SIEMENS

Siemens PLM Software

Teamcenter Global Services: Mult-site collaboration

Sharing Teamcenter data across global enterprises

Benefits

- Facilitates virtual corporation and globalization initiatives by enabling suppliers, allied partners, and other external parties to join your product lifecycle while retaining their local autonomy and honoring their security concerns
- Improves performance associated with accessing and querying data by distributing its content closer to your enterprise's largest user communities
- Fosters information re-use by enabling knowledge users across your global enterprise to seamlessly access product definition data created by other disciplines, other geographies, and/or other corporate entities

Summary

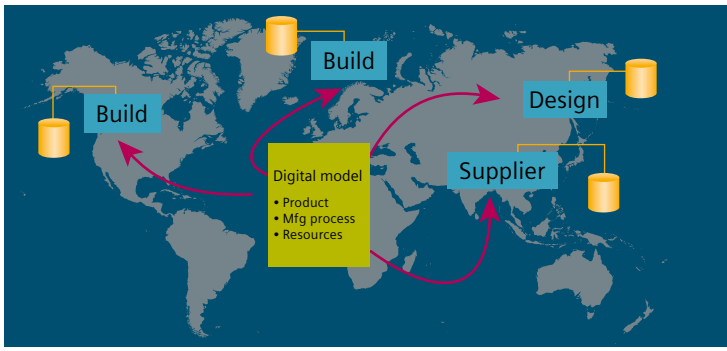
The multi-site collaboration capabilities offered through Teamcenter® Global Services software enable engineering teams, allied partners, and suppliers who work with Teamcenter to share product information and collaborate with each other in a seamless, globally dispersed environment. Multi-site collaboration is particularly beneficial when geographically dispersed team members work with synchronized product information and want to quickly access the "right" information retained in two or more databases without performing multiple time-consuming data searches or data transfers over a WAN.

Collaborating on a global basis

To enable users in a globally dispersed enterprise to access and employ product information managed under multiple product definition databases, Teamcenter provides a series of highly versatile data sharing capabilities utilizing multi-site collaboration.

Typically, companies adopt multi-site collaboration to:

- *Establish a federated network* (i.e., enable multiple sites that maintain different business rules, user/group controls and/or workflow-driven processes to exchange and share product definitions while retaining their local autonomy).



Design anywhere, build anywhere.

www.siemens.com/teamcenter

Teamcenter Global Services: Multi-site collaboration

Benefits *continued*

- Reduces time, cost and other inefficiencies associated with coordinating globally dispersed development teams
- Reduces late cycle changes resulting from out-of-date context data

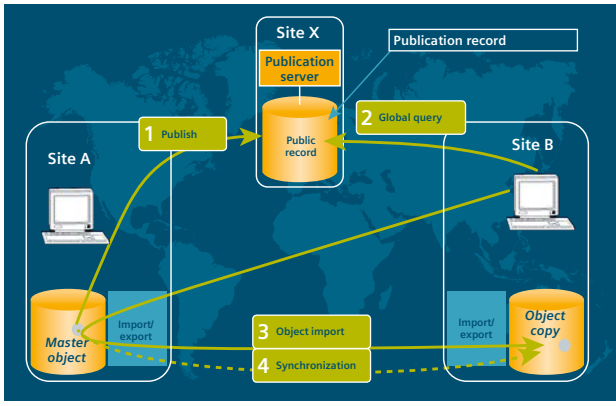
Features

- Federated object management
- Distributed object management
- Object-oriented
- Import/export
- Controlled replication
- Automatic synchronization
- Fine grain synchronization control
- Multi-channel data movement
- Shared object repository
- Publish/unpublish control
- Global search
- Firewall support
- Flexible network
- Support (fixed lines, DSL, cable, internet)

- *Overcome network issues* (i.e., by distributing Teamcenter databases and data geographically so that they are closer to the user population or discipline-specific databases thus optimizing the use of an enterprise's network and delivering higher performance to Teamcenter users).

