2013-2014
ANNUAL REPORT

The Ultimate Solution to Simplify Your Data Center
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“FIU and NWRDC have forged a great partnership whereby FIU’s disaster recovery resiliency has been implemented, test and validated successfully.”

Jesus Arias, PMP  
Business Continuity/Disaster Recovery Manager  
Florida International University
It has been an exciting year for NWRDC. We continue to grow in an effort to better support you, our customer base. Over the past several months, I have had the opportunity to speak with many organizations across the country and I have yet to find an organization like NWRDC. I have spoken with groups from California, Texas, North Carolina, Ireland and most recently South Africa, where efforts are underway to create a shared data center services group. I always smile at their surprise when I describe how we report to a Policy Board comprised of our customers.

We have seen a great deal of expansion in our managed services and storage service offerings. Our mainframe services, now 44 years old, continue to be a cornerstone of NWRDC. However, we are constantly looking for ways to improve and have started several new services this past year. Last fall, we took the opportunity to restructure our own contract for disaster recovery services into a new service offering. In December, we became a reseller of Dell SecureWorks. A normal reseller receives the service at a heavily discounted rate and adds a markup for profit. We, however, pass that savings on to you. This past spring, NWRDC also developed a new cloud backup service offering. Working with our partners, SHI and EMC, we structured this service in a very unique way in order to maximize the savings to you.

We are always looking for ways that we can help you provide better services and support to your organizations while minimizing costs. But remember, we need YOUR help! If your organization is struggling to find a solution to a problem, someone else is having that same challenge. By working together, we can find a solution that benefits everyone. Teamwork is the key!

Thank you for taking the time to review this report. We are very grateful to you, our customer base, as well as our excellent Policy Board. Your efforts are what makes the NWRDC model successful.
On behalf of my colleagues on the Policy Board of Northwest Regional Data Center, and the professional staff and leadership alike, I encourage you to read our annual report which includes the list of major accomplishments and new services for the fiscal year 2013-2014.

NWRDC is governed by its customers through a Policy Board composed entirely of customer representatives with verities of expertise. Through its authority to establish subcommittees, including the Management Committee, Technical Committee and ad-hoc committees, the Policy Board provides its customers with an extensive role in shaping the future direction of the center.

As this report outlines, NWRDC has completed several exciting projects, including but not limited to offering new hybrid based cloud solutions for large-scale data storage - Backup as a Service - as well as expanding both application hosting and software as a service. The continuation of using a flat rate progressive cost recovery for the mainframe customers is yielding dividends to contain and reduce cost for the customers. This adjustment has provided substantial savings to mainframe-based customers and has been instrumental in budget planning and forecasting for both our customers and the center alike.

Business continuity, managed services and server hosting, are also major focus areas that are continuing to grow. NWRDC is moving well beyond mere server hosting and co-location services to more advanced offerings including Infrastructure as a Service, Software as a Service, private cloud technologies as well as Security as a Service. NWRDC continues to balance cost-saving measures combined with the leading-edge technological solutions to address the requirements set forth by its customers and the Policy Board. This is of particular importance as we all continue to face shrinking budgets.

Lastly, I candidly appreciate my fellow Policy Board members for their contribution and their time. I also would like to sincerely thank our customers for providing constructive feedback to the Policy Board during our quarterly meetings, as well as expressing their appreciation to the NWRDC staff on a job well done on a regular basis. Please feel free to continue sharing your thoughts, ideas and suggestions on ways to expand or deem necessary to improve services. This is our shared data center and our vision is to maintain the highest level of service while maintaining quality.
Mehran Basiratmand, Chair
Small User Representative
Chief Technology Officer
Information Resource Management
Florida Atlantic University

Michael Barrett, Vice Chair
Management Committee Chair
Associate Vice President, Chief Information Officer
Florida State University

Michael Dieckmann
Senior Associate Vice President and CIO
University of West Florida

Ted Duncan
Deputy Chief Information Officer
Office of Technology & Information Services
Florida Department of Education

Levis Hughes
Management Committee Member
Bureau Chief
Office of Student Financial Assistance
Florida Department of Education

Michael A. James
Interim CIO
Application Management
Enterprise Information Technology
Florida A&M University

Gene Kovacs
Assistant Vice Chancellor
State University System
Information Resource Management
Florida Board of Governors

Damu Kuttikrishnan
Chief Information Officer
Florida Department of Revenue

Henry Martin
K-12 Representative
Management Committee Member
Technology Information Officer
Walton County School District

Randy McCausland
Technical Committee Chair
Senior Director
Infrastructure and Operational Support
Information Technology Services
Florida State University

Donald J. Muccino
Executive Director
Florida Virtual Campus

Pete Taylor
Management Committee Member
Associate Director, Administrative Software
Florida International University
The NWRDC Management Team combined their many years of experience to successfully transition the data center from a primarily mainframe computing utility to an efficient and innovative data center through state-of-the-art technology, leadership and partnerships.

