DIR Shared Technology Services

STS for Local Governments – Data Center Services for Texas Cities

July 27, 2022

Agenda

1. Introductions and STS Overview
2. Public Cloud Manager
3. Texas Private Cloud
4. Print, Mail, and Digitization
5. Learn More and Join Us

Introduction and STS Overview

Elise McCullough

MSI Outreach and Growth Consultant, Capgemini

DIR Shared Technology Services Model

Multi-sourcing Services Integrator (MSI)

- Marketplace
- Service Management
- Business Management
- Operations Management
- Customer Relationship Management

Data Center Services

- Texas Private Cloud
- Public Cloud Manager
- Mainframe Services
- Technology Solution Services
- Print, Mail, & Digitization
- Security Operations

Texas.gov

- Constituent Payment Portal
- Texas by Texas Digital Assistant
- Identity Solutions

Managed Security Services

- Device Monitoring
- Incident Response
- Assessments

Open Data Portal

- Official State Repository of Publicly Available Electronic Data

DIR Shared Technology Services:
Data Center Services

Multi-sourcing Services Integrator (MSI)
Capgemini

- Marketplace
- Service Management
- Business Management
- Operations Management
- Customer Relationship Management

- Privileged Access
- Policies & Standards

DCS Security Operations
SAIC

- Active Threat Identification
- Security Incident and Event Management

Technology Solution Services (TSS)
Deloitte

- Technology Planning
- Reference Architecture
- Solution Consulting
- Project Delivery

Application Services
Deloitte

- Application Development
- Application Maintenance
- Legacy Modernization
- Staff Augmentation

Private Cloud
Atos

- Managed Server Compute
- Managed LAN/WAN
- Data Center Facilities

Public Cloud Manager
Rackspace

- AWS, Azure, Google
- Managed Cloud Services
- Email O365
- Geographic Information Systems

Mainframe
Atos

- Managed Mainframe Services

Print, Mail, and Digitization
Xerox

- Managed Print & Mail
- Digitization
- Document Management System

Public Cloud Manager

Joe Nanus, Rackspace

Public Cloud

The Public Cloud Manager will provide computing services, technical and security assurances, and onboarding of public cloud services (commercial and government) through AWS, Azure, and Google.

WHAT'S NEW: Public Cloud service delivery with a focus on aligning the DCS Operating Model with Industry Best Practices. Leveraging Cloud Native tooling, the DCS Cloud Service model is poised to align to the value of Cloud Service Providers by evolving capabilities with investment in Service Evolution of the Public Cloud.

Overall Value

Expanded Public Cloud model to deliver Infrastructure as a Service (IaaS), Platform as a Service (PaaS) and Software as a Service (SaaS) built for and within the Public Cloud to leverage the full benefits of Public Cloud services with the security assurances of DCS.

How you benefit:

- Technical and Security Program assurance of new and existing Services
- Expanded ability to leverage public cloud services
- Cloud center of excellence guidance and support

Choice

Full operational support for IaaS, PaaS and SaaS Offerings to meet the varying support needs by Customer

How you benefit:

- Leverage the best workload hosting strategy for each use case and find the right capability in the right platform at the right Service Tier based on Customer requirements
- Program that will keep pace with cloud service provider evolution of capabilities

Competitive Price

Reduce operating expense by automation, focus on proper service alignment and improved self service

How you benefit:

- Maximize Public Cloud advantage of capabilities and price inherent in Public Cloud use cases
- Standardized Instance Scheduling to turn on/off systems to reduce operating expenses within the Public Clouds
- Daily managed services support rates

Public Cloud Service Tiers

IaaS Sandbox

Benefits & Included Security

- Cloud Native Logging
- Operating System Logging
- MSFT Cloud Application Security
- Verodin Security instrumentation Platform.

Note -

No application layer management

IaaS Semi-Managed

Benefits & Included Security

- Cloud Native Logging
- Operating System Logging
- MSFT Cloud Application Security
- Verodin Security instrumentation Platform.

But wait there's more….

- Armor Anywhere Endpoint Security
- BigFix Patching & Compliance
- CrowdStrike AV

Note -

Customer retains admin rights of OS.

No application layer management

IaaS & PaaS Fully Managed

Benefits & Included Security

- Cloud Native Logging
- Operating System Logging
- MSFT Cloud Application Security
- Verodin Security instrumentation Platform.
- Armor Anywhere Endpoint Security
- BigFix Patching & Compliance
- CrowdStrike antivirus (AV) & Host Intrusion Prevention (HIPS)
- Twistlock Container Patching & Compliance

(Optional)

- Imperva Web Application Firewall
- Application, Middleware, and Database Monitoring/Support.

Note -

PCM retains admin rights of OS.

No application layer management

Benefits for Cities

- **Reduce the Cost of IT solutions**
  - Multicity, department collaboration
  - Futureproof
- **Drive Success and Solutions for your constituents**
  - Augment your team with the DCS program
  - Service Providers are ready to help with training for city resources.

- **Additional Benefits**
  - Pay only for what you use, eliminating oversubscriptions or capacity planning.
  - Continued optimization to determine additional cost savings around spend and solutions being utilized.
  - Additional data insights and results from multiple local government entities
  - Security, Security, Security.
  - Flexibility, Scalability, Performance-driven, and focused on cost reduction and optimization.

