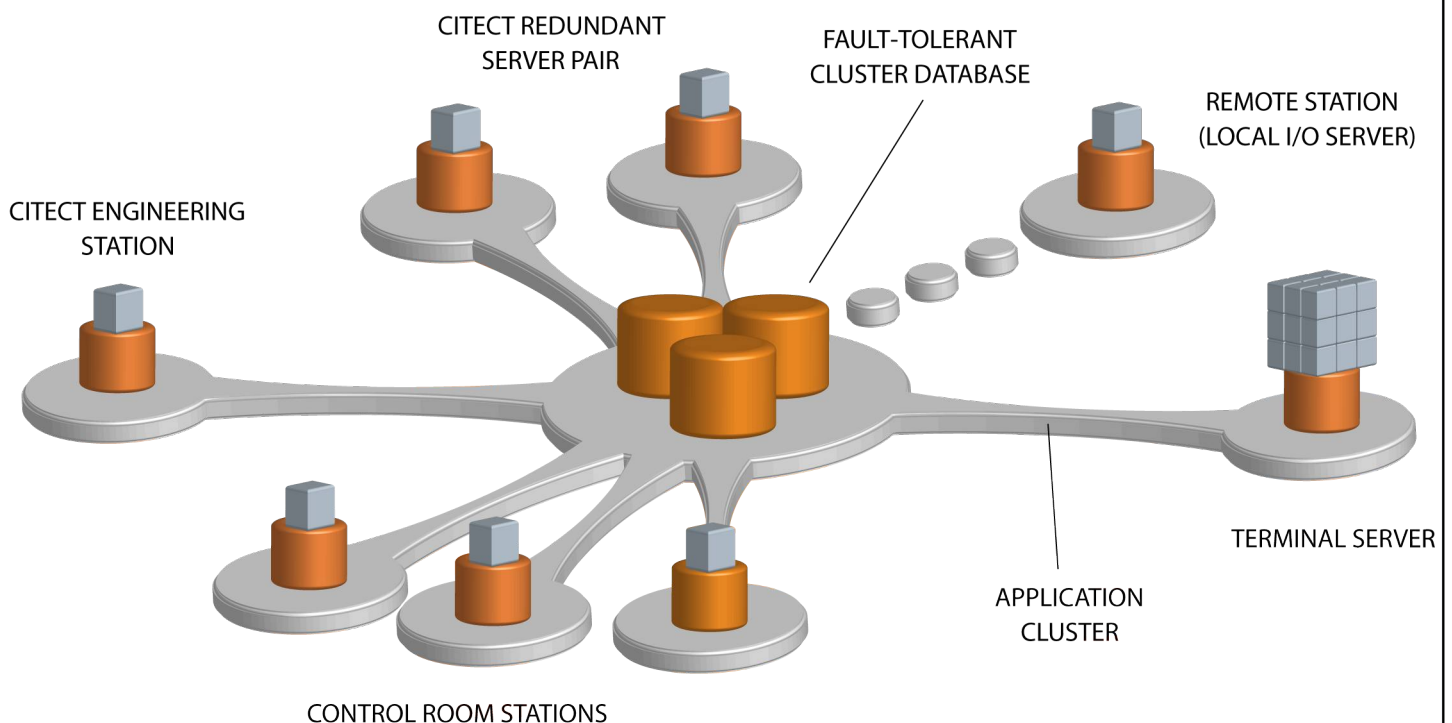


citect +AC

Citect +AC (Application Cluster) is a management infrastructure for standard CitectSCADA™ systems, built on the foundation of the Enterprise Navigator. Out of the box, CitectSCADA demonstrates a strong capability in supporting distributed and fault-tolerant architectures, however as systems scale to a large number of nodes then system management becomes an issue. Citect +AC complements CitectSCADA's standard features with a node-management framework for large systems that allows a network of CitectSCADA nodes to be managed as a single, cohesive system.

Citect +AC offers monitoring functions that provide an overview of all CitectSCADA nodes, including node health and software versions. It provides replication functions to ensure that changes to the system are propagated to all nodes in a controlled fashion: user accounts, configuration data, software versions, audit log messages, Navigator settings, and any nominated site-application settings.

The clustering technology used in Citect +AC does not rely on complex intercoupling of servers at the operating system level. Instead it adds a management layer that most importantly does not hinder normal CitectSCADA operation - If the application cluster is not visible to a node, CitectSCADA will continue operate normally (e.g. A remote monitoring station with local I/O, that is only occasionally connected to the cluster). Opportunistic replication ensures that when connectivity is re-established, data is resynchronised with the remote node.



