ContinuityHub • DR Test Program Pack

Sheet 1: Testing Spectrum Planner (Which Test Types, In What Order, How Often)

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PROGRESSIVE VALIDATION PRINCIPLE: Sequence from Low-Risk Verification to High-Fidelity Validation
Testing progresses along the testing spectrum: (1) **Plan Review** confirms documentation accuracy; (2) **Tabletop Exercise** stress-tests human decisions & complications; (3) **Component Testing** validates technical modules in isolation; (4) **Simulation Exercise** exercises the end-to-end recovery workflow in test environments; (5) **Full Interruption Test** proves production failover and failback.

THE TESTING SPECTRUM SPECIFICATION MATRIX

5 CORE TIERS + CONTINUOUS AUTOMATION

Test Type	Target Scope	Standard Cadence	Duration	Required Execution Focus	Pre-Requisites
1. Plan Review Checklist Test	**ALL PLANS & INVENTORIES**	Quarterly & after infra change	1–2 Hours	Review DR plan vs current environment; verify inventories, emergency contacts, vendor SLAs, and configs.	Current infrastructure inventory & SLA contracts.
2. Tabletop Exercise Facilitated Discussion	**RECOVERY TEAMS**	Quarterly	2–4 Hours	Walk through scenario step by step without live technical execution. Facilitator injects complications to surface gaps.	Completed Plan Review; documented scenario with stress complications.
3. Component Test Functional Test	**TIER 1** (Semi-Annual) **TIER 2** (Annual)	Semi-Annual / Annual	4–8 Hours per component	Execute individual procedures in isolation on live systems (e.g. database restore to test env, web app load balancer failover).	Isolated test bed; verified backup snapshots; rollback safeguards.
4. Simulation Exercise Workflow Exercise	**FULL RECOVERY WORKFLOW**	Annually	4–12 Hours	Execute comprehensive disaster recovery procedures in test environments under time pressure, incomplete info, and comms demands.	Component tests validated; isolated recovery environment provisioned.
5. Full Interruption Failover Test	**TIER 1 SYSTEMS**	Annually (Tier 1)	8–24 Hours (inc. failback)	Actual live production workloads failed over to recovery environment. Validates production capacity, data integrity, and failback.	Executive approval, customer notification, simulation pass, verified rollback.
Automated DR Validation Continuous Orchestration	**CLOUD & REPLICATED VMS**	Daily or Weekly	Automated	Orchestration tools spin up isolated recovery environments, restore data, validate app health, and generate pass/fail reports.	Cloud DR platform with isolated network orchestration capabilities.

CHANGE-TRIGGERED TESTING PROTOCOL

INFRASTRUCTURE DRIFT DEFENSE

Infrastructure Change Trigger	Mandatory Retest Type	Required Verification Scope	Trigger SLA Window
Cloud Migration / Architecture Overhaul	Full Interruption Test or Simulation	Validate networking, route tables, security groups, and automated spin-up.	Within 30 calendar days of cutover
Major Database Platform / Schema Upgrade	Component Test (Database Restore)	Restore backup to test instance; execute schema validation & data integrity check.	Within 14 calendar days of upgrade
Key DR Personnel / Lead Team Turnover	Tabletop Exercise	Exercise newly assigned roles under facilitated complication stress.	Within 21 calendar days of assignment
New Tier 1 Application Deployment	Plan Review + Component Test	Add to inventory; validate RTO/RPO targets; execute standalone component test.	Prior to production launch gate

ORGANIZATION / BUSINESS UNIT: .....

ASSIGNED DR PROGRAM MANAGER: .....

GOVERNING POLICY VERSION & APPROVAL DATE: .....

EXECUTIVE SPONSOR SIGN-OFF: .....

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TEST ID & EXERCISE TITLE: .....

SCHEDULED EXECUTION DATE & WINDOW: .....

TEST TYPE (REVIEW/TABLETOP/COMPONENT/SIM/FAILOVER): .....

