October 24, 2019

20-054   <u>UPGRADE OF DATA CENTER VIRTUALIZED SERVERS</u>

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FINANCIAL
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REPORT: PCC's virtualized servers in the Sylvania data center are 8-10 years old requiring increasing maintenance and support costs, high operational overhead, and numerous manufacturer solutions including different management consoles, support, and skills required. In an effort to mitigate these challenges and improve the current data center environment, Information Technology (IT) identified a new architecture that will enhance server performance, provide redundancy and consolidate support.

After thorough research and analysis, the best solution for PCC's data center infrastructure is to replace the servers with a new hyper-converged system. A hyper-converged system is what we did for our new backup servers in February 2019 (BA 19-077). Hyper-converged systems combine storage, computing power, and network into a single system to reduce data center complexity. The benefits from this model are increased performance, more flexible expansion options, lower cost of adding additional resources, and more efficient management. IT also identified hardware and software systems that would allow hosting from multiple campus locations within the district to offer a high-availability solution.

Multiple vendor solutions were researched including; Cohesity, Nutanix, Microsoft, and Dell/EMC/VMware. In the end, all of these systems, except Dell/EMC, are

proprietary software-only solutions that have to be paired with server hardware to provide hyper-convergence. When looking at the Dell/EMC VxRail solution, it is the only solution that truly was *one* system. It combines the server hardware with built-in VMware vSphere virtualization and utilizes vSAN virtual storage which is integrated into one system.

The Dell EMC VxRail is available through ORPIN (Oregon Procurement Information Network) contract 5603. Utilizing an ORPIN contract is allowed without a competitive process as outlined in the 2016 Public Contracting Rules section PCC-46-0400. CDWG is a provider of hardware products through ORPIN contract 5603 which is valid through 12/30/2019. The cost for the hardware is $1,810,000.

The VMware is available through NCPA (National Cooperative Purchasing Alliance) contract 01-42 with Dell. Utilizing a NCPA contract is allowed without a competitive process as outlined in the 2016 Public Contracting Rules section PCC-46-0400. This contract is valid through 10/30/2021. The cost for the software is $1,142,681.50.

The prices above include 5 years of maintenance costs. Maintenance costs after this will come from the IT general fund.

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There are no identified MWESB firms on either the ORPIN or NCPA contracts for this type of equipment and software,

RECOMMENDATION: That the Board of Directors authorize the College to purchase the Dell EMC VxRail and VLS VMWare for a total cost of $3,247,950 including 10% contingency. Funding will come from the 2017 Bond. Maintenance costs after 5 years will be from IT General Fund.