Trends

Shaping the IT Market

By Rick Nott

In an IT market constantly swept by winds of change and innovation, managing the total cost of applications ownership while integrating new and powerful tools can be challenging. Facility managers who harness these currents of change can help reduce total cost of ownership of enterprise applications, whether managing an IT department or across an entire enterprise of mission-critical operations. In an increasingly mobile workplace which may include multiple, diverse field-enabled applications, channeling these four trends is especially valuable. They can trim costs, increase efficiency and streamline operations. Four powerful industry movements continue to shape and drive the current market:

1. The rise of commodity hardware
2. The mobile revolution
3. Merger madness that is across companies and work silos
4. The emergence of pre-integrated solution families

The rise of commodity hardware
Commodity hardware, which is made from nonproprietary components made by multiple vendors, is affordable and easy to source. For commodity servers for enterprise level, mission-critical applications, the trend toward using Linux instead of traditional UNIX has increased dramatically. In August 2010, Forrester Research observed, "Linux
has crossed the chasm to mainstream adoption.” The declaration was based on the huge number of enterprises that moved to Linux during the late 2000s recession. Just last year, Gartner, a research organization, stated, “Adoption of open-source operating systems (OS) continues to be the biggest threat to proprietary OS vendors, with users preferring more common and more open platforms.”

For a long time, Linux was considered inferior and the choice between Linux and UNIX eventually led to thorough studies and comparisons. Results of those studies have driven the move to increased adoption of Linux. Linux has proven its performance ability to handle vast computational challenges. According to Top500, a website that tracks 500 of the most powerful known computer systems on the planet, 90 percent now use some variant of Linux. In fact, at least one of NASA’s supercomputer and the Hadron Collider at CERN both use LINUX.

Linux’s reliability and stability is impacted by the quality of the box in question. At the low end, to achieve levels equivalent to UNIX, it is recommended to use an n+1 distributed architecture. On the high end, many would argue the reliability and stability of Linux are equivalent. As far back as 1997, an article in the September issue of Internet Week (now Information Week) declared Linux, “a rock-solid system that supports a wide range of hardware and outperforms most other systems.”

Linux has gained adoption for its superior value proposition, as well. Based on Linux’s high performance and its ability to run on commodity hardware, it provides a lower cost option compared to traditional UNIX. For example, a commodity box from a supplier like Dell with Redhat installed, based on Internet rack price, is just under half the price of a traditional UNIX box, when calculated based on an n+1 distributed architecture. Savings are even higher when “n” is higher. When n = 2, savings reach 35 percent. When n = 3 it moves up to 40 percent. Facility managers, who appreciate the impact of the rise
of Linux as commodity software, gain a significant opportunity to reduce the total cost of their applications ownership.

The mobile revolution
There is a seemingly sudden whirlwind of small devices now available to facility managers, offering an unprecedented choice of new, flexible and affordable tools. These small devices, such as smart phones and tablets, deliver exceptional mobile power formerly only available from a PC, for a fraction of the cost. Managers can equip more workers with devices that provide real-time access to important data. Managers can locate workers and match staff to tasks with greater efficiency. The surge of new products offers a variety of device types to choose from, allowing managers to equip their staff based on what they need to do and how they need to do it. These tools also help attract much-needed younger workers who, in turn, will embrace and further unlock value from these tools in the workplace.

Merger madness
These days, it sometimes seems that everyone is buying everyone else. There are sound reasons for it, though, and they likely will continue to drive the trend. Particularly in highly technical fields dealing with vital assets, often the best way to acquire expertise is simply to acquire experts. Mergers and acquisitions are on the rise. CenturyLink just made another big purchase by acquiring Qwest. Ventyx is now an ABB company and, since the acquisition just last year, has been joined by two additional newly purchased companies. Mergers bring challenges as well as opportunities that can help manage total cost of applications ownership.

Senior managers face many practical obstacles to their ability to view and compare performance metrics across the new organization as if it were one company. Consolidating software systems is an important first step. While this can be painful in the beginning, it brings rewards when completed. Having enterprise-wide applications for expense reporting, document management and email, for example, streamlines processes and helps trim costs.

What can facility managers learn from the merger trend? Even if an organization does not experience an acquisition, the model of merged work types has much promise. Consider the vital and logistically tricky area of mobile workforce management (MWFM). Every organization must manage multiple work types, each with unique workflows and many on separate systems. For gas, water or electric utilities—which may manage customer service, gas leaks, tree trimming, outdoor lighting, metering, maintenance, repair, switching, planned and unplanned outages, construction, testing and surveys—this is especially true. The principle of “one company, one workforce” applies here.

