IBM Readies Data Engine

By Christine Bonafield

CAMBRIDGE, MASS.—IBM is preparing to unveil an object-oriented database for Unix-based network management that is also being used by Hewlett-Packard Co. with its management system.

IBM's data-engine technology, sources said, is part of a wide-ranging network and systems management proposal submitted by IBM and HP to the Open Software Foundation as part of the two companies' Distributed Management Environment proposal (*Communications Week*, Jan. 7).

▶ Provides object-oriented, distributed net mgm't
▶ Contains an SQL interface to access historical data
▶ Has a real-time operational interface based on OpenView's CMIS API
▶ Will be used in Unix and other environments

The rare technological two-step by IBM and HP is expected by OSF insiders to go head-to-head with another network management proposal submitted by Digital Equipment Corp. and its partners, Microsoft

• IBM'S DATA ENGINE

Corp. and BBN Communications Corp. (*Communications Week*, Oct. 15, 1990).

The OSF's choice of one proposal over the other ultimately should determine whose technology is likely to be licensed by a multitude of vendors to build network and systems management systems based on the DME. And, as the DME debate continues and the technologies are developed by the competing players, customer need for improved network management keeps growing, unabated.

Sources at the OSF, based here, said last week that the powerful IBM-HP proposal has put DEC on the defensive, and that DEC is responding by working quietly to organize a still-to-be-announced "cooperation demonstration" set for April.

The DEC demo is reportedly aimed at showing how management technologies from other OSF DME proposals can be used with the heart of DEC's Enterprise Management Architecture, the Director.

James Herman, a principal at Northeast Consulting Resources Inc., Boston, said he expects users will benefit from the intense competition and teaming the OSF technology and proposal process has fostered. "OSF has had more impact on the industry structure and the way vendors work together than anything that has happened in the last five years," he said.

OPEN INITIATIVES

IBM, meanwhile, said it is getting favorable feedback on the proposal to the OSF, and has other open-systems-networking irons in the fire.

Raymond Williams, an IBM senior technical staff member, said the IBM-HP proposal relies primarily on HP's Open Systems Interconnection-based network management applications programming interface, and incorporates IBM's reduced-instruction-set-computing RISC Station-6000 computer and IBM's unannounced data engine.

Williams also said IBM would use the object-oriented data engine in its own products, even if the technology was not accepted by the OSF. He would not name a date for the product's announcement, but the OSF requires that submitted technology be ready for shipment to customers in the first half of this year.

The data engine fixes what has been considered a significant flaw in HP's OpenView management system. To date, the product has relied on a "flat file" approach to data management, which has been criticized by network management experts.

The IBM data engine being integrated with OpenView relies instead on fault-tolerant computing to back up or recreate information files.

The data-engine technology is object-oriented. It distributes the network management capabilities throughout the network. The engine includes a Structured Query Language interface for historical data on the network management system workings.

The interface for real-time operational management information is contained in the Common Management Information Services API defined chiefly by HP in OpenView and includes extensions to the OSF/1 operating system provided by Paris-based Groupe Bull. IBM's primary contribution to that interface is the addition of the SQL.

It is the real-time operational aspect of the data engine that Williams said is most important to users as they store information in different locations throughout a network and then access or update that information using the AFS 4.0 Transarc Corp. file system used in OSF/1.

"The main difference between a flat file and this approach is that [in the data engine] you are keeping critical data in main storage where it is mirrored out to the store file. If you want it, it is there" to be accessed, Williams said.

Williams said he expects the data engine to be used primarily in Unix environments, although neither the DME nor the data engine are limited to Unix.

The data engine is object-independent, which means that it can be used for management of vendor-specific devices and applications either in Transmission Control Protocol/Internet Protocol or OSI networks. Initially, however, it will support only TCP/IP objects.

Williams said he expects the data engine to be linked to similar data engines on other operating systems—such as IBM's NetView network management system for MVS and VM—using a SQL interface.

Williams also said that if IBM were to implement its new SystemView management architecture—announced last fall—on the AIX operating system, the implementation would use the data-engine technology. "For at least some time there will be two databases in two different environments," he said.

Infighting May Delay OSF's DME

BY LAUREL NELSON-ROWE

Cambridge, Mass.—The Open Software Foundation's Distributed Management Environment efforts could be delayed by up to two years due to infighting between OSF and some of its technology providers, an IBM network management official said last week.

IBM Network Systems senior technical staffer Ray Williams said "different visions" between OSF architects and vendors providing the DME's technology underpinnings could push back DME implementations, expected later this year, and products being readied for 1993 back to 1995.

Williams' concerns were echoed by officials from Hewlett-Packard and Tivoli, both of which, like IBM, were selected by OSF last year to contribute key building blocks of the DME platform. The vendors say internal squabbles among the participants and the sheer complexity of the multivendor technology integration involved in constructing DME have hampered progress.

The OSF, however, says DME will not be delayed. OSF officials said any conflicts are being resolved as they arise through discussion and reviews by the technical and engineering specialists involved in the DME process.

Jonathan Gossels, OSF's business area manager, said "disagreements" have surfaced within the DME architectural and integration process,

DME Infighting

but he characterized them as "minor, routine" in developments in a "multicompany effort." He refused to describe any of the disagreements.

Williams and officials from HP and other DME contributors agreed that the vested interests and divergent approaches to the DME developments are similar to those that arise internally during any product development cycle. According to Williams, the differences "are coming out in the open [with the DME] because several different companies are involved."

The companies and the technologies involved include HP's OpenView Network Manager Server software, Tivoli's WizDOM object-oriented management technology, IBM's so-called "data engine" server software, and Banyan's Network Logger software, among other elements.

Jeff Thiemann, HP's OpenView business development manager, said the "clash of ideas" stems from the DME's mandate to tie together technologies that support current industry-standard management technologies or products, such as SNMP standard and HP's OpenView, with promising new and developing technologies, such as Tivoli's object-oriented programming approach.

Some of the technology providers fear that differences of opinion with OSF could delay efforts on DME by as much as two years.

Thiemann said that those involved in the DME face two alternatives. The OSF could stick with its ambitious original plan, which called for the release this year of an integrated DME platform that includes specifications for the Consolidated Management API—developed to address current management technologies—as well as specifications for object-oriented systems administration under DME. Or, Thiemann said, OSF could stagger independent releases of the CM-API, DME's object-oriented technology, and, even later, the integrated DME implementation.

IBM's Williams said he is concerned that the OSF is "taking the DME architecture beyond the selections made in September" while at the same time duplicating some technology and standards efforts within other bodies. For instance, he said, the OSF should put more emphasis on the Common Object Request Broker Architecture recently adopted by X/Open, as part of the DME's object broker.