



# Memorandum

**TO:** HONORABLE MAYOR AND  
CITY COUNCIL

**FROM:** Stephen R. Ferguson

**SUBJECT:** SEE BELOW

**DATE:** May 21, 2009

Approved

*Christine J. Shyppig*

Date

*5/22/09*

**SUBJECT: COST/BENEFIT OF SUPPORT FOR WINDOWS MIGRATION  
FROM UNIX**

## **BACKGROUND**

The 2009-2010 Proposed Budget includes a recommendation to eliminate 1.0 vacant Supervising Applications Analyst position. This position was designated to provide management for the enterprise server teams and would have facilitated the planned migration from Unix servers to Windows servers. The projected ongoing savings from the elimination of this position is \$132,629. At the Strategic Support CSA Operating Budget Study Session on May 11, 2009, Councilmember Herrera requested cost information regarding delay of the Unix to Windows migration project as a result of this position elimination proposal.

## **ANALYSIS**

The majority of City applications and users run on the Windows platform. The large enterprise systems (e.g. HR/Payroll, Integrated Billing System, FMS, and Integrated Development Tracking System) run on the Unix platform, which was selected at a time when Windows was not a viable alternative for the City's large systems. As technology continues to advance, the solutions that were selected in the past, may not continue to be the most sensible recommendations moving forward. Thus, a decision has been made to migrate the City's large systems from Unix to the Windows platform.

The basic component pricing listed below illustrates the cost difference between the two platforms:

<b><u>Initial Acquisition</u></b>	<b>Unix</b>	<b>Windows</b>	<b>Difference</b>
Database Server	\$ 70,000	\$ 12,000	\$ 58,000
Redundant Database Server	\$ 70,000	\$ 12,000	\$ 58,000
High Availability Software	\$ 117,500	\$ 4,000	\$ 113,500
Application Server	\$ 14,000	\$ 8,000	\$ 6,000

<b>Annual Support Costs Per Unit*</b>	<b>Unix</b>	<b>Windows</b>	<b>Difference</b>
Hardware Maintenance (Database servers)	\$ 7,344	3 years included with purchase	\$ 7,344
Operating System Maintenance (Database servers)	\$ 5,000	\$ 1,250 (\$250 per incident support)	\$ 3,750
High Availability Software Maintenance (Database servers)	\$ 36,400	\$ 0	\$ 36,400

\*Costs referenced above are *component* pricing only, and do not represent the City's *total* cost of operations and maintenance.

In 2008-2009, approximately \$120,000 was expended for annual support and maintenance of the City's entire enterprise Unix environment. It is projected that minimal annual support costs (\$250 per incident support) would be necessary in the 100% Windows environment. "Per incident support" is paid for, on an as-needed basis when the service request is initiated with the vendor. After the initial three year period, additional annual support costs may be necessary for hardware maintenance.

In addition to reducing annual support and maintenance costs, the City will avoid high replacement costs when the systems reach end-of-life, estimated to be in 2012. In 2008 the City was required to refresh the Unix environment to ensure that critical enterprise systems were not running on unsupported hardware. The cost was approximately \$880,000. If enterprise systems were running on Windows, the cost to refresh the 2008 environment would have been \$264,000. Migration to the Windows platform was not done at that time, because migrating large, critical enterprise applications takes time, planning and resources. This is a multi-year strategy. Refreshing the Unix environment in 2008 afforded the City time to perform the proper planning while the enterprise applications were not put at risk by running on unsupported environment.

The City has engaged a consultant to provide a plan for migration from Unix to Windows. The scope of the consultant's work is to produce a migration plan for one enterprise application according to best practices and benchmark the existing Unix systems. The Information Technology Department plans to use in-house staff to complete this labor intensive project. Due to the critical nature of each of these enterprise applications, a technical manager is required to oversee each step of the migration and staff's progress amongst competing priorities. With the elimination of the Supervising Applications Analyst position originally intended to perform this function, the migration project will likely be completed after 2012.

**CONCLUSION**

It is estimated that nearly the entire annual support costs of approximately \$120,000 being paid for Unix equipment will be saved when the migration project is complete. The Windows equipment can be supported with use of the "\$250 per incident" technical support plan. In addition, the one-time cost of refreshing (replacing) equipment in the Windows environment will be substantially less. Staff still intends to complete this project as it is clearly in the best interest

HONORABLE MAYOR AND CITY COUNCIL

May 21, 2009

**Subject: Cost/Benefit of Support for Windows Migration from Unix**

Page 3

of the City. However, with the elimination of this vacant position, additional staff reductions, and the necessary one-time initial acquisition costs, the work will progress without a dedicated manager, delaying the completion beyond the next required refresh date (approximately 2012).

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Chief Information Officer