UNIVERSIDAD MODELO

Licenciatura: Ingeniería en Desarrollo de Tecnología y Software

Asignatura: Fundamentos de la nube

Semestre: 4to

Trabajo: Trabajo final del primer parcial

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Cloud Fundamentals: Dev Ops

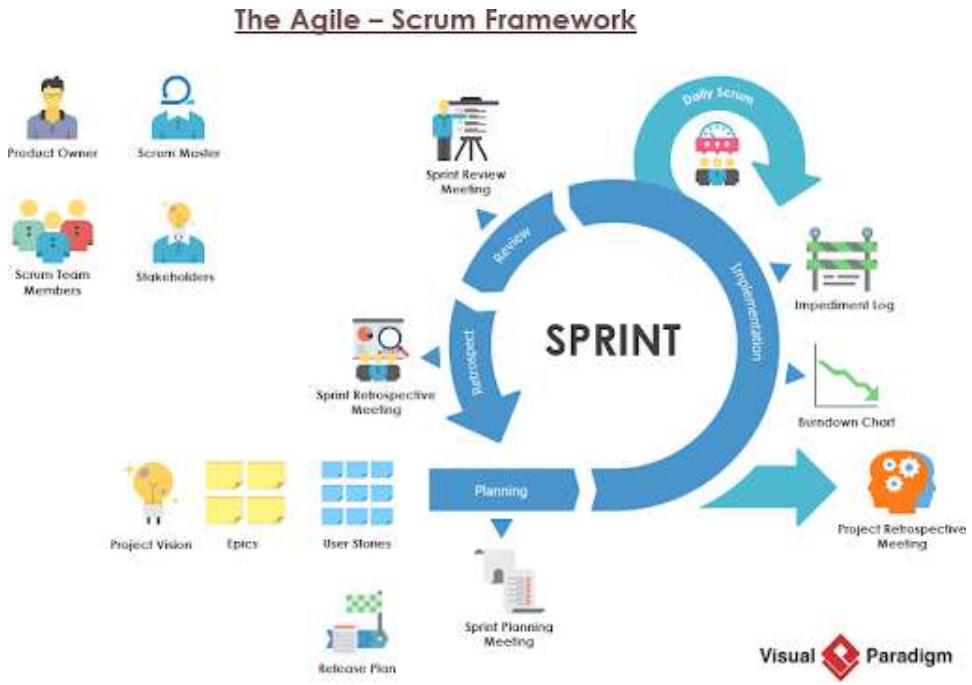
Introduction

DevOps is defined as the combination of cultural philosophies, practices and tools that increases an organization's ability to deliver applications and services at high velocity: evolving and improving products at a faster pace than organizations using traditional software development and infrastructure management processes. This speed enables organizations to better serve their customers and compete more effectively in the market.

The DevOps teams use practices to automate processes that historically have been manual and slow. They use a technology stack and tooling which help them operate and evolve applications quickly and reliably. These tools also help engineers independently accomplish tasks (for example, deploying code or provisioning infrastructure) that normally would have required help from other teams, and this further increases a team's velocity.

In this document, the main goal is to explain and show a few of the applications involved in the DevOps process, such as the Scrum framework using Trello, the Support tool using FreshDesk and the coding and version control aspect using GitHub via the Fork app.

The Scrum Framework



Scrum is defined as an agile way to manage a project, usually software development. Agile software development with Scrum is often perceived as a methodology; but rather than viewing Scrum as methodology, it is a framework for managing a process. It is used for effective team collaboration on complex products.

In the agile Scrum world, instead of providing complete, detailed descriptions of how everything is to be done on a project, much of it is left up to the Scrum software development team. This is because the team will know best how to solve the problem they are presented.

In Scrum, a sprint is a period of three weeks or less during in which an objective is proposed. Each Sprint has a goal of what is to be built, a design and flexible plan that will guide building it, the work and the resultant product increment. A new sprint starts immediately after the conclusion of the previous sprint.

In this framework, the sprint backlog is the set of product backlog (defined as the ordered list of all the requirements known to be needed in the product) items selected for the Sprint, plus a plan for realizing the sprint goal. The sprint backlog is an estimate by the development team about the work needed to deliver a desired functionality.

In Scrum development, a sprint planning meeting is described in terms of the desired outcome (a commitment to a set of features to be developed in the next sprint) instead of a set of lineal objectives to be done one after the other, as would be in most methodologies.

