

**Appendix 8 to  
Second Amendment of  
Master Service Agreement**

June 25, 2012



**Attachment to Data Center Services  
Service Component Provider  
Master Services Agreement**

DIR Contract No. DIR-DCS-MSI-MSA-001

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Between

**The State of Texas, acting by and through  
the Texas Department of Information Resources**

*and*

**Capgemini America, Inc.**

**Attachment 4-E  
Service Tier Matrix**

June 25, 2012

The Service Tier Matrix defines the services associated with each tier of service and the entry requirements for each tier of service. It is not intended to modify, supersede or amend any other obligations described in other contract documents, including without limitation Service Provider obligations related to Service Levels, Disaster Recovery, Security or storage.

**Consolidated Data Center (ADC/SDC)  
Tiered Offering**

**Notes:**  
As described in **Exhibit 4**, the Service Tier Matrix is used to categorize designated server category types into a three tier RU structure for support services. For clarity, Server Instance is the RU measure, not servers.  
An Instance classified within a tier will receive the support services as defined by that tier. The level of support for these Instances is described here within the matrix, including the entry requirements, monitoring, storage requirements to enable disaster recovery objectives, and service levels.  
Platinum service is available by procuring two Gold instances and related hardware charges. There are no incremental charges to implement and support high availability (HA) software and any other architectural requirements necessary to provide HA.  
Consolidated File/Print RU must meet the Gold tier offering metrics.  
S = Standard; service provided within tier  
O = Optional; can be added at additional cost as described in **Attachment 4-A**  
X = Required element for entry to tier  
- = Not Available

Offerings:	Not an RU Platinum	Gold	Silver	Bronze	Definitions and Notes
<b>Service Levels</b>					
Availability	99.95%/99.9%	99.9%/99.8%	99.85%/99.75%	99.75%/99.65%	
Incident Resolution Time - Severity 1	1h	2h	4h	6h	
Incident Resolution Time - Severity 2	2h	3h	6h	16h	
Root Cause Analysis Delivery	10d	10d	10d	10d	
Successful Recoveries	6h	24h	48h	72h	
<b>Monitoring</b>					
Network Monitoring	S	S	S	S	Server IP ping with alerts Server (Up/Down, Hardware specific errors, component monitoring, CPU, Disk Memory, Components of a server)
Hardware	S	S	S	S	
Operating Level (OS)	S	S	S	S	Server Capacity Threshold Monitoring (CPU, Memory, filesystem and OS disk).
Database	S	S	S	O	DB up/down, DB free space, DB status, etc.
Application Software	S	S	O	O	Any process required to support the Application. Process Up/Down, URL website availability, application file system capacity and availability.
Middleware Processes	S	S	S	O	Process Up/Down, application file system capacity and availability where the standard tools are capable of such monitoring.
Capacity Utilization Reporting	S	S	*	*	Reports on key server resources, such as CPU, Memory, and Disk. *Available in Silver/Bronze on an interim basis to support Incident Resolution.
Capacity Management	S	S	*	*	Capacity management service that reports historical trends of key server resources. The service will also include monthly analysis by a Capacity Planner and requires business application owner participation. *Available in Silver/Bronze on an interim basis to support Incident Resolution.
<b>Disk Storage</b>					
Replicated data across sites	S	O*	O*	-	For Tier 1, mirroring means an async copy of any disk volume (LUN) stored on an ADC or SDC SAN device replicated for storage at the secondary data center (includes OS volumes as well as data disk) *Required with D0 or D1; optional otherwise
Point in time copies	S	S	-	-	Initial point in time copy is provided by default, any additional PIT copies are at DIR request and follow standard policies for DIR request of disk storage
<b>High Availability Infrastructure Services</b>					
Must pick one of the following or an appropriate combination:					
Instance Mobility (where supported by the technology)	S	*	*	*	*May be available in Gold/Silver/Bronze depending on the hardware platform chosen. Customer may have to purchase additional software.
Hardware Cluster	S	*	*	*	*May be available in Gold/Silver/Bronze depending on the hardware platform chosen. Customer may have to purchase additional software.
Hardware HA (warm site)	S	*	*	*	*May be available in Gold/Silver/Bronze depending on the hardware platform chosen. Customer may have to purchase additional software.
Database Clustering	S	*	*	*	*May be available in Gold/Silver/Bronze depending on the hardware platform chosen. Customer may have to purchase additional software.
Database Failover	S	*	*	*	*May be available in Gold/Silver/Bronze depending on the hardware platform chosen. Customer may have to purchase additional software.
<b>Recovery Point Objective (Disaster Recovery)</b>					
6h	S	-	-	-	Recovery Point Objective - the allowed amount of data lost. Requires data to be on SAN storage, with space available to async replication to secondary site.
24h	-	S	O*	-	Requires data to be on SAN storage, with space available to async replication to secondary site. *Optional for Silver if Tier 1 storage is used.
2d	-	-	S	-	Tape based recovery based on offsite tape shipping frequency.
<b>Security (3)</b>					
Host Intrusion Detection (HIDS)	S	S	-	-	
<b>Platform Support</b>					
24 x 7	S	S	-	-	Tickets entered outside of service window will be addressed next contracted support period.
15 x 7 6AM - 9PM	-	-	S	-	
12 x 5 M-F 6AM - 6PM	-	-	-	S	
<b>Entry Requirements for Service Tiers. [Supportability for Disaster Recovery levels.]</b>					
DP and D0 must have a fully documented disaster recovery plan including who can declare, escalation process, and work breakdown structure for recovery and will schedule an annual disaster recovery test.	X	X			
D1 must have a fully documented disaster recovery plan including who can declare, escalation process, and work breakdown structure for recovery and a regular schedule to perform a disaster recovery test.		X	X		
D2 must have a fully documented disaster recovery plan-including who can declare, escalation process, and work breakdown structure for recovery within 12 months. Annual tests are normally tabletop exercises.		X	X		
D3 must have a fully documented disaster recovery plan including who can declare, escalation process, and work breakdown structure for recovery within 12 months. Annual tests are normally desktop exercises.		X	X	X	
D4 should have a documented disaster recovery plan within 12 months, however no testing occurs.		X	X	X	
Application must be written to operate in a highly available (HA) environment. State WAN infrastructure must be enabled/automated to support automated failover between data centers.	X				
Production Application must have dev/test and pre-prod. There must be equivalent capacity and capability in an alternate data center to support DR.	X				
Production Application must have dev/test OS instances separate from production OS instances	X	X	X		
Online backup required (e.g. database hot-backup) to ensure concurrent backup without impact to availability	X				
Online backup or offline backups can be completed within the scheduled backup window.		X			
Offline backups can be completed within the scheduled backup window.			X	X	

