

Scientific Software

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<http://www.csm.ornl.gov/Internships/abstracts/BakariJacobs.pdf>

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Researchers at the Oak Ridge National Laboratory submitted a request for better access to scientific software with centralized, management and oversight. Plans are to develop and implement a survey to determine commonly used software. This report will be used as a basis to request additional funding for a managed software program (MSP) in FY05. Software cost information and vendor contact information will be gathered and organized for use if the (MSP) is approved in the FY05 budget. Investigations will take place with vendors with possibilities for license consolidation, site licensing, or other license options that could result in overall cost savings. For this research, the data was collected determining which scientific software was commonly used, the number of licensed individuals, and if available, software preferred. Spreadsheets were developed containing vendor contact information, pricing for single and multiple licensing packages (1, 5, 10, 25, & 50) which were used as part of the NCTD FY05 budget submission.

Survey

Scientific and Administrative Software Usage Survey				
What software do you use?				
Identified as a "top ten" priority in the IT strategic planning effort, the Computing Infrastructure, Projects, & Services (CIPS) Group at NCTD is looking at how to expand the licensing and support provided for core scientific and administrative software in use at ORNL. Methods to achieve this goal are dependent upon the vendor options but might include:				
<ul style="list-style-type: none">• site-licensing• bulk purchases• concurrent-use licensing• other purchasing options				
In order to define the areas in which this effort might be most beneficial to staff, we would like your input. Please take a few moments to fill out the following survey to let us know your needs.				
For each software package, please identify whether you use (or would use) the software frequently, occasionally, or never (default answer).				
Please also be sure to use the additional space provided to write-in your vote for any software that may have been overlooked. Space for comments is also provided.				
Fortran Compilers		Frequently	Occasionally	Never
Sun Fortran	Solaris	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
HP Fortran	Tru64 Unix	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
PGI Fortran	Linux	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Intel Fortran	Linux	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Lahey Fortran	Linux, Windows	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
IBM Fortran	AIX, Linux, Mac	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Absort Fortran	Linux, Mac, Windows	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
C/C++ Compilers		Frequently	Occasionally	Never
Sun C/C++	Solaris	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
HP C/C++	Tru64 Unix	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Intel C/C++	Linux	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
IBM C/C++	AIX, Linux, Mac/C/C++	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
PGI C/C++	Linux	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Absort C/C++	Linux, Mac, Windows	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Visual Studio/Visual C/C++	Windows	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Developer Tools		Frequently	Occasionally	Never
Microsoft Visual Source Safe		<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>



RESULTS

Scientific Software is software applications used by scientist and engineer to understand and solve complex problems (e.g., Mathematica, Sun forte, Visual C++). The survey concluded that Mathematica, MS Visual, Matlab, IDL (visualization), and Mathcad were the most popular software.

A portion of the survey results will be used to plan for the FY2005 budget. Future plans are to implement a Managed Software Program (MSP). Some of the most popular software will be purchased through the MSP in the near future along with consolidating licenses. Server processes will be set up for users to check in and check out licenses rather than purchasing individual licenses.

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