Remote File Service

Jason Wicker, Rackspace

Remote File Service

- PCM is now able to provide Remote Cloud Based File Service
  - This replaces the previous remote file offering

- Features include
  - On Prem File Synchronization
  - Multiple levels of storage class (Archive, Hot, Cold, Premium, etc.)
  - Ability to have multiple types of storage pools against a single file source
  - Available in AWS and Azure
  - Built with reference architectures
  - Secure point to point encryption available
  - Low cost to entry, low cost to manage
  - Infinitely scalable - storage pools can be configured to expand automatically

Disaster Recovery

Jason Wicker, Rackspace

Disaster Recovery – Benefits with DCS

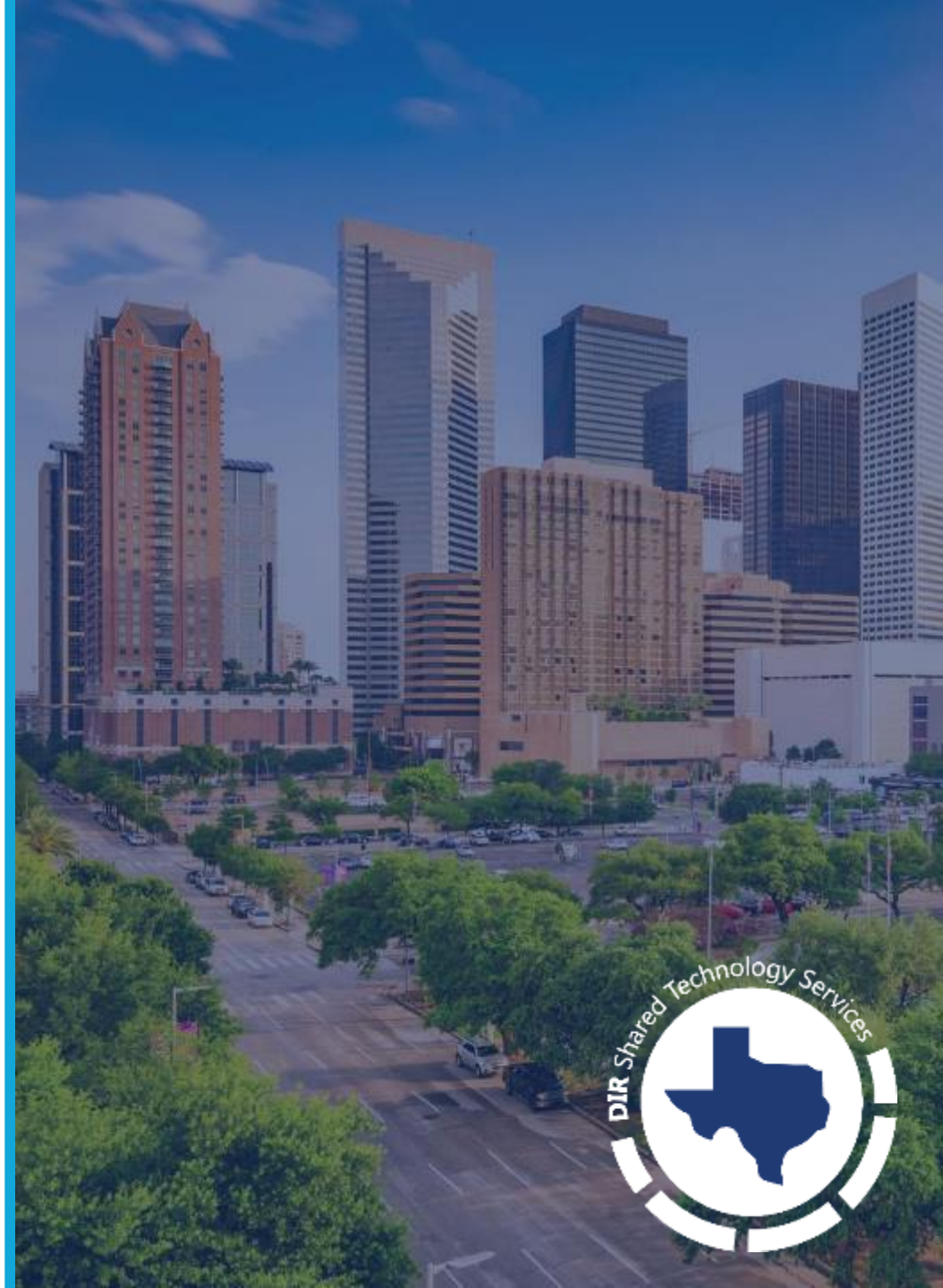
DR Classification and Target RPO/RTO times:

Service	Class A	Class B	Class C	Class D	Class E
Type	Active/Active	Regional Standby	Active/Active in Region	Backup/Restore	Sandbox
Description	Replicated data and load balanced environment across multiple regions. All regions actively taking traffic	Replicated data and services in a second region. Second regions is ready to take traffic via load balancers.	Data is load balanced across availability zones. All IaaS have a failover target. PaaS regional or HA available services.	No in region high availability, IaaS with backups and single instance PaaS	Customer Managed. PCM services to restore are best effort and assistance.
Region	Multi (2 minimum)	Multi (2 minimum)	Single Region	Single Region	Customer Managed
Availability zone	Multi (2 minimum)	Single/Multi	Multi (2 minimum)	Single Zone	Customer Managed
RTO	Real Time	< 1 Hour	< 8 Hours	< 5 days	Best Effort
RPO	Real Time	< 15 Minutes	< 4 Hours	< 24 hours	Best Effort

*RTO=Recovery Time Objective - time from disaster declaration to the actual server handover to application team
*RPO=Recovery Point Objective - point in time of data recovery

Texas Private Cloud

Margie Powers, Atos



Texas Private Cloud (TPC)

Enterprise & Business Value

Texas Private Cloud

Secure, Scalable, Agile, Affordable

Texas Private Cloud (TPC) is a key initiative for Shared Technology Services (STS) customers to streamline and empower its suite of shared services to efficiently and cost-effectively serve the state's agencies and institutions of higher learning, cities and counties, and opens the door to further innovation and transformation of agency environments to a **next-generation, Smart Cloud first** strategy.

