

Core Services Minor Release Compatibility Testing

This document will capture thoughts with regard to verification of minor releases for the Core Services of EdgeXFoundry. This has been discussed informally within the Core Working Group and during the QA/Test Working Group session of 22-Aug-2019 the topic of whether we needed to define a test suite for ensuring compatibility of minor releases came up. To facilitate that discussion and decision, I offered to draft a document that would record all thinking around this scenario to date. This document may also be amended to include thoughts from the community and thereby evolve into an eventual proposal.

Assumptions

No backward compatibility will be supported across major version upgrades (i.e. v1.x → v2.x) of EdgeXFoundry. The list below will only contain the basic assumptions in situations where backward compatibility is warranted.

- Backward compatibility must be supported across minor versions (i.e. v1.1.x → v1.2.x) and across patch versions (i.e. v.1.1.1 → v1.1.2)
- All event/reading data must be purged. If there is in-flight data pending export to upstream applications, that action must be completed first.
- All other data should be considered long-lived. It is undesirable to require a customer to re-provision their whole device landscape for a minor release upgrade.
 - This includes device profiles, devices, commands, schedules, device services, etc.

Verification Process

In this section I will use the Edinburgh (v1.0.0) and Fuji (v1.1.0) releases to refer to an actual minor release upgrade scenario. The current proposal is that this process is owned and operated by the testing team, who then provide feedback to the Core Working Group and Release Manager.

- Provision the Edinburgh release into an environment and verify its functionality
 - “Verification” is defined as operating in a state better than or equivalent to the corresponding blackbox test run.
- Delete event/reading data from the environment’s database
 - This can either be done via a REST call to core-data/api/v1/events/scruball or directly via database query.
- Shut down all components
- Replace all EdgeXFoundry Core Services in the test environment with those from the Fuji release.
- Bring services up and run the same verification process. The results should be as good or better than the previous run.
 - Any bugs/issues to be reported to the Core Working Group chair for triage and the Release Manager for visibility