THE 7 MANDATORY TEST PLAN ELEMENTS

ARTICLE CONSTRUCTION STANDARD

1. TEST OBJECTIVE (SPECIFIC CAPABILITY VALIDATED):

State exactly what capability is being proven (e.g. "Validate Tier 1 transactional database recovery to secondary region within 2-hour RTO with zero data loss").

2. DISASTER SCENARIO SIMULATED:

Detail the simulated incident narrative (e.g. datacenter power failure, unannounced ransomware lockout, severed undersea cable).

3. SCOPE (SYSTEMS, TEAMS & PROCEDURES TESTED):

Explicitly list in-scope systems, databases, network segments, and teams — and clearly state what is out of scope.

4. SUCCESS CRITERIA (MEASURABLE PASS/FAIL THRESHOLDS):

Define objective metrics: Target RTO elapsed time, Target RPO data loss window, application transaction verification, and failback completion.

5. PARTICIPANTS & ASSIGNED ROLES:

Incident Commander: _____ • Scribe/Observer: _____
Lead Database Engineer: _____ • Cloud/Network Lead: _____

6. SAFETY CONTROLS & PRODUCTION SAFEGUARDS:

Network isolation controls, freeze on production changes, abort triggers (exact threshold to halt test), and verified rollback procedures.

7. POST-TEST REVIEW PROCESS (SCHEDULE & DOCUMENTATION PIPELINE):

Immediate hot wash time/location: _____
Formal post-test report deadline: _____ Corrective action review meeting: _____

DELIBERATE STRESS INJECTION REGISTER

DEFEATING THE "TOO EASY" TESTING TRAP

Stress Injection Variable	Specific Scenario Complication Injected	Injected?	Observed Effect
Key Personnel Unavailable	Primary technical lead or incident commander declared unreachable at start. Alternate must execute without assistance.	[ ] Yes [ ] No	[ ] Pass [ ] Delayed
Simulated Backup Corruption	Primary snapshot flagged corrupt; team must detect failure and fail back to preceding valid checkpoint.	[ ] Yes [ ] No	[ ] Pass [ ] Delayed
Extended Vendor SLA Delay	Third-party cloud/hardware vendor reports 48-hour response delay; forces interim workaround execution.	[ ] Yes [ ] No	[ ] Pass [ ] Delayed
Concurrent Crisis Demands	Exercise injects simultaneous cyber/ransomware investigation alongside technical failover demands.	[ ] Yes [ ] No	[ ] Pass [ ] Delayed

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Sheet 3: Automation Readiness Checklist (Automated Technical vs. Human Validation)

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THE AUTOMATION BOUNDARY: Automation Validates Technical Recovery; It Does Not Replace Humans
Automated testing validates technical recovery — system availability, data integrity, and basic application functionality — on a high-frequency (daily or weekly) schedule. It does *not* validate human decision-making, pressure communication, or improvisation during unexpected complications. Both layers are mandatory for complete resilience.

THE OPERATIONAL CAPABILITY DIVISION

WHAT TO AUTOMATE VS. WHAT STAYS HUMAN

Operational Domain	Automated Technical Validation (Daily / Weekly)	Human-Involved Exercise Validation (Quarterly / Annual)
Environment Provisioning	Automated scripting spins up recovery environments, VPCs, subnets, and routing tables via API orchestration.	Human validation of architectural security, egress filters, DNS cutover authority, and physical site access.
Data Restoration & Integrity	Automated scheduled restore of database dumps / volume snapshots; programmatic checksum and row-count verification.	Human validation of data consistency across interdependent multi-tier systems and edge-case transaction reconciliation.
Application Health Checks	Automated synthetic user transactions (HTTP probes, API status codes, database read/write queries).	Human validation of complex cross-functional business logic, report generation, and third-party integration pipelines.
Incident Triage & Decisions	**NOT AUTOMATABLE:** Systems report pass/fail telemetry, but cannot assess business impact or make trade-offs.	Human incident commander weighs trade-offs, decides whether to invoke failover, and prioritizes competing recovery streams.
Crisis Communications	**NOT AUTOMATABLE:** Automated notification delivery (SMS/email tree) can be tested for speed and ACK latency.	Human framing of holding statements, executive briefings, customer notifications, and regulatory disclosures under pressure.