Secure	Scalable	Agile	Affordable
• Two Texas based Tier II data centers • 24/7 Logical and Physical Security Monitoring • Pre-configured Server and Network Security solutions built-in to all Private Cloud Virtual Machines **How you benefit:** • **Texas data remains in Texas** • **No single-points of failure** • **No "guess-work" for Security requirements** • **Device failure won't result in data loss**	• Multiple storage tiers for cost-efficient, fast access based on business needs • Back-Up as a Service and Disaster Recovery as a Service for limited-service customers **How you benefit:** • **Choose what you want and need** • **Smaller agencies can cost effectively access critical services**	• On-demand storage – quick ramp-up based on current business need, such as during COVID demand cycle • Software Defined Network providing more seamless integration between compute, storage, network **How you benefit:** • **Fast access** • **Cost-effective, using only what you need when you need it**	• Dark Capacity, a very cost-effective solution for Disaster Recovery (vs. cost of a redundant server) • Multiple Oracle solutions provide affordable alternatives to physical servers **How you benefit:** • **Multiple compute platforms provide economical and highly performing compute choices**

Texas Private Cloud Disaster Recovery

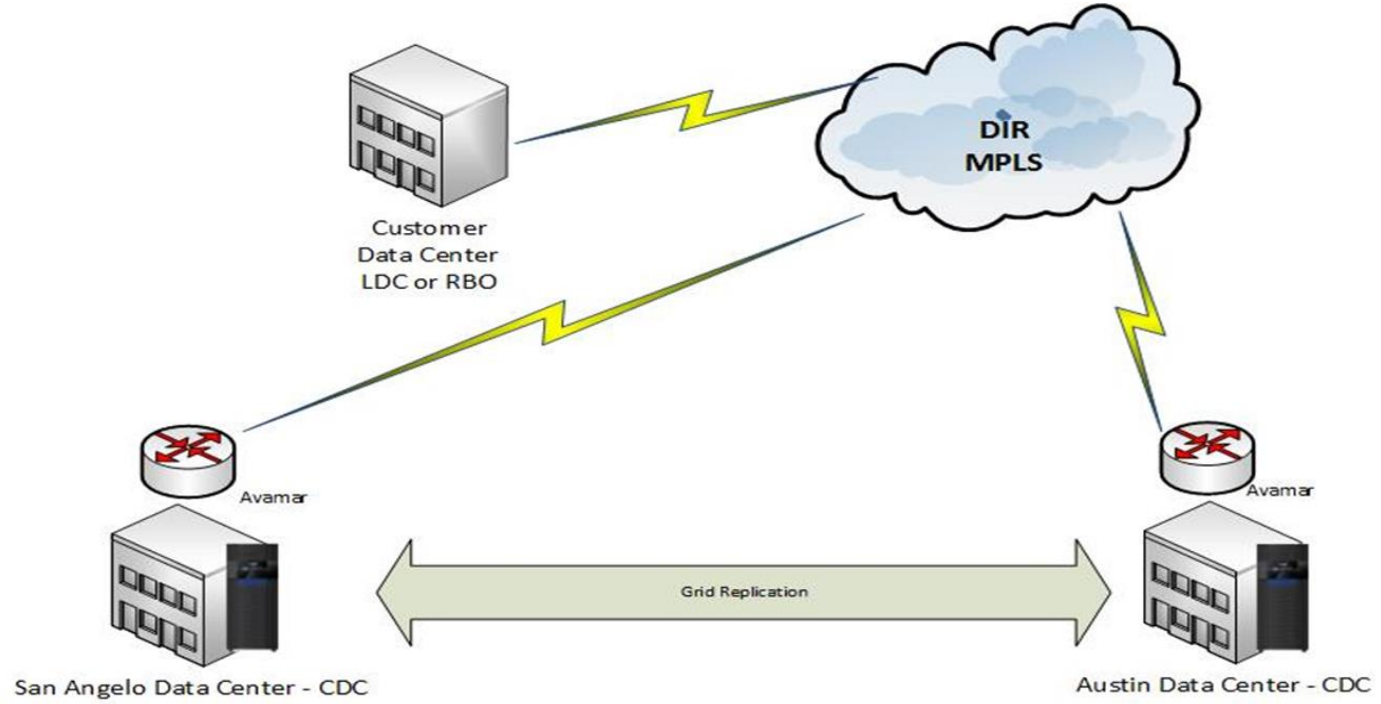
- Texas maintains 2 Uptime Institute Tier II data centers (Consolidated Data Centers/CDC) which host more than 5,000 workloads, including mainframe and Private Cloud
- Atos supports more than 1,000 servers in customer Local Data Center (LDC) and Remote locations
- Data is backed up over the wire to a CDC and replicated to the alternate site for Disaster Recovery (DR)
- Customers perform DR tests throughout the year with assistance from Atos and the MSI

