

Bridges Interface Test Script Template

HL7 v2 | FHIR R4 | HIPAA |
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|---------------------|--|------------------------|---|
| Test Cycle: | <input type="checkbox"/> Unit <input type="checkbox"/> Integrated <input type="checkbox"/> Dress Rehearsal | Interface Type: | <input type="checkbox"/> HL7 v2 <input type="checkbox"/> FHIR <input type="checkbox"/> HIPAA X12 <input type="checkbox"/> All |
| Tester: | _____ | Date: | _____ |
| Environment: | _____ | Build Version: | _____ |

HL7 V2 - CONNECTIVITY AND ADT MESSAGE VALIDATION

| ID | Test Description / Steps | Expected Result | Status | Notes / Defect Ref |
|--------|--|--|--|--------------------|
| BR-001 | Activate ADT outbound interface to RIS. Send test A01 message. Confirm MLLP ACK received in Bridges Interface Monitor. | Interface shows Connected. ACK AA received. Message count increments. No errors in Bridges log. | <input type="checkbox"/> Pass <input type="checkbox"/> Fail <input type="checkbox"/> N/A | |
| BR-002 | Review raw HL7 A01 in Bridges message viewer. Verify MSH.3, MSH.4, PID.3 MRN with correct assigning authority. | All fields populated per interface spec. MRN in PID.3 with correct authority code matching vendor requirement. | <input type="checkbox"/> Pass <input type="checkbox"/> Fail <input type="checkbox"/> N/A | |
| BR-003 | Admit test patient via ED registration workflow. Confirm A01 fires to ADC. Verify patient in Pyxis/Omniceil cabinet. | Patient appears in ADC cabinet within 5 minutes. Medication list from Epic order populated. No duplicate record. | <input type="checkbox"/> Pass <input type="checkbox"/> Fail <input type="checkbox"/> N/A | |
| BR-004 | Transfer test patient to ICU. Confirm A02 fires. Verify patient removed from origin cabinet and added to ICU cabinet. | Origin ADC cabinet: patient removed. ICU cabinet: patient added within expected sync window. | <input type="checkbox"/> Pass <input type="checkbox"/> Fail <input type="checkbox"/> N/A | |
| BR-005 | Discharge test patient. Confirm A03 fires to all receiving systems. Verify reconciliation task generated. | Patient removed from ADC and RIS. Discharge reconciliation task appears in Epic pharmacy queue. | <input type="checkbox"/> Pass <input type="checkbox"/> Fail <input type="checkbox"/> N/A | |
| BR-006 | Disconnect receiving system. Trigger ADT event. Confirm messages queue in Bridges without discard. | Bridges queue depth increases. No error discard. On reconnect, messages deliver in sequence. | <input type="checkbox"/> Pass <input type="checkbox"/> Fail <input type="checkbox"/> N/A | |

HL7 V2 - LAB ORDERS AND RESULTS

| ID | Test Description / Steps | Expected Result | Status | Notes / Defect Ref |
|--------|--|---|--|--------------------|
| BR-007 | Place CMP order via CPOE. Confirm ORM/OML transmits to LIS. Verify order in LIS with correct test code and demographics. | LIS receives order. Test code = CMP-88 per mapping table. Patient name, MRN, ordering provider all correct. | <input type="checkbox"/> Pass <input type="checkbox"/> Fail <input type="checkbox"/> N/A | |
| BR-008 | Place order for unmapped test code. Confirm Bridges error handling - no silent discard. | Bridges error log captures unmapped code. LIS rejects or holds order. Error visible in Interface Monitor queue. | <input type="checkbox"/> Pass <input type="checkbox"/> Fail <input type="checkbox"/> N/A | |

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|---------------|---|--|------------------------------|--|
| BR-009 | Post ORU result from LIS for CMP panel. Confirm all result components post to correct Epic result fields with reference ranges. | All CMP components populate. Reference ranges display. Abnormal flags shown. Result visible in Epic chart. | [] Pass [] Fail [] N/A | |
| BR-010 | Post critical potassium result (6.5 mEq/L) via ORU. Confirm result posts AND critical value notification fires. | Result posts to Epic chart. Critical value in-basket alert fires to ordering provider with timestamp logged. | [] Pass [] Fail [] N/A | |
| BR-011 | Send ORU with unknown LOINC code in OBX.3. Confirm error handling - result does not silently drop. | Bridges logs unmapped LOINC error. Result held in error queue. Integration analyst can view and correct mapping. | [] Pass [] Fail [] N/A | |

