Teamcenter 8.3 Best Practices

Upgrading or installing Teamcenter to version 8.3 can be a daunting challenge, but considering the performance and functional benefits, it should be seriously evaluated by companies, especially those already using Teamcenter. This article will describe the performance improvements, offer considerations to evaluate, and provide an experienced approach to version 8.3 upgrade/implementation.

With the Teamcenter 9 release just around the corner, a logical question is why upgrade to Teamcenter 8.3? One of the most compelling reasons is that version 8.3 is stable and provides numerous performance and functional benefits.

Performance Improvements

For performance improvements, version 8.3 provides faster internal code and enhanced latency support for f4-tier architecture implementations. Another key benefit is the store and forward capability for remote locations that improves save time compared with other versions of Teamcenter.

Other functionality enhancements include a totally redesigned change management module. Improvements include real types for change objects, allowing many more options for making behavior changes. Workflow control such as the ability to have separate approve and reject paths to provide better user interaction, while multiple outcomes supports real-time processes. Previous versions of change management are now designated as “Classic Change Management”.

Issues management is another improvement that helps capture product issues from different sources with the ability to promote them to formal change requests. There is also a tighter integration between schedule manager and change management. Improvements with the Service Oriented Architecture (SOA) for building Teamcenter interfaces are also included with version 8.3.

For users of Teamcenter 2007 UA or earlier versions, there are many significant improvements beyond what is mentioned within this article. For more information about functionality within Teamcenter 8, visit www.siemens.com/plm.

Version 8.3 New Installation Considerations

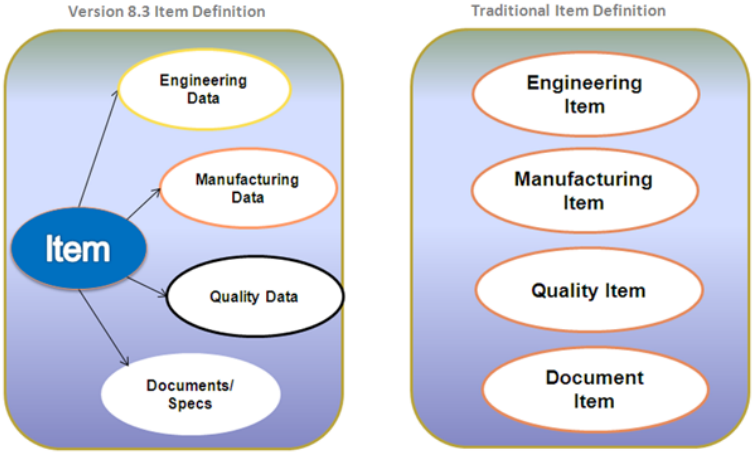
Version 8.3 gives you the ability to use 4-tier architecture and provides performance up to 300ms latency without requiring multi-site overhead for installations. Four-tier architecture is easier to install and maintain than 2-tier installations. Plus performance with two-tier solutions degrade over 20ms of latency.

Other new installation architecture considerations include the support of either .NET/IIS or J2EE for the enterprise/web tier. Based on our experience, support for .NET/IIS is better than for J2EE.

Another consideration is with BMIDE template setup. Best practices suggest that multiple templates should be avoided whenever possible unless the sites are totally independent with very little data sharing. “Having a single template is ideal if both sites have the exact data model requirements”, said Raj Sundaram, Solutions Architect. “If slight variations exist between sites, then a master template could be defined, with supersets of that template defined for each location. Generally, this is only a concern if a multi-site installation is necessary.”

From a process perspective, item definition considerations are critical, and there is some new item uniqueness functionality to consider. Teamcenter 8.3 now allows uniqueness to be determined with a combination of item properties, such as item ID and type (Figure 1).

