

# 1 HW 1: Microservices Migration Case Studies

This homework aims to help you understand the motivation and challenges that companies face when adopting microservices-based approaches. To this end, your goal is to pick 3-4 migration stories from Kubecon NA, Kubecon EU, or qcon and write a 2-3 page report about the migration case studies. Note: both Kubecon and qcon have multiple instances a year— a North American conference, European conference, a China conference, etc. You should be able to find migration case studies in different instances. I would recommend taking a look at the various conferences over the last 18-24 months. To find migration you will need to search the titles and abstracts of the different talks on the schedule page.

In analyzing the stories, your goals are to understand:

- Why did the company decide to migrate?
- What was the biggest challenge in migration?
- How much of the infrastructure was migrated?
- How did the shift to microservices change the production? how did it change the organization?
- What are the benefits of migration?
- Looking across the three (or four) migration case studies, what are the common themes? What are the differences? Why do the differences exist? (What aspect of the organization, services, use case led to the differences)
- Given your observations about similarities and differences, what new technique would you propose to simplify migration to microservices? Why do you think such a tool does not exist?

**Hand-Ins:** Your report should be 2-3 pages (excluding figures and references) and **must** follow the SIGCOMM submission template. You **must** use **10pt font in times**. Your report **must** follow conference style with the following sections:

- Abstract: A brief summary of your report.
- Introduction: A description of the importance of microservices, justification for why understanding migration case studies is essential, justification for why (and how) you picked the specific case studies.
- Case Studies: This describes and summarizes the different case studies.
- Discussion: This provides discussion on the themes (similarities/differences between case studies) and the new techniques you propose to simplify migration.

You **must** email me your PDFs with the Subject "CSCI2952-F: HW2" and your PDF **must** be named "First.Last.HW2.pdf".