To facilitate multi-site collaboration, Teamcenter leverages two key technologies:

- *A shared object repository* is a single database instance that is shared across multiple sites and contains entries for all objects that are intended to be shared across those collaboration sites. It maintains a record of every information object you intend to share across the Teamcenter network. While the shared repository does not physically store the actual objects themselves, it does maintain a record that indicates where the information objects reside (i.e., their database site), as well as the attributes that users can reference to narrow their database searches.
- When a site wants to share an object, it "publishes" the object in the shared repository by indicating what network-based sites are authorized to import this particular object.



Subsequently, these authorized sites can query the central database, view its published objects, and import appropriate objects into their local database at their discretion.

- *Multi-site data replication* provides a network-based environment with import/export capabilities that sites can leverage to push/pull product information in accordance with established business rules and workflows. Typically, authorized sites leverage the system's import capabilities to transfer a reference copy of the shared object into their local database. By enabling you to "replicate" shared objects at multiple sites close to your user communities, Teamcenter lets you maximize the Teamcenter network's data access performance.



Configuration flexibility.

Teamcenter Global Services
Teamcenter Global Services provides a robust set of capabilities that enterprise users can access – through a single logical point of entry – to seamlessly share information extracted from diverse, physically distributed application systems.Teamcenter Global Services enables:

- Information from different applications to be combined to form new business objects/entities
- Information extracted from one application to be transformed and delivered to other applications
- Workflow activities to be propagated between Teamcenter solutions
- Referencing/linking of data across multiple applications

Multi-site collaboration is one of several Teamcenter Global Services.

Teamcenter's data replication techniques leverage a conventional form of object-oriented import/export and extend it with three additional functions, including:

- Capabilities that enable end users to conduct global searches about any information object in the Teamcenter network regardless of its physical residence
- Automated import/export mechanisms that support a simple "pull action"
- Database synchronization capabilities that enable you to perform updates and refresh your read-only copies

Use case scenarios
Multi-site collaboration facilitates three main use case scenarios:

- Collaborating between multiple sites using the same Teamcenter data model, business rules, user/group controls, and workflows
- Collaborating between sites using similar Teamcenter data models but significantly different business rules, user/group controls and workflows
- Collaboration between sites that are separated by air gaps for security reasons

Typically, the first scenario applies when enterprises need to share data across user populations that are geographically distributed and connected with networks that have a high network latency and/or small bandwidth capacity. By distributing the data so that it is physically closer to the users, many of the restrictions imposed by network constraints can be overcome.

The second scenario frequently applies when an enterprise's wide area network is comprised of a series of independent, self-sufficient sites, with each site maintaining its own resources, its own data model, its own set of users and groups and its own business rules. (Typically, business rules consist of access controls, release procedures, change management practices, and other extensions that pertain to a local site.)

The third scenario is where companies are required to keep a physical separation by classified and non classified data yet need the non-classified data to be available in the classified environment so that complete designs can be reviewed. Here multi-site collaboration can be used to push data from the non-classified to the classified site using a removable media such as DVD, detachable drive or USB device. Once the data has been exported from the non-classified site, it can then be imported into the classified site. Subsequent updates to this information can then be exported across the air gap.

Contact
Siemens PLM Software
Americas +1 314-264-8499
Europe +44 (0) 1276 413200
Asia-Pacific +852 2230 3308

www.siemens.com/plm

© 2015 Siemens Product Lifecycle Management Software Inc. Siemens and the Siemens logo are registered trademarks of Siemens AG. D-Cubed, Femap, Fibersim, Geolus, GO PLM, I-deas, JT, NX, Parasolid,Solid Edge, Syncrofit, Teamcenter and Tecnomatix are trademarks or registered trademarks of Siemens Product Lifecycle Management Software Inc. or its subsidiaries in the United States and in other countries. All other logos, trademarks, registered trademarks or service marks belong to their respective holders.
3604-Y7 10/15 B