

MICHIGAN STATE

U N I V E R S I T Y

Alpha Presentation

AWSome Availability Zones

The Capstone Experience

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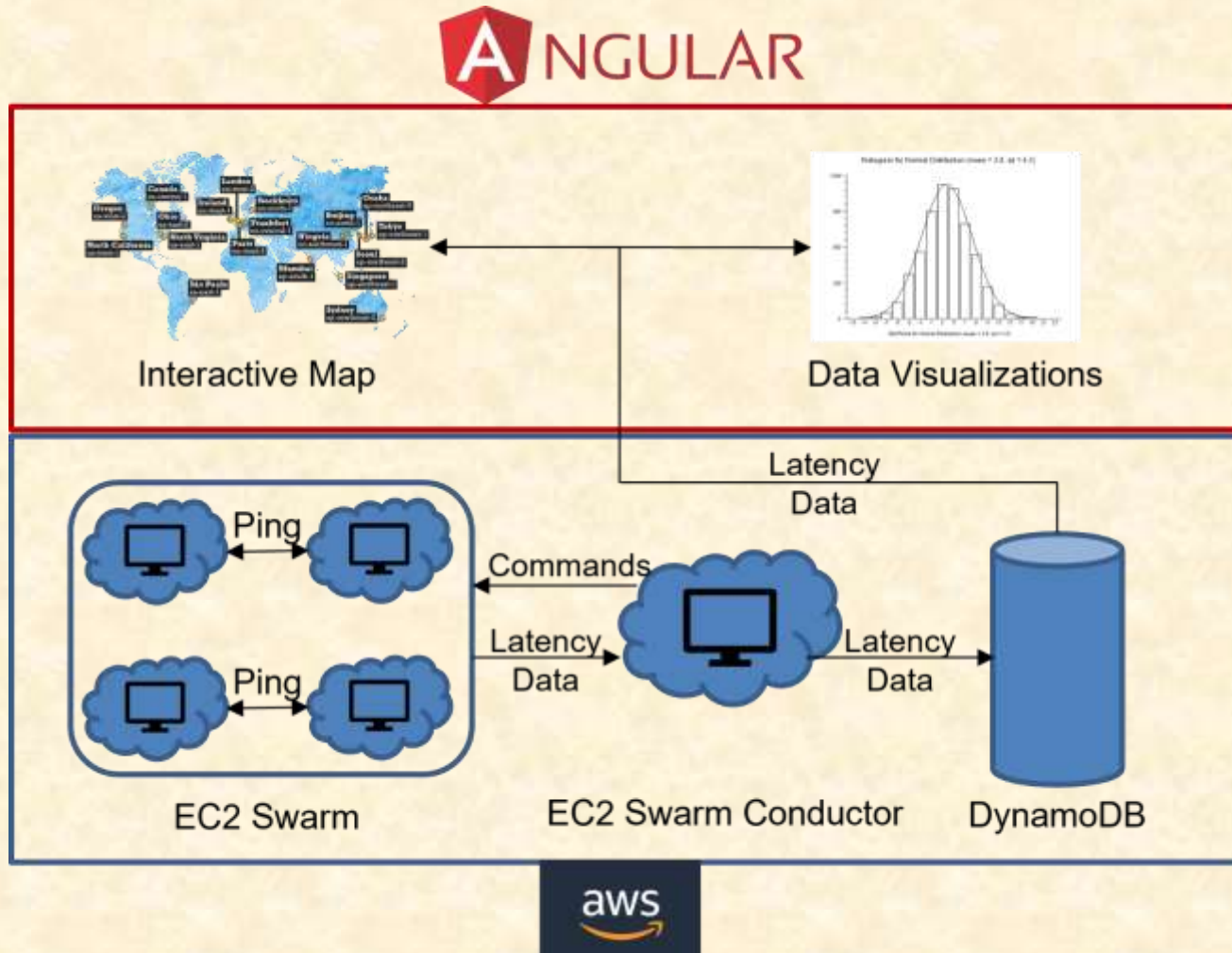
*From Students...
...to Professionals*