DR Class	RTO	RPO	Description
Class 1	2 hours	2 hours	• Lowest RTO/RPO* • Requires full automation and data replication
Class 2	8 hours	8 hours	• Requires data replication
Class 3	12 hours	12 hours	• Requires data replication
Class 4	48 hours	48 hours	• Backup based recovery
Class 5	Best Effort	Best Effort	• No guaranteed recovery time

*RTO=Recovery Time Objective - time from disaster declaration to the actual server handover to application team

*RPO=Recovery Point Objective - point in time of data recovery

Private Cloud BUaaS – Backup as a Service



Backup as a Service refers to an offering that allows customers to backup their data via the Atos Standard Backup Tools (Avamar/Networker/Data Domain)

Atos will provide the agent which the customer can install

Customer selects the data to be backed up, the backup frequency, and the retention period

Data is backed up over the wire to a Consolidated Data Center and replicated to the alternate site for DR

Dark Capacity – Business Rationale/Overview

- DR Classes 1 – 4 have a guaranteed RTO/RPO - customers know when their server will be recovered and available; DR Class 5 is best effort, no guaranteed RTO/RPO
- Currently, only 17% (674 of 4,009) of the servers in the DCS program have a DR class of 1–4; Industry best practice recommends 50%.

Cost is the reason customers cite most often for not utilizing DR Classes 1-4. In response, Atos and DIR jointly developed a **Dark Capacity** offering.

- Dark Capacity compute/RAM/storage is a reservation for virtual resources to be used for DR tests and an actual DR event.
- Reservations represent dormant capacity until required by a DR event or a DR test
- Customers can use Dark Capacity to serve as the DR targets for servers in DR Classes 2 – 4
- Dark Capacity storage applies only to DR Class 4 (DR Classes 1–3 require replicated storage)
- Both consolidated and non-consolidated servers can make use of Dark Capacity for DR
- Dark Capacity can be used to provide a DR target for a server in DR Class 5 (best effort) if moved to DR Class 4.

The reservation charge is a fraction of what an active server costs, making it a more cost-effective option to strengthen the State's DR position.

Dark Capacity – DR Classification

DR Class	RTO	RPO	Description	Eligible for Dark Capacity
Class 1	2 hours	2 hours	• CDC only • **Dedicated compute** • **SAN/VSAN/Data Replication** • Automated infrastructure recovery • DBMS recovery from replicated SAN/VSAN or Database replication	No, since Dedicated compute is required
Class 2	8 hours	8 hours	• CDC only • **Dedicated/Re-purposed/Dark Capacity compute** • **SAN/VSAN/Data Replication** • Automated infrastructure recovery • DBMS recovery from replicated SAN/VSAN or DB replication	Yes, compute/RAM
Class 3	12 hours	12 hours	• CDC only • **Dedicated/Re-purposed/Dark Capacity compute** • **SAN/VSAN/Data Replication** • Automated infrastructure recovery • DBMS recovery from replicated SAN/VSAN or Database replication	Yes, compute/RAM
Class 4	48 hours	48 hours	• CDC/LDC/Remote/Disaster Recovery as a Service (DRaaS) • **Dedicated/Re-purposed/Dark Capacity compute and Dark Storage** • **Backup based** • Automated or manual infrastructure recovery • DBMS recovery from backup	Yes, compute/RAM/Storage
Class 5	Best Effort	Best Effort	• Consolidated Data Center (CDC)/LDC/Remote • Backup based • Compute/storage at time of disaster (ATOD) • Manual infrastructure recovery • DBMS recovery from backup	No

