

Cloud Recovery

Sprint 2

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ReClo Overview

Our Clients:

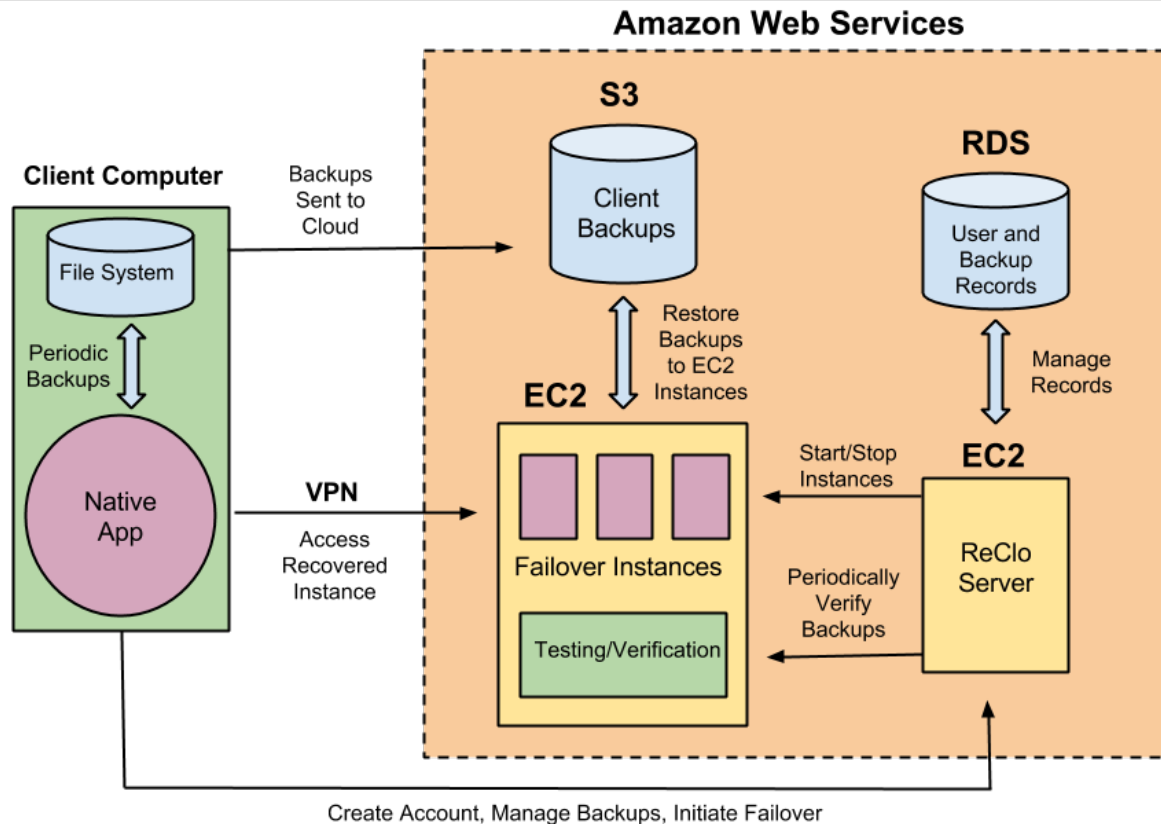
- Small to medium-sized businesses, e.g. franchise stores, doctors offices
- Generally non-technical users

Key Features:

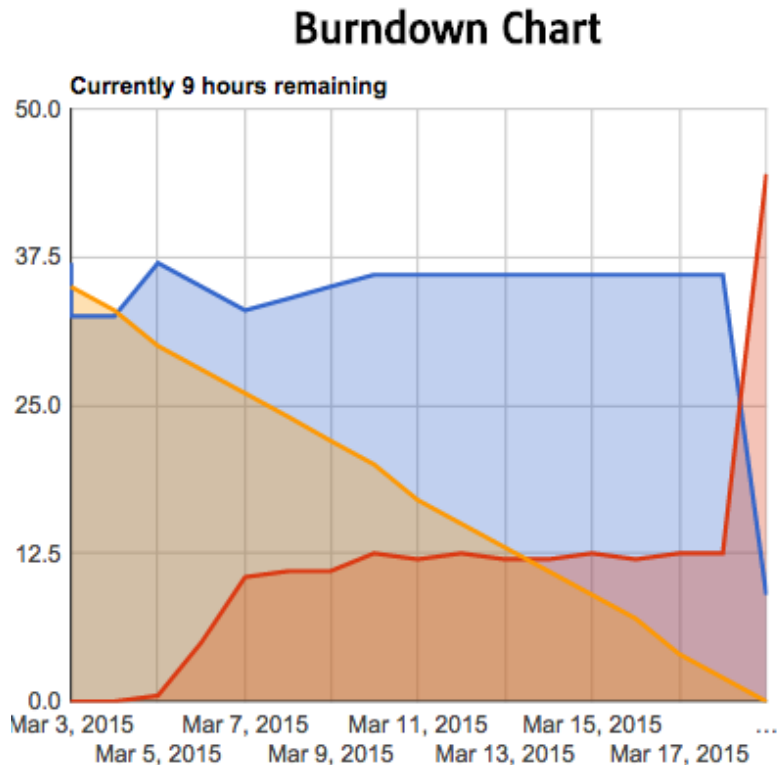
Backup Manager performs regular backups and pushed them to the cloud

