

# 1 HW 4: Kubernetes Evolution Case Studies ( New Features )

This homework builds on the last few homework. Unlike the last few homework where your goal was to understand specific issues. Here your goal is to understand new features and techniques being added into the Kubernetes ecosystem. You should use the Observability, Customizing/Extending Kubernetes, Application/Development tabs for KubeCon.

To this end, your goal is to pick 2-3 talks that present new features to Kubernetes from Kubecon or qcon and write a 2-page report about the new feature 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.

In analyzing the stories, your goals are to understand:

- Why was this new feature required? What problem is being solved by this new feature?
- How was the problem solved before this new feature?
- What types of applications or companies will benefit from this feature?
- What are generalizable lessons from this one instance?
- Looking across the three (or four) features, what are the common themes? What are the differences? Why do the differences exist? (What aspect of the problems being solved led to the differences)
- Given your observations about similarities and differences between these features, what new features would you propose? ( a bit of a meta-question)

**Hand-Ins:** Your report should be 2 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.
- Case Studies: Briefly summarize how you selected your case studies. Then describe and summarize the different case studies.
- Discussion: This section discusses the themes (similarities/differences between case studies) and the new techniques you propose to simplify migration.

You can turn in your homework using this form.