Consolidating MWFM reduces total cost of assets by delivering operational and IT benefits. It allows all field crews/technicians to communicate on a single MWFM system that supports current organizational structure and accommodates notebooks, tablets and/or smaller handheld devices simultaneously deployed in the field. This simplifies and further improves efficiency on a variety of communications, including for connects and disconnects, trouble calls, maintenance and inspections, operational performance objectives, installs and repairs, purchase of telephones and services, fiber to the home and construction.

Consider the additional efficiencies to be gained if all these work types were managed on a single system—particularly if that single system deals with everything from forecasting future workload to scheduling resources, dispatching work and completing it in the field, to capturing all this data and reporting on it. To truly maximize benefits from the “one company, one workforce” approach, a new approach is crystallizing around the concept of enterprise class software (ECS).

ECS would be scalable to handle the sheer volume of data as the application would need to manage thousands of users and hundreds of thousands of transactions, every day, without performance degradation. It reduces the number of platforms needed, a laudable and proven practice which Gartner terms “application portfolio rationalization.” With fewer vendors to manage, ECS simplifies and enables other cost-saving approaches such as volume purchasing.
ECS would support partitioning, defined as the ability to both accommodate multiple work processes and segregate data. The application needs to handle the uniqueness that is inherent to each work process, particularly in workforce management. Segregation makes it possible to limit or expand the areas each manager can access, whether by geography or business unit, so that portions of the system data can be managed, for example, at the regional center where the nuances are better understood.

Enterprise class software will need to be a commercial off-the-shelf solution (COTS) so that all needed updates and changes required by each group can be executed without customization, costly dependence on the vendor and in a controlled manner, so that one group’s changes don’t break another group’s configuration.

The emergence of pre-integrated technology families

When software makers have undergone mergers and acquisitions, organizations can take advantage of one-stop shopping for industry specific solutions but also may discover previously disparate applications now have been pre-integrated for them into a smaller number of applications that come out of the box fully interoperable with related applications. Sometimes called “product families,” where the vendor already has done the analysis of how several separate applications can best act as one, they are inherently interoperable. The vendor has pre-built the integration of the applications, tested it, and taken on the responsibility to physically maintain it over time and throughout any application upgrades.

Facility managers who seize this trend trim deployment costs and reduce the incidence of surprise incompatibilities. Standard product interfaces between them already have been configured; little-to-no post-implementation customization is needed. The result can mean that a family of applications is deployed such that their interfaces merge in a sense, presenting a single, simplified point of integration to the outside world.

Assume an average integration between two applications costs about US$250,000 and if that’s all that is needed, just two applications, there is a saving of US$250,000. But throw in a third application, one that’s outside the suite that needs to talk to the first two applications. Normally this would mean building out two more integration points. But since there is a combined outward facing interface, this only has to be done once, not twice, saving another US$250,000. So far, there has been US$500,000 savings. If this process happens again in three years due to an upgrade, there’s more savings. So, within the first five years, in this example US$1 million has been saved, even before considering the impact of efficiency gains or better problem solving or the benefits of end-to-end business intelligence.

The applications continue to grow together, so that as each separate application evolves to maintain “best of breed” applications in their own right, they do so in such a way that accommodates one another. The applications now have overlapping roadmaps, reducing the likelihood of wasteful redundancies or incompatibilities arising and taking advantage of new synergies.

Interoperability reduces the total cost of ownership by slashing the time, risk and effort needed to integrate multiple applications. Productized interfaces and combined outward facing interfaces further simplify the process.

Equally important is that vendors can solve problems holistically. Previously disparate groups of experts are brought together, each bringing different insights, and new possibilities emerge. The result is end-to-end, holistic business intelligence. Prepackaged key performance indicators can answer questions like, “What does the corporation need to understand from this larger workflow?” They enable managers to report and track on objects and information, as they loop through a number of applications, with no gluing required. Business intelligence with end-to-end visibility means better information and better decisions.

The rise of high performing commodity software, the myriad of affordable mobile devices, and new approaches and solutions emerging from a sustained period of mergers are winds of change blowing new opportunities toward savvy facility managers. The newest opportunities lie in the promise of enterprise class software and pre-integrated families of applications that help manage costs, optimize efficiency and build scalable, future-proof systems.

References: