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March 27, 2023

Honorable Nancy Skinner, Chair
Joint Legislative Budget Committee
1020 N Street, Room 553
Sacramento, CA 95814

Honorable Wendy Carrillo, Chair
Subcommittee No. 4
Assembly Budget Committee
1021 O Street, Suite 8230
Sacramento, CA 95814

Honorable Stephen Padilla, Chair
Subcommittee No. 4
Senate Budget and Fiscal Review Committee
1020 N Street, Room 502
Sacramento, CA 95814

SUBJECT: ANNUAL STATE DATA CENTER SERVICES RATE METHODOLOGY REASSESSMENT

Dear Senator Skinner:

The California Department of Technology (CDT) established state-owned data centers in accordance with Government Code (GC) 11542. CDT provides world-class technology services to California, the fourth-largest economy in the world. The Department is held accountable to provide stable and secure information technology (IT) and cybersecurity services to its customers. By doing so, it can enhance efficiency, reduce technology duplication, and enable economies of scale. The State Data Center provides fully managed and tenant-managed services and employs approximately 550 technology engineers supporting state, county, federal, and local government entities throughout California.

As Director, my vision for the State Data Center is to establish a reputation for operational excellence, information security resiliency, and modern managed IT services scaled to meet the diverse needs of California. Under my leadership, CDT will continue to secure state IT data and assets, reduce technology variance, and maximize the state's technical and security capabilities through effective policies and processes to operate in an efficient and cost-neutral manner.

GC 11540.5 requires CDT, in consultation with the Department of Finance (Finance), to reassess the formal rate methodology and relevant policies and procedures for state data center services. To complete the rate assessment, GC 11540.5 requires CDT and Finance to do the following:

1. Develop a rate structure that would allow a state entity or other customer of a state data center to compare services offered by state data centers with comparable services offered by major commercial vendors, including, but not limited to, features, levels of service, rates, and service options for all offered services;

2. Determine and designate which state data center services are either cost-inefficient or mandatory;

3. Evaluate the potential elimination of both cost-inefficient state data center services and nonmandatory state data center services provided; and,

4. Recommend revising policies, procedures, and strategies for providing state data center services, including the following:

    i. Create centralized contracts for shared information technology services to replace state data center services;

    ii. Require state entities to use specific state data center services needed to maintain a certain level of service for critical programs; and,

    iii. Instating term agreements for state data center services to improve revenue and expenditure forecasting.

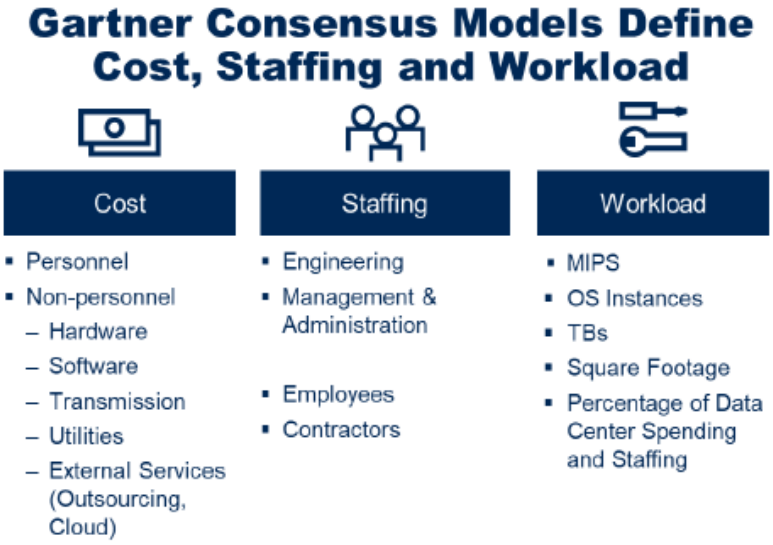
GC 11540.5(f) requires CDT to submit a written report to relevant budget subcommittees of both houses and to the Joint Legislative Budget Committee on progress toward the State Data Center rate reassessment requirements commencing April 1, 2023, and every twelve months thereafter until August 1, 2025. The reassessment will recommend changes to current policies, procedures, and strategies related to all of the following outcome metrics:

(1) The total number of services offered by state data centers;
(2) The total number of services identified for elimination;
(3) An explanation and timeline for the elimination of inefficient or non-mandatory services;
(4) The amount and percentage change in rates if any;
(5) The explanation for the change in rates if any;
(6) The estimated difference in rates by service between the state data centers and significant commercial vendors;
(7) An explanation for the difference in service rates;
(8) The forecasted change in service subscriptions over the current fiscal year and the next two fiscal years; and,
(9) The forecasted change in state data center revenues and expenditures over the current fiscal year and next two fiscal years based on the change in subscriptions.

