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STATE OF FLORIDA AUDITOR GENERAL

Operational Audit

FLORIDA STATE UNIVERSITY NORTHWEST REGIONAL DATA CENTER

Cost Allocation Processes



Sherrill F. Norman, CPA
Auditor General

Policy Board Members and Executive Director of the Northwest Regional Data Center

Pursuant to Section 1004.649, Florida Statutes, the Northwest Regional Data Center (NWRDC) at Florida State University is authorized to provide data center services to State agencies. The NWRDC Charter establishes a Policy Board (Board), composed of customer entity representatives, as the governing body for the NWRDC. The Board's primary function is to establish and promulgate policies for the NWRDC. The Executive Director, who is appointed by the Board, is responsible for the overall administration of the NWRDC.

Tim Brown served as Executive Director of the NWRDC and the following individuals served as Board members during the period of our audit:

Board Member

Dr. Mehran Basiratmand, Chair
Michael Barrett, Vice Chair
Jesus Arias, Affiliate Member
Michael Dieckmann, Non-voting Member from 7-7-18
Ted Duncan to 4-26-18
Ronald Henry, Non-voting Member
Levis Hughes to 4-26-18
Gene Kovacs
Damu Kuttikrishnan
Henry Martin
Dr. Andre Smith from 4-27-18
Sandra Stevens from 2-23-18

Customer Entity Represented

Small User Representative
Florida State University
Florida International University
University of West Florida
Florida Department of Education
Florida A&M University
Florida Department of Education
Florida Board of Governors
Florida Department of Revenue
K-12 Representative
Florida Department of Education
City, County, and Local
Government Representative

The team leader was Duarkis Fernandez, CPA, and the audit was supervised by Joshua T. Barrett, CPA.

Please address inquiries regarding this report to Christi Alexander, CPA, Audit Manager, by e-mail at christialexander@aud.state.fl.us or by telephone at (850) 412-2786.

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FLORIDA STATE UNIVERSITY NORTHWEST REGIONAL DATA CENTER

Cost Allocation Processes

SUMMARY

This operational audit of the Northwest Regional Data Center (NWRDC) focused on NWRDC cost allocation processes and included a follow-up on the finding noted in our report No. 2018-005. Our audit disclosed the following:

Finding 1: The NWRDC did not always use Board approved service rates or maintain adequate records to support service rates charged to customers.

Finding 2: NWRDC fiscal year-end true-up and customer account adjustment processes need enhancement.

BACKGROUND

The Northwest Regional Data Center (NWRDC) is an auxiliary operation of Florida State University (University) and is headed by a Policy Board (Board) consisting of representatives from its customer entities. The Board appoints an Executive Director who is responsible for the daily operation of the data center. In its capacity as the administrative host institution and fiscal agent, the University is the contracting authority for the NWRDC and provides legal support and executive oversight. All NWRDC positions are filled with University employees who are to follow University payroll, leave, and other personnel policies.

The NWRDC provides a variety of information technology (IT) services to its customer entities, including facilities and infrastructure services, storage and recovery services, network, mainframe, and security services, and other managed services.¹ NWRDC customer entities consist of State agencies, universities, colleges, school districts, municipal and county governments, a consortium, and nonprofit and for-profit entities that contract with the NWRDC for IT services. State law² requires the NWRDC to enter into a service-level agreement with each State agency customer and that the agreement establish the services to be provided by the NWRDC and the associated cost of each service.

The NWRDC operates on a cost-recovery basis whereby the NWRDC bills customer entities for the portion of operating costs associated with the specific data center services provided to each customer. State law³ specifies that the NWRDC is to maintain an appropriate cost allocation methodology that accurately bills State agency customers based solely on the actual direct and indirect costs of the services provided to State agency customers and prohibits the subsidization of non-State agency customer costs

¹ According to the *Fiscal Year 2017-2018 Northwest Regional Data Center Service Catalog*, managed services included: operating systems patch management, infrastructure monitoring, technical personnel, and administrator services related to server, virtual host, storage, network, and system activities.

² Section 1004.649(1)(c), Florida Statutes.

³ Section 1004.649(1)(b), Florida Statutes.

by State agency customers. The cost allocation methodology is also to comply with applicable State and Federal regulations concerning the distribution and use of State and Federal funds.

