



ATLAS Survey 5: Technical and Administrative Functions

OHDSI Community Call
01 July 2025



Agenda

- Atlas Review: What is Atlas?
 - Development Status: 3.x and 4.x Planning
 - What we need from you....
 - Survey 4 Response Review
 - Survey 5 Introduction - Konstantin Iaroshovets
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Atlas Review: What is Atlas?

- Atlas is a web-based application enabling non-programmers to design and fully specify elements that can be used in observational studies
- It is our primary interface for developing and evaluating cohort definitions
- Functions include:
 - Vocabulary Search (vocabulary exploration)
 - Concept Sets (code lists)
 - Cohort Definitions (population identification)
 - Characterization (incidence, pathways, proportions of concepts)
 - Analytics (population level estimation, patient level prediction)



Development Status: 3.x and 4.x Planning

- The 2.x line of Atlas is at end of development
 - Maintained for current users, hotfixes will be accepted
- The 3.x is under development, based on community feedback
 - Surveys are used to identify what we will carry forward
 - Technical updates are required (JDK updates, dependency review)
- The 4.x will make changes to application design based on user interviews and data collection by Data4Life.



What we need from you....

We will be showing you a set of features in Atlas 2.x (2.14) and we need your input about frequency of use and importance of the features.

How frequently do you use this feature?

Never used: you either did not know of, or never used this feature in Atlas

Rarely used: you use this feature <25% of the time using atlas.

Sometimes used: you use this feature 25% to 75% of time using Atlas.

Often used: you use this feature most of the time in atlas (> 75%)

How important is this feature in your work?

Not Important: The item is of no significance.

Slightly important: The item has little significance and is often overlooked.

Moderately important: The item is somewhat significant and should be considered.

Extremely important: The item or factor is critical and cannot be ignored.

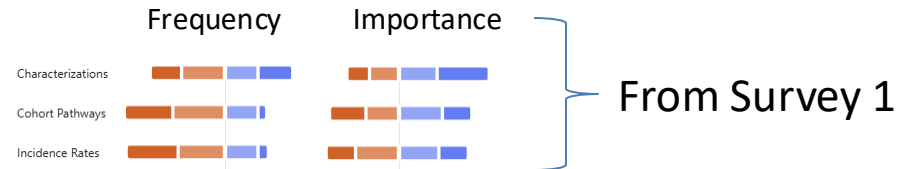
Feedback from these surveys will determine which aspects of the application get priority.



Survey 4: Response Review

Link: <https://forms.cloud.microsoft/r/azjcvTd65>

Total Responses: 15



Characterizations

Pre-spec Analysis: I use the prespecified analyses for characterization...

Custom SQL: I write custom SQL to build feature analyses...

Criteria Features - Prevalence: I use criteria logic to build proportional feature analyses...

Criteria Features - Distribution: I use criteria logic to build distribution feature analyses...

Characterization Designer: I build characterization designs...

Sub-groups: I use subgroups in characterization designs to characterize sub-populations...

Feature Analysis Parameters: I override default feature analysis params...

Execution: I review results from historical executions ...

Utilities: I import or export designs to/from Atlas ...

Versions: I review prior versions of designs ...

Tags: I use the tag button to assign or remove tags to characterizations...

Filters: I filter reports to restrict to specific analyses ...

Filters: I filter reports to restrict to specific domains...

Filters: I filter reports to require a minimum proportion...

Comparison: I select two cohorts to compare ...

Comparison: I sort the results by Standard Difference ...

Comparison: I view the balance plot to evaluate differences...

Subgroups: I use subgroups to evaluate sub-populations ...



Cohort Pathways

Designer: I design pathway analyses ...

Reports: I use the sunburst visualization...

Reports: I use the tabular reports...

Utilities: I import or export designs to/from Atlas...

Versions: I review prior versions of designs is...

Tags: I use the tag button to assign or remove tags to pathway analyses...



Incidence Rates

Designer: I design incidence rate analyses...

Designer: I define strata using criteria logic ...

Reports: I export reports to CSV ...

Reports: I would like to view rates across multiple outcomes...

Reports: I view incidence by strata ...

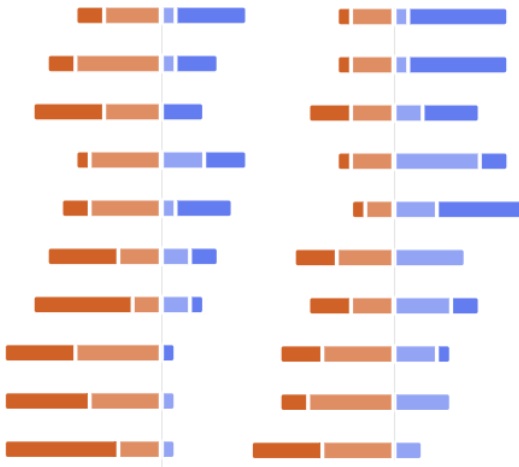
Reports: I utilize the heatmap of rates ...

