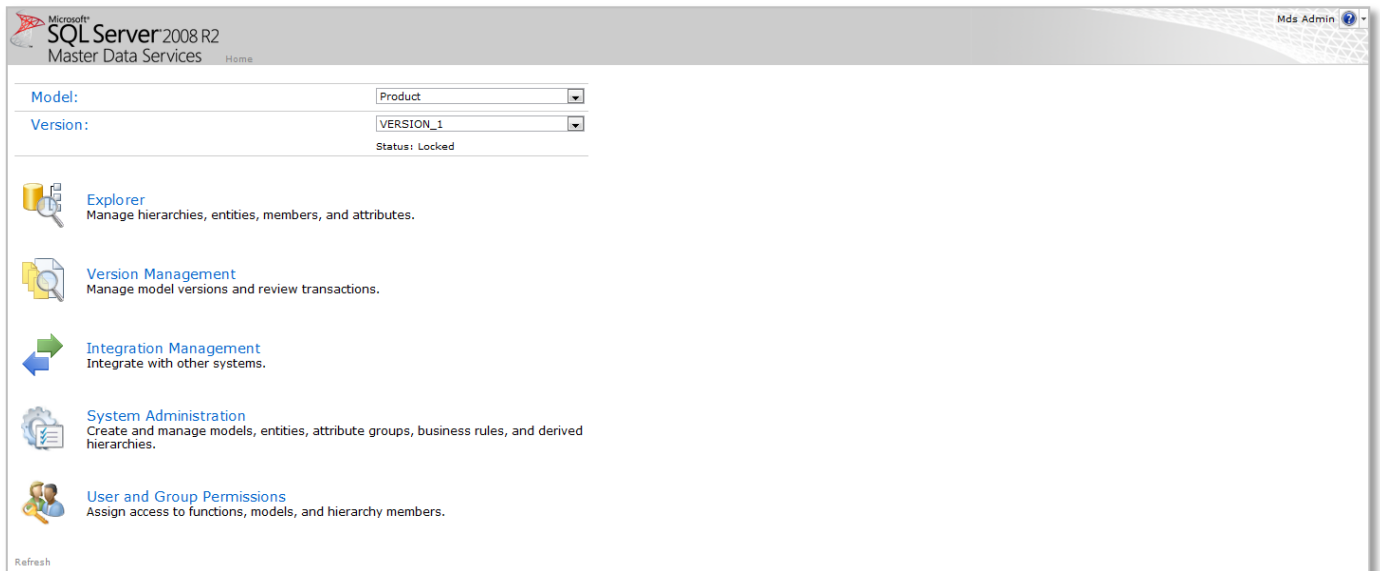


Master Data Services Training Guide

Master Data Services Environment



Portions developed by Profisee Group, Inc.

Master Data Services Overview

Master Data Services Implementation

Master Data Services helps enterprises standardize the data people rely on to make critical business decisions. With Master Data Services, IT organizations can centrally manage critical data assets companywide and across diverse systems, enable more people to securely manage master data directly, and ensure the integrity of information over time.

Specifically, Master Data Services provides the following:

- Master data hub that provides central management of master data entities and hierarchies
- Version control to help manage master data changes
- An open subscription interface to provide access to all subscribing systems in the format most appropriate for each system
- Flexible web deployment for easy access by data stewards and administrators
- Role-based, model and member security, in conjunction with workflow, to provide controlled and collaborative master data maintenance.

