# SQL Diagnostic Manager Scale-Out Architecture

SQL Diagnostic Manager Console now communicates with multiple Diagnostic Manager Scale-Out Management, consolidating the collected data to present it in a single view.

Windows Console maintains knowledge and connections to a single SQL Repository and a single DM Management service. To access any data instances SQL Diagnostic Manager queries to a single DM repository.
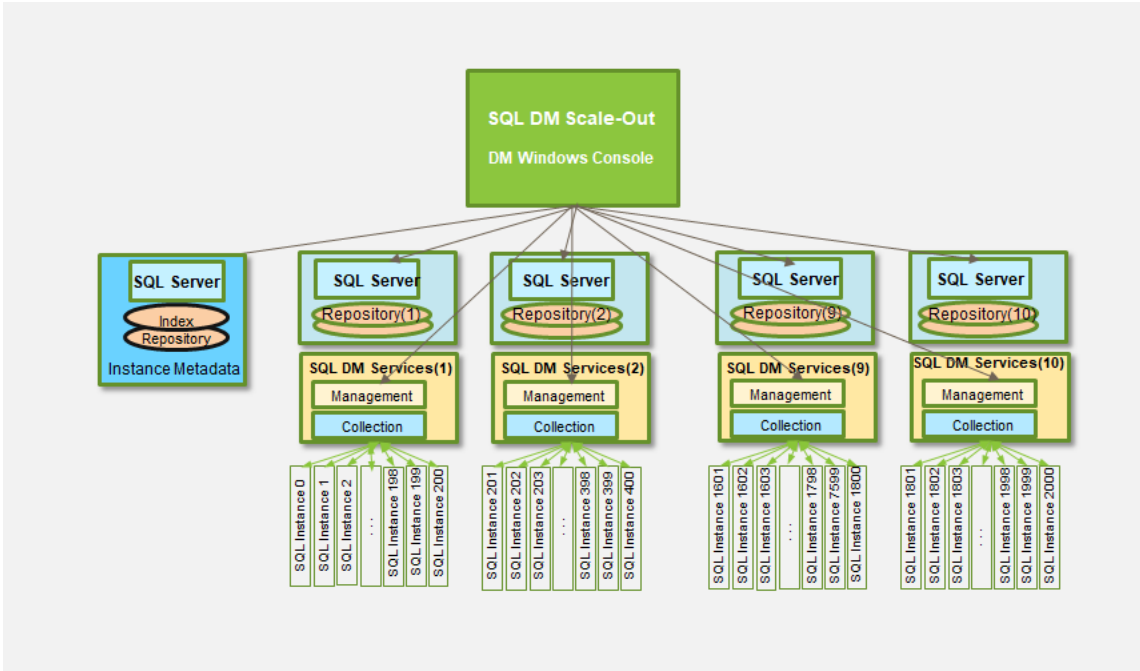
With the existence of multiple DM Repositories and Management Services in the installed environments, the Diagnostic Manager Scale-Out Manager maps the installation layers. To do so, it relies on metadata.

DMSO Metadata

DMSO Metadata describes which monitored instance is owned by a specific Management Installation. Besides, metadata is part of the mapping layer process.

This process is achieved by:

1. Intercepting references to the DM Repository and DM Management Service.
2. Mapping the DM Repository and DM Management service reference information to the appropriate DM Repository or Repositories.
3. Correctly assembling the data when more than one Repository contributes to the results.

DMSO Database

DMSO Database stores and maintains the data collected by the metadata. This data may

- Exist on a stand-alone server for performance and scalability reasons.
- Be provisioned on one of the management Installations.

The DM Windows Console reads the instance to Management Installation mappings into memory and maintains these mappings as a cache to speed instance to Management Installation mappings.

DMSO Cross Metadata

Some metadata elements utilized by the Diagnostic Manager are system-wide items, such as DMSO Users.

DMSO Users are defined in the context of the whole scale-out installation deployment.

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⚠ When you add a DMSO user, SQL Diagnostic Manager provisions it across all Management Clusters with the same level of permissions.

ⓘ You can find more information about DMSO features on SQL Diagnostic Manager Scale-Out Installations.