Texas Mainframe

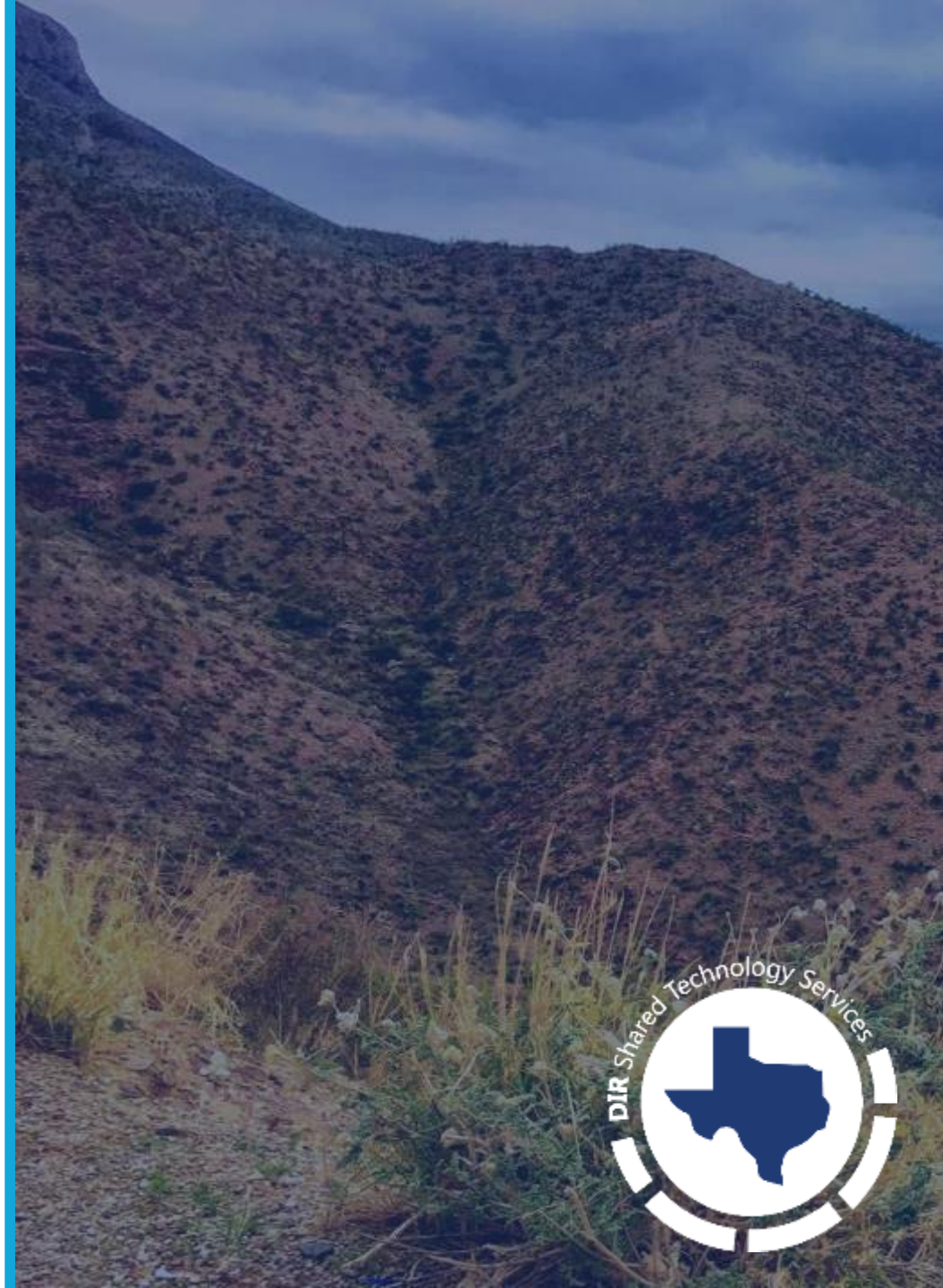
Mainframe
Atos

- Managed Mainframe Services

- Manage **4,000+** millions of instructions per second (MIPS) in 2 consolidated Data Centers
  - State of the Art IBM z15 Technology
  - Physical database management support for multiple database systems
  - All flash, all encrypted at rest, and all fully replicated Storage Area Network/Direct Access Storage Devices (SAN/DASD) Storage
  - Highly scalable and cost-efficient Disaster Recovery
  - Enterprise class Data Protection and Security offerings
- High customer satisfaction and Service Level Agreement (SLA) obtainment
- Highly automated environment
- Cost competitive for application usage
- Experienced Staff providing Infrastructure Management
  - Operating System and Database Software Support
  - Security Support
  - Scheduling and Batch Operations
  - Software License Management

Print, Mail, and Digitization

John Heatley, Xerox



Print, Mail, and Digitization

Print Mail Digitization
Xerox
- Managed Print & Mail
- Digitization
- Document Management System

Digital Delivery
5 M Digital Images
Delivered Monthly

Economy of Scale
30M Pages Printed
10M Envelopes Mailed
10M Envelopes Purchased Monthly

Data Security
Proven Technology
Safeguards PHI,PII & FTI

Operational Transparency
Real Time Job Progress
Posted to STS Portal

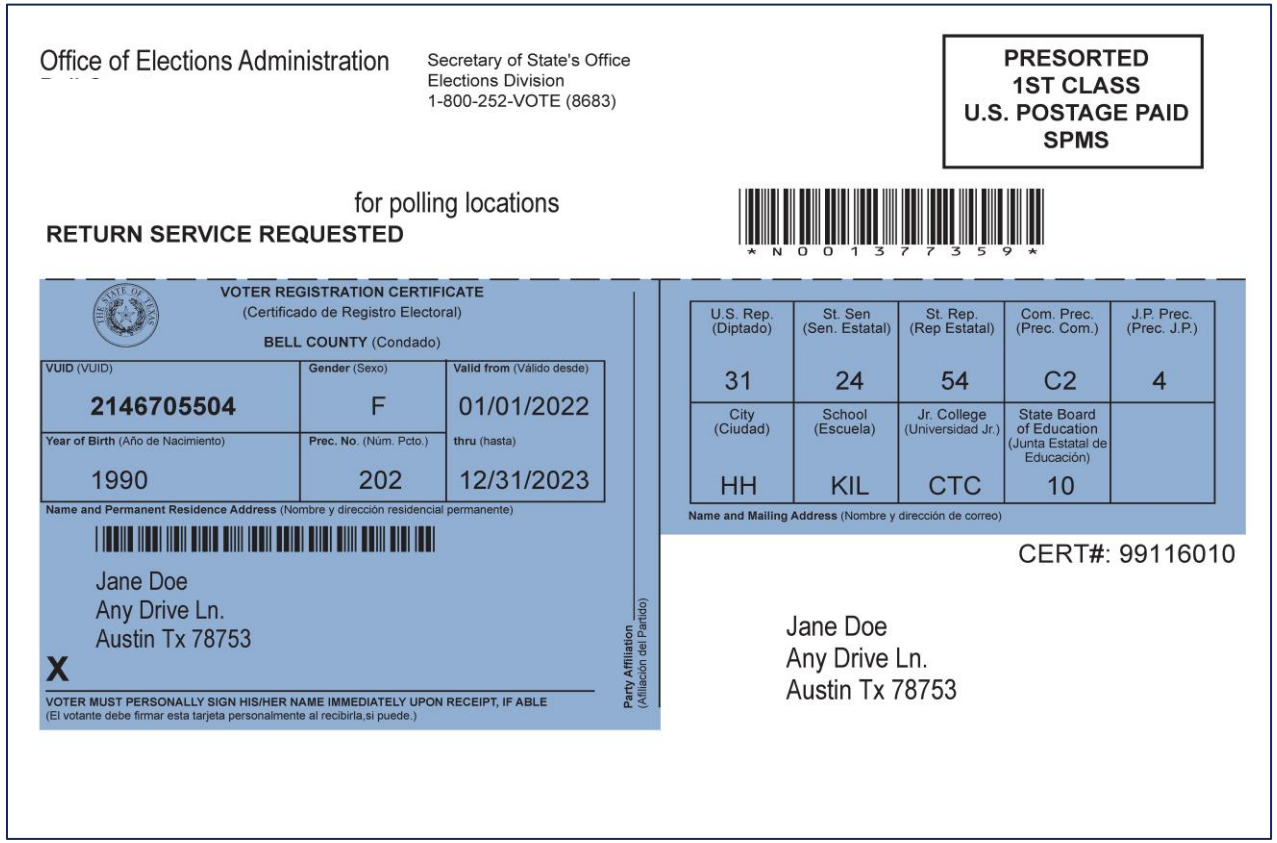
Automated
Technology Deployed to Automate Processing Including Certified Mail and FedEx