Master Data Services System Administration Tasks

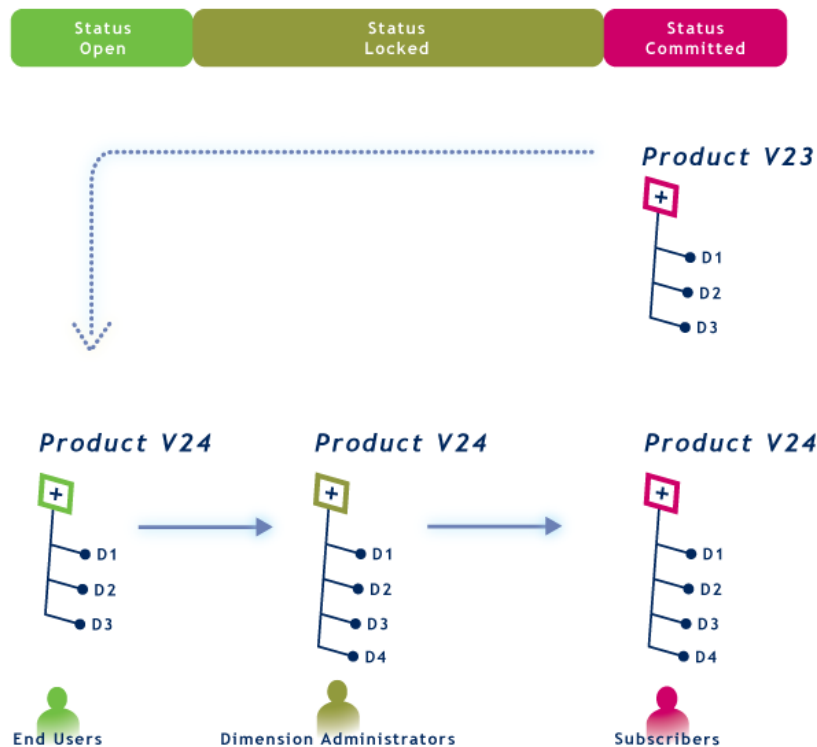
Administrative functions are assigned to users or groups. Administrative responsibilities include:

- Create the master data models and associated hierarchies, entities, and attributes
- Format and input data: format the data from the source systems and populate the Master Data Services staging tables
- Process staging tables: populate the Master Data Services database with data
- Integrate subscribing systems: use subscription views to update systems with authoritative master data
- Manage user and group permissions: assign access to functional areas, models and hierarchy members
- Manage business rules: create and manage business rules to enforce corporate standards and ensure data accuracy
- Manage model versions: copy versions, lock versions, validate for completeness and commit versions.

In addition, subscribing system administrators can use the predefined views to create or modify master data in subscribing systems.

Version Control

Master Data Services provides the ability to maintain multiple versions for each model.



Master Data Services versions can be open, locked or committed. The process of managing Master Data Services versions includes the following activities:

- A System or Model Administrator copies an existing version to a new, open version. Master Data Services users are able to make changes to the open versions.
- Once modifications are completed, a System or Model Administrator “locks” the version. Only administrators can make changes to a locked version. Also, only administrators can unlock versions, making them open again, to allow other Master Data Services users to make changes as required.
- Once a version is locked, a “validation” can be performed to make sure that the version is complete. A version must be valid before it can be committed.
- When the new version is ready for use by the subscribing data systems, an administrator “commits” the version. Committed versions can be copied to make a new, open version. No one can make changes to a committed version, as it is an official and authoritative version of record.

- Customized flags can be created to identify various versions for use in subscribing systems. An administrator can customize the version flags to suit their specific business requirements and processes (e.g. specify if a flag can be set to non-committed versions).
- Subscription view definitions are created to determine which version number or version flag of a specific master data model is available for downstream consumption.

