



# Arangen Consolidation Service

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## Arangen Consolidation Solutions

Data consolidation supports IT systems modernization by replacing aging legacy data storage systems with contemporary, high performance databases. Data consolidation extracts and combines valuable enterprise data from legacy archives, then relocates the data into modern database systems. After consolidation has evacuated all relevant enterprise data, the legacy data systems can be shutdown and retired. Modernization via data consolidation reduces IT system complexity, streamlines business operations, and reduces IT maintenance costs.

Data consolidation is a natural follow-on to data federation activities. Arangen data federation creates a unified view of the enterprise data by re-mapping and re-engineering data residing in legacy data systems. Arangen creates custom platform-independent consolidation solutions to copy the federated enterprise data into new or existing databases. Data consolidation preserves the unified view of restructured enterprise data created with Arangen data federation solutions. Arangen consolidation solutions are very efficient and run the consolidation processes without disturbing normal business operations.

## Data Consolidation Problems

Legacy data silos are the main obstacle to data federation and consolidation. Once access to a unified, global view of re-engineered enterprise data is available, consolidation must physically relocate that data to new or existing databases. Even with access to a unified federated data source, designing and implementing an in-house enterprise data consolidation solution can be a high risk, costly and time consuming project. Consolidation engines must referee application data queries to ensure that they are correctly routed to the proper data source. Consolidation engines must pay close attention to data consistency so that ongoing business operations continue to function correctly. These data consolidation issues must be addressed before attempting to move re-engineered legacy data to a new database.

Major technology improvements and pressures on IT departments to be more cost-effective have led many CIO's to undertake data integration solutions.

“With the focus on efficiency and return on investment (ROI), nearly all IT departments have consolidation projects under way.”

Aberdeen Group



## Arangen Consolidation Service

### Arangen Technology

Data consolidation typically follows data federation on system modernization projects. Arangen platform-independent data consolidation preserves the unified, federated view of enterprise data by moving re-engineered legacy data into new or preferred databases. Data consolidation's primary purpose is to remove and preserve valuable enterprise data from aging legacy systems so that the legacy systems can be safely eliminated.

#### Arangen technology - Federation

Arangen's platform-independent federation solutions liberate enterprise data from legacy data silos, removing roadblocks to business modernization. Arangen technology applies metadata-driven virtual database technology that re-maps and re-engineers data in real-time from legacy silos to create a unified, global source for integrated enterprise data. Arangen federation technology restructures and re-purposes legacy data for enterprise-wide reuse.

See the **Arangen Federation Service** data sheet for the complete federation story.

#### Arangen technology - Consolidation

Arangen custom platform-independent data consolidation solutions relocate federated enterprise data from legacy data silos to new or existing databases. Arangen consolidation technology extends federated virtual databases with metadata-driven consolidation engines. The consolidation engines read enterprise data from the virtual databases and move it to the designated new databases. The consolidation engines implement an application query router working as a read-through query cache overlaid on a synchronized bulk data mover.

The consolidation data mover does the heavy lifting in the background, copying re-engineered legacy data to new databases. The consolidation mover sequences through the re-engineered legacy data using order-by indexing to insure data synchronization between the new databases and the legacy data sources. The consolidation mover only runs (interleaves) when the system is idle and does not impede normal application operations.

The consolidation query router works with the virtual-database engines enabling them to behave as a read-through query cache, with the consolidated databases in the role of the cache. The consolidation query router intercepts and directs queries from running applications to the correct data source.

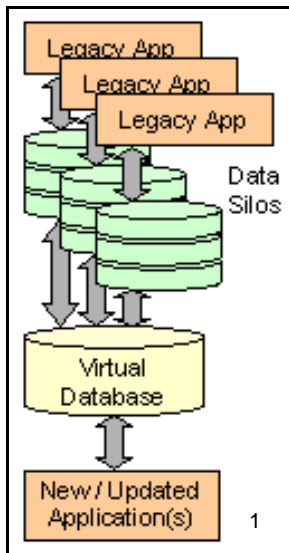
Arangen's platform-independent consolidation solutions allow business applications to run non-stop throughout the consolidation phase of a modernization project.



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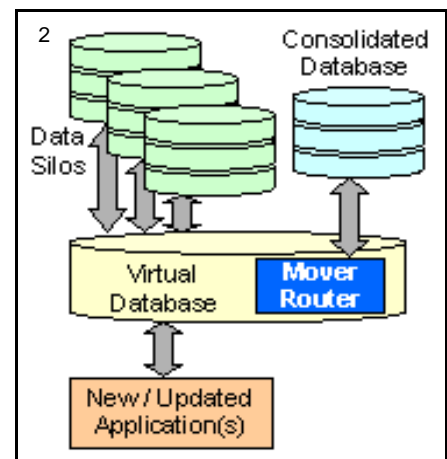
## Arangen Consolidation Solutions

Arangen's platform-independent consolidation solutions enable enterprises to preserve their valuable legacy data. Following data federation, Arangen's platform-independent consolidation solutions are applied to move unified, re-engineered enterprise data from the old legacy system into new or existing databases. Data federation coupled with consolidation enables multiple legacy data sources to be coalesced into new databases using the latest DBMS technology, or merged (integrated) into existing databases.



Consolidation is a central activity in IT modernization projects. A modernization project begins by setting forth project objectives and requirements. Once these are determined, Arangen data federation technology (1) is applied to examine the legacy data silos, then to restructure legacy data for reuse. New or updated applications are built or installed. When testing and validation against the existing legacy applications plus the new project data requirements is complete, legacy applications are retired and Arangen consolidation technology (2) is applied to move the restructured legacy data into new or existing databases. The consolidation data mover is setup to do the bulk data hauling, and the consolidation query router is installed to ensure that applications can continue to operate without interruption during the consolidation process. When

complete, the new (or modernized) applications are re-targeted to the new databases away from the virtual database interfaces, the legacy data silos can be shutdown and retired, and the Arangen framework may be removed.



Consolidating legacy data does not lock out legacy applications. Data federation can be applied to consolidated data to replicate and restore (reverse federate) legacy data interfaces and thus extend the service life of legacy applications. Even though the actual legacy data sources have been retired, the legacy applications can still function as long as needed. See the Arangen Migration Data Sheet for more information on this capability.

## Arangen Consolidation Service

Arangen professionals construct, deliver and install a custom platform-independent data consolidation solution. The custom consolidation solution implements a set of consolidation movers and routers that augment Arangen's federation solutions. The consolidation process runs in real-time and does not disturb normal business application operations.