State Data Center Service and Rate Comparison

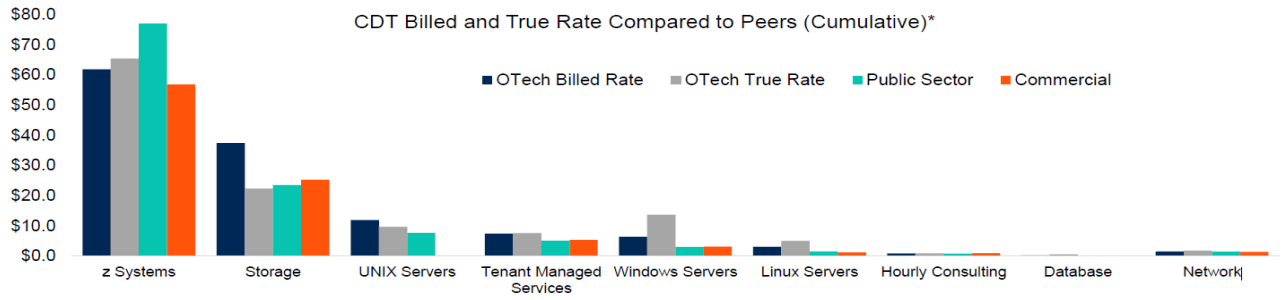
The State Data Center offers 15 IT services to state, county, federal, and local government entities. These services include Unix, Linux, and Windows Servers, CA Government Enterprise Network (CGEN), Managed Cloud Services, multi-platform Database Support, Storage services, Secure File Exchange, Tenant Managed Services, and zSystem (mainframe).

CDT engaged with Gartner, a globally recognized IT industry consultant, as an independent third party to benchmark data center service offerings (towers) against 14 peer entities within four industries using consensus models that offer similar technology services.



The peer industry institutions were based on similar workloads, spending, and staffing levels. These represent five (5) Financial Institutions, two (2) Government, four (4) Utilities, one (1) Manufacturing, and two (2) Pharmaceuticals.

Gartner's preliminary analysis indicates CDTs billed and true* rates are generally higher than its public and commercial peers. However, State Data Center services are labor-focused pursuant to GC 19130 and difficult to compare against commercial service providers with tens of thousands of customers and significant shareholder capital supporting their business decisions. Typically, commercial service providers do not offer the same level of service as does the State, which includes value-added managed services such as architectural design, security based on state policy, coordinated service management, 24/7 security, and Service Desk operations. Unlike the State, commercial service providers rely on their customers to provide these value-added services, which are often obtained via premium consulting services contracts.



*True Rates are calculated as the rate that would fully recover service cost
Diagram 1: CDT Billed and True Rate Peer Comparison

In recent years, CDT observed several factors influencing its operating expenses and ability to effectively cost recover some services. Factors such as unanticipated personnel salary increases and unpredictable increases in hardware and software contract renewals. CDT has not historically adjusted rates accordingly resulting in discrepancies between the billed rate and the true rate of the service.

Gartner has also determined that CDT has a more complex rate structure compared to other shared service organizations, with a higher number of rates assigned to each service.