Recovery Manager starts a new EC2 instance from a backup file and establishes a VPN connection, allowing users to access their data

Architecture



This Sprint: Burndown



“We bit off more than we could chew...”

Almost every task took longer than we expected.

Now getting to the “hard part” of building our application.

This Sprint: Our Goals

- Client “Backup Manager” Application
- Client Installer
- Product Website
- RESTful API
- Incremental Backups

This Sprint: Trello

EC500 - Sprint 2 ☆ Private 🔥 [Burndown Chart](#)

Sprint Backlog 7

- Integrate PowerShell backups with client UI, client-side backend code
👤 2 MX
- Implement static product website with download links
👤 3
- Create a new AWS instance from a .vhd backup file
👤 2

Add a card...

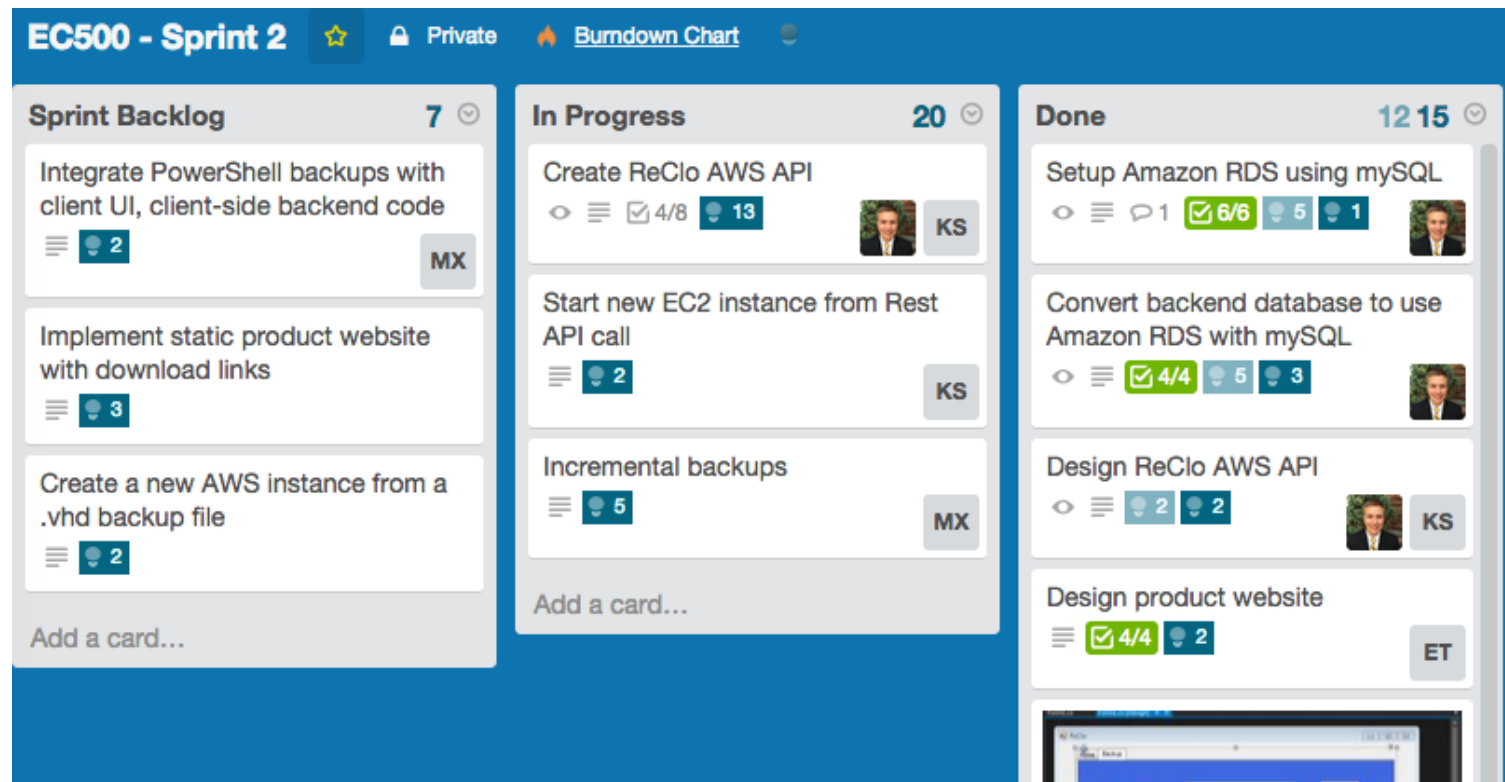
