INCISION GROUP B.V. NETHERLANDS CASE STUDY

Name of the customer: INCISION GROUP B.V.
Start date of the project: July 15th, 2019
End date of the project: Active development is still in progress

About the Customer

Incision is an education and workflow platform for surgeons worldwide. Incision produces content in-house with a team of experienced surgeons, 3d modelers and video editors. The main purpose of the platform is to give surgeons access to shared experiences, skills and expertise, by providing tools to get a quicker and more thorough preparation for the OR. The HQ office is located in Amsterdam, the Netherlands. however, The Incision sales team is located world-wide. The platform currently counts over 100.000 registered users.

Customer Challenge

The existing solution (https://www.incision.care/) was built using WordPress (WP). To support various features, Incision developed a set of custom WP plugins. Maintaining WP plugins is a challenge. Because of various custom plugins WordPress could not be updated to latest versionz, so the platform was potentially vulnerable to security threats. Additionally, the data structure that WordPress imposes started slowing down the application, creating negative user experience. Some of Incision's customers indicated they might stop using the platform due to poor performance.

Our Solution

Together with the CTO of Incision, the direction was chosen to rebuild the platform from the beginning in order to overcome existing issues and to support the growth in the future. A move of the platform to AWS and the use of AWS managed services and serverless architecture would enable to quickly create the new platform and to prevent existing users leaving the platform.

How AWS services were used as part of the solution

All static content and a single page website file are hosted on S3, sitting behind CloudFront and Route53. The backend consists of a REST API (API Gateway) and RDS MySQL database. Cognito is used for user authentication and authorization. Welcome emails, as well as transactional emails are sent to users using Simple Email Service (SES). The REST API consists of several CloudFormation stacks with Node.js Lambda functions deployed using the Serverless framework. The application uses Lambda functions for Cognito triggers and a number of scheduled tasks. Deployments are automated and executed via CodeBuild. The infrastructure is described in CloudFormation templates as a part of the code base. This architecture is illustrated in the image below:
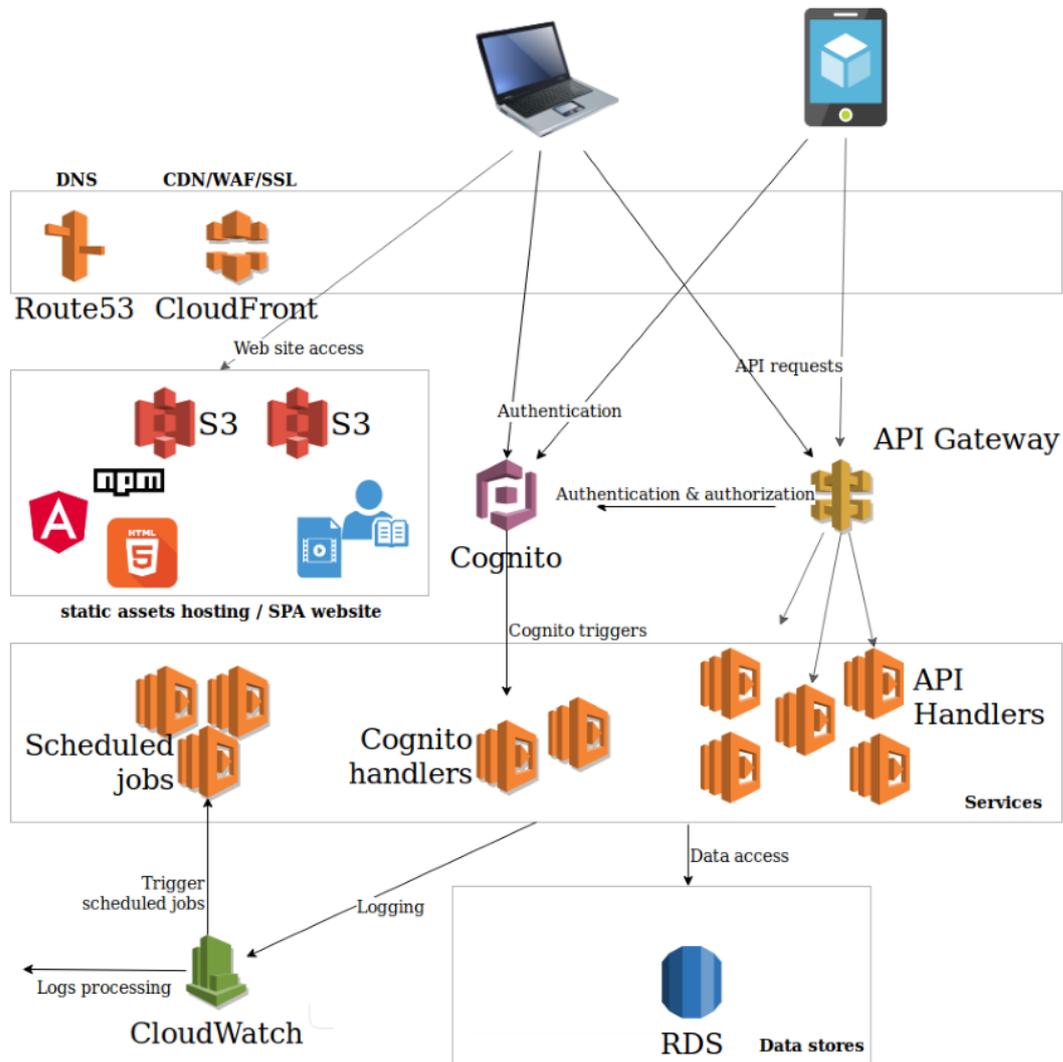
Third party applications or solutions used

- LTI integration with Learning Management Systems (LMS) for users to take tests and have their grades from Incision submitted to their organization's LMS
- Stripe integration for individual user payments for monthly/yearly subscriptions

Results and Benefits

The new platform went live on February 4th, 2020 after approx. 6months of development.
One of many clearly visible benefits is that using managed services really speeds up feature development and delivery, while improving maintainability and cost control.