Reliable
7X24 Operation
Consistent SLA Performance

Hardened
Fully Tested Disaster Recovery

Case Study Voter Registration

- Merge County data with a voter registration card template.
- Print, cut, presort and mail full color voter registration cards.



Office of Elections Administration

Secretary of State's Office
Elections Division
1-800-252-VOTE (8683)

PRESORTED
1ST CLASS
U.S. POSTAGE PAID
SPMS

for polling locations

RETURN SERVICE REQUESTED

N00137735 9

VOTER REGISTRATION CERTIFICATE
(Certificado de Registro Electoral)

BELL COUNTY (Condado)

VUID (VUID)	Gender (Sexo)	Valid from (Válido desde)
2146705504	F	01/01/2022
Year of Birth (Año de Nacimiento)	Prec. No. (Núm. Pcto.)	thru (hasta)
1990	202	12/31/2023

Name and Permanent Residence Address (Nombre y dirección residencial permanente)

Jane Doe
Any Drive Ln.
Austin Tx 78753

X

VOTER MUST PERSONALLY SIGN HIS/HER NAME IMMEDIATELY UPON RECEIPT, IF ABLE
(El votante debe firmar esta tarjeta personalmente al recibirla,si puede.)

Party Affiliation (Afiliación del Partido)

U.S. Rep. (Diptado)	St. Sen (Sen. Estatal)	St. Rep. (Rep Estatal)	Com. Prec. (Prec. Com.)	J.P. Prec. (Prec. J.P.)
31	24	54	C2	4
City (Ciudad)	School (Escuela)	Jr. College (Universidad Jr.)	State Board of Education (Junta Estatal de Educación)	
HH	KIL	CTC	10	

Name and Mailing Address (Nombre y dirección de correo)

CERT#: 99116010

Jane Doe
Any Drive Ln.
Austin Tx 78753

Sweet Spot for PMD Service

- Letter print and mail (collection letters, Utility Billing, Notices etc.)
- Tax statement print and mail
- Regulated Documents (Federal Tax Information, Personally Identifiable Information and Personal Health Information)
- Digital document delivery to your repository (SharePoint etc.)
- Specialized documents (registration stickers, library cards, voter documents)
- Document composition (apply your data to templates, mail merge)
- Envelope production (avoid supply chain impacts)
- Large volume mailings due to expandable capacity
- Low volume mailings due to fixed pricing based on all State volume.

If you have other requirements contact us, we may be able to help!