In Progress 20

- Create ReClo AWS API
👁️ ☰ 4/8 👤 13 👤 KS
- Start new EC2 instance from Rest API call
☰ 👤 2 KS
- Incremental backups
☰ 👤 5 MX

Add a card...

Done 12 15

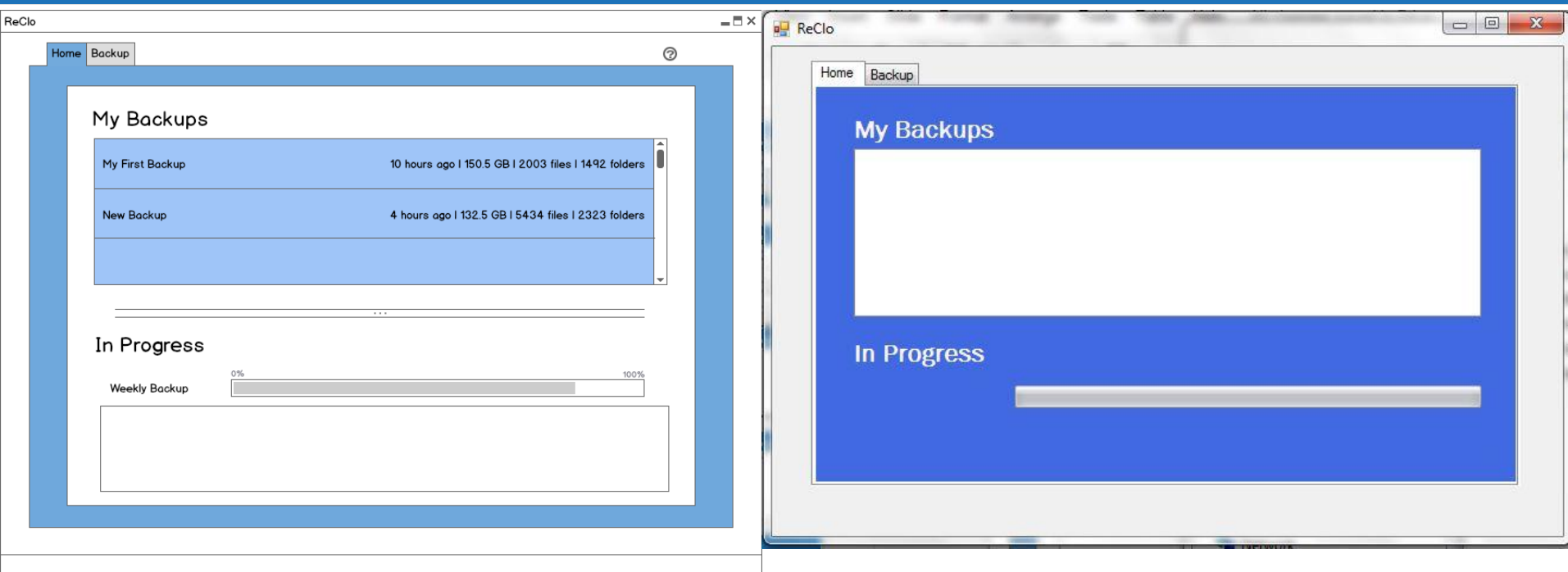
- Setup Amazon RDS using MySQL
👁️ ☰ 💬 1 ✅ 6/6 👤 5 👤 1 👤 KS
- Convert backend database to use Amazon RDS with MySQL
👁️ ☰ ✅ 4/4 👤 5 👤 3 👤 KS
- Design ReClo AWS API
👁️ ☰ 👤 2 👤 2 👤 KS
- Design product website
☰ ✅ 4/4 👤 2 ET



What We Accomplished:

- Backup Manager GUI and Installer
- Async Class for connecting Backup Up manager to API
- RESTful API for Backup Manager client
(no Recovery Manager API yet)
- Client website with product info and download links
- Converted back-end database to MySQL
(took much longer than expected)
- Still working on incremental backups