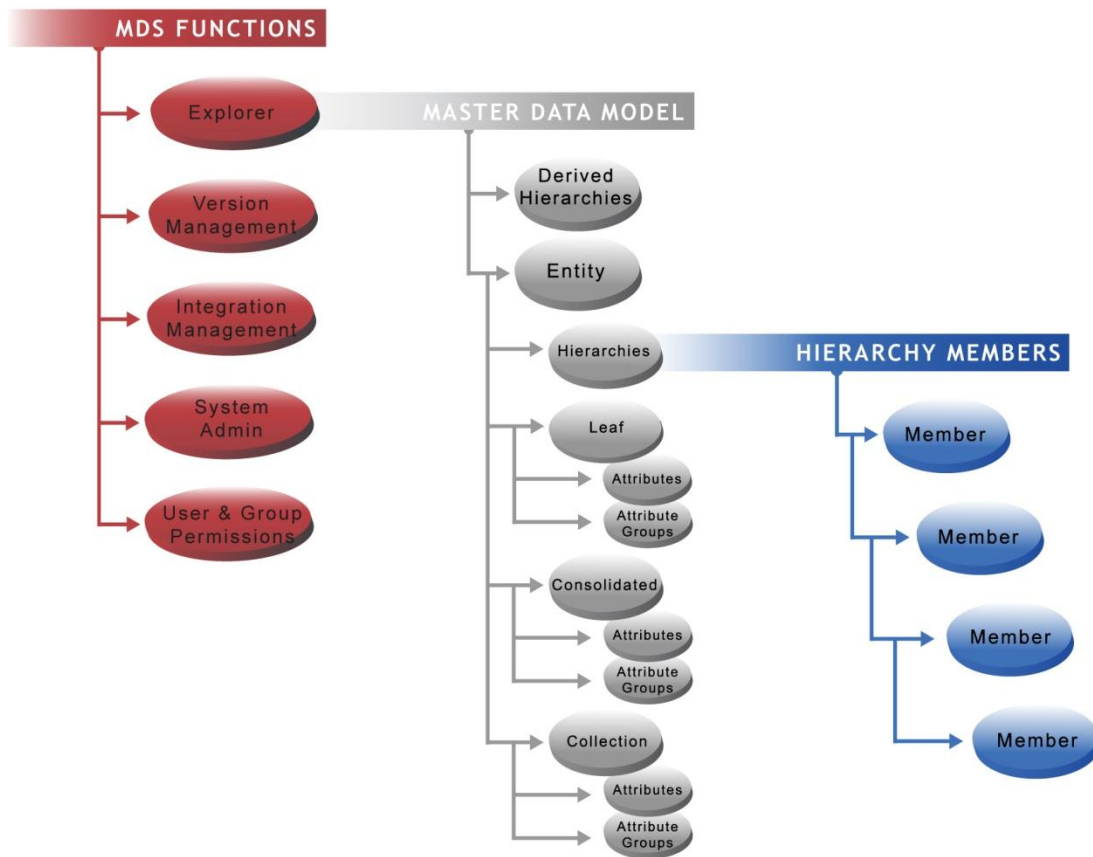
Security Model

Master Data Services' comprehensive security model provides complete control over security—from high-level blanket access for administrators, down to the most specific, granular access for users responsible for a single attribute.

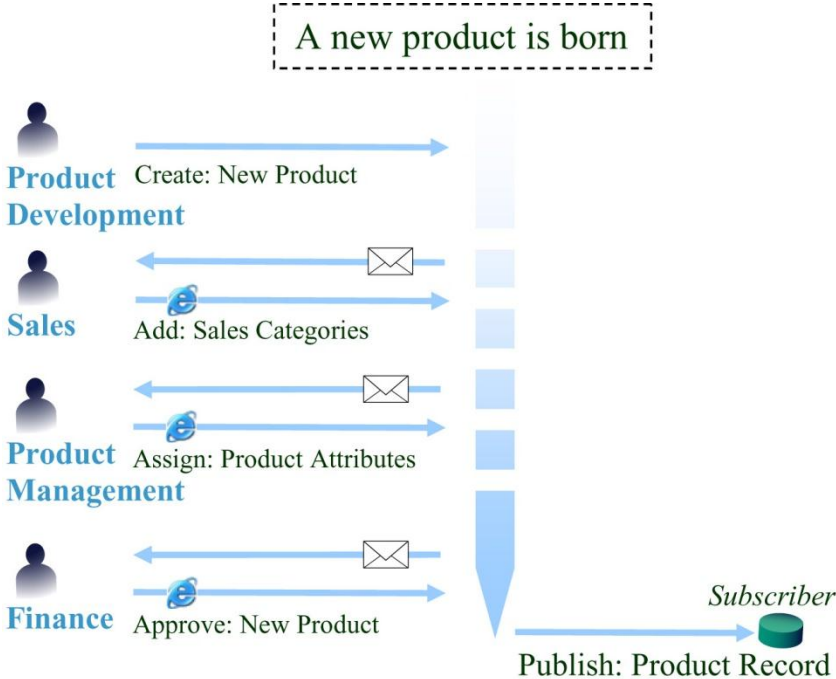
The combination of controlling functional and granular access provides a secure, collaborative environment in which organizations can confidently manage, maintain and store all their master data.

- **User and Group Security – Permissions** can be assigned directly to users and/or groups. The best-practice approach to user/group security combinations is to manage permissions through group assignments. Groups serve to decouple permissions from direct association with users, which simplifies security maintenance. Groups make it easier to respond to frequently changing user roles.
- **Functional Security – Functional permissions** are assigned to users to grant basic end-user (Explorer) access and administrative capabilities such as version management, integration management, system administration and permission management.
- **Model Security – Master Data Services** delivers complete read/write/deny control over every component of a master data model, including models, hierarchies, entities, collections, attributes and attribute groups.
- **Hierarchy Member Security – Read-only, Update or Deny permissions** can be assigned to consolidation nodes of explicit or derived hierarchies to control member-level access within a model.