Project Overview

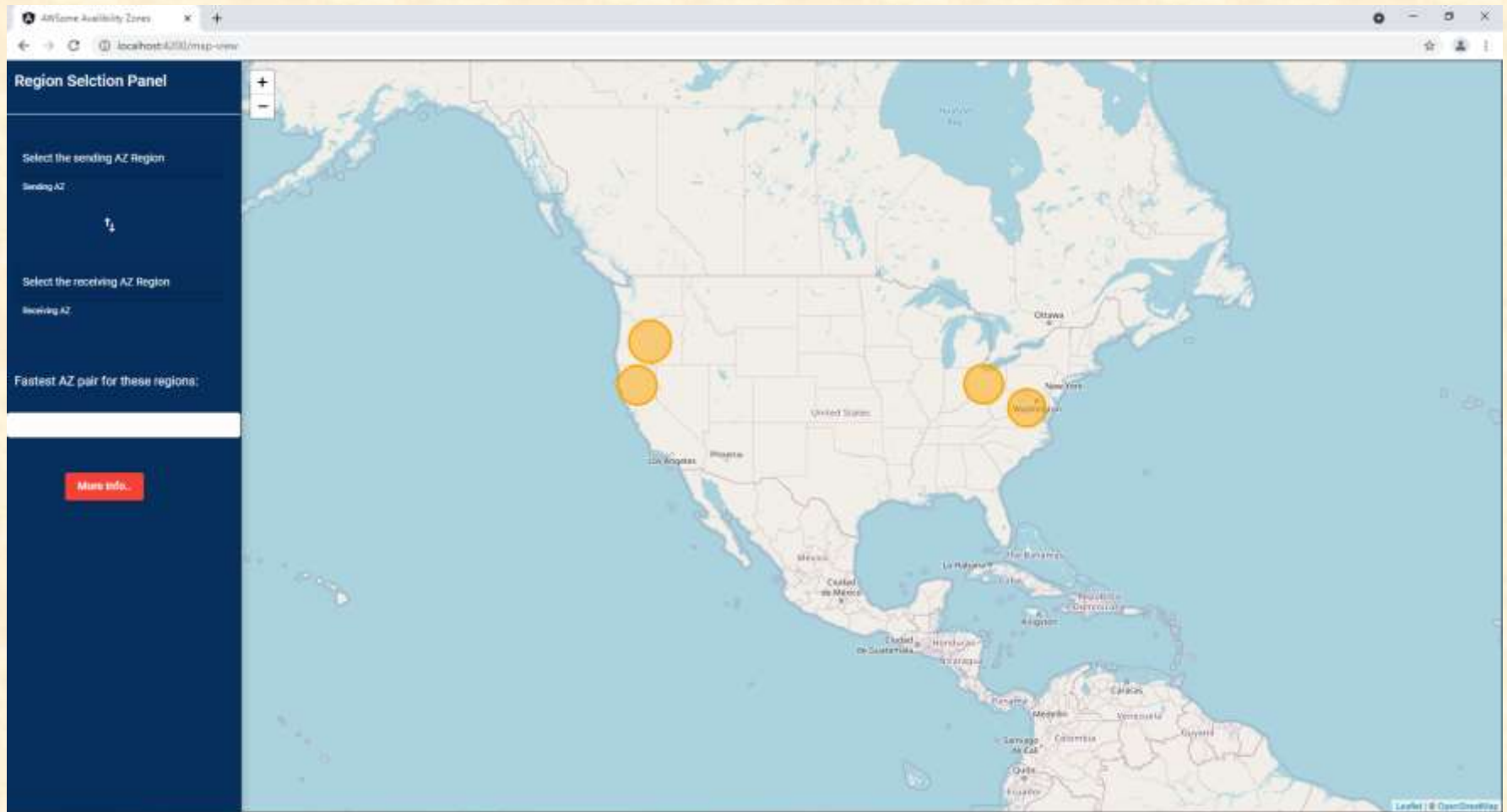
- Create an open-source tool that...
 - Automatically measures network latency between AWS data centers around the world
 - Provides all AWS customers with an easy-to-use visualization of this latency data
 - Allows experienced AWS customers to quickly answer questions about their specific use case



