

Upgrading Maximo®: Data Migration Considerations

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TRM knows that in order to mitigate the risks associated with upgrading a critical enterprise-wide business application (like Maximo), it is imperative that the upgrade and/or system cutover processes:

- Ensure data and application integrity
- Minimize production downtime
- Provide for contingency fallback (if the upgrade cannot be completed in the desired timeframe).

Having a repeatable and reliable process minimizes risk and instills confidence with project stakeholders.

Our customers expect a production upgrade for their Maximo system to take no longer than a single weekend (with one additional business day as a contingency). This downtime window should include both the time it takes to run the upgrade processes, and the time it takes to test the system prior to official deployment.

Regardless of the approach taken to upgrade the database, the following tasks also need to be performed:

- Screen Updates
- Custom Applications
- Interface Updates
- Report Updates
- Business Rule Integration
- Mobile

There are two options for upgrading to Maximo 7. The first is utilizing IBM's upgrade tool and upgrade path (Maximo 4 - 5 - 6 - 7). The second is writing scripts to move data from the Maximo 4 database to the Maximo 7 database.

Go-Live Steps using the IBM upgrade utility and path

- Turn off Maximo 4
- Run the upgrade tool to upgrade the database to Maximo 5 (This can take 5 to 10 hours, depending on the amount of data.)
- Run the upgrade tool to upgrade the database to Maximo 6 (This can take 5 to 28 hours, depending on the amount of data.)
- Run the upgrade tool to upgrade the database to Maximo 7 (This can take 5 to 10 hours, depending on the amount of data.)
- Apply the screen changes
- Apply the application customizations
- Test the application

Upgrade Utility

IBM's upgrade tool for Maximo is a complex program that attempts to address all the changes a customer has made to the database while simultaneously addressing all the changes that IBM has made between versions 4, 5, 6, and 7.

In fact, this requires up to three separate upgrade utilities (4 to 5, 5 to 6, and then 6 to 7). There is evidence to suggest that the IBM upgrade utility has not always resulted in successful data migration, due to the complexity involved with all of these changes to the system. We have found that the customers who have successfully used the tool have experienced long run times.

Risks

- The upgrade tool cannot be paused or restarted. Therefore, if the tool stops during the process, it will have to be restarted, potentially adding an unforeseen amount of time to the downtime window. This may interfere with meeting user expectations for downtime.
- Some customers have worked for three to six months to execute the upgrade from 5 to 6. We cannot predict how much longer it will take to successfully complete the 5 to 6 and 6 to 7 upgrade using the upgrade utility. This may interfere with the project schedule and internal labor budgets.
- The upgrade tool doesn't convert all the data properly, so there will have to be data fix scripts and significant testing after the database is upgraded.
- The upgrade project team does not have control over the complicated upgrade tool and must rely on IBM to provide input and support. This may interfere with the project budget and schedule.

Data Migration Scripts

Data migration for new implementations is essential. TRM has conducted hundreds of data migrations for new implementations. TRM has also migrated data to Maximo 7 from Maximo 4, Maximo 5, Maximo 6, and other CMMS systems using data migration scripts. Data migration is an approach we regularly use to **reduce risk** by simply eliminating the upgrade tool from the upgrade process. This approach addresses the risks associated with using the upgrade tool. For transactional data, we use SQL database scripts. For static data, we typically use our RulesManager scripting engine.

TRM consultants regularly use the TRM RulesManager standalone scripting engine to migrate data between Maximo versions during an upgrade. It provides command line access at the file-system level for one or more Maximo systems. This enables TRM consultants to write Java scripts for databases, HTTP servers, FTP servers, email servers or other Maximo instances.

Recommended:

Go-Live steps using TRM's data migration process

- Migrate the static data and historic data to the Maximo 7 production system
- Turn off current version of Maximo (Maximo 4 or 5)
- Run data migration scripts for transactional data and active data. (This will take approximately 12 hours.)
- Test the application.

RulesManager acts as if someone is manually entering the data versus a simple database-to-database migration, which will also bring across bad and orphaned data along with good data. With RulesManager all your data is validated and all your Maximo business logic is used during the migration.

Things to look out for while using the TRM Recommended Approach

- This process is more manual, so the project team needs to give greater attention to details. The process also involves significant planning and testing after the data is migrated.

About TRM

Total Resource Management (TRM) is focused on improving the asset and operational performance of organizations through the effective use of information technologies. TRM is an IBM Premier Business Partner with over fifteen years; experience delivering asset and service management solutions based upon IBM Maximo. TRM supports clients across a wide range of industries, including government, defense, cities, facilities, energy, utilities, transportation and life sciences. TRM is based in Alexandria, Virginia and has business centers across the U.S. For more information, visit www.trmnet.com or call 703-548-4285.