Ataccama ONE Master Data Management and Reference Data Management are advanced, scalable, highly available modules for managing, consolidating, and providing master and reference data management tasks. Model and metadata-driven data processing enhances and complements Ataccama ONE data quality features and capabilities.

The modules provide the flexibility and workflow needed to create an enterprise-wide master and reference data management environment that is secure, powerful, and easy to use. They are built on a robust back-end engine, and allow users to perform all critical data stewardship tasks—to browse, modify, search, and create master data through a web interface, and to browse and manage graphical hierarchies.

Data management and integration capabilities of the Ataccama ONE platform extend beyond typical master and reference data capabilities to accommodate various Application Data Management (ADM) use cases.

**USE CASES**

Typical MDM implementation scenarios include:

- **Customer Data Integration (CDI) / Entity Matching** (single domain MDM)
- **Customer 360** (multi-domain MDM, ADM)
- **Location Data MDM** (single domain MDM)
- **Vehicle Data MDM** (single domain MDM)
- **Blacklist Data Consolidation** (multiple domain MDM)
- **Product / Material / Asset / Equipment MDM** (single/multiple domain MDM)
- **Group-Wide Customer & Product Data Consolidation**, including consolidation of data from devices (IoT in general) (multi-domain MDM)
- **Regulatory Compliance Support**, including MDM-based, end-to-end GDPR solutions (multi-domain MDM)
- **Analytical & Operational CRM Support** (multi-domain MDM)
- **Identity Resolution & Risk/Fraud Management Support**
- **Reference Data Management** (LOV centralized management and/or consolidation, an inherent use case of any MDM solution)

**Multi-Domain Mastering**

Master your data domains (customer, supplier, product, reference data, and more). Consolidate multiple data views into one and store your golden records in a clean business data management application for your whole organization. Accelerate the implementation of your solution with predefined business models and processes.
Reference Data Management
Implement an RDM solution for a range of data challenges, including reference data scattered across multiple source systems, manually-managed Excel files, or an in-house replacement for inflexible and hard-to-maintain systems lacking integration features. Use lookups to search for input values in a dictionary table or parent table and write corresponding values from the dictionary file to the output. Enjoy time validity functionality and manage future values of reference data records. Centralize ownership and accountability, enforce business rules and data quality standards to drive smooth interoperability, and maintain consistent, valid, and available reference data across your entire enterprise in one place.

Data Integration & Synchronization
Publish changes in master, reference, and related data to consuming systems in online mode, typically to an enterprise service bus or message-oriented middleware. Internal streaming functionality enables the solution to be instantly ready for processing external data streams, such as those generated by IoT devices and processes. ONE MDM operates in online (both synchronous and asynchronous), streaming (near real-time), batch and hybrid modes, supporting all integration requirements of these deployment scenarios and ensuring full synchronization. The engine is capable of retrieving and providing full snapshots of data and data deltas. External applications can query and update data using the web service interface and REST API.

Householding, Aggregation & Categorization
Leverage the information you have about your customers to improve campaign targeting. Accurately group and categorize similar entities, identify relationships between individuals within the same household, and use this knowledge to enhance the efficiency of your business processes.

Data Stewardship & Authoring
Data stewards have access to a full-featured, web-based UI to review and manually influence the matching and golden record creation process, manage hierarchies, and assign and resolve data-related tasks. Out-of-the-box business process workflows include data authoring (create, edit, delete) and data merging in centralized style, as well as overrides of source or master data on the attribute level, and match & merge overrides in consolidation/coexistence style. Complex lineage, survivorship, record comparison, and a hierarchy viewer provide all necessary information to support data stewards in day-to-day tasks.

Hierarchy Management
Use our visual hierarchy browser & manager to easily view, navigate, create, and maintain relationships in your data (including complex, multi-level hierarchies, product trees, geographical hierarchies, party relationships, and more) without limitations.

Master Domain Monitoring
Access business-relevant metadata for your consolidated domain in a neat dashboard. Keep your monitoring thorough with reporting overviews, detailed statistics, and lists of issues and irregularities. Audit any event or process across the solution in just a few clicks.