At fiscal year end, for each IT service provided, the NWRDC prepares true-up analyses to adjust the service rates used to bill customer entities to equal the actual cost of the IT services. For non-mainframe services, a corresponding credit or debit billing adjustment is made for each customer entity, as necessary, to reflect the results of each true-up analysis. For mainframe services, a corresponding increase or decrease to each customer entity's mainframe rate for the following fiscal year is applied, as necessary, to reflect the results of the true-up process.

FINDINGS AND RECOMMENDATIONS

Finding 1: Service Rates

NWRDC policies and procedures⁴ specified that the NWRDC was to establish rates for each service provided that ensured customers were billed based on actual direct and indirect service costs. Accordingly, the NWRDC created service rate sheets to detail the expenses (e.g., staff activity and depreciation expenses) and other relevant information (e.g., number of electrical circuits and square footage) associated with each service, excluding services provided on a per quote basis. Each June, the Board approves the rates for each service as part of the NWRDC operating budget.

As part of our audit, we examined NWRDC records for 7 of the 33 2017-18 fiscal year service rates and 8 of the 34 2018-19 fiscal year service rates.⁵ Our examination disclosed that the NWRDC did not always use Board-approved service rates or maintain adequate records to support service rates charged to customers. Specifically, we found that:

- The NWRDC undercharged customers by applying a lower cloud infrastructure service rate than the rate approved by the Board for the 2017-18 fiscal year and, although requested, NWRDC management could not provide the information necessary to determine the amount charged to each customer or the total amount undercharged. Additionally, NWRDC records did not evidence and NWRDC management could not identify the staff activity expenses used to calculate the network VPN tunnel service rate charged to customers for the 2017-18 fiscal year.

In response to our audit inquiry, NWRDC management indicated that a typographical error resulted in the incorrect cloud infrastructure service rate being applied and that, while the NWRDC had not established policies and procedures delineating the basis for all service rate calculations, sufficient records, including service rate sheets with adequate explanatory notes, were to be maintained to allow individuals familiar with the concepts of cost accounting and rate development to recreate the rates as needed. Notwithstanding management's response, policies and procedures that detail the process for calculating each service rate would provide greater assurance that customers are billed based upon the anticipated actual direct and indirect costs of the services provided and minimize the amounts billed or credited to customers during the true-up process. Additionally, to demonstrate that customers are charged appropriate rates for data center services, it is critical that the NWRDC maintain adequate records of the expenses used to establish service rates. Finding 2 describes additional issues regarding the NWRDC

⁴ NWRDC Policy and Procedure Manual Chapter 4.10, *Establishment of Rates*.

⁵ Rates examined did not include rates for services provided on a per quote basis.

2017-18 fiscal year true-up analyses for non-mainframe data center services and adjustments to customer accounts.

- The NWRDC could not provide a service rate sheet to support the 2018-19 fiscal year MAN Wave 1GB service rate of \$656 per GB per month. According to NWRDC management, the MAN Wave 1GB service rate sheet was not maintained due to oversight. Absent adequate records, NWRDC management cannot demonstrate the propriety or basis for service rates charged to customers.

Recommendation: We recommend that NWRDC management establish policies and procedures and strengthen management oversight to ensure that service rates are adequately supported and appropriately applied to customers and that records are maintained to support the amounts charged to customers.

Finding 2: Fiscal Year End True-Up Processes and Customer Account Adjustments

As noted in the **BACKGROUND** section of this report, for mainframe services, the NWRDC makes necessary increases or decreases to each customer entity's mainframe rate for the following fiscal year to reflect the results of the true-up analysis. For non-mainframe services, the NWRDC provides billing adjustments to customer accounts to reflect the results of the true-up analyses.

