to asteriondb_admin).



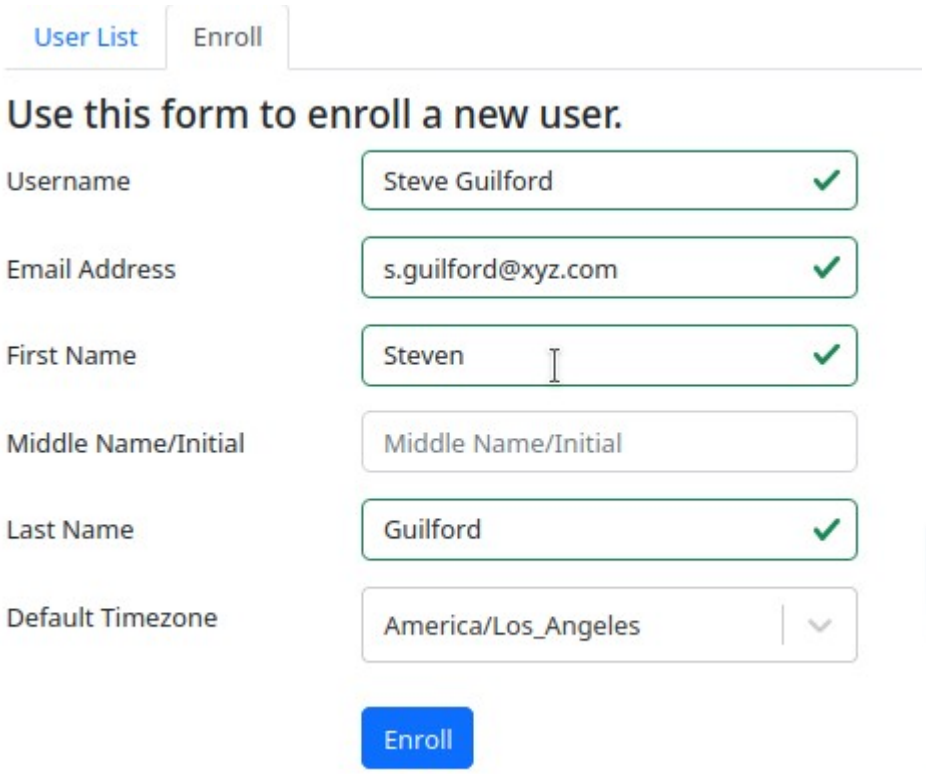
Double clicking on a row will bring up a detail modal allowing you to view and adjust various user properties and reset their password.