**Tim Brown - Executive Director**

Tim was appointed Executive Director of NWRDC on April 9, 2008. He brings over 22 years of IT experience to the organization, with a focus on strategic planning, budgeting, building and leading support and development teams in academic settings. Prior to this position, he served as Associate Vice President of the Information Technology Division at Middle Tennessee State University since 2005. Tim’s experience also highlights key management positions with the University of Alabama at Birmingham, serving as the Director of IT Infrastructure Services from 2001 to 2005, and Associate Director for Computer Services from 1993 to 2001. Tim earned his Bachelor of Science degree from Auburn University and his Masters of Science in Health Informatics from the University of Alabama at Birmingham. In addition, he is a Certified Information Systems Security Professional and Certified Information Systems Auditor.

**Mikal Haney - Assistant Director**

Mikal has 36 years of experience in diverse technical and management consulting engagements encompassing data center design, software installation, performance metrics, capacity measurement and production implementation and support. He is responsible for all mainframe software and hardware support. Prior to joining NWRDC in 2003, Mikal worked with the State of Florida and a myriad of public and private corporations throughout North America as an employee of IBM and other large scale systems providers. He began his IT career while in the United States Marine Corps and received his computer science education at West Texas State University.

**Matt Stolk - Assistant Director**

Matt was promoted to Assistant Director in October 2012 in recognition of his long-term contributions and dedication to NWRDC’s success. Responsible for the data center’s open systems support group, Matt has more than 10 years of hands-on technical and managerial experience in enterprise IT architecture. Prior to his current role, Matt served as NWRDC’s Windows/Linux Team Manager, leading the transition for the Department of Education to full managed services as part of Data Center Consolidation. He has previously held a number of positions at the Florida Department of Corrections, both as a consultant and full staff member working his way from IT support, team lead, server administrator to team manager prior to joining NWRDC.

**Sharon Pearson, CPA - Chief Business Officer**

Sharon has over 24 years of experience in the higher education accounting community as an Assistant Controller, Grants Specialist and Coordinator of Accounting. She serves NWRDC as Chief Business Officer on assignment from her role as an Assistant Director for the University Business Administrators program with Florida State University. Sharon holds her Masters from Florida State University and earned her Bachelor’s degree at Nova Southeastern.
This year NWRDC celebrated the long-time careers of three of our valued employees. On behalf of the Policy Board, Florida State University, the data center staff and all of our customers, we wish Mary, Jewel and Lee a healthy and happy retirement. Thank you for your dedicated service.

MARY MINNIEFIELD

In November 1976, Mary started her career as a Clerk I with the Department of Motor Vehicles. Joining Florida State University in 1984, she worked in the Travel Office before moving to the University Computing Services department. From July 2011 to her retirement in April 2014, Mary was a cherished member of our Operations team.

LEE BURGESS

As a Financial Systems Analyst, Lee began his long career at NWRDC in September 1990. He was responsible for customer billing and collections until his retirement in June 2014. Lee was an invaluable member of the administrative team.

JEWEL ERVIN

On April 20, 1979, Jewel began her 35-year long career at NWRDC as a Computer Operator II. She went on to become the weekend supervisor and served in this role from 1987 to 2002. Jewel was promoted to Computer Operations Manager in August 2002, the position she held until her retirement on June 30, 2014. Jewel was well respected by customers and admired by her staff due to her loyal dedication to NWRDC.