Figure 1

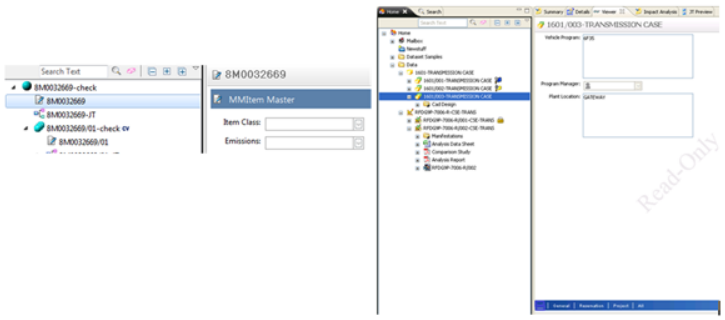


Other process considerations for a new installation are whether to use master forms or business object properties. Business object properties align better with the object model and version 8.3 provides better control over properties that avoid the need for a separate master form. This is a recommended practice from Siemens, however, master forms are still automatically created during item definition, and must be manually hidden for now (Figure 2).

Version 8.3 Upgrade Considerations

Based on our experience, we recommend a two-phase upgrade process. Phase one is performing the system upgrade using as-is configuration (no configuration enhancements). Once the system is upgraded and stable, then introduce configuration enhancements as a phase two activity.

Figure 2



"This approach keeps the upgrade scope more focused and manageable, in addition to providing a new interface from the system upgrade plus additional functionality during the same go-live activity tends to overwhelm users," said Sundaram.

From an environment perspective, Mercury PLM Services suggests upgrading a sandbox environment first to learn the new version of Teamcenter and verify basic system performance. Then, upgrade a test environment and overlay the current configuration making sure to thoroughly validate the system within each environment. Finally, perform the upgrade on the live production environment once user training and final hardware updates are completed. Be sure to validate any customizations and third-party CAD integrations with the latest version of Teamcenter in both sandbox and test (Figure 3).

Figure 3

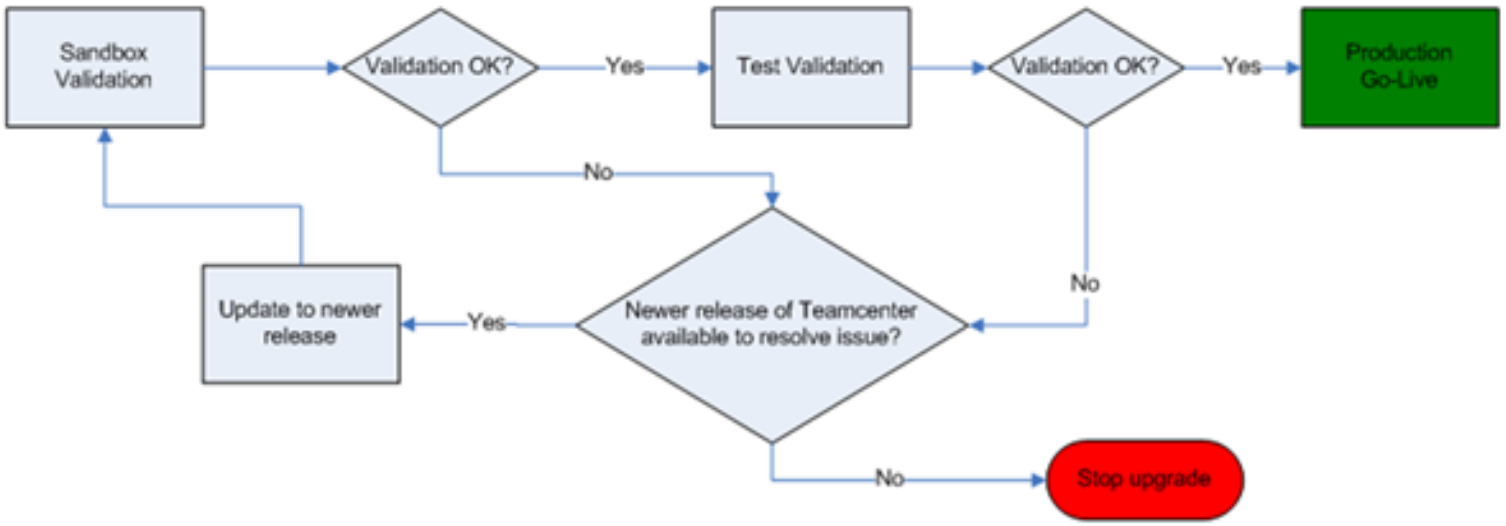


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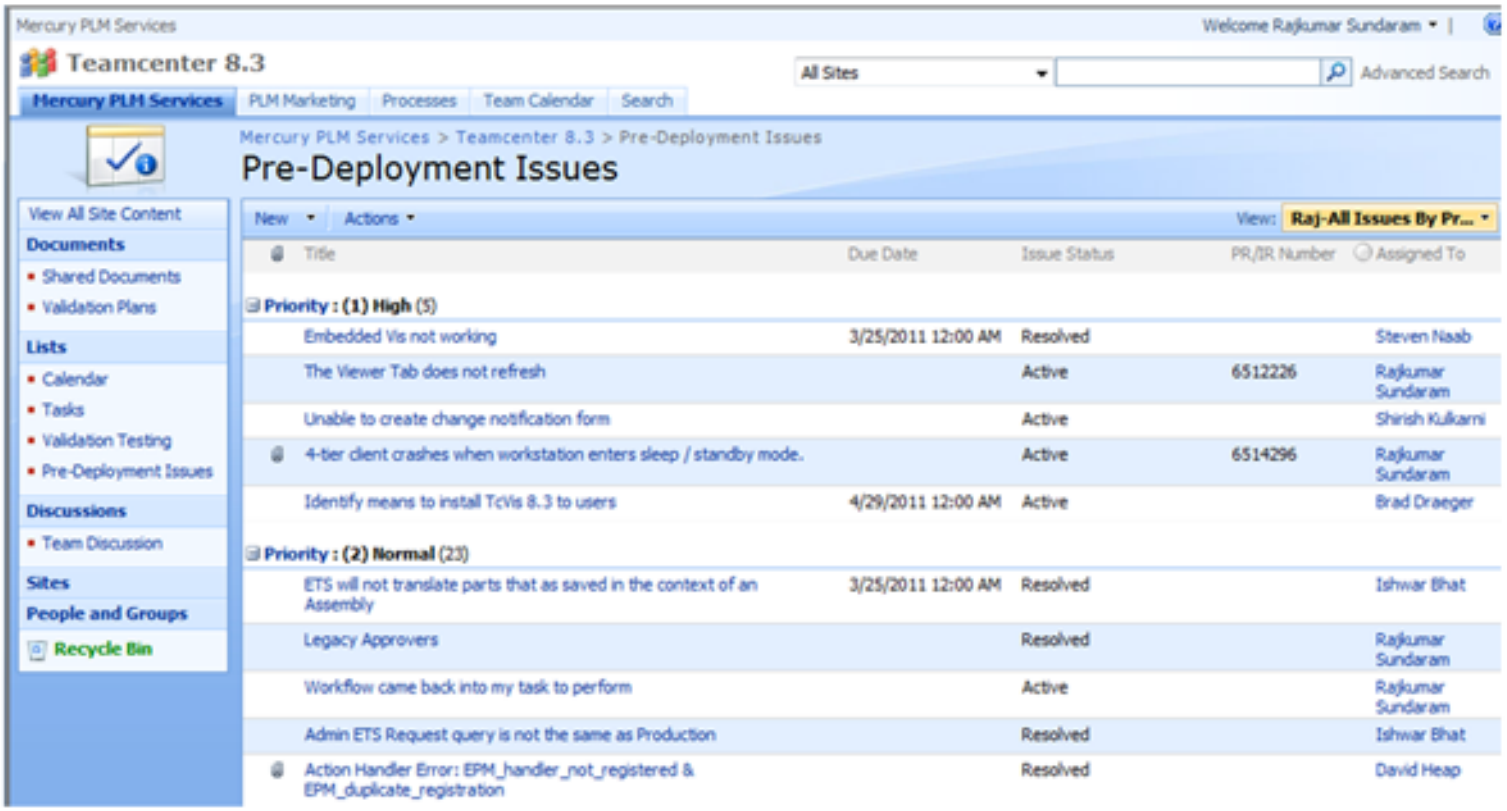
Figure 4



Another best practice is to take performance benchmarks before upgrading. This helps verify that performance has not degraded, or if it has, then the upgrade team has an opportunity to investigate remedies. It also allows the implementation team to provide the user community with functional expectations about the system, such as will it be faster or slower than the current-state installation.

During the upgrade process, we suggest establishing a central validation and issues-tracking location. Our team uses a SharePoint site to capture validation plans and testing issues, as well as assign people responsible for fixing the issues. This provides a tracking and corrective action verification mechanism for the upgrade and installation team (Figure 4).

Upgrades from Teamcenter Engineering 2005 are supported, as Siemens supports upgrading from the last two major releases (2007 UA and TcE 2005). This is an important upgrade consideration as Teamcenter 9 will only support other unified architecture versions only (2007 UA and Teamcenter 8).

If upgrading Teamcenter Engineering 2005 in a multi-site configuration, the ODS (Object Directory Services) must be upgraded first. Upgrading from a clone of production is also essential. End-user training should also be planned for Teamcenter Engineering 2005 upgrades as some of the interface changes are significant.

Figure 5 shows the major upgrade steps for Teamcenter Engineering 2005 based on our experience:

Figure 5

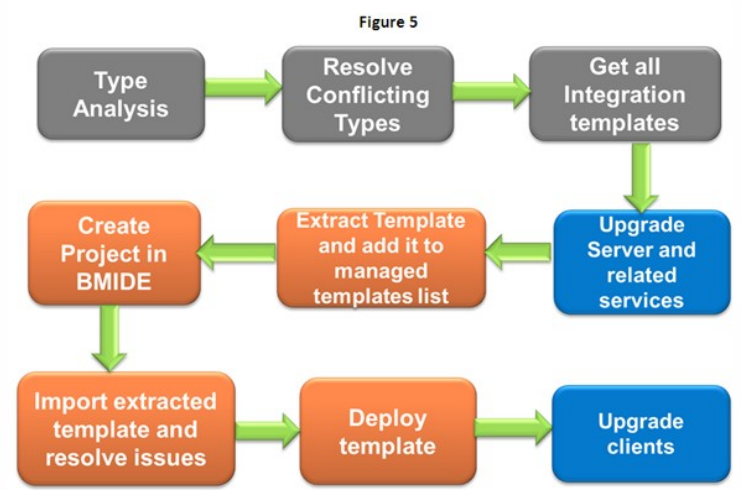
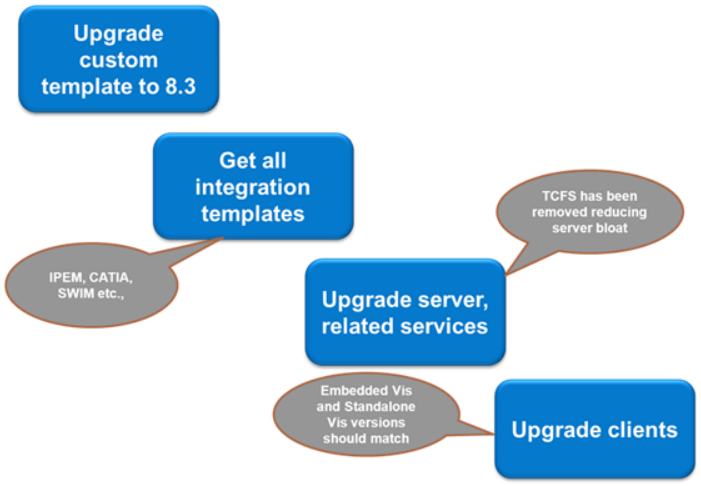


Figure 6 shows the major upgrade steps for Teamcenter 2007 UA based on our experience:

Figure 6



For information about installing or upgrading Teamcenter version 8.3, please visit www.mercuryplm.com. We encourage you to benefit from our numerous Teamcenter 8.3 upgrade and installation experiences.

Mercury PLM Services Unique Perspective

Mercury's differing approach concentrates on understanding your process as a must for success. A process-centric approach requires businesses to review and question existing work streams to understand "why," "what," and "how" work should be done to establish efficient cross-functional work flows that are consistent, repeatable and scalable for growth.

Mercury also offers a unique perspective for helping organizations that are considering a Product Lifecycle Management implementation because Mercury lives and breathes PLM from a manufacturing business user's vantage point.

Because Mercury works in a dynamic, global product-development environment that supports a worldwide manufacturing footprint, Mercury has a user's perspective that helps drive results and realize improvements. Several of Mercury's experts also have been deeply involved with our ISO 9000 certification effort, as well as configuration management, and engineering document-management practices. ■

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