Scrum teams are supported by two specific roles. The first is a ScrumMaster, who can be thought of as a coach for the team, helping team members to use the Scrum process to perform at the highest level. The second role is the product owner (PO), and in Scrum software development, he represents the business, customers or users, and guides the team toward building the right product.

Scrum Daily

The Daily Scrum is a 15-minute event for the Development Team to synchronize activities and create a plan for the next 24 hours. The Daily Scrum is held every day of the Sprint. At it, the Development Team plans work for the next day. It is used to optimize team collaboration and performance by inspecting the work since the last Daily Scrum and to catch up on upcoming Sprint work. The Daily Scrum is held at the same time and place each day to reduce complexity.

In a Daily Scrum, the Scrum Master asks 3 very important questions to every member of the team: What did you do yesterday? What will you do today? and Is there any problem?

By focusing on what each person accomplished yesterday and will accomplish today, the team gains an excellent understanding of what work has been done and what work remains. The daily scrum meeting is not a status update meeting in which a boss is collecting information about who is behind schedule. Rather, it is a meeting in which team members make commitments to each other.

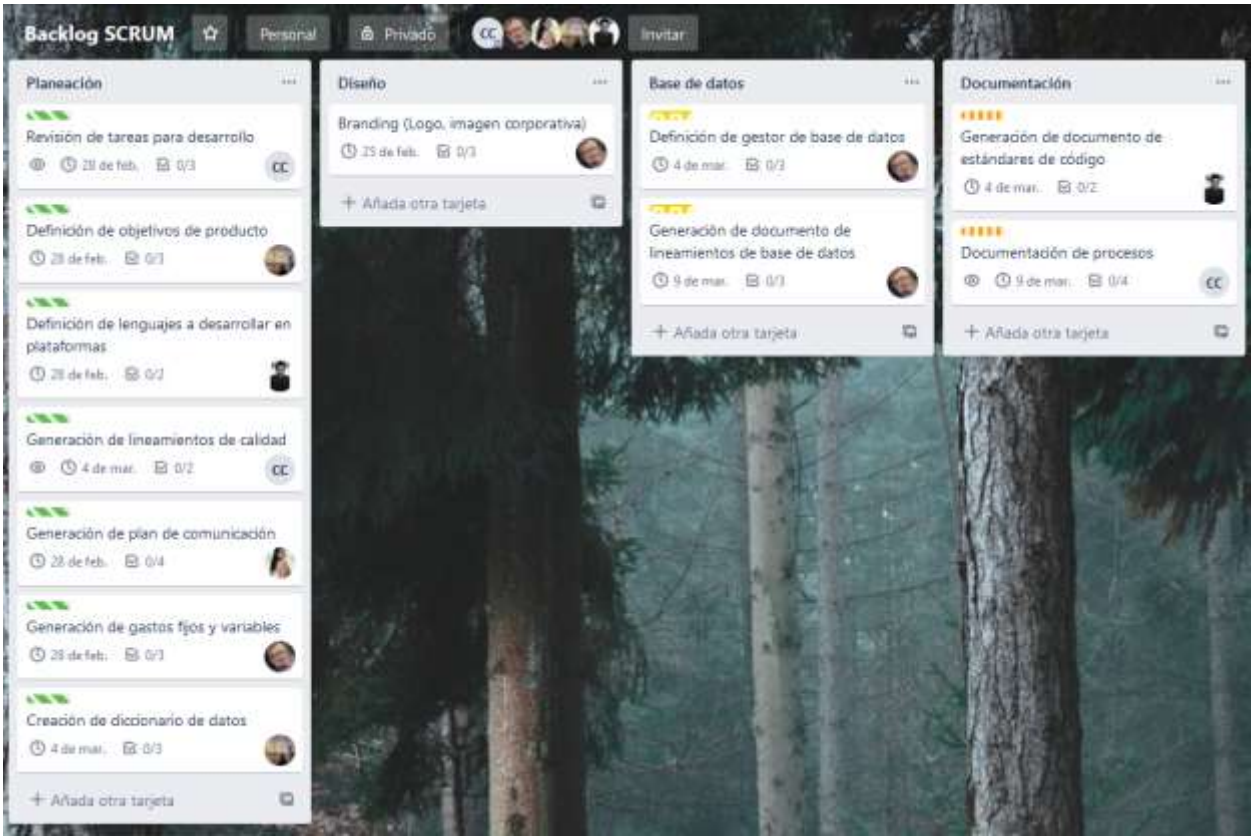
Scrum Biweekly

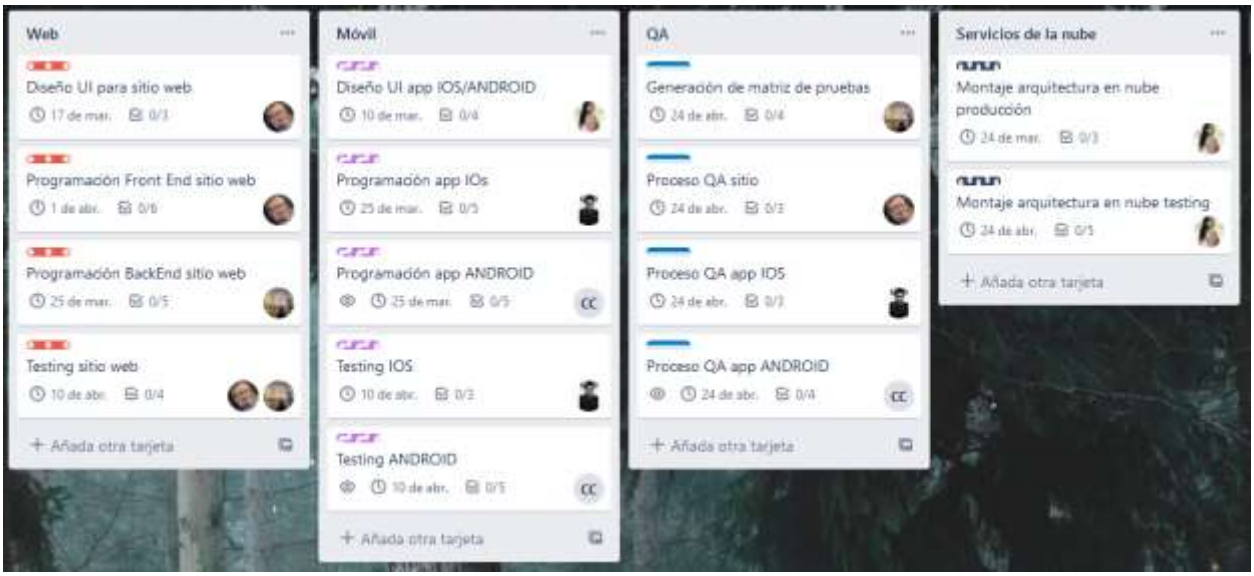
Every two weeks a larger meeting will be held with the team members to catch up and review the potentially shippable product on its current state. It is used to check which updates have been done and to find solutions to the problems not solved yet. This meeting should last around 2 hours. The Scrum Master, the Product Owner and the stakeholders should be involved in it.

Scrum Tool

To implement the Scrum Framework, a very useful SaaS tool called Trello will be used. Trello is a collaboration tool useful for project and task management. It can organize your projects into boards. In one glance, Trello tells you what's being worked on, who's working on what, and where something is in a process.

Example:





Teams:

Web team:

- Ana Castillo
- Hanna Lizarraga

Mobile team:

- Cristell Naranjo
- Manuel Canul
- Christian Cabral

Quality Assurance:

- Hanna Lizarraga
- Ana Castillo
- Manuel Canul
- Christian Cabral

Cloud Services:

- Cristell Naranjo

Database design:

- Ana Castillo

Documenter:

- Manuel Canul
- Christian Cabral

Design:

- Ana Castillo

Project Manager:

