# **Security and Redundancy**



Permission groups and user policies allow simple implementation of any Role or area-based security.

Primary Server IP:	127.0.0.1	
Secondary Server IP:	192.168.1.2	
On Primary Startup: If secondary is active, put primary in stand-by		
Identifying the IP address of the servers and electing the switch options is the only configuration required to implement redundancy. Run any project on hotstandby fault-tolerant servers.		

Complete redundancy scenarios:

- Hot-standby or hot-hot servers
- Redundant networks
- Redundant remote data servers
- Redundant PLC stations management

# **Security and Redundancy**



Designed to deliver world-class mission-critical applications

Redundancy switch time and high volume data was tested to meet rigorous offshore requirements.

# **Group and User Permissions**

Total flexibility to define privileges based on groups or specific users. Permissions can be global or tied to a specific display, object, or input action.

# **Runtime Users**

Dynamically create users and store credentials in SQL databases. Get users from Active-Directory or third-party system for integrated security or unified login.

# **User Policies**

Identification policies, session duration, control, automated logoff, esign, audit-trail, and a complete set of user management features are available.

## FDA and NERC Regulated Applications

**FactoryStudio** allows delivering applications in conformance with Title 21 CFR Part 11, and it was designed following the applicable recommendations from NERC, such as the CIP- 007-1-Cyber Security-System Management.

# Security at the Core Level

Security must be implemented at the core, not applied externally. **Factor yStudio** modules have built-in security related components designed from the core.

#### **Hot-standby Fault-tolerant Servers**

**FactoryStudio** automatically initializes and continues to synchronize the primary and secondary server. The Device communication channels are also easily setup for redundant physical networks and redundant PLC nodes.

#### **Database Redundancy**

The Alarm and Historian database can be assigned to a third-party external cluster or replicated automatically when running on the **Factory Studio** servers.

#### **Project Configuration Synchronization**

Engineering tools provide features to simplify configuration and updates in redundant scenarios.

#### Hot-swapping

Redundant or stand-alone servers allow dynamic switching of project versions, without interrupting service for connected clients and keeping the real-time database loaded.

# Redundancy at the Core Level

Real-time tags, Devices, Alarms, Historian, Scripts, Clients, all **FactoryS tudio**'s modules, were designed from the ground up to meet redundancy and hot-swapping requirements.