Utilities: I import or export designs to/from Atlas...

Utilities: I review the analysis SQL ...

Versions: I review prior versions of designs is...

Tags: I use the tag button to assign or remove tags to incidence analyses...





Survey 5: Technical and Administrative Functions

This survey covers topics ranging from authentication methods, data source configuration, user and role administration, Active Directory Integration, Tag Management and Auditing.



Survey 5 Walkthrough and Demo

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OHDSI Community Call

01 July 2025



Introduction

Agenda

Authentication and security configuration

Data source management

User and role administration

LDAP/AD integration

Other tools: Audit trail log and Tags management

The screenshot displays the ATLAS Configuration page. The left sidebar contains navigation links: Home, Data Sources, Search, Concept Sets, Cohort Definitions, Characterizations, Cohort Pathways, Incidence Rates, Profiles, Estimation, Prediction, Reusables, Jobs, Configuration (selected), and Feedback. The main content area is titled 'Configuration' and shows the 'Execution engine' section. It includes a table with columns: Source Name [Source Key], Table Qualifiers, Dialect, Vocabulary Version, Evidence, Record Counts (RC / DRC), Incidence, Check connection, and Refresh cache. The table lists four data sources: SynPUF 110k, SynPUF 2.3m, Synthea Covid19, and Vocabularies 2025/02. Below the table are buttons for 'Clear Configuration Cache', 'Manage Permissions', 'Import Users from LDAP/AD', 'Tag Management', and 'Clear Server Cache'. The footer mentions 'Apache 2.0 open source software' and 'provided by OHDSI join the journey'.

Source Name [Source Key]	Table Qualifiers	Dialect	Vocabulary Version	Evidence	Record Counts (RC / DRC)	Incidence	Check connection	Refresh cache
SynPUF 110k [synpuf-110k]	CDM: cdm_531 CEM: cem CEMResults: cem_results Vocabulary: cdm_531 Results: results_atlas	postgresq	v5.0 19-MAY-20	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="checkbox"/>	check	refresh
SynPUF 2.3m [synpuf-2m]	CDM: cdm_531 Vocabulary: cdm_531 Results: results_atlas_280	postgresq	v5.0 11-JUN-20	<input type="radio"/>	<input type="radio"/>	<input checked="" type="checkbox"/>	check	refresh
Synthea Covid19 [SYNTHEA]	CDM: cdm_531 Vocabulary: cdm_531 Results: results_atlas_280	postgresq	v5.0 04-JUN-20	<input type="radio"/>	<input type="radio"/>	<input checked="" type="checkbox"/>	check	refresh
Vocabularies 2025/02 [VOCABS]	Vocabulary: vocabs_2025q1	postgresq	v5.0 27-FEB-25	<input checked="" type="radio"/>	<input type="radio"/>	<input type="checkbox"/>	check	



Authentication & Security Options

Supported Authentication Methods

Local DB – Default built-in method

OAuth - Google, GitHub, etc.

SAML 2.0 – Enterprise SSO integration

LDAP/Active Directory – Enterprise directory services

Google Identity Aware Proxy (IAP)

Enabling Security

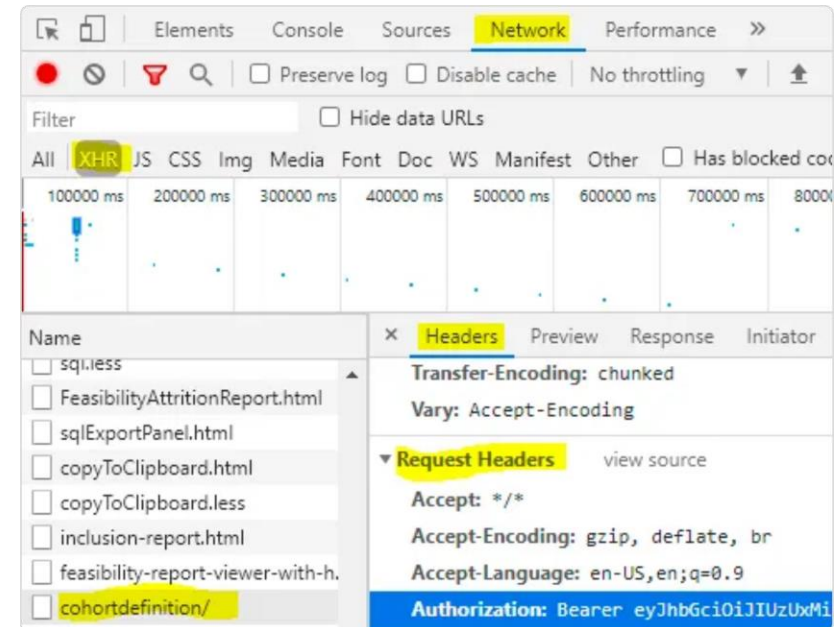
By default, WebAPI security is disabled. To enable:

```
<security.provider>AtlasRegularSecurity</security.provider>
```

