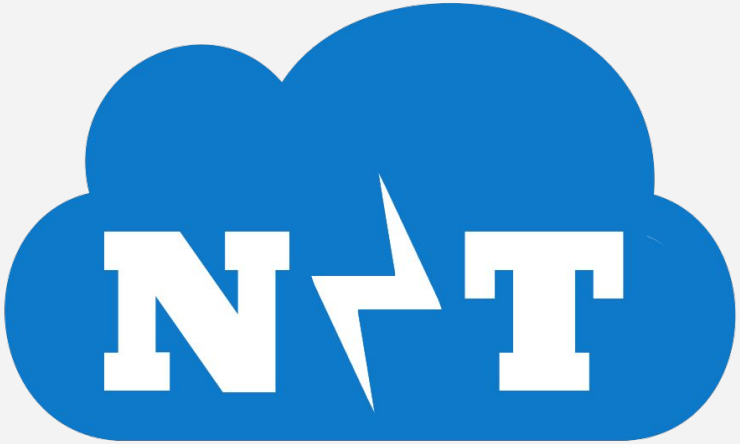


Nimbus Technology

Itreau Bigsby, Matthew Cocchi,
Richard Deen, Benjamin George
Mentor: Austin Sanders

Data Storage

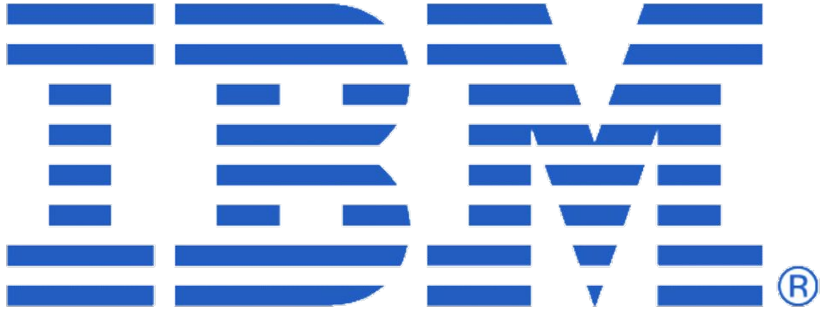
- Project's Scale:
  - Giga/Terabytes of data stored
  - Hundreds, thousands of AWS requests per month
- Main Problem Parts:
  - Cost per month
  - Cost per interaction

PUT, COPY, or POST Requests	$0.01 per 1,000 requests
GET and all other Requests	$0.01 per 10,000 requests

	Standard Storage
First 50 TB / month	$0.026 per GB
Next 450 TB / month	$0.025 per GB
Over 500 TB / month	$0.024 per GB

The Client: Daniel Boros (IBM)

- NAU alumni
- Senior Software Developer
- Spectrum Protect Server Development: Services for data hosted on AWS



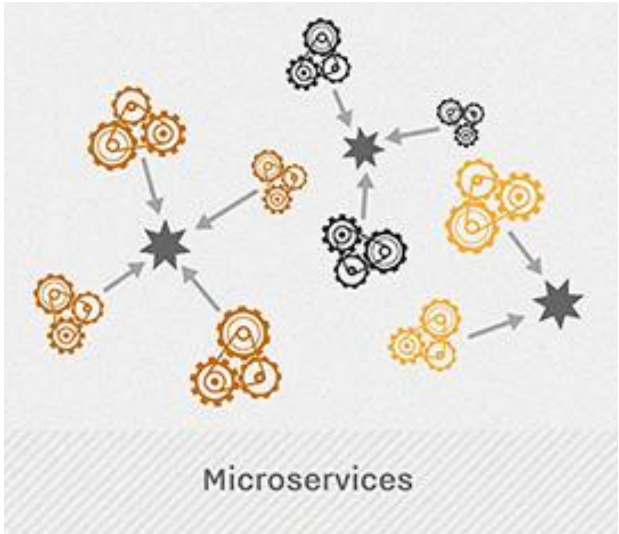
Spectrum Protect: Current Issues

Monolithic:

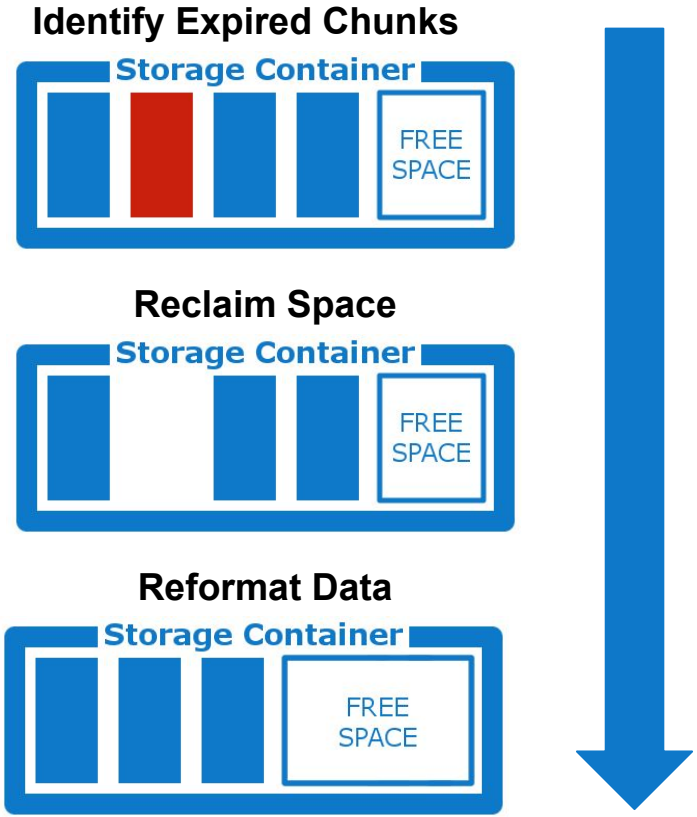
- Clunky
- Heavy
- Dependencies

Microservices:

- Cleaner
- Lightweight
- Less dependencies
- Modularized



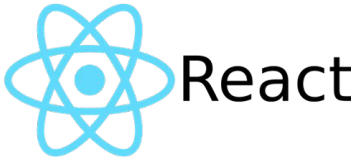
The Solution: Cull Expired Data



- **Backend:**
  - Abstracted microservice
  - Analyzes storage data
  - Culls expired data
  - Reformats database
  - Services many containers
- **Frontend:**
  - Web application
  - Displays analytics

The Plan:

- **Frontend:**
  - Web application
  - React.js: reusable components
  - D3: data visualization
- **Backend:**
  - Continuous microservice
  - Golang: multi-threading
  - Amazon Web Services API



Conclusion

- Nimbus Technology, with Dan Boros at IBM
- Client's cost of storing data on AWS
- Monolithic vs. microservices
- Solution: cull expired data
- Go, React, D3