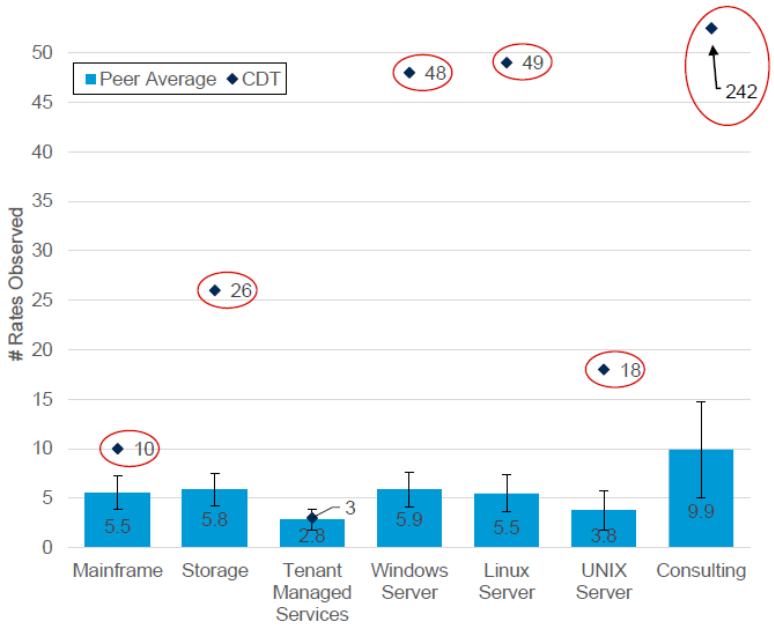


Diagram 2: CDT Number of Rates by Service Comparison

Next Steps: Over the next two years, CDT will streamline its service catalog by simplifying the rate structure and addressing customer rate concerns. This effort will also reassess and revise service costs to ensure they remain cost efficient and account

for unforeseen increases in operating expenses. Moreover, CDT will coordinate rate changes with budgeting cycles to allow customer departments to make appropriate adjustments.

State Data Center Service Cost Efficiency

Gartner has identified that CDT direct spending for the State Data Center is higher than the peer average, mainly due to the cost of data center personnel services. This spending is 31% higher than peer average for most services assessed, except for mainframe and disaster recovery. Management and administrative classifications comprise 21% of CDT staffing, while commercial peers' have 15%. Gartner also observed that CDT spends significantly less on mainframes than its peers, which may pose a potential risk. It should be noted this risk was based on 2021/2022 data. CDT's investment strategy may differ from its peers wherein substantial investments are made every three to five years. CDT's latest investment in hardware and software occurred in 2022/2023 and will align CDT with the peer average. CDT is confident the mainframe system remains robust and properly maintained.

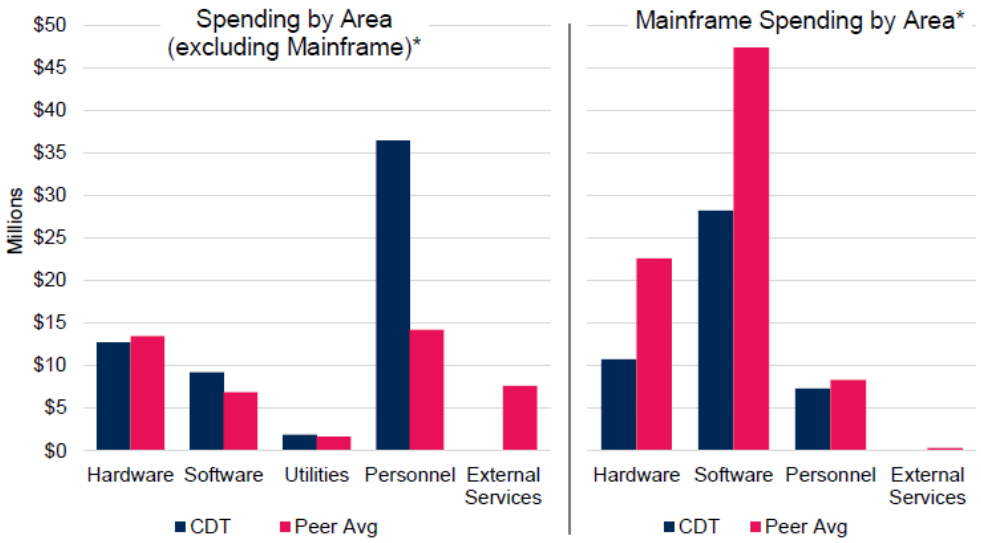


Diagram 3: Spending by Area Comparison

CDT has also identified services that have high expenses and low customer demand such as Unix and Linux servers along with redundant and cost-inefficient managed cloud services and is working with customers to eliminate them.

