

Datto Disaster Tracking

Project Plan

Masters of Disaster

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Overview

Datto Inc. is a vendor of backup, disaster recovery (BDR) and Intelligent Business Continuity (IBC) devices. Customers purchase Datto's solution in preparation for events such as power outages, floods, fires, hurricanes, tornadoes, and earthquakes. Currently, Datto has no way to inform customers of weather events that may affect their company. The goal of the Disaster Tracking and Alerting project is to provide Datto with a way to proactively warn customers of inclement weather events that may affect their business, ensuring they are prepared before disaster strikes.

In the scope of this project, the customers are solely Datto and the Managed Service Providers (MSPs) that Datto partners with. The end users of Datto devices are not customers for this project.

The team will implement two web based applications, one to be used internally by Datto, and another for external use by the MSPs. This solution will use geolocation and weather tracking to provide risk information on devices. In addition to the web applications, the team will implement a mobile application for use by the MSPs. The mobile application will largely be responsible for sending the MSPs push notifications when there is a disaster event that could affect one of their customers.

Goals and Scope

List of in-scope items:

- Internal website for use by Datto. It will show all devices and be able to filter devices shown on the map.
- External website for use by MSPs. MSPs will only be able to view their devices on the map.
- Mobile iOS application for use by MSPs. They will be able to receive push notifications when a disaster event may affect their device.
- Develop a set of APIs to serve the web and mobile applications. Securing the APIs so that each MSP can only view the devices they own is also in scope. MSPs will have login credentials that should be used to authenticate access to the APIs.

List of out-of-scope items:

- Determining the geo-location of devices is out of scope. This information will be given from a third party, and correctness of the information returned does not need to be verified.
- Predicting and ensuring accurate weather forecasts is out of scope. The application will simply be pulling weather information from a reliable, external weather API.

Deliverables

Deliverable	Expected Delivery	Released	Type
Project Website	Week 2 - 9/02/14	Yes	Project
Initial Project Plan	Week 3 - 9/09/14	Yes	Project
Requirements Document	Week 4 - 9/16/14	Yes	Product
User Stories	Week 5 - 9/23/14	-	Product
UI Mockups	Week 6 - 9/30/14	-	Product
Design/Architecture Document	Week 7 - 10/07/14	-	Product
Mid-term peer evaluation	Week 7 - 10/07/14	-	Project
API Prototype	Week 10 - 10/28/14	-	Product
Web Application Prototype (functioning UI, connected to API)	Week 15 - 12/2/14	-	Product
Mobile Application Prototype (functioning UI, connected to API)	Week 15 - 12/2/14	-	Product
Give Interim presentation	Week 15 - 12/2/14	-	Project
Functional Tests	TBD	-	Product
API Completion	TBD	-	Product
Web/Mobile Application Completion	TBD	-	Product
Code freeze	Week 12	-	Process
Project Poster	Week 12	-	Project
Final Presentation	Week 14/15	-	Project
Project Completion	Week 15 - 5/5/15	-	Project

Risk Management

<See Risk Management spreadsheet>

Scheduling and Estimates

Scheduling for this project is handled by using the Scrum methodology. Team members are assigned to user stories that they will be able to complete within the sprint. The time to complete user stories are estimated with story points, which are determined during planning poker sessions. If it is expected that a user story will not be completed by the end of the sprint, then the team will make sure to clearly communicate any schedule changes that will be caused. The team will also track velocity, an estimate of the amount of story points the team can finish each sprint. The sprint velocity metric helps to determine how much the team will be able to accomplish by the end of the sprint. This estimate will be refined over time as the team uses past velocity measurements to enhance the accuracy of future estimates. The overall goals for the end of each sprint will be used to prioritize the user stories that will be tackled in each sprint.

Measurements and Metrics

Sprint Velocity - This is a measurement specific to Scrum. The number of story points that the team completes in a sprint is the sprint velocity. This measurement is useful when planning the next sprint, and will allow our team to know how many user stories we will be able to complete.

Cyclomatic Complexity - Cyclomatic complexity will be used to measure the overall complexity of our code base. Keeping this low will ensure that the code we write is maintainable and follows best coding practices.

LOC per method - Lines of Code per method will be used to measure the complexity of methods. This will also ensure that the code we write is maintainable and follows best coding practices.

Estimation Accuracy - Time tracking sheets will be used to determine difference between estimation and actual time.

Rate of Requirements Change - % of requirements that changed plotted vs time.

Technical Process

Project Methodology: Scrum (2-week sprints)

Project tools and activities: Trello (User story management), planning poker (story point planning), sprint planning, sprint retrospectives, daily (bi-weekly) scrum stand-up.

Internal Artifacts: Burndown chart, product backlog, sprint backlog.