NON-DISRUPTIVE CLOUD DR VALIDATION PROTOCOL

ZERO-PRODUCTION-RISK FRAMEWORK

5-Step Isolated Network Validation Flow:

1. Isolated Network Provisioning: Spin up a sandbox VPC/VNet with complete network isolation (no routing to production).
2. Storage Replication Decoupling: Clone/mount latest replication snapshot into isolated test network without breaking replication stream.
3. Automated Compute Instantiation: Boot VMs, containers, and database engines in test subnet.
4. Functional Smoke Testing: Run automated synthetic test suites validating database read/writes and API responses.
5. Clean Teardown & Evidence Log: Tear down isolated test environment; record timestamp, duration, and pass/fail logs.

Automation Pre-Flight Verification Checklist:

- [ ] Recovery VPC routing verified completely disconnected from production.
- [ ] Cloud IAM credentials restricted to recovery sandbox only.
- [ ] Replication snapshot process validated non-locking on live database.
- [ ] Synthetic test scripts check real transactional schemas.
- [ ] Automated alert routes to DR team on test failure / timeout.
- [ ] Automated teardown routine has verified force-clean permissions.
- [ ] Monthly audit of automated test success/failure trend logs.

SCHEDULED AUTOMATION CADENCE REGISTER

HIGH-FREQUENCY TECHNICAL RUNS

Target System / DB	Orchestration Platform	Cadence	Automated Validation Scope	Failure Alert Route
Tier 1 Core Database	Cloud DR Orchestrator	Daily	Snapshot restore, DB mount, table checksum, RPO test	#dr-alerts / On-Call Pager
Web & Application Tier	Terraform / CloudFormation	Weekly	Auto-scaling spin-up, health-check probe, load test	#dr-alerts / Devops Lead
Notification Call Tree	Automated Mass Notification	Monthly	Broadcast ping to all recovery leads; measure ACK time	DR Program Manager

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Sheet 4: Post-Test Review & Corrective Action Tracker (Metrics, Findings, Owners, Deadlines)

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QUANTITATIVE POST-TEST SCORECARD

THE 6 MANDATORY METRICS

Measurement Metric	Target Benchmark (BIA)	Actual Measured Result	Variance (+/-)	Evaluation Status
1. Actual Recovery Time (vs. RTO)	Target RTO: _____	Actual Time: _____	[ ] Met [ ] Exceeded by: _____	[ ] PASS [ ] FAIL
2. Actual Data Loss (vs. RPO)	Target RPO: _____	Actual Loss: _____	[ ] Met [ ] Exceeded by: _____	[ ] PASS [ ] FAIL
3. Notification Speed	Activation Target: _____	Full Team ACK: _____	Latency: _____	[ ] PASS [ ] WARN
4. Procedure Accuracy	Zero Improvisations Allowed	Improvised Steps Count: ___	Unscripted Actions: _____	[ ] PASS [ ] DEFECT
5. Application Validation	100% Production Data Sanity	Functional Check: _____	Failed Transactions: _____	[ ] PASS [ ] DEFECT
6. Failback Time	Maintenance Window: _____	Actual Failback: _____	Window Overrun: _____	[ ] PASS [ ] OVERRUN

AFTER-ACTION DEBRIEF (HOT WASH) SUMMARY

4 CORE INQUIRIES

1. WHAT WAS TESTED & SYSTEMS INVOKED:

2. WHAT WORKED EXACTLY AS PLANNED:

3. WHAT FAILED, BROKE DOWN, OR DIVERGED:

4. WHAT TOOK LONGER THAN EXPECTED:

ISO 22301 CONTINUAL IMPROVEMENT CORRECTIVE ACTION TRACKER

REMEDIATION PIPELINE

ID	Deficiency / Finding Description	Mandatory Corrective Action	Owner	Due Date	Next Test Gate
CAP-01					Q__ Test
CAP-02					Q__ Test
CAP-03					Q__ Test
CAP-04					Q__ Test

