

Test proprietary protocol behavior

Keep real peers in the test loop while you develop selected message changes and repeatable checks.

Planning template only. No tests have been run and no results are asserted.

01 Plan the evaluation

1. Define one requirement

Choose a specific behavior and its acceptance criteria. Identify the message format, relevant state, and the observation that would establish the expected device response.

2. Implement a focused intervention

Use FID to select the relevant traffic and attach your protocol-aware tool or reusable RIG. Develop and validate the parser, message change, or suppression logic for the protocol rather than assuming the platform already understands it.

3. Run against the real peers

Establish the baseline, apply the intervention, and record the endpoint response and recovery. Keep test parameters and protocol logic under version control so the procedure can be repeated after system changes.

Setup checklist

- A FID appliance, the real Ethernet peers, and an authorized integration or test-lab environment.
- Protocol specifications or validated protocol knowledge, a developer for the custom test logic, and explicit acceptance criteria.
- A separate management connection. The 10 GbE Ubuntu appliance uses a third wired interface; WiFi is only available on WiFi-enabled platforms.

Scope and limits

- The examples are test ideas requiring custom implementation, not a supplied protocol test suite. FID does not automatically interpret an ICD or invent pass/fail criteria.
- Framing, checksums, encryption, authentication, and timing constraints must be handled by the selected tool and the test design.
- This is a bench and integration-lab application, not a claim of airborne deployment, safety certification, or complete hardware-in-the-loop replacement.
- Effective throughput depends on the enabled functions, traffic, and hardware. Optional EtherShunt bypass is limited to 1 GbE.

Offering: Custom RIG development. Confirm the delivered configuration before testing.

Record the result

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Tie the message intervention to a requirement and an observable endpoint response. Retain the baseline, the actual traffic produced, the test-logic version, and the recovery result.

Test owner

Date / run ID

Equipment / firmware / tool versions

Authorized scope and acceptance criteria (define before the test)

01 Baseline exchange

The real peers complete the intended normal transaction.

☐ Not run ☐ Pass ☐ Fail ☐ Inconclusive

Observed behavior / evidence reference:

02 Out-of-range application field

The protocol-aware tool creates the intended test message; record the receiver response.

☐ Not run ☐ Pass ☐ Fail ☐ Inconclusive

Observed behavior / evidence reference:

03 Unexpected sequence or missing message

The specified state-machine or timeout behavior is exercised and observed.

☐ Not run ☐ Pass ☐ Fail ☐ Inconclusive

Observed behavior / evidence reference:

04 Restore normal traffic

The equipment returns to the behavior required by the test plan.

☐ Not run ☐ Pass ☐ Fail ☐ Inconclusive

Observed behavior / evidence reference:

Recovery, unresolved questions, and next action

Attach additional evidence as needed. Keep completed records in your approved storage; this worksheet does not submit any data.