Ed-Fi in the Cloud Session Notes

Thursday, April 12, 2018

1:00 PM - 2:00 PM	Deploying Ed-Fi in the Cloud Ballroom AB In 2017 the Ed-Fi Alliance and its community made substantial investments to simplify deployment of the Ed-Fi ODS / API infrastructure to cloud service providers Amazon Web Services and Microsoft Azure. Attend to learn about the state of those efforts and to provide feedback to shape their future.

These broad session notes attempt to capture the spirit of the discussion and should not be interpreted as a transcript. Although Ed-Fi Alliance staff were involved in capturing these observations, the notes below should not be construed as official, complete, or 100% accurate.

Presentation by Shannon Kerlick [X] and Silvia Jones (old account)

The slide deck will be posted. These notes will just cover highlights and discussion.

Is this a PaaS or IaaS approach?

- Current Azure solution is PaaS and AWS solution on IaaS.
- These are not definitive approaches.
- Concerned about LEA staff having time & expertise for deployments, so just looking for models that can simplify. Ultimately want “push button” deploy.

Tarun Verma from AWS

- CloudFormation template to deploy the stack
  - Includes virtual private cloud (VPC), encryption in transit and at rest
- Amazon K-12 solution architects can help integrate

What about the limitation of having a local database?

- That is only for local development - production deployments should run SQL separately from the application.

Does anyone have a limitation where cloud is not an option?

- Michigan data hubs
  - 5 production facilities hosting LEA’s
  - VM templates and Octopus deploys
  - Starting to consider cloud deployment alternative
  - Districts are protective of data and fear having their data in the cloud
  - No actual restriction, just the fear
- Many are already using Office 365, which is putting data on the cloud whether people actively realize it or not.
- How well does it work when you have various hosted source systems - will they be able to communicate with ODS in the cloud?
  - Extensions particularly a challenge
  - Should be able to link networks with the cloud provider
  - Tarun: AWS cloud can setup connection that looks just like it is on your network

What are some of the differences between AWS and Azure?

- Auto-scaling of Azure SQL
- Admin app in Azure is better right now, but AWS is working to bring it to parity
- Orchestration functionality is different.

Extensions?

- In theory you could have an integration platform for pushing your extension packages into testing
- Challenges around dev / staging (copy of production data for acceptance testing) / production process

Deployment considerations?

- Would it be useful for Ed-Fi Alliance to make binaries & deploy scripts available?

- Is there a desire for an on-premise installer (e.g. msi package)?
- Containers?
    - Minor deploys in particular would be easier with containers. Couple of dozen hands went up in support of containers.
    - Would need to answer some questions around how to separate or bundle components (e.g. separate IIS / SQL / MSMQ containers? Using PODS?)
    - Yes, there would be a learning curve to this.
    - Purpose for cost management?
    - Local pilot testing and data center or cloud deployment with repeatable deployment process when using these images.
- Any testing on Linux SQL Server (container solution)?
- Any consideration of open source SQL platforms?
    - Development costs probably high
    - Harder to bake-in performance tuning