

# 2023 DIR Discover Breakout Session:

Managing a Hybrid Cloud Network Transition

# Managing a Hybrid Cloud Network Transition

Hybrid Cloud Connectivity (HCC) Project

September 22, 2023



Texas Department of Information Resources

Transforming How  
Texas Government  
Serves Texans

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# Agenda

Network Background

Problem Statement/Suggested Solution

Network Connectivity Diagram

Challenges

Successes

Additional Successes from Project

Milestone Timeline

Questions

# Network Background

## Data Center Network (DCN) – Pre-2020

- DCN ring used for replication, cross data center communications between private and public cloud environments
- Data Center Services (DCS) tools management provided via DCN

## NextGen DCS

- In 2020 with NextGen DCS, responsibilities for private cloud and public cloud were separated
- Current Cyrus One contract expiration date: September 2023

# Status: DIR Managed Proposal

## Problem Statement Public Cloud Connectivity:

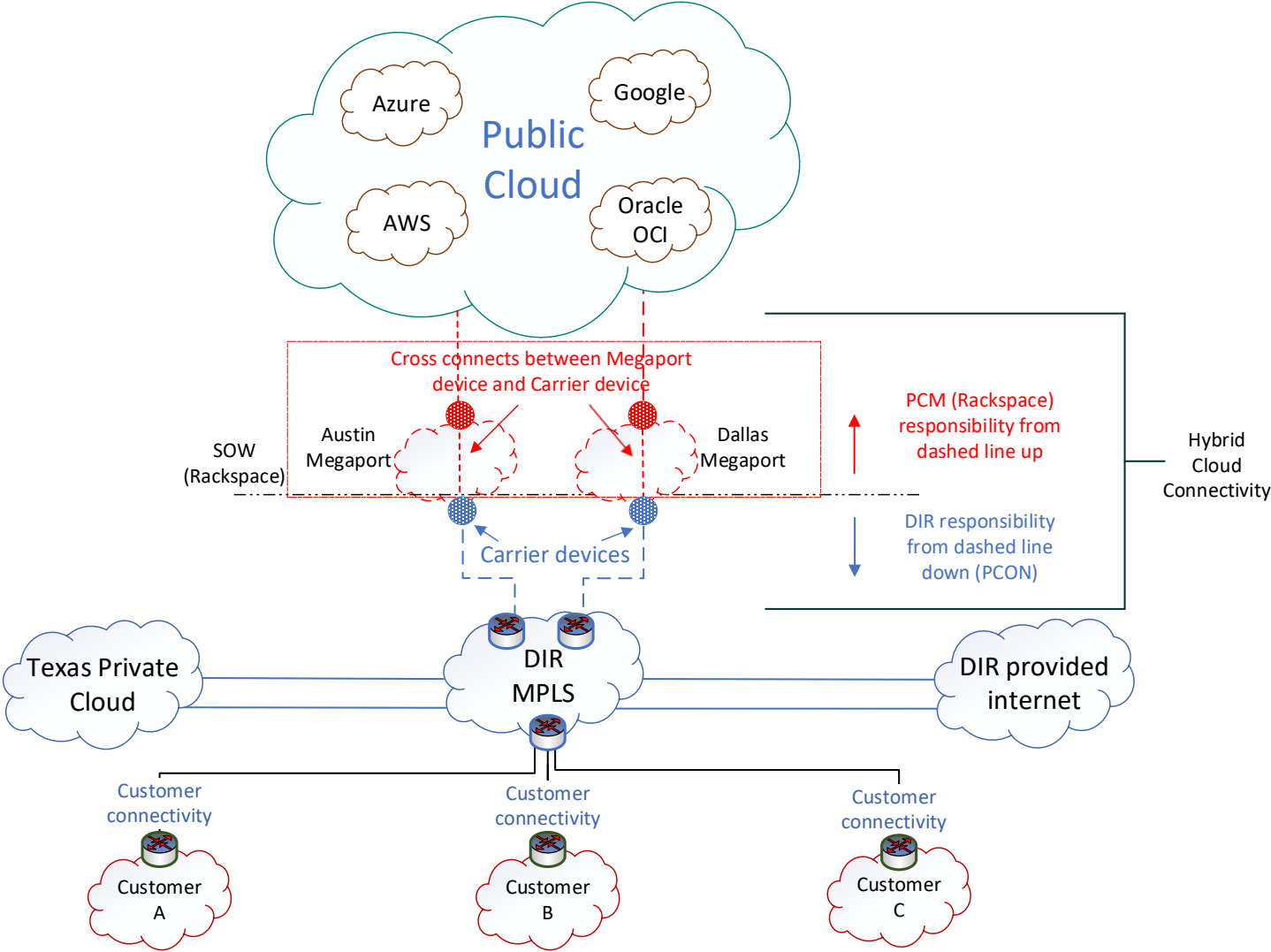
- Texas Private Cloud (TPC) replication services and Public Cloud Manager (PCM) cloud services are provided via the Data Center Network (DCN).
- The DCN is comprised of Cyrus One backbone equipment and TPC hardware.
- The Cyrus One contract expiration date is September 27, 2023.
- The contract had no available options for renewal or extension to the current agreement.