Set in `WEB-INF/settings.xml`

Atlas Configuration

Create `config-local.js` in ATLAS (e.g., `atlas/js/config-local.js`)





Data Source Configuration

"New Source" Configuration

In ATLAS Configuration menu, you can define a new CDM source:

Source Name (e.g., "MyCDM")

Source Key (unique identifier)

JDBC Connection URL

Username/Password for the CDM database

Security Note

When adding sources via the ATLAS GUI, WebAPI will encrypt the password in the database.

Source Daimons

Each source requires four daimons:

Daimon	Purpose
CDM	Clinical data
Vocabulary	Standardized terminologies
Results	Analysis results storage
Temp	Temporary calculations

Access Control

By default, only users in the source's role (e.g., "Source user (cdm)") can see/use that source. WebAPI auto-creates a role "Source user (SourceKey)" for each source.

In Atlas Manage Roles, you can add users to that role to grant them access to the source.



User & Role Management

Roles Overview

Functional Roles

Control access to ATLAS features

Data Roles

Control access to data sources

Default Roles/Users

On first login, WebAPI creates:

- A new SEC_USER record
- Assignment to "public" role
- A personal role (name = username)

Atlas Manage Roles UI

Access via:

- ATLAS Configuration
- Click Manage Permissions
- Select Roles tab

From here you can create roles, assign permissions, and add users to roles.

The screenshot shows the ATLAS web interface. On the left is a dark blue sidebar with a menu containing: Home, Data Sources, Search, Concept Sets, Cohort Definitions, Characterizations, Cohort Pathways, Incidence Rates, Profiles, Estimation, Prediction, Reusables, Jobs, Configuration (highlighted), and Feedback. The main content area is titled 'ATLAS' and 'Role #10'. It has tabs for 'Users', 'Permissions', and 'Utilities'. The 'Users' tab is active, showing a search bar for 'Atlas users' and a 'Show 50 entries' dropdown. Below this, it says 'Showing 1 to 3 of 3 entries'. A table lists three users, each with an 'Included' checkbox (all checked) and a 'Login' column.

Included	Login
<input checked="" type="checkbox"/>	ohdsi
<input checked="" type="checkbox"/>	admin
<input checked="" type="checkbox"/>	acumenus



LDAP/AD User Import

Setup Requirements

Enable LDAP/AD authentication in settings.xml:

```
<security.auth.ldap.enabled>true</security.auth.ldap.enabled>  
<security.ldap.url>ldap://ldap.example.org:389</security.ldap.url>  
<security.ldap.dn>cn={0},dc=example,dc=org</security.ldap  
urity.ldap.dn>
```

Import Process

- Navigate to ATLAS Configuration
- Click "Import Users from LDAP/AD" button
- Select LDAP groups to import
- Map each group to an Atlas role
- Run the import process

Benefits

- Centralized user management
- Automatic role assignment
- Reduced administrative overhead
- Consistent access control

Role	Group name
admin	Atlas-admin
Atlas users	Atlas-us-user
cohort creator	
cohort reader	
concept set creator	

Group to Role Mapping Example

LDAP Group	Atlas Role
CN=atlas-admins	admin
CN=atlas-researchers	researcher
CN=atlas-viewers	viewer

After import, users appear in their assigned roles' Users list.



Other Administrative Tools

Tags Management

Create and manage tags to organize and categorize:

- Cohort definitions

- Concept sets

- Analyses

- Other ATLAS artifacts

Tags help users find and organize their work, especially in environments with many users.

Audit Trail and Logs

Monitor system activity and user actions:

- User login/logout events

- Resource creation and modification

- Permission changes

- Data source access

Useful for troubleshooting, security monitoring, and compliance requirements.

Administration Best Practices

- Regularly review user accounts and permissions

- Monitor system logs for unusual activity

- Create backup procedures for important configurations

- Document your specific environment setup

- Test configuration changes in a non-production environment first



Survey 5: Information

- Survey link: <https://forms.cloud.microsoft/r/Q5z5WaYKsz>
- Forum post: <https://forums.ohdsi.org/t/atlas-3-0-user-surveys/23821>

Please feel free to share the survey link to anyone who is an Atlas user.

All input is welcome!



Thank You!