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Managing Change

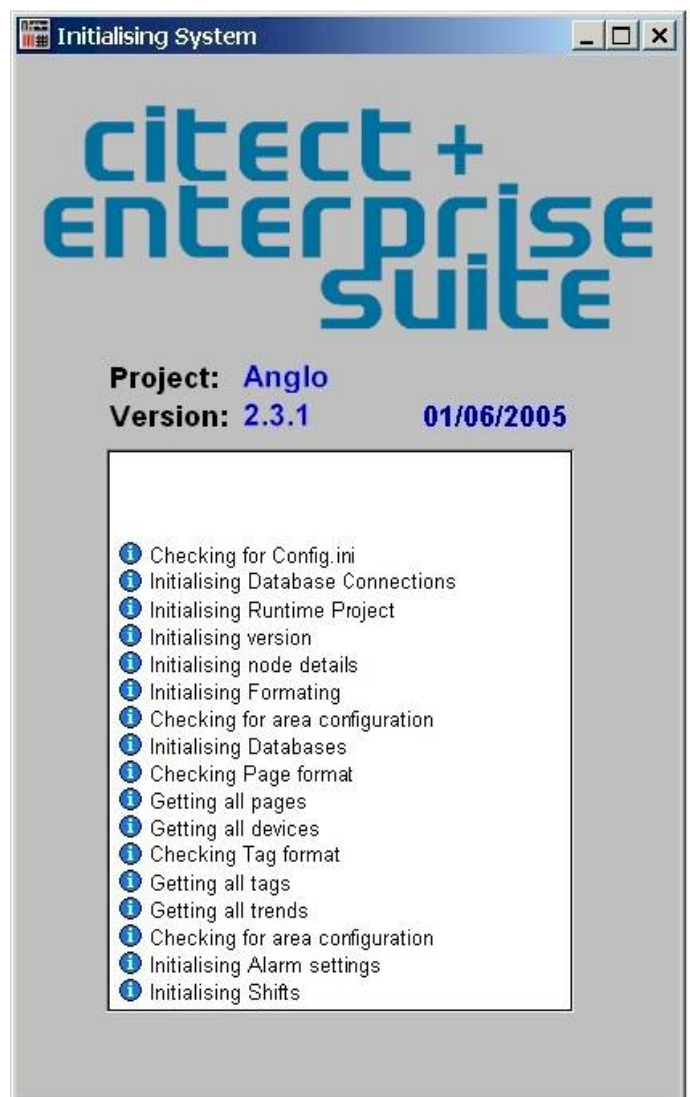
Centralised version control tracks project versions across all nodes. On Navigator start-up, each node checks the central repository for details of the current project version and path. Any divergence against the current configuration will be alerted to the user through a flashing icon on the navigator's status bar, and the user has the option to hold off committing changes (e.g. If they are in the middle of a critical task).

Roll-out and Roll-back of configuration changes allows a change on a CitectSCADA client can to be reverted back to a previous known version.

Full auditing of roll-outs and details of user acceptance, to track which nodes have not yet updated, and who rejected the changes (if any).

Seamless replication. A variety of standard data types are seamlessly replicated between nodes (user accounts, system health information, configuration data). In addition, custom applications built in the Navigator environment can take advantage of the data replicator to simplify the creation of distributed applications (e.g. Enhanced logging and operator commenting etc.).

Many functions in the Navigator (e.g. Enhanced trending) can be configured by database settings rather than being hard-coded and compiled-in. This often means that changes that would normally require a tedious copy/recompile/restart on each node can simply be distributed on-line through the replication layer.



The Enterprise Navigator checks for system updates on startup

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Managing Growth

Citect +AC supports highly-flexible architecture options, whether a simple 2- or 4-way system, or a sophisticated 50 node deployment. The application clustering technology delivers field-proven support for a diverse range of configuration options, including occasionally connected nodes and terminal servers.

Nodes can be added to the application cluster on-the-fly: simply perform a standard CitectSCADA install on the node, install the Enterprise Navigator, register the new node at the Cluster master and start the new CitectSCADA node. On first startup, the Navigator contacts the current cluster master and downloads all required project files and updates, then restarts CitectSCADA to begin operating as a member of the cluster.

As your system scales, the Citect +AC infrastructure ensures that the system management overhead does not increase with it. With Citect +AC, it takes the same amount of effort to roll out changes to a 50 node system as it does to one node.



Server health indicators; version update notifier.

Improving Availability

Cluster-wide monitoring and health reporting allow an administrator to see problems emerging before they cause downtime and take corrective action (disk filling etc.)

Centralised logging functionality collects all operator, application and event logs centrally, and then makes them available system-wide for better visibility and easy identification of problems.

System monitoring pages in the Navigator automatically display all current CitectSCADA nodes and their users and project versions. Automatic PLC diagnostic page displaying the current state of each PLC within the system.

Node failures or other software problems can be detected instantly and diagnosed more easily - getting the system up and running more quickly.

System Monitoring pages in the Navigator are readily accessible by off-site support staff, enabling a fast response to any system problems.



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