

Monitoring Productivity

By Eric Haley

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In a perfect world, employees rise at the dawn of each work day with a smile of enthusiasm, excited to start a new venture of hard work with unrelenting motivation. They're anxious to complete each and every project that lands on their desk, like a child waiting to rip through a mysterious pile of freshly wrapped birthday gifts. In a perfect world, employers rest assured that every task, bestowed onto their hardworking staff of 'go-getters', will be completed ahead of deadline, addressed with the concernment of a family crisis and the only distractions that exist are lunch breaks that always seem to interfere with the day's productivity. However, we live in an imperfect world where employees find motivation in cups of coffee, instead of at the rise of each new day, and the temptation of distractions are only a mouse click away from the task at hand. While employees are trusted to stay on task, every organization, whether cognizant of it or not, has employees who may tend to be less efficient with their time; wasting company hours and dollars, surfing the internet or on a game of solitaire. Because of this, supervisors are necessary for ensuring that all employees are productive with their time, completing all assignments.

Like teachers are evaluated on the progress of their students' grades, supervisors are evaluated on the success of their departments. Physically walking from office to office is one way supervisors try to make sure that their staff members are using their time constructively. However, neglectful employees can simply exit out of a game or internet browser when they hear a supervisor approaching. This is why many organizations have invested in monitoring software to keep a close watch on their employees. With monitoring software, supervisors and administrators can sit at their desk and monitor a selected employee's computer to see exactly what they're doing at that moment. Unfortunately, monitoring software can be expensive and network intensive, bogging down network traffic. There is a cost efficient alternative, although, that many organizations aren't aware of when it comes to monitoring employee computer activity. Training management software is utilized in much the same way an administrator uses monitoring software. It's used by teachers, professors, and corporate trainers to not only monitor their students' or trainees' screens, but to assist them in the learning process as well. By offering both computer monitoring and control capabilities, training management applications can actually serve a triple purpose: administrators and supervisors can benefit from the monitoring features by keeping a close eye on their employees; an IT department can utilize the remote control capabilities for troubleshooting as a helpdesk solution; corporate trainers and administrators can utilize the software for local or distance training.

Employee Monitoring

When monitoring employees, it's important to be able to monitor several employees at once, in almost real time, enabling administrators to

monitor all their employees on one screen. Some training management applications only enable users to view up to 20 screens at a time. One training management application, NetOp School, enables users to view up to 200 desktops at once, via thumbnail images, on one desktop. Depending on the type of configuration provided in the software, users can typically set-up the thumbnail desktop images to refresh every three or 30 seconds. By adjusting the refresh rate, administrators can determine the amount of information being transmitted over the network. When viewing numerous desktops over a network it's important to make sure that you use a product that won't use many network resources. This way, it won't slow down the company's network, affecting the speed at which employees can access information on the network.

When viewing a remote desktop, an image or snapshot of the desktop is sent over the network, to the computer conducting the monitoring, through data transfers. This can be done a couple of different ways. The most common means of transmitting desktop images is through bitmapping. A bitmap is an image file that defines a location and color to each pixel or "bit" in the display space. Because a bitmap uses a fixed or raster graphics method of specifying an image, the image cannot be immediately rescaled by a user without losing definition. Several training management applications use this as their primary way of monitoring desktops. Bitmap transfers not only make for slow monitoring sessions, but they also tie up the network.

Other training management applications use GDI hooking and vector graphics transfers to carry out monitoring tasks. Vector graphics is the creation of digital images through a sequence of draw commands or mathematical statements that place lines and shapes in a given two-dimensional or three-dimensional space. GDI hooking involves intercepting these draw commands and sending a copy of these commands to the remote PC for reproduction. Because GDI hooking sends commands, as opposed to actual files, from one PC to the next, the monitoring sessions are almost always faster and use less of the network to conduct a session. Additionally, vector graphics are designed to be quickly rescaled, allowing for a quicker screen transmission and refresh rate.

GDI hooking is only valid with Windows to Windows sessions and even during a GDI hook, there are still bitmaps that need to be transferred. Because of this, training management applications cannot rely entirely on GDI hooking, but a good training management application will enable the use of GDI hooking whenever possible.

Confidentiality is crucial when monitoring employees. If an employee knows when they're being monitored, they'll obviously make sure that they're not goofing off. The right training management application will enable a supervisor to eavesdrop on any employee, whenever necessary, without them knowing otherwise. This way, administrators have a constant watch over their employees to ensure their productivity at all times.

Monitoring Productivity continued from page 28.

Training management applications, furthermore, offer several features that can contribute to the monitoring process. One example of this would be a recording feature. With a recording feature, administrators can record an employee's computer activity. This way, if an employee were caught playing games or using their computer inappropriately, an administrator could record their illicit use of their technology for later discussion. This way, if an employee tries to deny the claim, the recording can be replayed for them to see that they were being monitored. Or, administrators can save such recordings for employee reviews, when they're being considered for a raise.

Additionally, some training management applications enable an administrator to lock up a monitored user's keyboard and mouse, at which point, a message can be sent to them telling them to get back to work. Typically, an instance like this only happens once before the employee learns that their progress is being monitored by upper management.

Helpdesk Solution

The remote control capability in a training management application enables users to take complete control of a computer, view the remote PC's screen, control its keyboard and mouse, launch applications or chat with someone at the remote PC—just as if they were seated at that computer. This way, if an employee should encounter a software related problem, they can get immediate assistance by simply instant messaging their IT department. Once the IT staff has been notified of the issue, they can remotely address the problem without even leaving their office; providing an instantaneous helpdesk solution.


Another feature found in high quality training management applications is the ability to distribute files. With a file distribution feature, an IT administrator can send out software updates to every computer on the corporate network. This alleviates having to physically visit each machine to download and install updates to the PCs located throughout the building. By remotely distributing and installing software, IT employees will save hours of wasted travel time, providing corporations with an excellent return on investment and IT employees with additional time to address more important issues.

Distance Learning

Feature-rich training management applications provide several possible uses, but remain very beneficial for their developed use. With the right training management application, corporations can provide distance learning to telecommuters or employees at offices separated by states or even oceans.

A broadcast feature will enable an instructor to broadcast their screen or a trainee's screen to other trainees to be used as example. This feature is especially beneficial when combined with the record feature discussed earlier. An instructor can pre-record a demonstration or a Power Point presentation and rebroadcast it to all the trainees once a class or presentation has begun. This way instructors will save time by recording an entire lesson plan before the class even begins. Then, once they've started to playback the presentation, an instructor can sit back and relax while the trainees soak up the information. For a presentation, this will enable presenters to deliver a smooth, well-prepared production of information to the clients or upper management attending the remote conference.

In the corporate environment, saved dollars translate to profit retention. Saving money on operational costs, such as software, leaves company money to be saved or distributed elsewhere. Training management software is one way in which an organization can cover several needs while

saving money on budget costs. A good training management application will combine a variety of beneficial features to give supervisors the ability to monitor numerous employees at once, IT employees the ability to troubleshoot computers without leaving their office, and instructors or administrators the ability to harness computer technology for detailed instruction and remote conferencing. 



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