MWR-07: YAML Role Tree & Export Schema

System: MaxWorkRoles

Module ID: MWR-07

Title: YAML Role Tree & Export Schema

Version: 2.0

Classification: Export Module

Responsible: TBYD Architectural Team / Capsule Interface Layer

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

This module defines the machine-readable structure for exporting role definitions, delegation trees, trace capsules, and scope metadata. It is used for deployment, inter-system bridge transfers, governance review, and public trace validation.

# 2. YAML Structure Specification

A YAML Role Tree consists of the following elements:  
- role\_id: unique signed role identifier  
- operator\_link: hash or capsule of operator identity  
- scope:  
 - object  
 - action  
 - time / expiry  
- delegation:  
 - from: origin capsule ID  
 - chain: list of signed delegation capsules  
- context:  
 - system\_hash  
 - governance\_link (optional)  
- trace\_path: hash references to logged events

# 3. Example YAML Role Capsule

```yaml  
role\_id: R-84571-DELEG-001  
operator\_link: 0xA8C…DF12  
scope:  
 object: system.config  
 action: override  
 time: 2025-06-01T00:00Z – 2025-06-30T23:59Z  
delegation:  
 from: CAPSULE-ROOT-2025  
 chain:  
 - SIGNED-DELEG-A  
 - SIGNED-DELEG-B  
context:  
 system\_hash: 0x97F…5C1A  
 governance\_link: TREATY-TR001-XGOV  
trace\_path:  
 - TRACE-ID-0021  
```

# 4. Validation & Enforcement Rules

- All fields are mandatory unless stated otherwise.  
- YAML must pass schema check as defined in Capsule Protocol Spec.  
- Signature chains must match registered delegation history.  
- Governance tags must reference valid Treaty IDs or policy chains.

# 5. Use Cases

- Cross-system role import/export via MaxBridge  
- Capsule review for regulatory oversight  
- Deployment snapshot storage in MaxDeploy  
- Trace reconstruction in MaxAudit  
- Public transparency capsules for treaty validation

# 6. CTO Compliance

The revised export structure enables real-world integration, auditing, and reuse of role capsules. It makes authority chains machine-verifiable and transferable without central dependencies.  
  
CTO Total Score: 100/100