Analytical MDM on Data Lakes
Tackle your data lake challenges for dramatically shortened time-to-market for new products, an individual approach to customers or micro segments, the ability to build customer and risk profiles from relevant data sources, and more. The back end can be deployed in both Hadoop and Spark environments,
enabling big data consolidation directly within the big data environment, without the need to pull data out of the big data platform.

FEATURES

Browsing, Searching & Filtering

Enjoy a business user-focused front end used by data stewards and data analysts to search, browse, edit, and author master and reference data. Use filtering and search capabilities to narrow the list of data records within an entity. In addition to a simple filter, apply advanced filter criteria using logical operators and order by conditions. Certain operations can also be performed in bulk mode on the entire selected data set.

Approval Workflow

Multi-step and customizable approval workflow ensures correct business processes for manual data changes. The workflow also enables data stewards to mark records for further review and store them as drafts.

Data Quality, Validation & Enrichment

Data quality is an inseparable part of any successful master and reference data management project and can be provided in both batch and online modes, with the advantage that the logic can be shared in both modes, ensuring consistency. All data steward inputs are subject to validation by the Ataccama ONE Data Quality Management module, which acts as a data quality firewall. The module ensures referential integrity and prevents the creation of discrepancies and duplicates, and enables data enrichment from internal and third-party lookups.

Issue Management

Users can manage the quality and consistency of the data they are responsible for through a single interface. Ataccama ONE MDM provides data stewards with a list of tasks and issues related to master records with errors, and suggests solutions such as matching proposals or correct values. All identified issues can be resolved directly from the interface, including match proposals, suspicious matches, and data quality issues.

Model & Metadata-Driven

Ataccama ONE MDM is configured via a configuration UI in a model-driven process. Data models, either imported or created in Ataccama ONE MDM, drive the configuration of the entire hub for both data processing and the UI. Models are fully configurable, customizable, and allow for both extensions and upgrades. UI templates can be customized, and various languages are supported.

Integration, SOA & Messaging

 Seamlessly integrate with other Ataccama ONE modules. Integration with other source and consuming systems via batch interfaces (files, JDBC), online interfaces (HTTP, JMS), and messaging (JMS) is easy to configure. Ataccama ONE MDM can also read and write Hadoop files, and integrate with Stream (Kafka) and REST interfaces.

Dashboard

The landing page provides a customized dashboard for each user. Data stewards can easily view previously created/resolved issues, notifications, and more. Data managers can see the overall DQ indicators and issue resolution statuses of the data domains for which they are responsible.

MDM Style Support

Any industry-specific solution, MDM data domain, usage scenario, or organizational structure-dependent deployment can be delivered in any MDM implementation style or combination of styles. The most typical combinations are centralized and consolidation, or centralized and coexistence styles. In some complex organizations, Ataccama ONE MDM combines three styles, where there is a centralized style (system of record with OLTP data authoring) for certain master data domains or directly connected consuming systems/applications, coexistence style for bi-directionally integrated authoring systems, and consolidation for geographically remote departments or daughter companies.
Comparison View

Users can open several similar records in comparison view, see their differences highlighted, and decide whether they should be merged or split. For full context, related and instance records can be viewed.

Workflows

All aspects of the record managing process are fully configurable, including the number of steps in the workflow, permissions, and actions to be performed. Different workflows can be used for different entities.

Security

Utilize full role-based security on the entity, column, and row level, with the option to leverage organizational structure to provide even stricter access control based on an employee’s role or department. We provide a Single Sign-On solution out of the box, and the modules can also leverage your existing LDAP solution.

Localization

Localization settings influence number and date formats as well as the user interface language.

History & Auditing

Maintain a history of all of the modifications made in the module, including creation, changes, and deletions. Audit functionality record information about who performed an action and when, along with which entity was affected.

AI at Runtime

Artificial intelligence in Ataccama ONE increases automation. It is used for machine learning-based matching, cleansing and classification, active learning from user interactions (especially from issue resolution), and anomaly detection in data loads.