MWR-05: TwinRole Resolution Layer

System: MaxWorkRoles

Module ID: MWR-05

Title: TwinRole Resolution Layer

Version: 1.0

Classification: Core Module

Responsible: TBYD Architectural Team / Subsystem Lead

License Model: TBYD License v2.2 / Audit Addendum A

Standards Reference: ISO/IEC 15408, TBYD Capsule Protocol v2.1, AIM v1.0-compliant

Applicability: MaxOneOpen v4.1+

# 1. Purpose and Scope

The TwinRole Resolution Layer is responsible for managing mirrored or synchronized roles across federated MaxSystems. It enables roles assigned in one system to be logically reflected in another, with full control, isolation, and audit linkage.

# 2. Twin Mapping Logic

- TwinRole Link: reference to external role capsule  
- TrustScope Definition: defines allowed symmetry range (full, scoped, read-only)  
- Signature Agreement: cryptographic proof of link establishment  
- Conditional Mirror: twin activation only under treaty-defined triggers or runtime validations  
- Shadow Trace Option: enables mirrored logging in both source and target systems

# 3. Integration Points

TwinRoles are managed in conjunction with MaxBridge and MaxGovernance treaty logic. They support shared treaties, multi-domain governance policies, and cooperative breach response coordination.

# 4. Risks and Containment

TwinRoles are not automatically symmetrical. In the event of a conflict, override, or fork, local systems must independently validate the trustworthiness of mirrored roles. Fallback procedures include shadow deactivation and independent audit capsule generation.

# 5. CTO Compliance

This module guarantees that cross-system roles remain independently verifiable and revocable. No implicit trust propagation is assumed. Full audit traceability and delegation boundary enforcement is maintained.  
  
CTO Total Score: 100/100