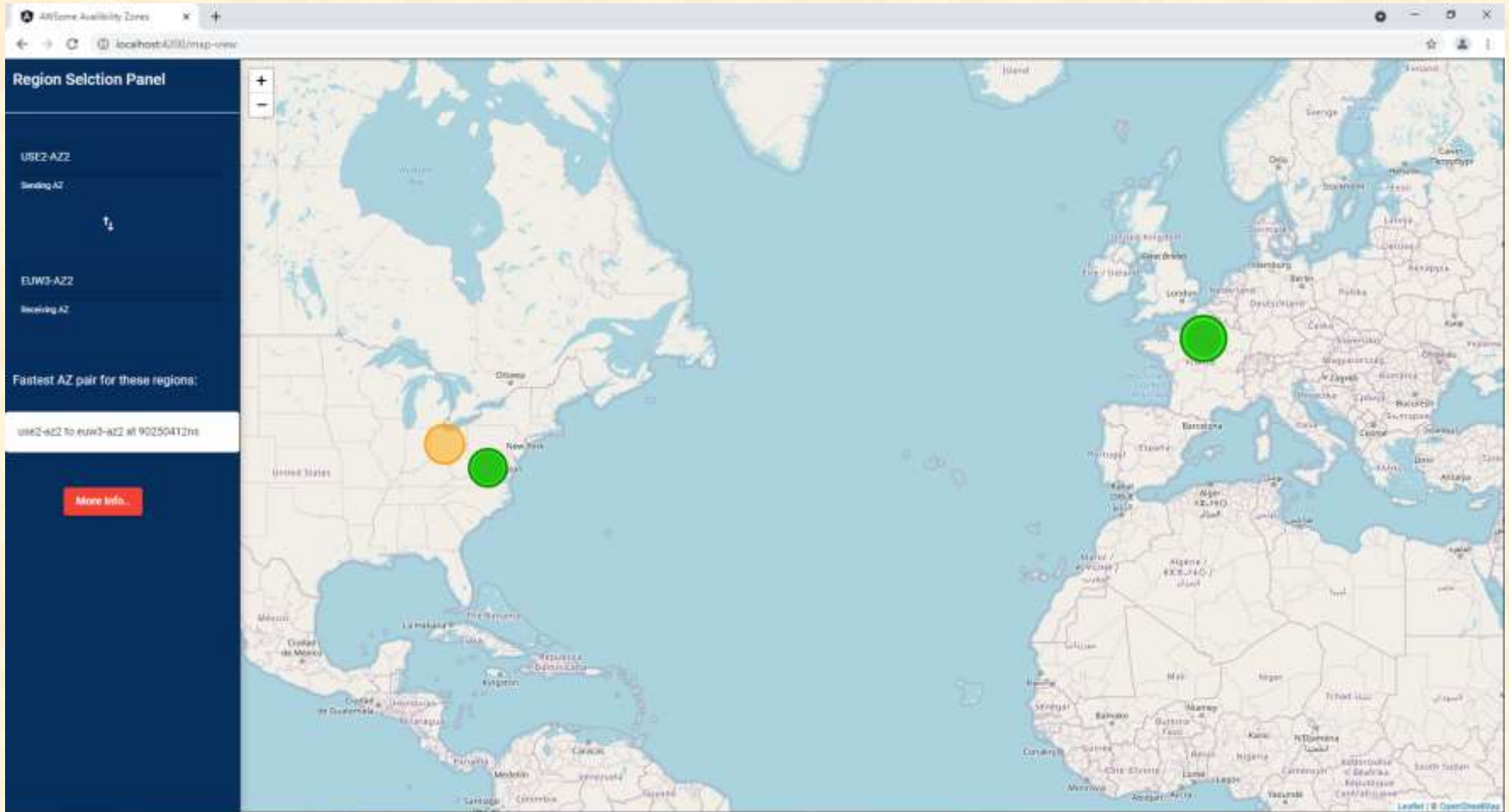
System Architecture



Initial Map View



Map View after selections



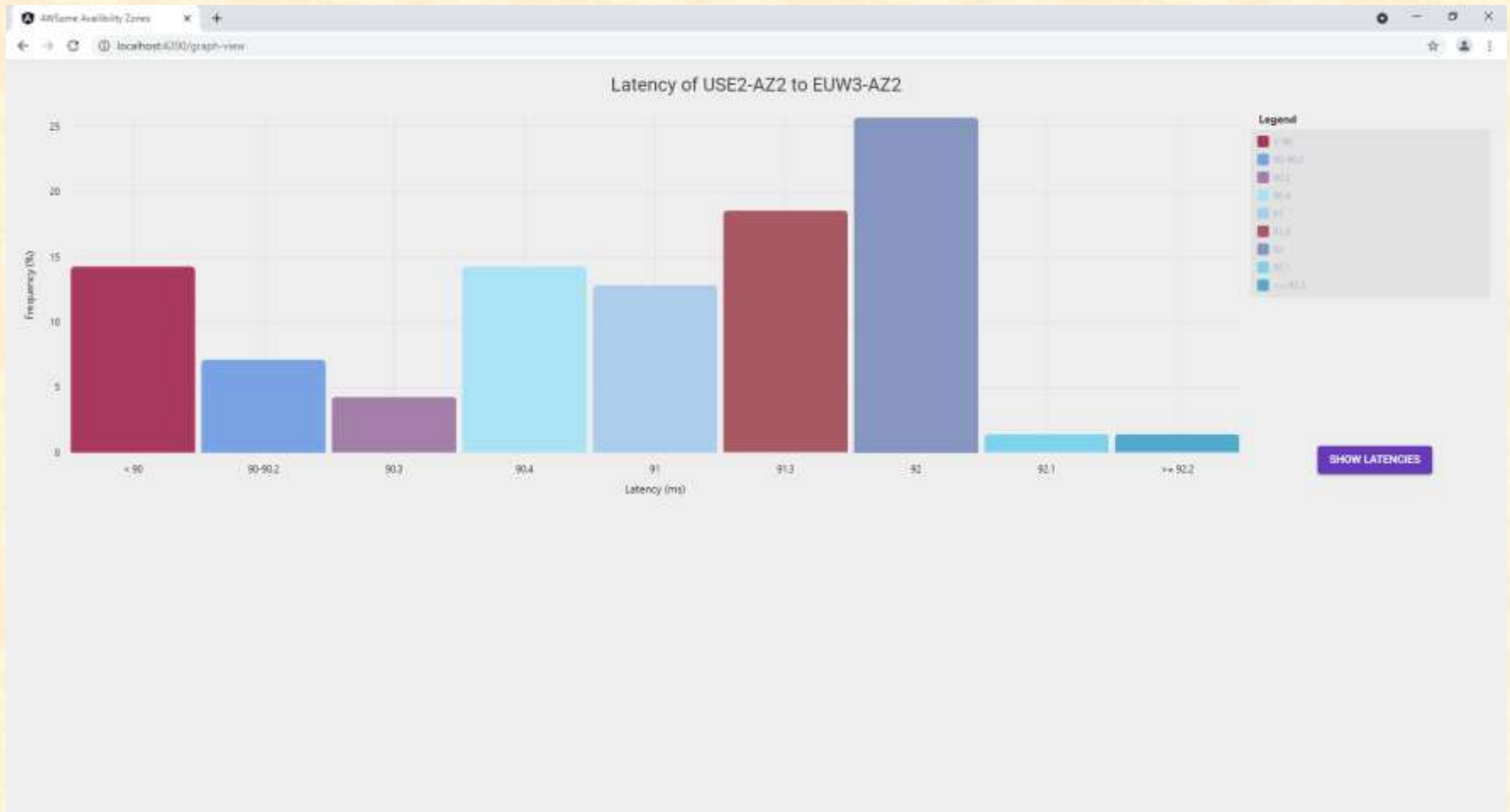
List View

The screenshot displays the AWS IAM console's 'Availability Zones' page in list view. On the left, a 'Region Selection Panel' allows filtering by region and availability zone. The main table lists various Availability Zones with their status, source AZ, RTT, time stamp, and resume time.

Status AZ	Source AZ	RTT	Time Timestamp	Resume Time
use2-az2	euw3-az2	92036163	1634181362612228900	8854974
use2-az2	euw3-az2	92057380	1634181362726435600	0
use2-az2	euw3-az2	92079840	1634181362822659600	0
use2-az2	euw3-az2	92056227	1634181362919277300	0
use2-az2	euw3-az2	92072746	16341813630117159600	0
use2-az2	euw3-az2	92108842	1634181363113915100	0
use2-az2	euw3-az2	92224494	1634181363210332400	0
use2-az2	euw3-az2	92068038	1634181363307105800	0
use2-az2	euw3-az2	92052075	1634181363403771000	0
use2-az2	euw3-az2	92058128	163418136350289300	0
use2-az2	euw3-az2	92036496	1634242923382929400	4292981
use2-az2	euw3-az2	91985036	1634242923710660000	0
use2-az2	euw3-az2	92062069	1634242923806751300	0
use2-az2	euw3-az2	92019367	1634242923903093200	0
use2-az2	euw3-az2	92014213	1634242923999322600	0
use2-az2	euw3-az2	92071320	1634242924095737900	0
use2-az2	euw3-az2	92029025	1634242924191857400	0
use2-az2	euw3-az2	92032122	1634242924287766300	0
use2-az2	euw3-az2	92024872	1634242924384046000	0



Graph View



What's left to do?

- Scale up back-end deployments (monitor all AZ pairs)
- Polish front-end visuals + add more navigation options
- Include “welcome” screen explaining the page’s content
- Populate interactive map with all 21 supported Regions
- Consider alternative OS options for Swarm Instances
- Add mechanism for controlling frequency of data collection to Swarm Conductor



Questions?

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System Architecture (Raw PointPoint)

