

## Time Travel Testing: A Mechanism for Improving Renewal Experience

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**Abstract :** While organizations strive to expand their new customer base, retaining existing relationships is a key aspect of improving overall profitability and also showcasing how successful an organization is in holding on to its customers. It is an experimentally proven fact that the lion's share of profit always comes from existing customers. Hence seamless management of renewal journeys across different channels goes a long way in improving trust in the brand. From a quality assurance standpoint, time travel testing provides an approach to both business and technology teams to enhance the customer experience when they look to extend their partnership with the organization for a defined phase of time. This whitepaper will focus on key pillars of time travel testing: time travel planning, time travel data preparation, and enterprise automation. Along with that, it will call out some of the best practices and common accelerator implementation ideas which are generic across verticals like healthcare, insurance, etc. In this abstract document, a high-level snapshot of these pillars will be provided. **Time Travel Planning:** The first step of setting up a time travel testing roadmap is appropriate planning. Planning will include identifying the impacted systems that need to be time traveled backward or forward depending on the business requirement, aligning time travel with other releases, frequency of time travel testing, preparedness for handling renewal issues in production after time travel testing is done and most importantly planning for test automation testing during time travel testing. **Time Travel Data Preparation:** One of the most complex areas in time travel testing is test data coverage. Aligning test data to cover required customer segments and narrowing it down to multiple offer sequencing based on defined parameters are keys for successful time travel testing. Another aspect is the availability of sufficient data for similar combinations to support activities like defect retesting, regression testing, post-production testing (if required), etc. This section will talk about the necessary steps for suitable data coverage and sufficient data availability from a time travel testing perspective. **Enterprise Automation:** Time travel testing is never restricted to a single application. The workflow needs to be validated in the downstream applications to ensure consistency across the board. Along with that, the correctness of offers across different digital channels needs to be checked in order to ensure a smooth customer experience. This section will talk about the focus areas of enterprise automation and how automation testing can be leveraged to improve the overall quality without compromising on the project schedule. Along with the above-mentioned items, the white paper will elaborate on the best practices that need to be followed during time travel testing and some ideas pertaining to accelerator implementation. To sum it up, this paper will be written based on the real-time experience author had on time travel testing. While actual customer names and program-related details will not be disclosed, the paper will highlight the key learnings which will help other teams to implement time travel testing successfully.

**Keywords :** time travel planning, time travel data preparation, enterprise automation, best practices, accelerator implementation ideas

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