The NWRDC completed the 2017-18 fiscal year true-up analyses for mainframe services in June 2018. For non-mainframe data center services, NWRDC records indicated that, after completion of the 2017-18 fiscal year true-up analyses, by cost center,⁶ the NWRDC owed customers \$117,988. As part of our audit, we interviewed NWRDC management, reviewed selected 2017-18 and 2018-19 fiscal year service rate sheets, and examined NWRDC records for the 2017-18 fiscal year mainframe services true-up analysis. Our audit procedures disclosed that:

- The NWRDC did not allocate total 2017-18 fiscal year mainframe costs to customers based on actual usage, and the amount allocated was understated by \$119,261. For example, NWRDC records indicated that Department of Education accounts were overbilled by \$87,056; however, our recalculations, based on actual costs and usage, indicated that the accounts were overbilled by \$4,059. As a result of these allocation errors and the methodology deficiencies subsequently described, the NWRDC did not correctly adjust customer entities' 2018-19 fiscal year mainframe rates.
- Notwithstanding the 2017-18 fiscal year mainframe cost allocation errors, the NWRDC's methodology for adjusting customer entities' mainframe rates for the 2018-19 fiscal year was not adequate to ensure that customer rates were properly adjusted. Specifically, the methodology incorrectly negated the reported total amount overbilled for the 2017-18 fiscal year in establishing the 2018-19 fiscal year mainframe rates.
- As of May 10, 2019, the NWRDC had not performed the 2017-18 fiscal year true-up analyses for the individual non-mainframe data center services (e.g., managed services, raised floor space, compute memory bundle, and backup and storage services) provided to customers and, consequently, had not adjusted customer accounts to reflect the actual cost of providing each service. For example, as similarly noted in our report No. 2018-005 (Finding 1), the NWRDC was unable to demonstrate that all staff activity costs billed to State agency customers were for services actually provided or that corresponding adjustments to customer accounts were made, as necessary.

⁶ According to NWRDC management, cost centers comprise one or more data center services. For example, the Server Hosting cost center includes a variety of services such as raised floor space, compute memory bundle, electrical circuit surcharge, MAN Wave 1GB, among others.

According to NWRDC management, errors in preparing the mainframe cost allocation were due to insufficient management oversight. Further, while NWRDC management could not explain how the error in methodology for adjusting subsequent years' mainframe rates occurred, management indicated that oversight of this process would be enhanced going forward. Additionally, NWRDC management indicated that, in lieu of performing a true-up for each individual non-mainframe service, true-ups were performed at a cost center level.

Absent effective management oversight, the risk is increased that mainframe costs will not be appropriately allocated to customers or that customer billing rates will be properly adjusted to reflect the actual cost and usage of mainframe data center services. Additionally, the performance of true-up calculations for individual non-mainframe services would better enable the NWRDC to demonstrate that customers were only billed for the actual costs of the services received and reduce the possibility that State agency customers may inadvertently subsidize non-State agency customers.

Recommendation: We recommend that NWRDC management enhance oversight procedures to ensure that all mainframe costs are appropriately allocated to customers and billing rates are correctly adjusted to reflect customers' actual costs and usage. Additionally, we recommend that NWRDC management conduct true-up calculations for individual non-mainframe services and timely adjust customer accounts to reflect the actual costs of services received.

OBJECTIVES, SCOPE, AND METHODOLOGY

The Auditor General conducts operational audits of governmental entities to provide the Legislature, Florida's citizens, public entity management, and other stakeholders unbiased, timely, and relevant information for use in promoting government accountability and stewardship and improving government operations.

We conducted this operational audit from February 2019 through May 2019 in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

This operational audit of the Northwest Regional Data Center (NWRDC) focused on NWRDC cost allocation processes. The overall objectives of the audit were:

- To evaluate management's performance in establishing and maintaining internal controls, including controls designed to prevent and detect fraud, waste, and abuse, and in administering assigned responsibilities in accordance with applicable laws, administrative rules, contracts, grant agreements, and other guidelines.
- To examine internal controls designed and placed in operation to promote and encourage the achievement of management's control objectives in the categories of compliance, economic and efficient operations, the reliability of records and reports, and the safeguarding of assets, and identify weaknesses in those internal controls.
- To determine whether management had corrected, or was in the process of correcting, the deficiency disclosed in our report No. 2018-005.
- To identify statutory and fiscal changes that may be recommended to the Legislature pursuant to Section 11.45(7)(h), Florida Statutes.