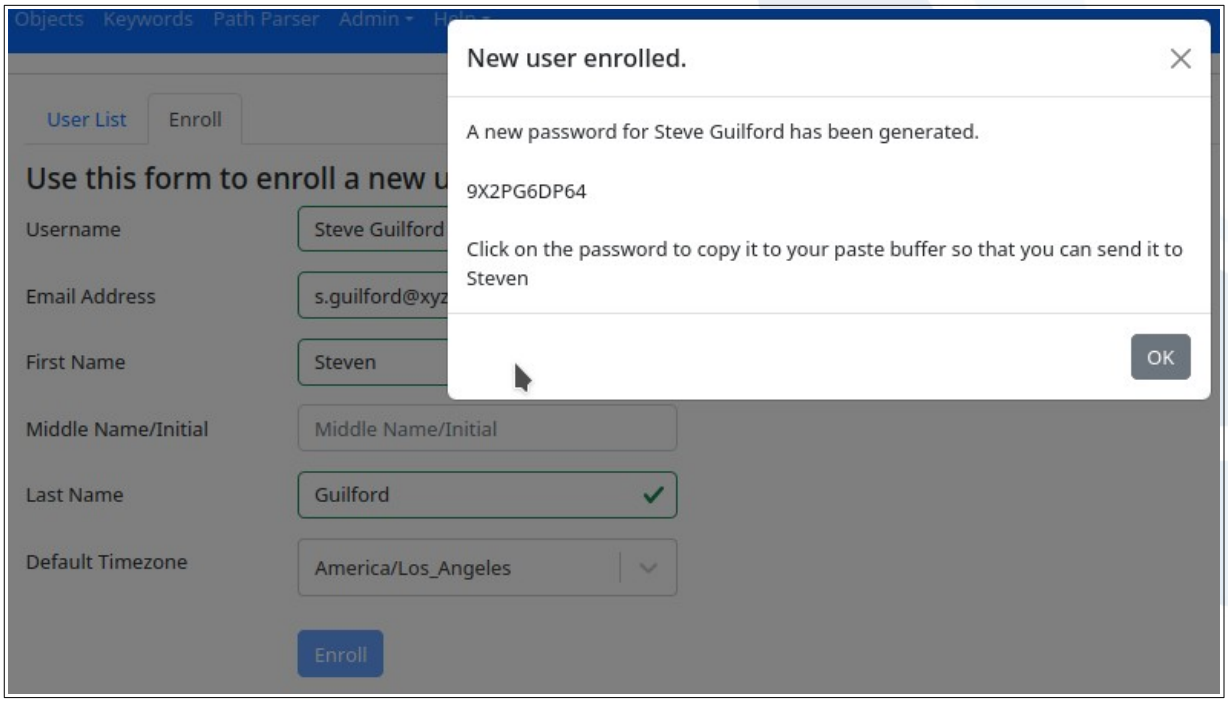
22.3.1 Creating/Enrolling a New User

If you have elected to allow new users on the Website Profile page, you will be able to access the ‘Enroll’ tab on the User Administration page.

Copyright © 2024 by AsterionDB Inc. All Rights Reserved



After clicking the Enroll button a modal will appear with a temporary password that you will need to convey to the new user. You can click on the password to copy it to your paste buffer.

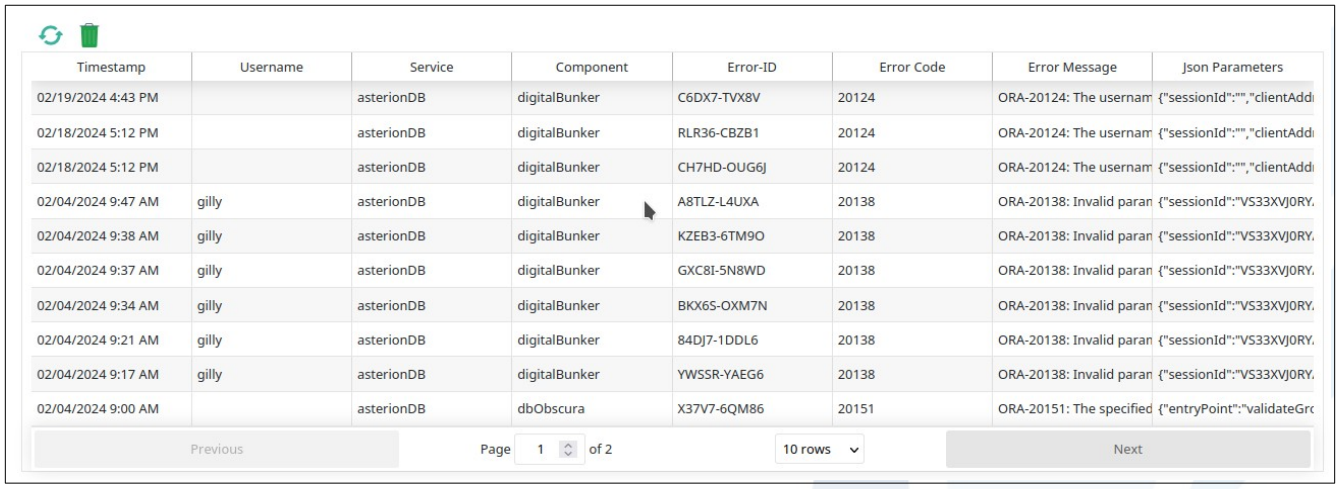


Upon logging in the new user will have to change their password.