Next Steps: Over the next two years, CDT will work closely with customer departments to analyze service demand, identify additional opportunities to reduce expenses, eliminate cost-inefficient services, and develop plans to move customers away from services identified for elimination. CDT is also collaborating with Finance on a three-year plan to optimize the data center operating model, which includes onboarding

new revenue-generating services and reducing operating expenses where appropriate.

State Data Center Service Utilization and Revenue Impacts

CDT has collected data to forecast how much each of the 15 IT services offered by the State Data Center will be used over the current and next two fiscal years. The chart displays utilization metrics for each major service, based on historical trends and customer migration data.

Forecasted OTech Service Subscriptions

Service	Metric	2022-23	2023-24	2024-25	Change*
Application Support	Application	286	253	246	-14.0%
Colocation (TMS)	Cabinet	455	454	459	0.9%
Consulting	Consulting (Hour)	40	48	47	17.5%
Database Support	Database	323	292	292	-9.5%
Dedicated Services	Instance (Variable)	10,535	9,776	9,078	-13.8%
Email	Email Service	238,927	236,536	234,169	-2.0%
File Transfer	User	5,889	6,007	6,127	4.0%
Linux Server	Server	92	88	84	-8.7%
Mainframe	CPU Hour	13,342	12,918	12,436	-6.8%
	Server	49	50	52	6.1%
Network	Connection	2,044	2,024	1,989	-2.7%
Storage	Storage (GB)	10,249,571	9,475,856	9,417,203	-8.1%
UNIX Server	Server	267	250	238	-10.8%
Virtual Desktop	User	3,058	2,993	2,929	-4.2%
Web Hosting	Web Server	11	11	11	-4.0%
Windows Server	Server	283	276	268	-5.2%

Figures above represent projected monthly subscriptions

*Change reflects the percent change from FY 2022-23 to FY 2024-25

CDT has forecasted a continued decline in service utilization over the next two years as customers migrate to outside services. This decline is expected to be around four percent annually until Fiscal Year 2024/25. However, expenses are not expected to decrease at the same rate due to retreating General Fund support and an unprecedented increase in equipment, licensing, and maintenance costs. These inflationary factors are projected to impact existing cost-reduction efforts.

It should be noted that the projected decline in utilization is largely due to existing customer migration efforts. CDT is not currently aware of new customer migration plans. As a result, CDT has forecasted the following changes to revenues and expenditures over the next three years:

Forecasted Change in OTech Revenue & Expenditures

	2022-23	2023-24	2024-25
Revenue	$185,411,134	$178,315,755	$170,993,495
Expense	$183,607,604	$185,061,552	$177,426,753
Difference	$1,803,530	-$6,745,797	-$6,433,258

Next Steps: CDT will continue to monitor service utilization trends and identify ways to increase revenue and reduce operating expenses to address any imbalance.

State Data Center Policy Review and Refresh

CDT is conducting a comprehensive review and refresh of its data center related policies. CDT believes California needs to move from a Cloud First policy to a Cloud Smart policy, which aligns with the Federal Government's vision. A Cloud Smart policy will not only facilitate the adoption of cloud technologies but will also lead to the full modernization of the state's IT services, rather than just migrate outdated technologies to a cloud environment. A simple "lift and shift" is not recommended as it fails to take advantage of cloud computing efficiencies, introduces security and operational risk, and results in minimal cost savings. This effort will also identify mandatory data center services and establish policy to ensure customer adoption occurs.

Next Steps: CDT will review policies, procedures and strategies that affect data center services and propose policy revisions to enhance the effectiveness of certain service(s) and suggest revisions to make them more viable.

As CDT and Finance collaborate to develop new rates and policies, CDT will provide updates on the reassessment effort via an annual report pursuant to GC 11540.5(f). Upon finalization of the reassessment, the appropriate legislative bodies will be notified of percentage change in State Data Center rates with an explanation for those changes.

If you have any questions or would like to discuss this report, please feel free to contact me at (916) 752-7808 or by email at Liana.Bailey-Crimmins@state.ca.gov.

Respectfully,

Liana Bailey-Crimmins
Director
California Department of Technology

cc: Honorable Phil Ting, Chair, Assembly Committee on Budget
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