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Bruce Claremont, May 2006

RPG on OpenVMS Lives On at EVMS

Who among us in the IT world hasn't faced the loss of a useful software application simply because the underlying hardware has become obsolete? Unsupported on newer platforms, the old application can no longer evolve to meet ever changing business needs. No matter how useful or important, the application has to be replaced.

Fortunately, this is not always the case. There are a few companies out there that appreciate the value of legacy applications and actively strive to support them. A legacy application often represents a tremendous value in vested business knowledge, making it well worth preserving. Using the right tools, expertise, and operating system, such investments can be preserved. Consider the following case.

With an annual operating budget of \$160 million, Norfolk-based Eastern Virginia Medical School (EVMS) relies on the HP OpenVMS operating system to support the majority of its financial applications. The applications, which cover budgeting, human resources, finance, auditing, procurement, and payroll, have been developed in house using VAX RPG II. Application development on the VAX was initiated in 1990 by CIO Deborah Taylor, a self described old school IBM blue blood that was won over to OpenVMS by the elegance and reliability of Digital Equipment Corporation's VAX hardware and operating system. However, the core application components have even deeper roots, original development having occurred on an IBM System/3 in the 1970's using IBM RPG II.

EVMS soon graduated from a VAX 3900 to a VAX 4100, then added an Alpha 1000 to create a mixed OpenVMS cluster. Unfortunately, VAX RPG II was never ported to OpenVMS on the Alpha, Digital having dropped the product in 1992. Debbie worked around this limitation by VESTing the compiled RPG executables to the Alpha, allowing the applications to be executed in the Alpha OpenVMS environment. The VAX 4100 became a development platform and continued to support the VAX RPG II compiler. Application development continued in RPG.

Fast forwarding to the present. After 14 years of faithful service, the VAX 4100 is nearing retirement. The hardware is starting to show signs of age and the hardware support contract is becoming prohibitively expensive. Because RPG is central to the EVMS financial applications, the VAX remains essential to supporting RPG. This is the quandary faced by EVMS unless an Alpha compatible RPG compiler can be found.

Unwilling to give up OpenVMS or RPG, EVMS turned to Migration Specialties for help. The Colorado-based company offers Migration RPG, an RPG II compatible compiler that runs on all OpenVMS architectures: VAX, Alpha, and Integrity. Migration RPG is 95% compatible with VAX RPG II. It offers many enhanced features unavailable in VAX RPG II. In short, it provides a modern RPG II development environment for OpenVMS. More importantly, it allows EVMS to preserve its investment in business software and retain the development environment in which it is comfortable.

Migration Specialties consultant Bruce Claremont traveled to the EVMS facilities and teamed up with Debbie Taylor and developer Charlene Till for three days to assess porting the VAX RPG II applications to Migration RPG. 99% of the DCL code proved portable with no modification. 1,300 of 1,500 VAX RPG II programs compiled clean with minimal modifications. Initial ad hoc testing was successful. Charlene found the Migration RPG development environment comfortable and familiar. An additional week of effort on the part of Bruce and Charlene will see the entire set of VAX RPG II applications ported to Migration RPG, tested, and running native under HP OpenVMS on the Alpha.

With the port to Migration RPG, EVMS ensures the future of essential financial applications. Migration RPG is also available on the HP Integrity platform, providing EVMS a smooth migration path to the latest OpenVMS hardware when they are ready to take that step. All of this has been achieved at modest cost with no disruptions to business operations and no need for any user retraining. Solid business applications with 30 years of heritage are preserved and can continue to evolve on an operating system that is a hallmark of security, reliability, and scalability, in a development environment of the client's choosing. Sometimes you can have it all.