Security permissions are a crucial component of the Master Data Services workflow. These assignments will limit validation issue notifications to the appropriate users based on their ability to access and correct member data values.



Notification-based Workflow



The notification-based workflow feature of Master Data Services integrates your web browser, email and data validation rules into a single business process that ensures efficiency and minimal last-minute conflicts, all within a secure, controlled environment.

Business Rules

The ability to validate hierarchies and master data against a variety of business rules and conditions is a key component to any best-practice master data management strategy. Master Data Services' sophisticated business rule engine validates data according to any number of multi-conditional business rules to enforce corporate standards and ensure master data accuracy. From basic business rules such as making a specific attribute mandatory, to complex multi-conditional rule expressions, Master Data Services ties together a robust rule engine, real-time validation and notification framework to efficiently ensure the accuracy and completeness of your hierarchical and master data.

Selecting Business Rules from the Manage drop-down menu in the System Administration functional area displays the Business Rule Maintenance screen. Here, the administrator can create and manage business rules that support custom business logic. With business rules a user can easily construct complex IF-THEN rule expressions to:


- Generate code or attribute values
- Set and create default values
- Create any combination of validation criteria to enforce standards and ensure accuracy.



Notification Framework

Notification Framework

- Work together with web-based workflow and business rule engine to automate and streamline the master data creation and validation process
- Notifies users of changes in version status and validation errors
- Notification recipients (user or group) are specified for each business rule



Master Data Services' notification framework facilitates an event-driven workflow, ensuring the right users are notified of the appropriate changes and validation issues in a timely fashion for an efficient and effective change management process.

Email notifications are sent when there are version status change or validation errors. All emails have direct links to the application and specifically to the issue the email is addressing.

In Configuration Manager the administrator can set the frequency of email delivery using the Notification E-mail Interval system setting. The email delivery format is set per user in the User and Group Permissions - Edit User - General tab.

For each business rule, a notification user or group may be specified as the recipient of the validation issue notifications. Notifications will be limited based on security permissions such that only users who can access the affected member and attribute will be notified.

Master Data Services Terminology Overview

Each of the terms below are components of a Master Data Services model.

- Model – the highest-level container. All other components are defined within the context of a model.
- Entity – a container for a set of members.
- Member – a data element; classified as a leaf, consolidated, or collection member type.
- Attribute – a property of entity members. Attribute types include free-form, file, or domain.
- Hierarchy – organization of members into various consolidated groups and levels to support analytic requirements.
- Collection – user-defined subset of leaf and consolidated members.
- Business Rule – business logic that is intended to invoke a certain Master Data Services action.
- Subscription View – allows for integration with downstream systems dependent on master data, hierarchies, and collections.