In May 2014, Florida State University, our host institution, recognized several NWRDC employees with their Sustained Service Awards:

- Steven Menard - 40+ years
- Jewel Ervin - 35 years
- Mary Minnefield - 30 years
- Sharon Pearson - 20 years
- Brian Witherington - 20 years
- Kate Wasson - 10 years
- Thomas Wiatt - 10 years
- Annie Zhang - 10 years
A major undertaking this fiscal year came from the Storage and Recovery Services team. Through a partnership with SHI and EMC, leaders in the backup services market, our cloud Backup as a Service (BaaS) is based on EMC’s Data Protection Suite, which includes:

- Data Domain disk array for deduplicated target storage
- Avamar for deduplicated backup across enterprise system platforms and applications
- Networker for unified backup and recovery centralization and management
- Data Protection Advisor for data backup and recovery monitoring and reporting

The integration of these technologies enables NWRDC to optimize this solution’s efficiency, security, high availability, and reliability. Available as a flexible on-demand service, BaaS provides customers advanced control over backup and recovery processes, making data protection easy, secure and cost effective. NWRDC’s BaaS is priced on per gigabyte (GB) capacity actually used after deduplication with no upfront cost or minimum purchase needed. All the licenses and agents are included, regardless of the number of servers.

The BaaS on-demand model allows our customer to expand and contract storage space as needed, insuring you only pay for the backup space actually consumed. You no longer need large up-front capital expenditures that result in “extra” capacity sitting idle.

BaaS can be deployed across multiple locations. Customers can choose from local appliance as well as NWRDC in-state and/or out-of-state facilities, providing the flexibility to support various performance, availability and disaster recovery needs. If you already own an EMC Data Domain appliance, NWRDC can serve as your off-site replication target. Data can be encrypted both in transit and at rest to provide increased security.

While BaaS allows for complete customer management and control, those wishing a higher level of service can subscribe to NWRDC’s managed services.
A service that was requested during the June 2013 Policy Board meeting was a Managed Security Service Provider (MSSP) offering. Board members expressed interest in NWRDC partnering with a third party provider to provide security services. Initial interest included offerings like penetration testing and log aggregation and monitoring. As a result, NWRDC partnered with Dell as an authorized reseller of Dell SecureWorks. With a broad and flexible portfolio of Managed Security, Threat Intelligence, Incident Response and Security & Risk Consulting Services, Dell SecureWorks helps organizations of all sizes and industry types to minimize their exposure to noncompliance, breaches and downtime. In addition, NWRDC is able to offer a 15% discount to all of our customers on their products and services. With SecureWorks you can:

- Gain 24x7x365 protection of networks, end points, applications and data from cyber threats.
- Offload resource-intensive security operations to certified security experts, letting you focus on your business.
- Minimize the burden of compliance and quickly deploy key security controls for PCI DSS, GLBA, HIPAA, FISMA, NERC CIP and other regulations.
- Understand emerging cyber threats and proactively manage security risk.
- Significantly reduce costs due to security breaches, infections and IT downtime.

We have received numerous inquiries from our current customer base regarding these new security services. One of our current customers, who was an existing SecureWorks customer, has already realized substantial savings.

**CENTURYLINK**

NWRDC has entered into a strategic public/private partnership with CenturyLink and its Atlanta data center facility to extend its secure raised floor space, power and network services to all of our customers at competitive rate. This innovative offsite facility provides a great extension of NWRDC for alternate production processing, colocation, and disaster recovery services in order to meet the rising demands for infrastructure and connectivity, with highly reliable power and cooling, diversified network, multi-layer security, and exceptional customer support.
Budgeted Expenses Versus Indirect Costs Over the Past 5 Years

<table>
<thead>
<tr>
<th>Fiscal Year</th>
<th>Budgeted Expenses</th>
<th>Indirect Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>FY 2009-2010</td>
<td>$8,000,000</td>
<td>$2,000,000</td>
</tr>
<tr>
<td>FY 2010-2011</td>
<td>$8,000,000</td>
<td>$2,000,000</td>
</tr>
<tr>
<td>FY 2011-2012</td>
<td>$8,000,000</td>
<td>$2,000,000</td>
</tr>
<tr>
<td>FY 2012-2013</td>
<td>$8,000,000</td>
<td>$2,000,000</td>
</tr>
<tr>
<td>FY 2013-2014</td>
<td>$10,000,000</td>
<td>$2,000,000</td>
</tr>
</tbody>
</table>

**BUDGETED EXPENSES BY COST CENTER FOR FISCAL YEAR 2013 - 2014**

- **Server Hosting**
  - $6,340,177
  - 58.5%
- **Mainframe**
  - $3,467,229
  - 32.1%
- **Storage as a Service**
  - $869,984
  - 8.0%
- **Tallahassee Fiber Loop**
  - $109,466
  - 1.0%
- **Contract Management**
  - $42,832
  - 0.4%
TOTAL REVENUE BY COST CENTER FOR FISCAL YEAR 2013-2014