The Service Tier Matrix defines the services associated with each tier of service and the entry requirements for each tier of service. It is not intended to modify, supersede or amend any other obligations described in other contract documents, including without limitation Service Provider obligations related to Service Levels, Disaster Recovery, Security or storage.

**Non-Consolidated Service Centers  
Tiered Offering**

Notes:

As described in **Exhibit 4**, the Service Tier Matrix is used to categorize designated server category types into a three tier RU structure for support services. For clarity, Server Instance is the RU measure, not servers. An Instance classified within a tier will receive the support services as defined by that tier. The level of support for these Instances is described here within the matrix, including the entry requirements, monitoring, storage requirements to enable disaster recovery objectives, and service levels.

S = Standard: service provided within tier

O = Optional: can be added at additional cost as described in **Attachment 4-A**

- = Not Available

Offerings:	Gold	Silver	Bronze	Definitions and Notes
<b>Service Levels</b>				
Availability	99.85%/99/75%	99.8%/99.7%	99.70%/99.6%	
Incident Resolution Time - Severity 1	3h	5h	8h	
Incident Resolution Time - Severity 2	4h	8h	24h	
Root Cause Analysis Delivery	10d	10d	10d	
Successful Recoveries	24h	48h	72h	Recovery time based on once tape is on site
<b>Monitoring</b>				
Network Monitoring	S	S	S	Server IP ping with alerts
Hardware	S	S	S	Server (Up/Down, Hardware specific errors, component monitoring, CPU, Disk Memory, Components of a server)
Operating Level (OS)	S	S	S	Server Capacity Threshold Monitoring (CPU, Memory, filesystem and OS disk).
Database	S	S	O	DB up/down, DB free space, DB status, etc.
Application Software	S	O	O	Any process required to support the Application. Process Up/Down, URL website availability, application file system capacity and availability.
Middleware Processes	S	S	O	Process Up/Down, application file system capacity and availability where the standard tools are capable of such monitoring.
Capacity Utilization Reporting	S	*	*	Reports on key server resources, such as CPU, Memory, and Disk. *Available in Silver/Bronze on an interim basis to support Incident Resolution.
Capacity Management	S	*	*	Capacity management service that reports historical trends of key server resources. The service will also include monthly analysis by a Capacity Planner and requires business application owner participation. *Available in Silver/Bronze on an interim basis to support Incident Resolution.
<b>High Availability Infrastructure Services</b>				
Cluster/HA/Failover	-	-	-	Not available at Non-Consolidated Service Centers as standard services.
<b>Recovery Point Objective</b>				Recovery Point Objective - the allowed amount of data lost.
6h	-	-	-	Requires data to be on SAN storage, with space available to async replication to secondary site.
24h	-	-	-	Requires data to be on SAN storage, with space available to async replication to secondary site.
2d	S	S	-	Tape based recovery based on offsite tape shipping frequency.
<b>Security</b>				
Host Intrusion Detection (HIDS)	S	-	-	
<b>Platform Support</b>				Tickets entered outside of service window will be addressed next contracted support period.
24 x 7	S	-	-	
15 x 7 6AM - 9PM	-	S	-	
12 x 5 M-F 6AM - 6PM	-	-	S	