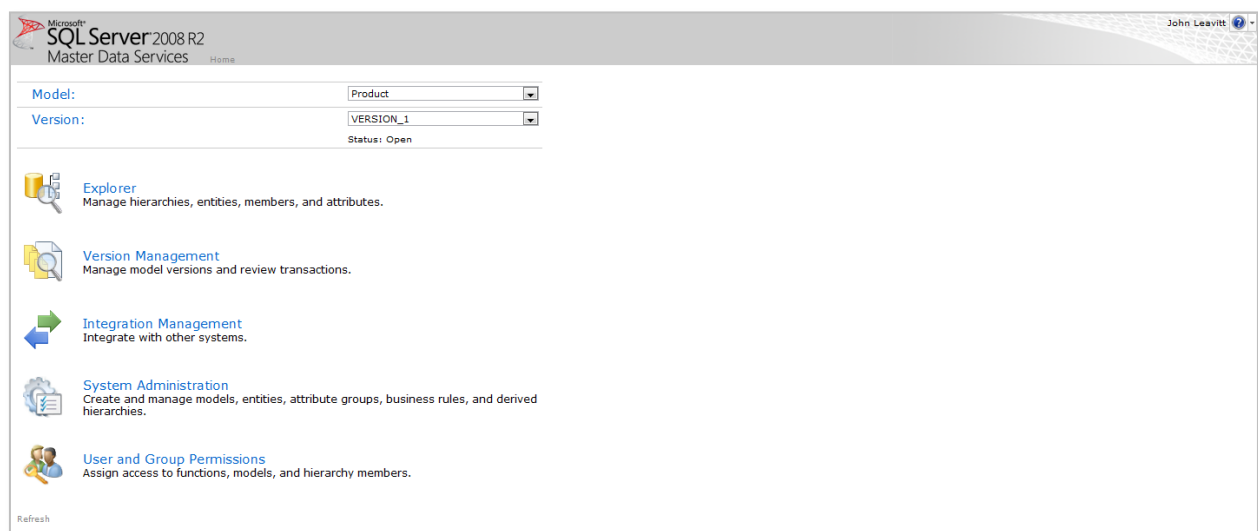
Master Data Services Application Basics

Master Data Manager Web UI

Master Data Services is a web-based application, thus making it broadly available to users. Master Data Services leverages Windows Authentication for integrated security and single sign-on. Users should be set-up in Active Directory; their specific roles and responsibilities are assigned through the User and Group Permissions functional area.

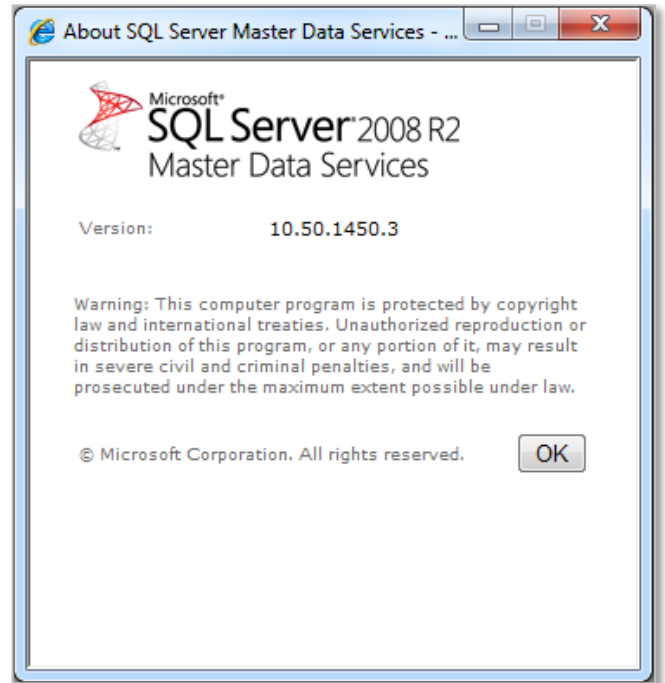
Home Page

The Master Data Manager home page is an easy-to-navigate, intuitive screen for selecting a Model and Version context and navigating to assigned functional areas.



Product Version

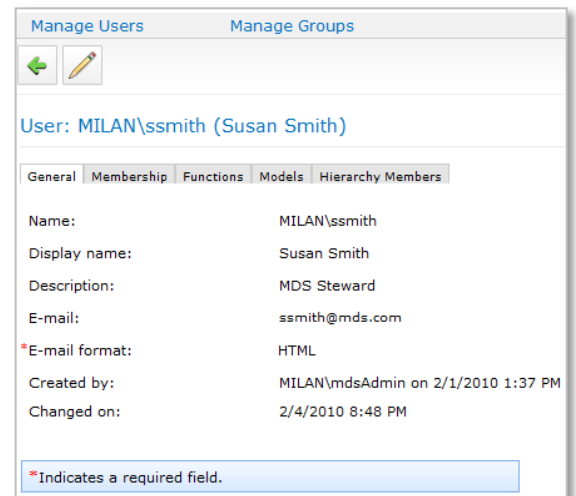
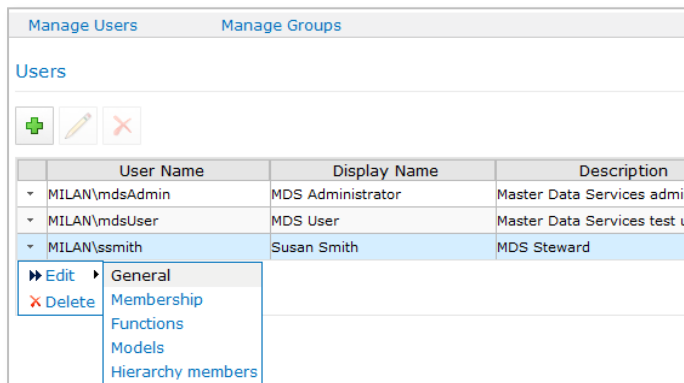
The Master Data Services product version can be obtained from any page within Master Data Manager. Click on the help icon (blue circle with question mark in top right corner of the screen) and select “About Master Data Manager” from the drop-down menu. The product version is associated with the database as well as the user interface. The version number is required when communicating with Microsoft support.