Mainframe
$3,765,637
35.0%

Server Hosting
$6,284,996
58.0%

Storage as a Service
$534,125
5.0%

Tallahassee Fiber Loop
$125,942
1.0%

Contract Management
$67,127
1.0%

Server Hosting Revenue Growth Over the Past 5 Years

FY 2009-2010: $1,321,795 (16%)
FY 2010-2011: $2,223,055 (29%)
FY 2011-2012: $3,508,423 (42%)
FY 2012-2013: $5,248,877 (52%)
FY 2013-2014: $6,284,996 (58%)
EXPENSES AND REVENUES OVER THE PAST FIVE YEARS

NWRDC is a not-for-profit organization. Per our charter and Florida Statutes, excess revenues above expenses are returned to customers.

1,081kWh
Average FL Residential Monthly Kilowatt Usage

545,712kWh
Average NWRDC Monthly Kilowatt Usage
## TOTAL EXPENSES BY TYPE FOR FISCAL YEAR 2013-2014

<table>
<thead>
<tr>
<th>Expense Type</th>
<th>Percent</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Salary &amp; Benefits</td>
<td>38%</td>
<td>$3,795,099</td>
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<tr>
<td>Salaries</td>
<td>37%</td>
<td>$3,744,485</td>
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<tr>
<td>Other Personal Services (OPS)</td>
<td>1%</td>
<td>$50,614</td>
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<tr>
<td><strong>General Expenses</strong></td>
<td><strong>58%</strong></td>
<td><strong>$5,877,802</strong></td>
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<tr>
<td>Software Maintenance</td>
<td>19%</td>
<td>$1,946,923</td>
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<tr>
<td>Contractual Services</td>
<td>13%</td>
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<tr>
<td>Hardware Maintenance</td>
<td>5%</td>
<td>$544,673</td>
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<tr>
<td>Intrafund Transfers</td>
<td>5%</td>
<td>$481,706</td>
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<tr>
<td>Utilities</td>
<td>5%</td>
<td>$473,516</td>
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<tr>
<td>Supplies (including IT supplies)</td>
<td>4%</td>
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<tr>
<td>Telecommunications</td>
<td>3%</td>
<td>$299,287</td>
</tr>
<tr>
<td>Repairs &amp; Maintenance (Facilities)</td>
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<td>Memberships &amp; Subscriptions</td>
<td>1%</td>
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<tr>
<td>Travel &amp; Training</td>
<td>0%</td>
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<tr>
<td>Insurance</td>
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<td>$30,408</td>
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<tr>
<td>Rentals</td>
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<td>$15,598</td>
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<tr>
<td>Printing &amp; Duplicating</td>
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<td>$7,922</td>
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<td>Freight &amp; Postage</td>
<td>0%</td>
<td>$236</td>
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<tr>
<td><strong>Other Capital Outlay</strong></td>
<td><strong>3%</strong></td>
<td><strong>$273,895</strong></td>
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<tr>
<td><strong>Auxiliary Fees</strong></td>
<td><strong>2%</strong></td>
<td><strong>$168,948</strong></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>100%</strong></td>
<td><strong>$10,115,744</strong></td>
</tr>
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</table>
SERVICES

NWRDC Storage Services Growth
NWRDC Storage Services has seen dramatic growth during this fiscal year with a 156% increase in our Tallahassee data center which can be attributed mainly to the Florida Department of Revenue’s move from a dedicated aging storage system to NWRDC’s shared offering. The best part is that moving to the shared service cost less than what they were paying in maintenance for a dedicated storage array. While being a very complex and time sensitive transition, the storage team was able to meet DOR’s deadline with minimal planned outages of their major systems. Based on before and after statistics, they have realized performance increases and are taking advantage of advanced encryption at rest options.

NWRDC Cloud Infrastructure Services Growth
NWRDC’s Cloud Infrastructure Services also achieved growth this fiscal year. We have had an additional 346 Compute Memory Bundles purchased throughout the year for an 83% growth rate. The Florida Department of Education (DOE) has vastly expanded its use of this new service. This shared infrastructure offering has allowed DOE to expand with zero capital outlay to a shared system that provides redundancy and performance gains within the environment while providing a more stable platform than their legacy systems.