Copyright © 2024 by AsterionDB Inc. All Rights Reserved

23 API Error Log

AsterionDB provides a centralized API error log that will display any errors generated by the API.



Timestamp	Username	Service	Component	Error-ID	Error Code	Error Message	Json Parameters
02/19/2024 4:43 PM		asterionDB	digitalBunker	C6DX7-TVX8V	20124	ORA-20124: The usernam	{"sessionId":"","clientAddı
02/18/2024 5:12 PM		asterionDB	digitalBunker	RLR36-CBZB1	20124	ORA-20124: The usernam	{"sessionId":"","clientAddı
02/18/2024 5:12 PM		asterionDB	digitalBunker	CH7HD-OUG6J	20124	ORA-20124: The usernam	{"sessionId":"","clientAddı
02/04/2024 9:47 AM	gilly	asterionDB	digitalBunker	A8TLZ-L4UXA	20138	ORA-20138: Invalid paran	{"sessionId":"VS33XVJ0RY.
02/04/2024 9:38 AM	gilly	asterionDB	digitalBunker	KZEB3-6TM9O	20138	ORA-20138: Invalid paran	{"sessionId":"VS33XVJ0RY.
02/04/2024 9:37 AM	gilly	asterionDB	digitalBunker	GXC8I-5N8WD	20138	ORA-20138: Invalid paran	{"sessionId":"VS33XVJ0RY.
02/04/2024 9:34 AM	gilly	asterionDB	digitalBunker	BKX6S-OXM7N	20138	ORA-20138: Invalid paran	{"sessionId":"VS33XVJ0RY.
02/04/2024 9:21 AM	gilly	asterionDB	digitalBunker	84DJ7-1DDL6	20138	ORA-20138: Invalid paran	{"sessionId":"VS33XVJ0RY.
02/04/2024 9:17 AM	gilly	asterionDB	digitalBunker	YWSSR-YAEG6	20138	ORA-20138: Invalid paran	{"sessionId":"VS33XVJ0RY.
02/04/2024 9:00 AM		asterionDB	dbObscura	X37V7-6QM86	20151	ORA-20151: The specified	{"entryPoint":"validateGrc

Previous Page 1 of 2 10 rows Next

Copyright © 2024 by AsterionDB Inc. All Rights Reserved

Alphabetical Index

Access Limit....34, 37, 46
Access Mode....34, 44, 46
Auto Fetch....54
Button....22, 23, 24, 26, 27, 29, 35, 37, 39, 46, 53, 54
Database Plugin Server....8
DB Session....35, 47
DbObscura....8, 10, 11, 22, 34, 35
DbStreamer....8, 11
Default Timezone....54
deleted objects....28, 43
Delivery Method....37
download....11, 21, 22, 37
Enroll....19, 46
Expiration Date....34, 36, 37, 46
File Types....19
Forwarded For....41, 56
I/O Options....34
Immutability....12
ingest....20, 22
IP Address....34, 36, 37, 46
keyword....7, 10, 11, 18, 21, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 43, 44
keyword/value....7, 10, 11, 27, 28, 29, 32, 43, 44
Keywords....10, 11, 18, 21, 23, 24, 25, 26, 28, 29, 30, 44
keywords,....30
large data set....18, 54
Oracle Cloud....9
password....52, 53
Process ID....35, 46, 47
Referer....41, 56
Refresh....18, 54
Shared Objects....44
SQL*VOX....7, 8
stream....8, 9, 11, 21, 37, 41, 43, 52, 55, 56
suggested value....23, 26, 27
upload....11, 17, 20, 39
Versions....12, 21, 39
Web Link....36
web links....11, 36, 40
....22, 42
....7, 9, 10, 11, 12, 23, 39

Copyright © 2024 by AsterionDB Inc. All Rights Reserved