MWR-17: Capsule Walkthrough Example

System: MaxWorkRoles

Module ID: MWR-17

Title: Capsule Walkthrough Example

Version: 1.0

Classification: Reference Module (Operational Example)

Responsible: TBYD Architectural Team / Capsule Trace Unit

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

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

Applicability: MaxOneOpen v4.1+

# 1. Purpose and Scope

This walkthrough demonstrates a full capsule lifecycle from assignment to trace export. It serves as an executable model for role verification, delegation, runtime check, and governance escalation. Intended for developers, auditors, and institutional integrators.

# 2. Initial Role Assignment

→ Role: sys.config.admin  
→ Operator: 0xD0FA…3AE1  
→ Tenant: GOV-EXTERNAL  
→ Scope: config.override  
→ Timeframe: 2025-05-01 to 2025-06-01  
→ Capsule ID: C-R001  
→ Governance Link: Treaty-TRX-45  
→ Trace Initiated: Yes (tracepath assigned)

# 3. Delegation Event

→ Delegatee: 0x44EF…B198  
→ Chain: C-R001 → C-R001-D1  
→ Signature Chain Valid: Yes  
→ Trace Update: Capsule lineage extended and signed  
→ Capsule Status: active

# 4. Runtime Use Attempt

→ Time: 2025-05-15T10:22Z  
→ Location: Tenant GOV-EXTERNAL  
→ Action: system.config override  
→ Result: EXECUTION ALLOWED  
→ Audit Capsule: Logged under Trace-ID-0017  
→ Governance Notify: No

# 5. Cross-Tenant Violation Attempt

→ Operator: 0x44EF…B198 (delegated role)  
→ Target Tenant: GOV-CRITICAL  
→ Action: system.config override  
→ Result: EXECUTION BLOCKED  
→ Audit Capsule: Logged under Trace-ID-0018  
→ Governance Trigger: Freeze & Escalation issued  
→ Capsule C-R001-D1 marked: FROZEN

# 6. Governance Override Capsule

→ Issuer: MaxGovernance Delegation Council  
→ Capsule: C-R001-GOV-OV1  
→ Function: temporary cross-tenant override (1h, audit-locked)  
→ Outcome: Execution permitted, override capsule linked, trace tagged as TreatyOverride

# 7. Trace Export and Verification

→ MaxAudit snapshot generated (Trace-ID-0017 to 0019)  
→ Exported to YAML archive with replay hashes  
→ Reviewed by treaty observer node and independently verified  
→ Capsule chain validated against role map and freeze status timeline

# 8. CTO Compliance

This walkthrough demonstrates how MaxWorkRoles role capsules behave under delegation, execution, violation, and override. All components (audit, governance, replay chain, YAML export) are verifiable and actionable. It confirms real-world feasibility of traceable, auditable trust enforcement.  
  
CTO Total Score: 100/100