synTQ

Flexible Manufacturing

The fully flexible PAT knowledge manager for all applications, from the laboratory to full GMP manufacturing

synTQ Flexible Manufacturing (FM) meets the complete requirements demanded of a fully flexible PAT knowledge manager.

synTQ FM is the most comprehensive real-time version of synTQ, since it can interface to multiple instruments, multiple MVA packages, multiple control systems and can run multiple unit operations concurrently.

Orchestrations (PAT methods) can be created and modified in a synTQ FM environment, and multiple versions of them can be stored within the system. synTQ FM is thus fully applicable for use in any PAT application, be it a research, development or manufacturing environment.

Feel secure in your development time and technology investment, as all models and orchestrations developed within synTQ FM can be shared with other synTQ applications.

In a production environment, synTQ FM can run on either a physical or virtual server that may be in your data centre, in much the same way as a traditional level 2 automation system. For smaller applications, it can be embedded into an industrial controller and sited inside a control panel alongside your PLC or DCS, residing on level 1 of your automation system.

In a research or development environment, synTQ FM would likely run on a standard machine sited locally in an access-controlled enclosure. For global laboratory, real-time release testing (RTRT) and PAT systems, synTQ FM may be hosted, and store data, in a fully GMP-compliant, remote cloud-based server.

Vendor-Neutral Connectivity

In line with all versions of synTQ, synTQ FM is vendor neutral. synTQ FM can connect to any device that has a communications interface and a known protocol. You have the flexibility to create a “best of breed” solution, using instrumentation, MVA packages, automation systems or other third-party systems (such as MES, historian, LIMS) from vendors of your choice.

The multi-vendor connection capability of synTQ lets you take full advantage of the latest or optimum MVA, instrumentation, automation and other technologies, as it enables you to easily add new interfaces to your systems as they evolve.

In Summary

synTQ FM is a fully flexible PAT knowledge manager that can be deployed on all systems and processes. synTQ drives quality-centric, real-time, closed-loop control into your process, optimising quality, time and cost.

Optimal Industrial Technologies

Version 5 Highlights

- Modern Look and Feel
- 3D and 2D Graphics
- User Dashboard
- Instrument Store
- Model Store
- Lab Notebook Feature
- Closed-Loop Lab Sampling
- Multi-Language Switching
- Continuous Improvement Support
- Multivariate Predictive Control
- Cloud-Based Data Pump System

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Technical Specification

System Operation

synTQ FM is typically run from a physical or virtual machine, or cloud-based system, that is dedicated to its operation. For GMP applications, this may be a small industrial controller sited in a control panel next to your PLC or DCS, an access controlled physical server, or running virtually, in a data centre. For global applications, it may be running on a cloud platform. For a small non-GMP application, it may be a standard machine in an office environment.

The machine normally interfaces to a dedicated physical or virtual PAT LAN (for the instrumentation interface) and an Automation LAN (for the control system and other synTQ system interfaces).

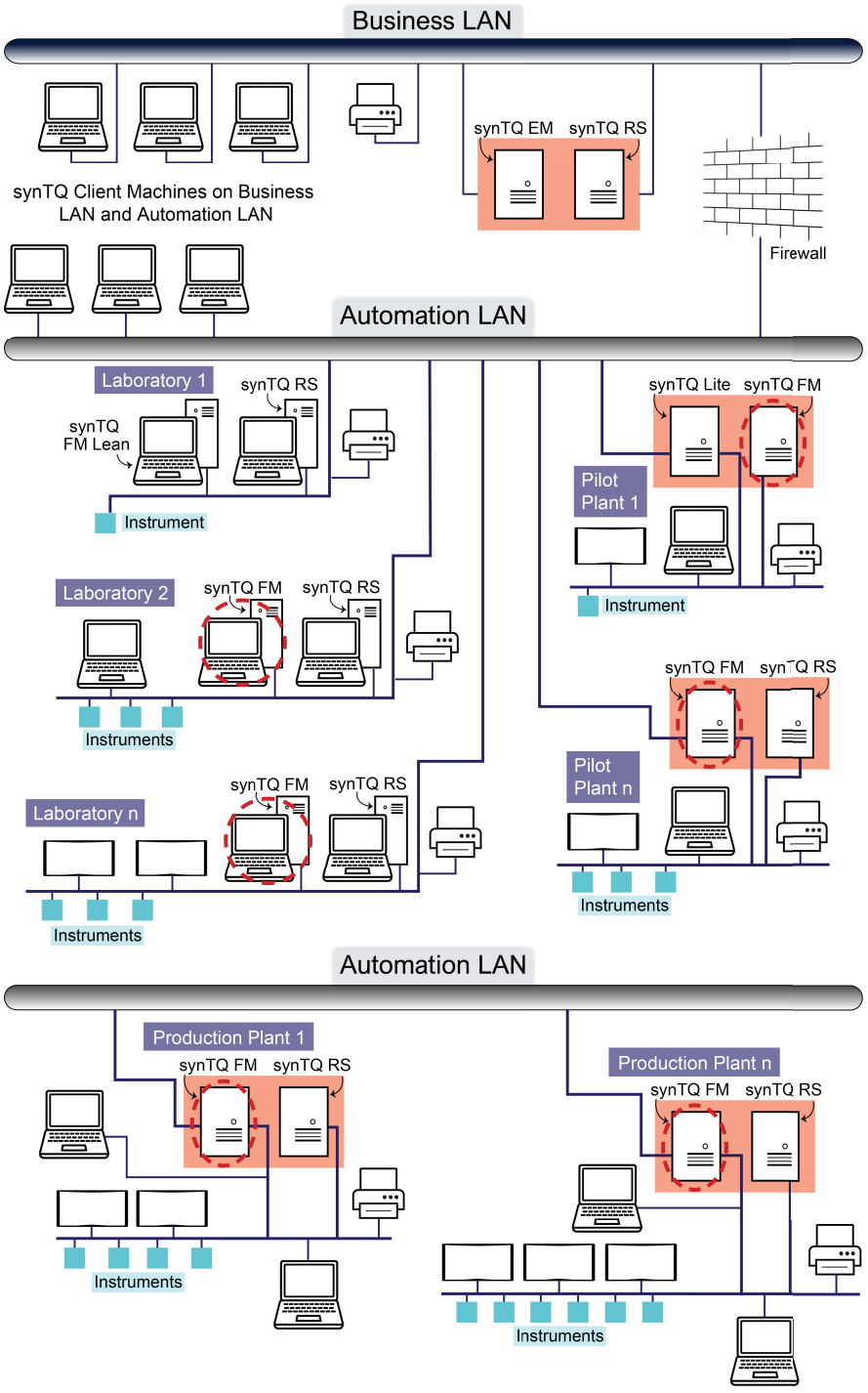
synTQ uses a true client/server architecture. Within a synTQ FM system, one or more clients may be used, often with a client being dedicated to a specific plant area or unit operation.

Orchestrations (PAT methods) and models can be created and edited by an authorised user within synTQ FM, and if required, the orchestrations can be exchanged with other synTQ systems.

synTQ FM is fully capable from a real-time, functionality point of view. It can interface to multiple instruments, MVA packages, control systems and other third-party systems. It can run multiple simultaneous unit operations.

A typical distributed architecture for implementing PAT using synTQ is demonstrated by the right-hand diagram (synTQ FM is highlighted with a red dotted circle).

Multi synTQ Node Distributed Architecture Using A Range of synTQ Application Types



Please note that specifications are subject to change without notice.

SciY Optimal Industrial Technologies

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