User Details

The user name of the currently logged in user is displayed on every Master Data Services page in the top right corner of the screen, next to the help icon. To edit user details, from the Master Data Services home page, click on “User and Group Permissions” (permission must be granted for users to access this functional area).

Clicking the action button next to a user provides Edit and Delete options. Select General from the Edit menu in order to edit user details.



Master Data Manager Criteria Selection

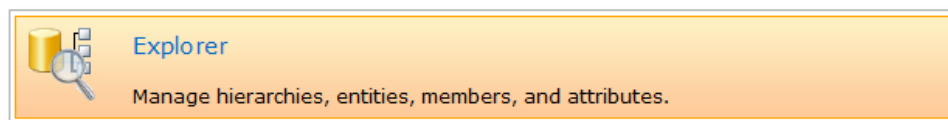
The first step to accessing and managing a model within Master Data Manager is to select a master data model and a version.



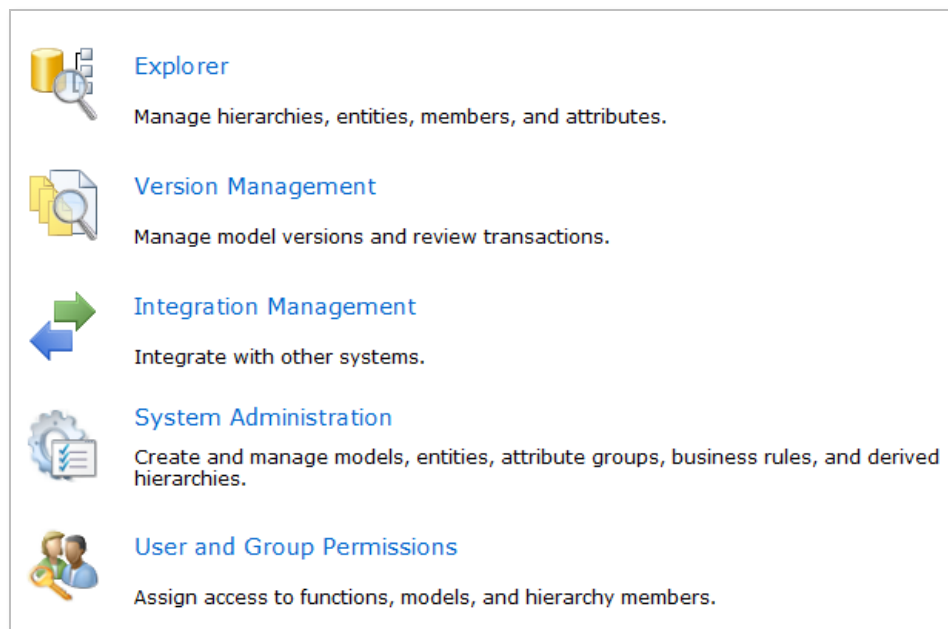
After a user selects a data model and version, the version status appears on the screen; displaying the phase of the version lifecycle (i.e., open, locked, or committed).

Master Data Manager Launch Buttons

Typical end users only require access to the Explorer button on the Master Data Manager home page, as this is where the majority of the data management actions take place.