Exercise Design Evaluation: Was the scenario sufficiently realistic? [ ] Yes [ ] Too Easy • Were success criteria calibrated correctly? [ ] Yes [ ] Adjusted • Did test reveal unmapped risks to feed into the organizational Risk Assessment? [ ] Yes (Risk ID: _____) [ ] None.

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Sheet 5: Annual Test Calendar & Multi-Test Evidence Register (The Year on One Page)

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ANNUAL DR TESTING MASTER SCHEDULE

12-MONTH COORDINATED CADENCE

Quarter / Month	Scheduled Exercise	Involved Systems & Scope	Deliberate Stress Injection	Target Date & Status
Q1 • Month 1	Plan Review (Checklist Test)	All Tier 1 & Tier 2 documentation	Inventory & SLA validation audit	Date: _____ [ ] Done
Q1 • Month 2	Tabletop Exercise #1	Core Recovery Team (Ransomware Scenario)	Lead DB Admin declared unavailable	Date: _____ [ ] Done
Q2 • Month 4	Plan Review (Checklist Test)	Post-Q1 change delta inspection	Verify updated contact phone trees	Date: _____ [ ] Done
Q2 • Month 5	Tier 1 Component Tests	Database restore + Load balancer failover	Seeded backup checksum test	Date: _____ [ ] Done
Q2 • Month 6	Tabletop Exercise #2	Third-Party Vendor Disruption Scenario	Cloud provider 48-hr hardware outage	Date: _____ [ ] Done
Q3 • Month 7	Plan Review (Checklist Test)	Pre-Simulation inventory audit	Audit test environment network routes	Date: _____ [ ] Done
Q3 • Month 8	Annual Simulation Exercise	Full recovery workflow in test environment	Incomplete info, time pressure & comms	Date: _____ [ ] Done
Q3 • Month 9	Tabletop Exercise #3	Cascading Infrastructure Failure	Secondary backup corrupted / offline	Date: _____ [ ] Done
Q4 • Month 10	Plan Review & Tier 2 Tests	Tier 2 Component functional tests	Isolated non-critical service restores	Date: _____ [ ] Done
Q4 • Month 11	Tier 1 Full Interruption Test	Live production failover & failback	Real production traffic failover	Date: _____ [ ] Done
Q4 • Month 12	Tabletop Exercise #4 & Audit	Annual debrief & ISO 22301 program audit	Audit all closed CAP actions from year	Date: _____ [ ] Done
Ongoing Continuous	Automated DR Validation	Daily/Weekly cloud snapshots & sandbox restores	Daily automated pass/fail reports	Continuous Pipeline

INFRASTRUCTURE CHANGE RETEST LOG

AD-HOC EVENT-DRIVEN TESTS

Change Date	Infrastructure Event / Migration	Required Retest Type	Retest Execution Date	Lead Sign-Off
___/___/2026		[ ] Plan [ ] Comp [ ] Sim	___/___/2026	_____
___/___/2026		[ ] Plan [ ] Comp [ ] Sim	___/___/2026	_____

ANNUAL PROGRAM COMPLIANCE & EXECUTIVE SIGN-OFF

ISO 22301 AUDIT TRAIL

DISASTER RECOVERY PROGRAM LEAD:

Signature: _____ Date: _____

LEAD INFRASTRUCTURE / IT ARCHITECT:

Signature: _____ Date: _____

CHIEF INFORMATION SECURITY OFFICER (CISO) / RISK OFFICER:

Signature: _____ Date: _____

EXECUTIVE VICE PRESIDENT / OPERATIONS SPONSOR:

Signature: _____ Date: _____