Learn More and Join Us

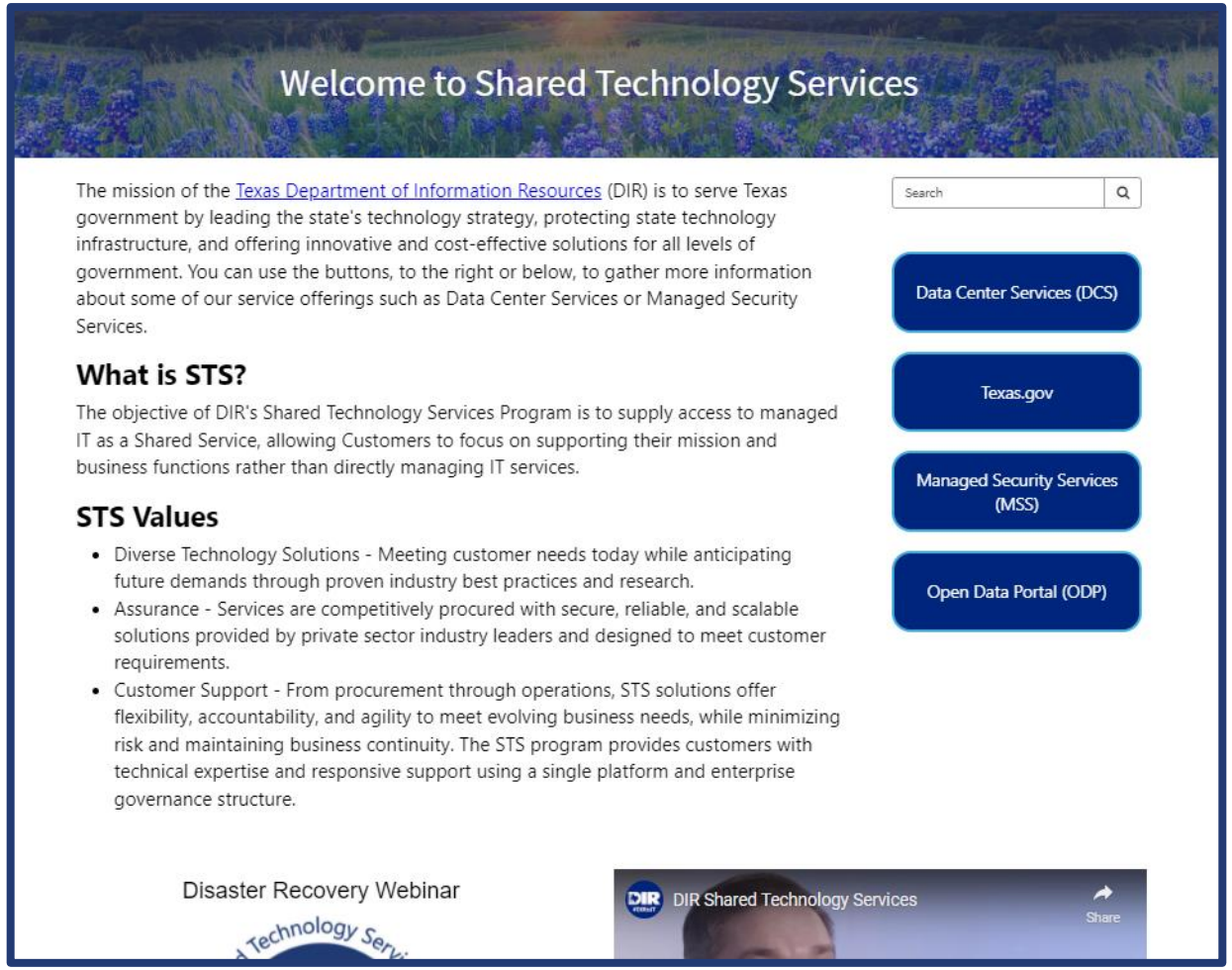
Elise McCullough

MSI Outreach and Growth Consultant, Capgemini

STS External Portal

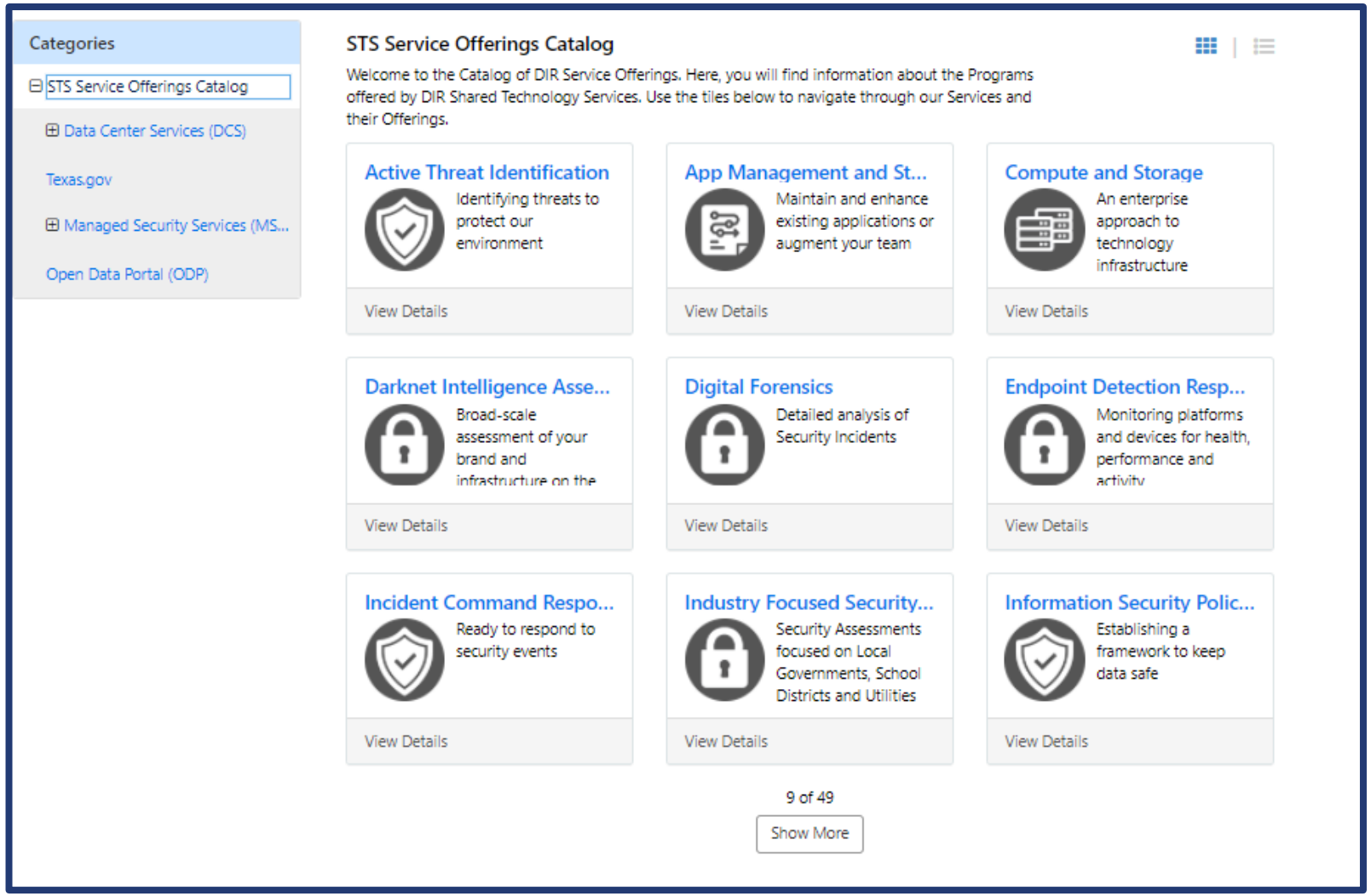
https://dirsharedservices.service-now.com/dir