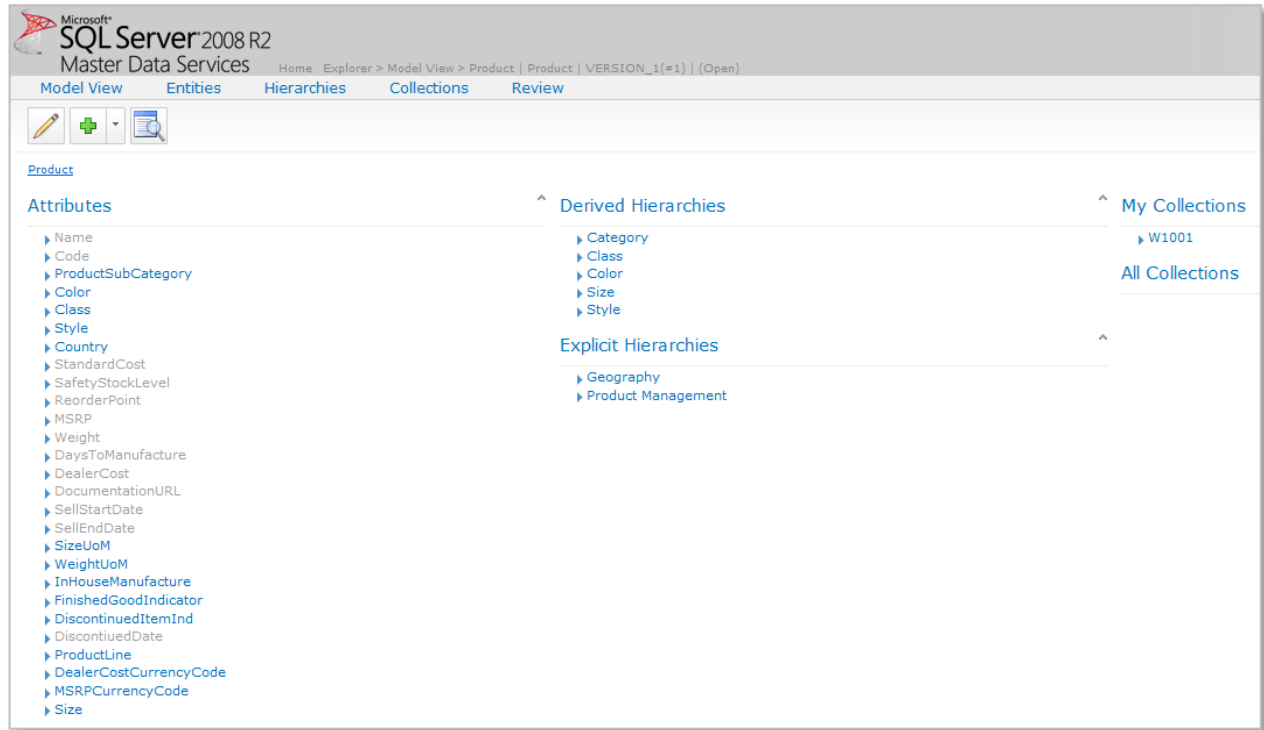


Below are all of the available functional areas in Master Data Services. Some administrator users may have access to Version Management, Integration Management, System Administration, and Permissions buttons for the model(s) they have been assigned.



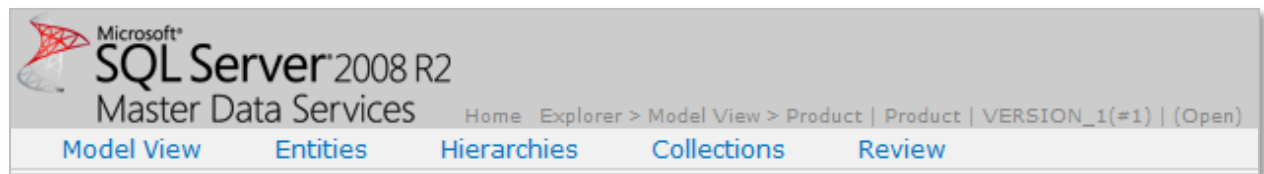
Explorer: Model View

Clicking on the Explorer button from the home page directs users to the Model View screen, similar to the example below (depending on the selected model). This screen shows the structure of the primary (or "base") entity within the model along with the related attributes and hierarchies. From here, users may click to navigate to related entities or browse the entity and hierarchies to make data changes.



Navigation Menu

A navigation menu is located at the top of every screen. Depending on which area of Master Data Services the user is in, the options may vary. The example below shows the options for the Explorer: Model View screen.



Note that the Model View screen itself is a “menu” in the context of the model. Links are grouped by Attributes, Derived Hierarchies, Explicit Hierarchies and Collections.

Recap

Recap

- Master Data Services overview
- Master Data Services terminology
- Master Data Services user interface