## Suggested proposed solution to replace the replication and cloud services on the DCN prior to expiration of the Cyrus One contract on September 27, 2023:

- Replication services to be migrated onto Texas Department of Information Resources (DIR's) Multi-Protocol Label Switching (MPLS) backbone
  - Obtain official quotes for replication circuits; timeline; cost
- DIR managed solution – to solve cloud service connectivity

# Communications Technology Services (CTS)

## Hybrid Cloud Connectivity (HCC) Project - Diagram



- This design will reduce the complexity of routing agency's traffic destined to the Public cloud through our Texas Private Cloud provider.
- Targeting installation completion and customer migrations by end of Sept. 2023

# Challenges

## Ability to complete migration prior to the contract expiration on 9/27/23

- Investigate option of obtaining emergency extension on CyrusOne contract
- What happens if customer traffic is not migrated before expiration date

## Supply Chain – Issues with global material logistics

- Material orders typically take months, sometimes longer
- DIR was not exempt from experiencing the same extended delays due to a global pandemic

## Coordination with Agencies to schedule acceptable migration timeslots

- Willingness of agencies to migrate traffic during active legislative session
- Potential for the Governor to call for a special legislative session
- Limited manpower available during the standard maintenance windows

# Successes

## DIR Self Performed

- Work was done more efficiently resulting in better quality product
- Reduced expenditures caused a lower overall cost
- Team proactively resolved issues before they became problems saving time overall
- Ability to use DIR-A for the pilot migration (beta customer) during the learning curve

## Customer communication

- Technical Information was conveyed via a Webinar to inform the customer
- Meetings were held to answer customers' pending questions & give updates about the process

## Flexibility of Migration Schedule

- Stood up a parallel path for circuits – which minimized downtime
- Ability to migrate day/night based on customers' preference, & they participated in testing



# Additional Successes from the project

## Excellent Project Team was critical to a successful outcome

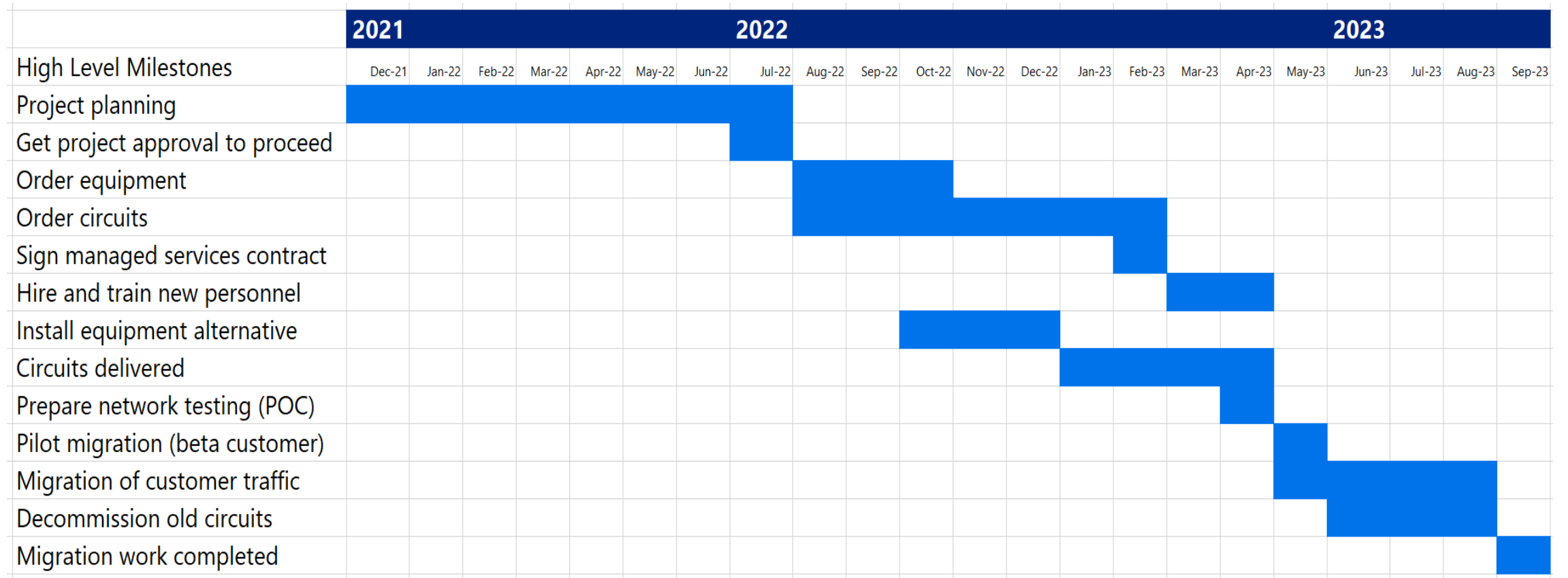
- Using experienced technicians helped the knowledge transfer to new contractors
- Early training of manpower resources was beneficial to being more effective
- Dedicated workers were very collaborative in the process to get the job done
- Thus, the team worked well together resulting in a better-quality product
- Early lessons learned were implemented to improve the migration process
- Superior skillset of DIR technical staff and their willingness to assist when needed
- Allowing the customers to chose their own migration time and day
- Strictly maintained the overall timeline and enforced the migration deadline to help comply
- Outstanding help from the Enterprise Relationship Manager (ERM) – DIR employee
- Additional help from the Customer Relationship Manager (CRM) – vendor employee
- Team was able to focus on migration of one agency at a time instead of multiple

# Additional Successes continued

## Persistent attention to details helped for a successful outcome

- Ensuring approvals were achieved in a timely manner.
- Ordering network equipment early as possible to minimize effect of shipping delays
- Implementing an alternative option to mitigate extended lead time for equipment
- Tracking of all the tickets related to migration and decommissioning of related circuits
- Starting the project early was paramount to on-time completion
- Emphasizing the need for customers to have their test plan available before migration
- Coordinating with vendor early enough to allow 30-day to remove equipment from sites
- Encouraging the customers by informing them of the project status
- Dissuading the potential option of doing multiple migrations and being distracted

# Milestone Timeline



# Questions?



# Thank You

Gerardo Lopez  
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