This audit was designed to identify, for those programs, activities, or functions included within the scope of the audit, deficiencies in management's internal controls, instances of noncompliance with applicable governing laws, rules, or contracts, and instances of inefficient or ineffective operational policies, procedures, or practices. The focus of this audit was to identify problems so that they may be corrected in such a way as to improve government accountability and efficiency and the stewardship of management. Professional judgment has been used in determining significance and audit risk and in selecting the particular transactions, legal compliance matters, records, and controls considered.

As described in more detail below, for those programs, activities, and functions included within the scope of our audit, our audit work included, but was not limited to, communicating to management and those charged with governance the scope, objectives, timing, overall methodology, and reporting of our audit; obtaining an understanding of the program, activity, or function; exercising professional judgment in considering significance and audit risk in the design and execution of the research, interviews, tests, analyses, and other procedures included in the audit methodology; obtaining reasonable assurance of the overall sufficiency and appropriateness of the evidence gathered in support of our audit's findings and conclusions; and reporting on the results of the audit as required by governing laws and auditing standards.

Our audit included the selection and examination of transactions and records. Unless otherwise indicated in this report, these transactions and records were not selected with the intent of statistically projecting the results, although we have presented for perspective, where practicable, information concerning relevant population value or size and quantifications relative to the items selected for examination.

An audit by its nature, does not include a review of all records and actions of agency management, staff, and vendors, and as a consequence, cannot be relied upon to identify all instances of noncompliance, fraud, abuse, or inefficiency.

In conducting our audit, we:

- Reviewed applicable laws, Federal regulations, and NWRDC policies and procedures, and interviewed NWRDC personnel to obtain an understanding of true-up, cost allocation, billing, and expense processes.
- Interviewed NWRDC management and recalculated selected NWRDC service rates for the 2017-18 and 2018-19 fiscal years to determine whether the NWRDC had established cost allocation processes that allowed for an equitable distribution of costs among activities and customers, in accordance with State law and Federal regulations.
- Examined NWRDC records for the 13 State agency customers that received NWRDC services during the period July 2017 through January 2019 to determine whether:
 - The NWRDC had executed service-level agreements (SLAs) with each State agency customer.
 - The SLAs appropriately addressed all statutorily required provisions.
 - The NWRDC provided the 13 State agency customers cost estimates detailing the projected annual costs of the agreed-upon services by September 1, 2017, and September 1, 2018, pursuant to Section 1004.649(1)(e), Florida Statutes.
- From the population of 33 NWRDC non-per quote services listed in the 2017-18 fiscal year service catalog and 34 NWRDC non-per quote services listed in the 2018-19 fiscal year service catalog, examined NWRDC records for 7 selected services from the 2017-18 fiscal year service catalog

and 8 selected services from the 2018-19 fiscal year service catalog to determine whether the NWRDC adequately documented the methodology for establishing service costs and the methodology was reasonable and in compliance with applicable laws and Federal regulations.

- Analyzed NWRDC records related to the NWRDC's allocation of mainframe processing costs to State agency and other customers for the 2017-18 and 2018-19 fiscal years to determine whether, in accordance with Section 1004.649(1)(b), Florida Statutes, customers were appropriately billed for services received and NWRDC processes were sufficient to ensure that State agency customers did not subsidize other NWRDC customers.
- Evaluated NWRDC actions to correct Finding 1 noted in our report No. 2018-005. Specifically, interviewed NWRDC management and, from the population of 29 NWRDC non-mainframe services provided to customers during the 2017-18 fiscal year, requested true-up records for 4 selected non-mainframe services to determine whether customer accounts were adjusted to reflect the actual cost, including actual staff activity costs, of each service received.
- Examined the NWRDC's 2017-18 fiscal year statement of revenues, expenditures, and changes in net position and the Statewide Cost Allocation Plan reconciliation between total revenue and the total actual costs of providing services to determine whether appropriate adjustments were made to customer billings based on the actual costs of the services provided in accordance with Section 1004.649(1)(b), Florida Statutes, and applicable Federal cost principles.
- Examined NWRDC records for 30 customer payments (1 from each revenue transaction selected), totaling \$2,514,844, selected from the population of 496 revenue transactions related to customer payments, totaling \$26,553,479, recorded during the period July 2017 through January 2019, to determine whether customer payments were properly received, recorded, and reflected the rates or per quote amounts approved by the NWRDC Policy Board.
- Examined NWRDC records for 27 expense transactions, totaling \$1,848,907, selected from the population of 30,746 NWRDC expense transactions, totaling \$27,397,537, recorded during the period July 2017 through January 2019, to determine whether the expense transactions were properly authorized, calculated, recorded, supported, and made in accordance in with applicable laws and Federal regulations.
- Communicated on an interim basis with applicable officials to ensure the timely resolution of issues involving controls and noncompliance.
- Performed various other auditing procedures, including analytical procedures, as necessary, to accomplish the objectives of the audit.
- Prepared and submitted for management response the findings and recommendations that are included in this report and which describe the matters requiring corrective actions. Management's response is included in this report under the heading **MANAGEMENT'S RESPONSE**.

