

Optimizing Data Center Migration with ITIL

By Fred Latala and Mike Tainter, Forsythe

In any data center migration, the best possible cutover is a seamless non-event that prevents costly, unplanned downtime.

With businesses today in constant motion, a data center migration is a major challenge—an exercise in process maturity, project management and business continuity. There are many moving parts to synchronize—literally and figuratively—including maintaining service delivery levels, upholding security, minimizing risk and preventing loss of data or equipment. Success requires in-depth understanding and proper documentation of all the interrelationships between technology infrastructure and the business operations it supports.

Migration is also an effective and advantageous moment to introduce sound process development techniques to ensure not only that your migration flows smoothly, but also that its continued operation after the migration is managed in a mature manner. One method to enable the immediate and long-term success of your data center migration is to integrate the best practices contained in the IT Infrastructure Library (ITIL). When implemented properly, ITIL processes such as Service Level, Incident, Change and Configuration Management can streamline migration and help it run like clockwork. Best of all, the clock doesn't stop there. ITIL-based migration processes are an investment that can be leveraged in the new environment, providing a comprehensive framework for mature data center operations aligned to meet the needs of IT's business customers.

Assess Maturity Level

Once the decision has been made to migrate your data center, the first step is to assess your organization's current process maturity, preferably using an established framework, such as that of the Capability Maturity Model Integration (CMMI) as shown in Figure 1. You will want to select the target maturity level you wish to achieve prior to migration planning.

The established levels of maturity are: 0) Incomplete, 1) Performed, 2) Managed, 3) Defined, 4) Quantitatively Managed, and 5) Optimizing. Don't set the bar too high; it may not be reasonable to accomplish a Level 4 or 5 in the scope or timeframe of the project as the changes required may introduce undue risk. In most cases, Level 3 is a sound and achievable target.

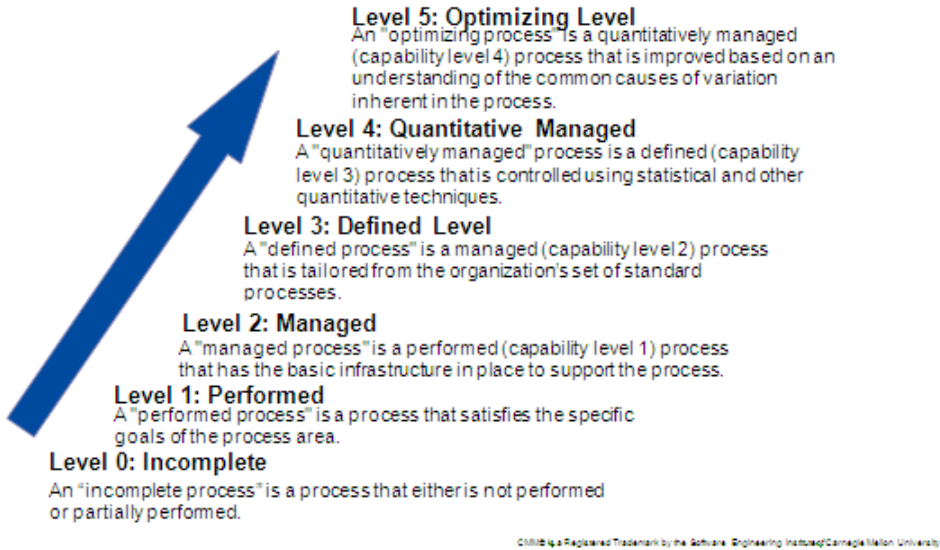


Figure 1. Capability Maturity Model Integration

The scope of the assessment should include incident/request fulfillment, problem, change, configuration, release/deployment and service (service portfolio and service catalog) processes. Determining process maturity in these areas will help identify the gaps that will exist when managing operations in the new environment.

Organizations with well-documented and actively managed asset and configuration management, disaster recovery, monitoring and management and change control programs are closer to being prepared for a successful data center migration. They have already invested in the discovery, validation, or development of information and processes in order to prepare. Conversely, gaps in service management processes and documentation must be addressed prior to, or in conjunction with, data center migration. Failure to do so will introduce increased risk and lead to outages that will negatively impact business.

A rule of thumb is to match the maturity level of the IT processes to the resiliency level of the facility. For example, if an organization spends millions of dollars building a Tier 3 or Tier 4 data center, it makes sense to bring IT processes to a Level 3, 4 or 5 of maturity. Otherwise, the organization will still encounter an unacceptable level of business interruption, even though the facility is operational. Cumulative errors caused by poor documentation and process can be a likelier source of business interruption in the long run than an actual disaster.

The assessment report should include observations, gaps, impacts and project descriptions to close the gaps, as well as a roadmap of projects. The assessment should be conducted in the first phase of the data center migration planning effort. Timely focus on the following ITIL processes will pay dividends in your ability to plan and manage the environment in the new data center.