NETWORK

Expanded Network Services
As part of the requirements for Backup as a Service as well as to expand NWRDC’s ability to provide core networking services, we have added some additional switching abilities in the data center this past fiscal year. These additions give us the ability to more easily provide 10Gb core connectivity. Furthermore, we have upgraded to 10Gb firewalls to continue supporting the increasing needs of our customers.

DOE Managed Network Service
This past fiscal year, DOE has expanded its managed services support with the most recent being for their network infrastructure. NWRDC now provides network management for systems both at NARDC and within DOE’s state offices.

DATA CENTER CONSOLIDATION

Florida Virtual Campus
NWRDC worked with the Florida Virtual Campus to consolidate both their Tallahassee and Gainesville locations into our facility. This move was a major planning effort by both NWRDC and FLVC staffs. Since the move in December of 2013, we have been working to assume managed services roles similar to our other state customer base. As a part of this move we also relocated their current disaster recovery equipment from Tallahassee to our new out-of-state site in Atlanta.
“NWRDC has hosted the City of Jacksonville’s financial application for the last three years. The level of service has been exceptional. The System Administrators have extensive knowledge of the z/OS operating system and are very professional. The team is always prompt in answering questions and providing assistance when issues arise. The customer support has been very helpful and responsive in making sure the City’s mission critical system workload is completed on-time. NWRDC has filled a critical void for the City of Jacksonville.”

Usha Mohan, Division Chief & CIO
Information Technologies Division, City of Jacksonville

MAINFRAME
During this fiscal year, the mainframe staff reduced the cap on z/OS processing, which resulted in approximately $250,000 savings for NWRDC customers. They implemented security and efficiency improvements by upgrading the mainframe’s microcode, changing ACF2’s password rules to auto-expire force changed passwords, and employing secure FTP using FTPS and SFTP. The NWRDC mainframe staff continues to insure the platform remains up to date allowing NWRDC mainframe customers to incorporate new software features into their existing applications.

FACILITIES
Disaster Recovery Site Move
With the previous contract expiring, NWRDC finalized an Invitation to Negotiate (ITN) for a new contract for an out-of-state data center facility then completed the technical side of a disaster recovery site move for our internal back office, service based systems, and for two customers. While complicated to plan and execute, all three moves went seamlessly with no unplanned extensions of the outage times. The new contract created a partnership between NWRDC and CenturyLink, allowing us to resell CenturyLink services though our service catalog. Connectivity options include both shared and dedicated 10Gb FLR connectivity as well as MFN connectivity. The plan is to utilize the Atlanta data center facility for an alternate processing site as well as disaster recovery.

New Generator and Electrical Upgrade
In fall of 2013, NWRDC and FSU Facilities Management completed a project to add a new generator. A 500 Kilowatt generator was installed and workload was redistributed from our existing redundant 1 Megawatt generators. This redistribution of existing power load freed up 230 Kilowatts of power for use by our customers. In addition, NWRDC completed the first year of a 4-year project to upgrade all electrical panels within the Tallahassee facility. This is the latest project underway to upgrade NWRDC’s infrastructure to meet our customers’ future needs.

Specialized Micro-Cleaning
In an effort to continue providing the cleanest environment possible for our customers, this summer NWRDC contracted with a company who specializes in micro-cleaning to work their magic under the raised floor space at the Tallahassee facility. This process utilized special equipment to trap dust and fine particles before they could be ingested by your computer systems.

Additional Office Space
With the growth of our services, NWRDC has outgrown its office space. Therefore, in February of 2014, our administration and mainframe teams relocated to leased space in the Morgan Building, just a short walk across the street from NWRDC.
NWRDC strives to encourage and foster future generations of IT professionals. This past spring an inquisitive group of FSU Computer Science students toured our state-of-the-art facility to learn about our operation. In addition, on Bring Your Child to Work Day several children of NWRDC employees participated in a full day of fun educational activities, where they were inspired to disassemble servers and try their hand at counting raised floor tiles for the Executive Director!
The Florida Virtual Campus completed a multi-phased relocation of its Tallahassee and Gainesville data centers to NWRDC in December 2013.

“Extensive planning and coordinated efforts between FLVC networking staff and NWRDC professional service staff, resulted in a smooth transition and minimal impact on the state’s 1,000,000+ public college and university students and institutional staff who rely upon FLVC’s services.”

Betsy Hacker
Assistant Director
Technology Infrastructure Services
Florida Virtual Campus