AUTHORITY

Pursuant to the provisions of Section 11.45, Florida Statutes, I have directed that this report be prepared to present the results of our operational audit of the NWRDC.



Sherrill F. Norman, CPA
Auditor General

MANAGEMENT'S RESPONSE



2048 East Paul Dirac Drive
Tallahassee, FL 32310-3752
850.245.3500 Phone
850.245.3570 Fax

Sherrill F. Norman
Auditor General
State of Florida
G74 Claude Pepper Building
111 West Madison Street
Tallahassee, Florida 32399-1450
September 11, 2019

Dear Ms. Norman,
Please accept Florida State University's response to your letter of August 12th with report of preliminary and tentative findings and recommendations from your recent audit of Northwest Regional Data Center. As always, please let us know if there are any questions or if we can be of assistance. Thank you.

Sincerely,
Tim Brown
Executive Director, Northwest Regional Data Center
Florida State University

cc:
Sam McCall, Chief Audit Officer, Florida State University
Jane Livingston, Assoc. VP and CIO, Florida State University
Mehran Basiratmand, CTO, Florida Atlantic University & Chair, NWRDC Policy Board

Finding #1: Service Rates

Recommendation: We recommend that NWRDC management establish policies and procedures and strengthen management oversight to ensure that service rates are adequately supported and appropriately applied to customers and that records are maintained to support the amounts charged to customers.

NWRDC Response:

NWRDC acknowledges there was a difference between the cloud infrastructure rate published and the rate billed to the customers for the fiscal year 2017-2018. This was due to a typographical error. The net difference in total revenue received based on actual billings at \$30.16 per month and what should have been billed at \$30.33 per CMB (compute-memory bundle) per month is \$5,522.75 for the entire year across all customers. The difference that NWRDC under billed its customers constitutes 0.557% of the total revenue for this service.

As reported, NWRDC did not publish a rate sheet for the MAN wave rate for FY 18-19. After updating the rate, NWRDC determined the rate billed was understated by \$41 per month, a total of \$492 for each customer. The undercharge will be recovered during FY 19-20. Steps have been taken to make sure a rate sheet is published going forward.

NWRDC agrees with the recommendations. We will establish policies and procedures and strengthen internal controls and management oversight to ensure only board-approved rates are published and billed to customers and that all rates are properly documented.

Finding #2 – Fiscal Year End True-Up Processes and Customer Account Adjustments

Recommendation: We recommend that NWRDC management enhance oversight procedures to ensure that all mainframe costs are appropriately allocated to customers and billing rates are correctly adjusted to reflect customers' actual costs and usage. Additionally, we recommend that NWRDC management conduct true-up calculations for individual non-mainframe services and timely adjust customer accounts to reflect the actual costs of services received.

NWRDC Response:

NWRDC agrees with the audit recommendation. We have updated the mainframe flat rate calculation and provided a copy of the new calculation to the audit team. We will enhance oversight procedures to ensure that all mainframe costs are appropriately allocated to customers and billing rates are correctly adjusted to reflect customers' actual costs and usage.

During FY 19-20, where historical costs for individual non-mainframe services could be isolated, we implemented true-up adjustments for those services. We will conduct true-up calculations for these individual non-mainframe services and timely adjust customer accounts to reflect the true costs of services received.

Where historical costs could not be isolated, NWRDC is capturing FY 19-20 cost information, by individual non-mainframe service, to enable the development of true-up adjustments by service. True-up calculations for FY 20-21 will be conducted for each individual non-mainframe service. Customer accounts will be adjusted timely to reflect the actual costs of services received.