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**Storage Entry Requirements for Disaster Recovery in Consolidated Data Centers**

- Tier 1 - Storage            Replicated across data center (storage network attached)
- Tier 2 - Storage            Not replicated across data center (storage network attachments)
- Tier 3 - Storage            Higher density disk, not replicated across data center

		Service Tiers			
		Platinum	Gold	Silver	Bronze
Storage	Tier 1	DP <sup>(2)</sup>	D0 <sup>(4)</sup> or D1 <sup>(9)</sup>	D1 <sup>(6)</sup>	NA <sup>(3)</sup>
	Tier 2	NA <sup>(3)</sup>	D1, D2 or D3 <sup>(5)</sup>	D1 <sup>(6)</sup> , D2 or D3 <sup>(7)</sup>	D3 or D4 <sup>(8)</sup>
	Tier 3 <sup>(1)</sup>	NA <sup>(3)</sup>	D2 or D3 <sup>(5)</sup>	D2 or D3 <sup>(7)</sup>	D3 or D4 <sup>(8)</sup>
Rules for Combinations and Legend					
(1) Tier 3 Storage is not to be used with transaction processing					
(2) Tier 1 Storage is required for Platinum support and Platinum DR					
(3) Tier of Storage not available for the corresponding Service Tier					
(4) D0 - If the Gold Instance has a D0 then Storage must be Tier 1					
(5) D2 or D3 - If the Gold Instance has a D2 or D3 DR, then Storage may be Tier 2 or Tier 3					
(6) D1 for Silver requires Tier 1 Storage or appropriate Tape Backup solution					
(7) D2 or D3 - If the Silver Instance has a D2 or D3 DR, then Storage may be Tier 2 or Tier 3					
(8) Bronze Instance will have D3 DR, the State may select Tier 2 or Tier 3 of Storage based on Data Store Requirements					
(9) D1 for Gold requires Tier 1 Storage or appropriate Tape Backup solution					

The Service Tier Matrix defines the services associated with each tier of service and the entry requirements for each tier of service. It is not intended to modify, supersede or amend any other obligations described in other contract documents, including without limitation Service Provider obligations related to Service Levels, Disaster Recovery, Security or storage.

**Disaster Recovery**

**Consolidated Data Center**

Platinum Gold Silver Bronze

Disaster Recovery - RTO					Recovery Time Objective - time to restore systems after the disaster has been declared
Dplatinum : 1h	S	-	-	-	Existing Server HW; Data Replicated to alternate DC; failover ready
D0: 24h	-	S	-	-	Existing Server HW; Data Replicated to alternate DC
D1: 72h	-	S	S	-	Existing HW; Tape recovery to an alternate location
D2: 7d	-	S	S	-	Tape, Existing Server HW, ITL
D3: 14d	-	S	S	S	Tape, Drop Ship HW
D4: Low Priority	-	S	S	S	Tape, Drop Ship HW

**Non-Consolidated Service Centers**

Platinum Gold Silver Bronze

Disaster Recovery - RTO					Recovery Time Objective - time to restore systems after the disaster has been declared
Dplatinum : 1h	-	-	-	-	
D0: 24h	-	-	-	-	
D1: 72h	-	S	S	-	Existing HW; Tape recovery to an alternate location
D2: 7d	-	S	S	-	Tape, Existing Server HW or DR contract, ITL
D3: 14d	-	S	S	S	Tape, Drop Ship HW
D4: Low Priority	-	S	S	S	Tape, Drop Ship HW

Potential Combinations of Support Tiers and DR					
<b>Consolidated Data Center Centers</b>					
		Support Tier			
		Platinum	Gold	Silver	Bronze
DR Level (RTO)	DP (1 hour)				
	D0 (24 hour)				
	D1 (72 hour)				
	D2 (7 days)				
	D3 (14 days)				
D4 <sup>(1)</sup> (Low Priority)					
<b>Non-Consolidated Service Locations</b>					
		Support Tier			
		Platinum	Gold	Silver	Bronze
DR Level (RTO)	DP (1 hour)				
	D0 (24 hour)				
	D1 (72 hour)				
	D2 (7 days)				
	D3 (14 days)				
D4 <sup>(1)</sup> (Low Priority)					
<b>Rules for Combinations and Legend</b>					
Support Tier and DR Level combination is available					
Support Tier and DR Level combination is NOT available					
(1) D4 level items will be recovered in a disaster on a best effort basis regardless of Service Tier.					