

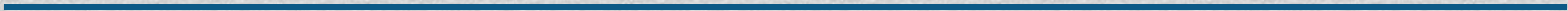
State Project Presentations

rkansas

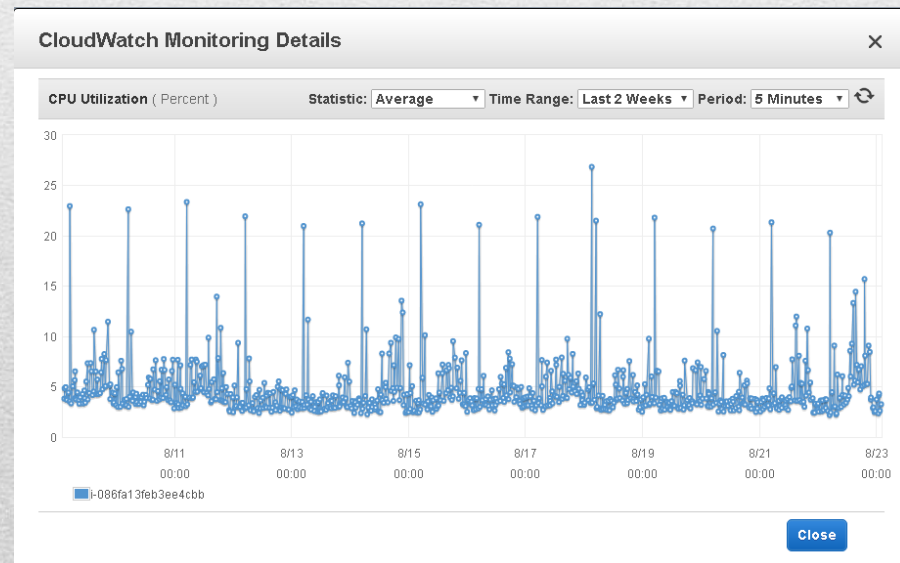
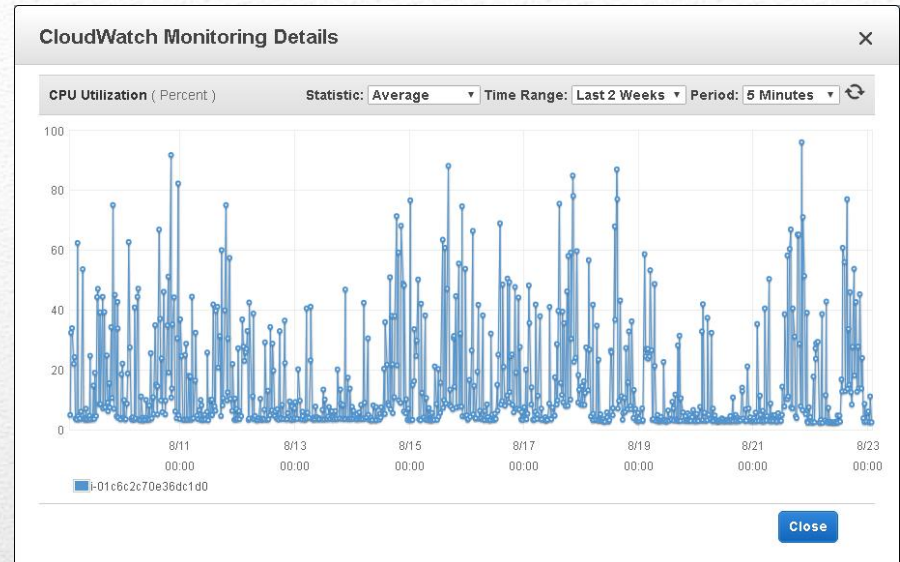
2017 MAGIC GIS Clearinghouse Summit

August 23 & 24

Starved Rock State Park



- Scale Out AWS architecture
 - Reduce EBS volume footprint
 - DB Server Dedicated Machine
 - Rest service resource utilization
 - Web Server performance affected
- ArcServer 10.2.2 to 10.5
 - 3 yrs since last upgrade personnel turnover
 - Administer by configuring
 - Leverage S3 for image service...



- Arkansas Digital Ortho Project
 - AWS EBS Volume GP2 - \$100.00 per TB
 - AWS S3 Low Access Storage - \$23.00 per TB
 - Total Project 8.5TB –1ft Projected MrSID extrapolated file size 2TB...
 - 14 Counties 1FT/6IN 272 GB mostly 20/15:1 MrSID MG2/3 Wavelet
 - ESRI Optimize Raster – Same Quality & Performance –tradeoff for size in respect to storage medium and reduced compute read/write
 - 2 Formats available
 - MRF & TIFF
 - Meta Raster Format – NASA developed format for low access storage staging
 - Tagged Image File Format – its been around awhile
 - Cached with XML based proxy (pointer)
 - Host machine file requirements miniscule
 - With Mosaic overviews < 10GBs including cache
 - Default compression templates
 - LERC & JPEG
 - LERC ESRI developed
 - JPEG Open Standard
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• Workflow Observations

- LERC not optimized for use case, more for elevation data
 - JPEG compression lackluster compared to Wavelet
 - Uncompressed GeoTIFF 390MB → MRF – JPEG 59% 230MB
 - Compressed 286MB 40:1 MrSID 7MB → MRF –JPEG 19% 55MB
 - Quality reduction from applying compression to something already compressed
 - Statewide 1FT GeoTIFF 6.5TB → 59% MRF 3.8TB
 - 6.5TB 40:1 MrSID 160GB
 - \$87 per month to serve sourced on S3 vs \$16 per month to serve on EBS
 - Projection unable to account for 40:1
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Questions?