Backup Manager Application



Backup Manager Application

ReClo

Home Backup

Backup source:

Backup destination:

Description:

What to backup:

When to backup:

ReClo

Home Backup

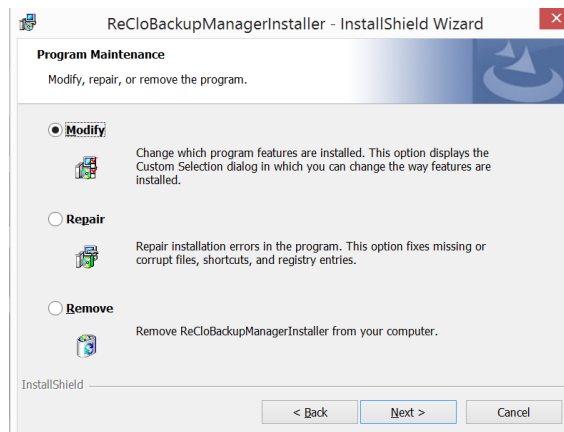
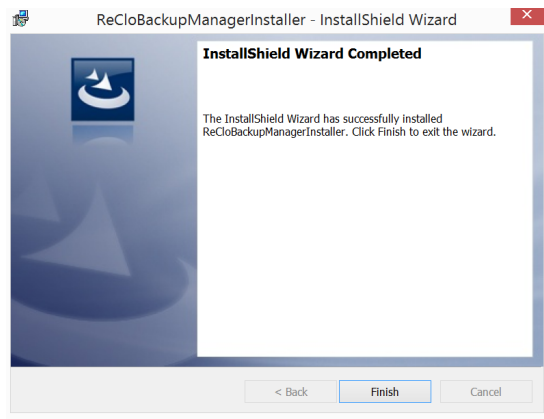
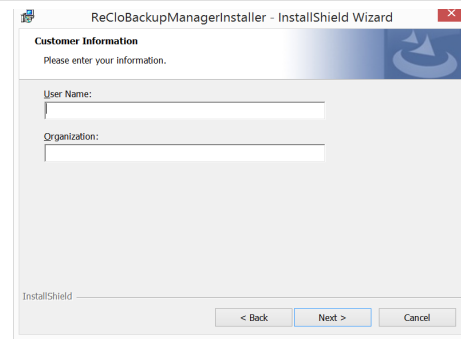
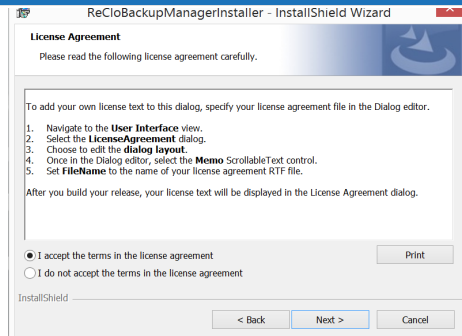
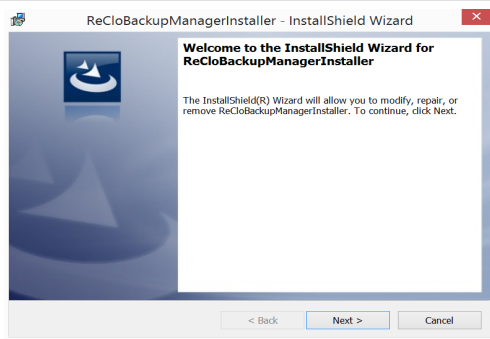
Backup Source:

Backup destination:

What to backup:

When to backup:

Client Installer



Product Website

Incremental Backups

The current version of WBADMIN in Windows Server 2012 compress incremental image with the original image together.

A log is kept for each backup operation
Customers can choose the image to be recovered by Snapshot ID.

RESTful API

Added API calls to create, upload, and get information on client backups.

Uses node.js (lightweight, asynchronous JavaScript) for the server.

C# client library for use with the applications.

API Design

Several types of parameters:

request URL parameters	For globally unique IDs, e.g. user, backup
request body key-value pairs	For request data, e.g. username, email
request URL query	For session tokens

HTTP request conventions:

POST	For user authentication, creating new objects
GET	For query the database for information about existing objects
PUT	For updating existing objects
DELETE	For removing/invalidating existing objects

API Client Library

- Asynchronous HTTP methods
- Used Mono for compilation
- Lots of debugging and errors
- Just basic functions for logging in, logging out, and registering

RESTful API

Next Sprint: Goals

Functional Backup Manager and Recovery Manager UIs

Complete API (node.js) and client library (C#)

Better estimation of tasks and better burndown pace