- Designed for prospective STS customers, including governance (city, county, and state) and higher education
- STS Service Offerings catalog with high-level views and drill-down details
- Publications page featuring previous webinars and other helpful articles
- Eligibility details and sample agreements



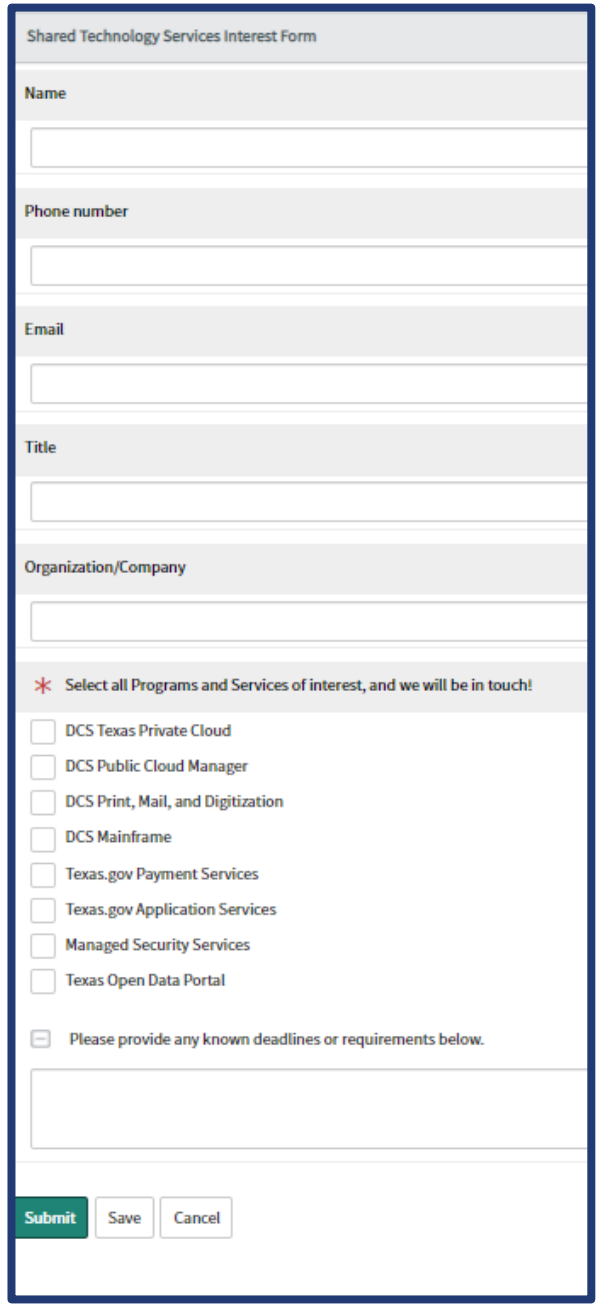
STS Service Offerings Catalog

- Data Center Services (DCS)
- Texas.gov
- Managed Security Services (MSS)
- Open Data Portal (ODP)



Want More Information?

- Prospective Customers: Submit our interest form on any offerings page to be contacted by our team.
  - Select all STS Programs or Services of interest.
  - Provide additional information about your needs to help get your request to the right person faster.
- Current Customers: Submit a Request For Solution (RFS) via the Service Catalog or engage your MSI Customer Relationship Manager.



Eligibility and Contract Requirements

Prior to receiving Shared Technology Services from DIR, all customers must sign either an Inter-Agency Contract (IAC) or an Inter-Local Contract (ILC). In addition, each Program has Terms and Conditions that must be accepted.

Who is eligible?

- State Agencies
- Public Institutions of Higher Ed
- Local Governments
- Public School Districts
- LCRA

Note: Public community colleges are eligible to participate only in Managed Security Services (MSS) and Texas.gov.

Contract Document Previews

- Shared Technology Services IAC
- Shared Technology Services ILC
- Data Center Services Terms and Conditions
- Texas.gov Terms and Conditions
- Managed Security Services Terms and Conditions
- Open Data Portal Terms and Conditions

(Find these on the External Portal's Eligibility page.)

Contact Us

Outreach and Growth Team

outreach.dirsharedservices.nar@capgemini.com

STS is powered by the following providers:

Atos

Capgemini

NIC TEXAS

SAIC

xerox

AT&T

Deloitte.

rackspace technology

tyler technologies