- Alfredo Bolio

Support/Tracking tickets System

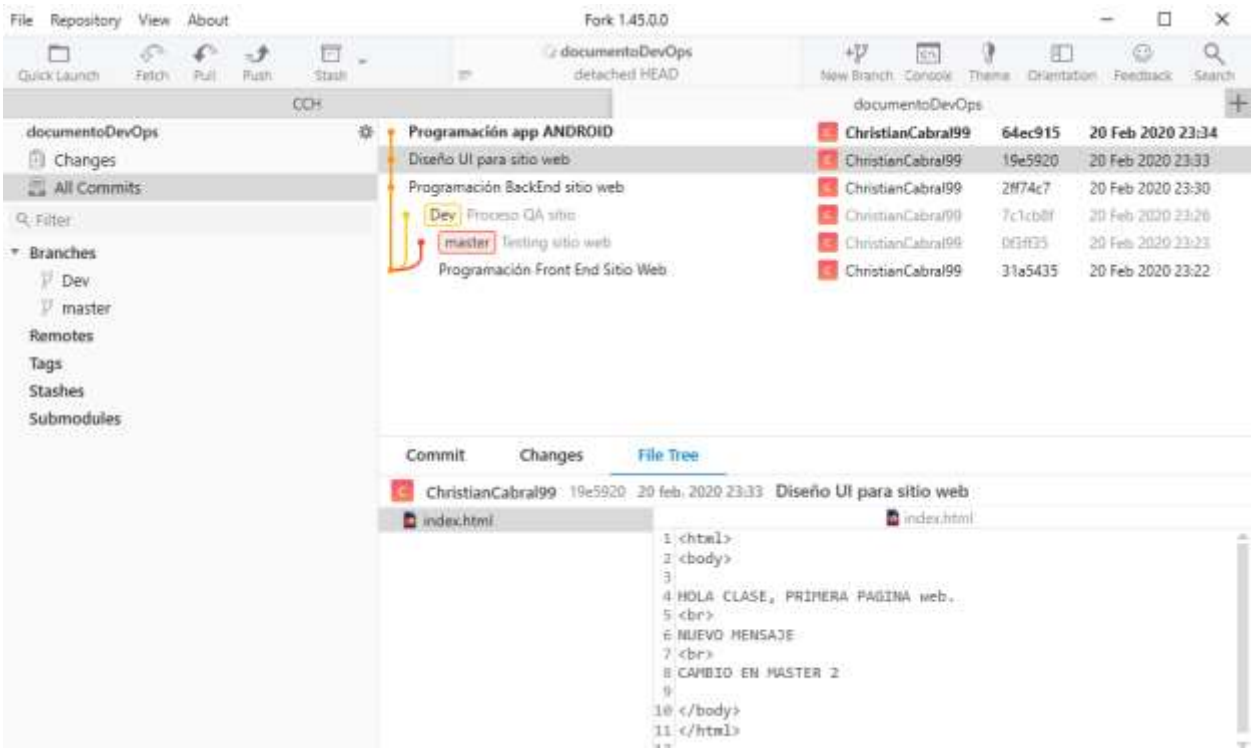
A support and tracking system refer to a program that enables the operators of a product or service to keep track of user requests and deal with issues in an efficient and organized way. It provides a point of contact for customers to send their queries and a ticketing system that tracks and organizes issues for faster resolution via an established e-mail.

The SaaS tool that is going to be used to fulfill this task is FreshDesk, an online customer service software providing helpdesk support with all smart automations to get things done faster. It can be very useful because it provides help via a large amount of support channels, such as e-mail, phone, chat, Twitter, Facebook and bots.

Work and version control

The workflow and version control topics are closely related to the Continuous integration and Continuous delivery DevOps practices. By using version control, you don’t need to save each version as the ¨final¨ version of the project; also, by using this concept you can be able to test and compare different versions of the code, without worrying that the old versions will be lost forever.

In this case, we are going to use GitHub, a Git repository hosting service with useful features. While Git is a command line tool, GitHub provides a Web-based graphical interface. It also provides access control and several collaboration features. We will be using it via the Fork git client, which provides a very helpful and friendly interface with many tools, such as the list of repositories and branches, the ability to merge conflicts, fetch, pull, push and commit.


File Repository View About
Fork 1.45.0.0
Quick Launch
Fetch
Pull
Push
Stash
documentoDevOps
detached HEAD
New Branch
Console
Theme
Orientation
Feedback
Search
CCH
documentoDevOps
documentoDevOps
Changes
All Commits
Filter
Branches
Dev
master
Remotes
Tags
Stashes
Submodules
Programación app ANDROID
ChristianCabral99 64ec915 20 Feb 2020 23:34
Diseño UI para sitio web
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Programación BackEnd sitio web
ChristianCabral99 2ff74c7 20 Feb 2020 23:30
Dev Proceso QA sitio
ChristianCabral99 7c1cb8f 20 Feb 2020 23:26
master Testing sitio web
ChristianCabral99 063ff35 20 Feb 2020 23:23
Programación Front End Sitio Web
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Commit
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ChristianCabral99 19e5920 20 feb. 2020 23:33 Diseño UI para sitio web
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2 <body>
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4 HOLA CLASE, PRIMERA PAGINA web.
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6 NUEVO MENSAJE
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8 CAMBIO EN MASTER 2
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10 </body>
11 </html>