Service Desk

Best practices ensure appropriate reporting of incidents, effective escalation procedures, and consistent, accurate logging prior to and during migration. Having the service desk be a single point of contact ensures that all stakeholders use the same information during and after the migration. Provide a mechanism to augment the current process, such as having a specific team within the service desk to focus on migration issues. Tag relevant items specifically as migration tickets for easier analysis and post-migration reporting. Additional communication mechanisms allow stakeholders to escalate status or log non-critical issues as appropriate.

Incident Management

The ability to manage incidents is critical to success during and post migration. Logging in a mature manner creates consistency and allows for trending in the new environment, along with accurate assignment of responsibilities that lead to efficient closure. Augment incident management during migration to help assign incidents to the appropriate parties for timely resolution.

Change Management

In its simplest form, a data center migration is a collection of changes. Mature change management techniques ensure migration-related changes are logged, filtered, analyzed, approved and coordinated so that risks and impacts are addressed. Integration with incident management is essential, and evaluation of all changes is necessary to understand impact; what often seems like an unrelated change can cause avoidable issues.

Release Management

Release management activities ensure changes are released to the production environment in a unified manner. Proper testing, validation, communication and training result in a more effective production change. As each change is planned, release management activities can be used to bundle and take advantage of delivering the new technology in release units. *To avoid additional risks that can be caused by changes, it is a good practice to freeze changes prior to the migration.*

Configuration Management

Document all configuration items being migrated, since an inventory must be collected to determine scope. Take advantage of migration-driven configuration activities such as planning, identification, control, status accounting and validation to guarantee all information is documented and contained in an accessible form. After migration, care must be taken to ensure the data in the CMS remains current by integrating the CMS with sound change management. The goal is to triangulate the processes of change, release and configuration management in order to coordinate, execute and ensure all the information is documented in the configuration management system (CMS).

Service Level, Service Portfolio and Service Catalog Management

Migrating IT capabilities must occur within the context of an acceptable risk profile. Documenting business and technical services in the context of service level management illuminates which services are going to be impacted and associated criticality. Basing decisions on service levels allows migration to occur without negatively affecting the business. Document the services and their status in the service portfolio and service catalog; as each is identified, the relationships of configuration items can be determined. This provides additional information to the migration team about how the technology interoperates to deliver the services.

Availability, Capacity and Service Continuity Management

Information collected from the service catalog (i.e., service level requirements) can help in designing the architecture needed to deliver services and lead to service quality enhancements in the new data center. Taking advantage of the service lifecycle of strategy, design, transition, operations and improvement contained in ITIL v3 is of major benefit to any data center migration.

Data center migration is a major undertaking for any organization. But it also presents a unique opportunity to mature IT management. Developing the services, processes, people and tools to meet business expectations during—and after—a data center migration will ensure delivery of quality services is maintained beyond the event itself. See the IT Service Management / Business Service Management Framework in Figure 2. Take advantage of the opportunity by developing the processes that will lead to a more effective transformation and enhanced future operations. Doing so can make your data center migration—and your long-term IT operations—run like clockwork.

Don't stop now

Even when you've successfully attained and maintained your desired state, always look for new opportunities to improve. Don't know where to go from here? Maybe it's time for your next consultation with Forsythe.

Let Forsythe help you optimize your data center migration with ITIL—tailored specifically to your organization. It all begins with a conversation. Call Forsythe today.

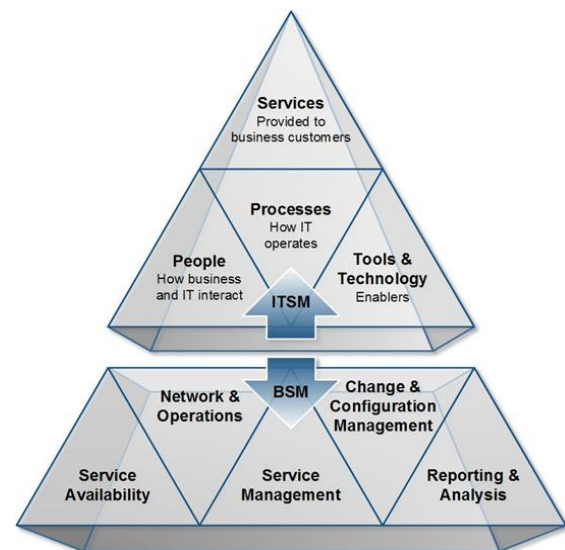


Figure 2. IT Service Management / Business Service Management Framework

As the director of data center migration services, **Fred Latala** is responsible for Forsythe's overall data center migration strategy, vision, best-practice models and the quality of solutions delivered. Latala has more than 20 years of experience in internal and external IT management roles and may be reached at flatala@forsythe.com.

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