FHIR R4 - API AND SMART ON FHIR

| ID | Test Description / Steps | Expected Result | Status | Notes / Defect Ref |
|---------------|--|---|------------------------------|--------------------|
| BR-012 | Register test SMART app in Epic MyApps. Launch from patient chart. Request auth code via patient-context flow. | Auth code returned. Access token exchanged. Token contains correct patient context (launch/patient scope). | [] Pass [] Fail [] N/A | |
| BR-013 | Query FHIR Patient endpoint: GET /fhir/R4/Patient/{id} using access token. Verify US Core required fields. | HTTP 200 returned. Patient resource in JSON. Name, DOB, gender, MRN identifier all present per US Core profile. | [] Pass [] Fail [] N/A | |
| BR-014 | Query FHIR Observation: GET /fhir/R4/Observation?patient={id}&category;=laboratory. Verify lab result data. | Observation resources returned. LOINC codes in code.coding. Values in valueQuantity. Status = final. | [] Pass [] Fail [] N/A | |
| BR-015 | Test backend service SMART auth. Request token using client credentials grant (no user context). | Client credentials token returned. Authorized resource type queries succeed. No MyChart login required. | [] Pass [] Fail [] N/A | |
| BR-016 | Attempt FHIR query with expired access token. Confirm 401 response and application token refresh. | HTTP 401 Unauthorized returned. App refreshes token. Subsequent query with new token succeeds. | [] Pass [] Fail [] N/A | |

HIPAA X12 - ELIGIBILITY AND CLAIMS

| ID | Test Description / Steps | Expected Result | Status | Notes / Defect Ref |
|---------------|--|---|------------------------------|--------------------|
| BR-017 | Submit 270 eligibility inquiry for test patient to clearinghouse sandbox. Verify 271 response received and parsed. | 271 received within SLA. Coverage populates into Epic coverage verification. Benefit details visible to front desk. | [] Pass [] Fail [] N/A | |
| BR-018 | Submit 270 for patient with no active coverage. Verify 271 inactive-member response handling. | 271 returns no active coverage. Epic coverage record updated to inactive. Staff notification configured correctly. | [] Pass [] Fail [] N/A | |
| BR-019 | Submit 837P professional claim to clearinghouse test environment. Verify 277CA acceptance returned. | 277CA received with accepted status. Claim ID returned. No validation errors. Charge moves to Submitted in Epic. | [] Pass [] Fail [] N/A | |

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| BR-020 | Receive 835 remittance file from clearinghouse test. Confirm payment posts to correct claim in Epic. | Payment amount matches ERA. Adjustment reason codes mapped. Claim moves to Paid. ERA posted with correct date. | [] Pass [] Fail [] N/A | |
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FAILOVER, ERROR HANDLING, AND MONITORING

| ID | Test Description / Steps | Expected Result | Status | Notes / Defect Ref |
|---------------|---|---|------------------------------|--------------------|
| BR-021 | Simulate ACK timeout by halting ACK response from receiving system. Confirm Bridges retry behavior. | Bridges retries per configured interval. After max retries, message moves to error queue. Alert fires to analyst. | [] Pass [] Fail [] N/A | |
| BR-022 | Send HL7 message with malformed PID segment. Confirm parse error handling and no data corruption. | Parse error logged in Bridges. Message held in error queue. Raw message viewable by analyst for correction. | [] Pass [] Fail [] N/A | |
| BR-023 | Verify Interface Monitor baseline message counts are correct for all P1 interfaces during peak test period. | Counts per interface align with expected test volume. No unexplained zeros on active interfaces. | [] Pass [] Fail [] N/A | |
| BR-024 | Simulate end-of-shift ADT burst (high message volume). Confirm queue depth stays within SLA threshold. | Queue depth stays within defined threshold. Latency within SLA during volume spike. No messages discarded. | [] Pass [] Fail [] N/A | |

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| QA / Integration Lead: _____ | Clinical Sign-off: _____ | Date: _____ | Cycle #: _____ |
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