Case study | 003371

Software

IFP Energies Nouvelles saves time and money using the Chromeleon Updater Service tool to manage automated software upgrades

"We have 200 computers in our Chromeleon Domain, and before the Chromeleon Updater tool, we had to update each of them manually, which meant traveling to our Paris site and doing the update on every computer one by one. The updater service changed everything. Now we can send the update to all computers at once. For me, to upgrade the 200 PCs is only half an hour, where it used to take three to five days."

–Maxime Visconte,
Head of Laboratory and Industrial IT,
IFP Energies Nouvelles

Introduction

Upgrading a laboratory's chromatography data system (CDS) can pose challenges for system administrators because the upgrade process can disrupt workflows and requires careful planning to minimize downtime. The maintenance of servers, local computers, and instrument controllers for an enterprise-level CDS is usually managed by an IT team and encompasses operating system updates, antivirus software updates, backups for disaster recovery, and application updates, among others. Performing these actions manually on each local device can be logistically difficult and time-consuming and can result in substantial laboratory downtime. As a result, some companies may not be able or want to take advantage of every software update straightaway. Additionally, costs related to software, hardware, travel, and potential infrastructure upgrades must be carefully managed to align with the lab's budget and scalability needs.

IFP Energies Nouvelles (IFPEN), a public research, innovation, and training organization in the areas of energy, transport, and the environment, solves CDS administration challenges using

> “The updater package is very straightforward—it's done seamlessly for the users. There is no interruption; we just run the updates. It just works.”
>
> —Maxime Visconte

the Thermo Scientific™ Chromeleon™ Chromatography Data System in an enterprise environment. Within the Administration Console view, system administration parameters such as license information and user management, as well as scheduling maintenance windows, software updates, and installation qualification (IQ) can be performed from one centralized location. These capabilities considerably reduce the time IT managers must spend performing system administration tasks. Because processes can be scheduled when systems are not in use, downtime is likewise minimized. This case study highlights how IFPEN relies on the Chromeleon Updater Service tool to schedule and perform software updates to over 200 computers across two of its locations, making the update process seamless for users.

Automated software updates save time, increase productivity

Administration of Chromeleon CDS across the lab can be done from any location on any PC, locally or remotely, as long as the company network can be accessed. This means administrators do not have to be in front of specific computers or servers to carry out certain administrative tasks, resulting in less time traveling between laboratories and sites, freeing up time to concentrate on other business activities.

The Chromeleon Updater Service tool (Figure 1) allows system administrators to create updater packages and then automatically distribute and install them across the network on remote PCs, including client PCs and instrument controllers, at a time that is suitable for the business. Following an update, it is possible to automatically run and review the IQ report remotely. Updater packages can be centrally created for any update—not just for the Chromeleon software—and distributed in a controlled manner, maintaining network bandwidth, to the selected remote computers, ready for installation. For example, the updates can be automatically installed for one, groups, or all computers at a predetermined time.

Maintenance Window Settings allow system administrators to notify users in advance of a planned downtime on selected computers, enabling system maintenance to be performed without interrupting sequences and injections that are currently running. This functionality delivers control over the process and eliminates the need for the administrator to go to every location using the software and manually install the update on each computer.

For IFPEN, the Updater Service tool is easily implemented and seamless for users, allowing the company to readily take advantage of all kinds of software updates. Maxime Visconte, Head of Laboratory and Industrial IT, IFP Energies Nouvelles explained, “We are planning to move to Chromeleon 7.3.2 CDS soon and we are confident now that we have done more than seven upgrades using the Updater tool that we can perform it completely unattended starting Friday evening and be sure that on Monday everything will start as expected.”

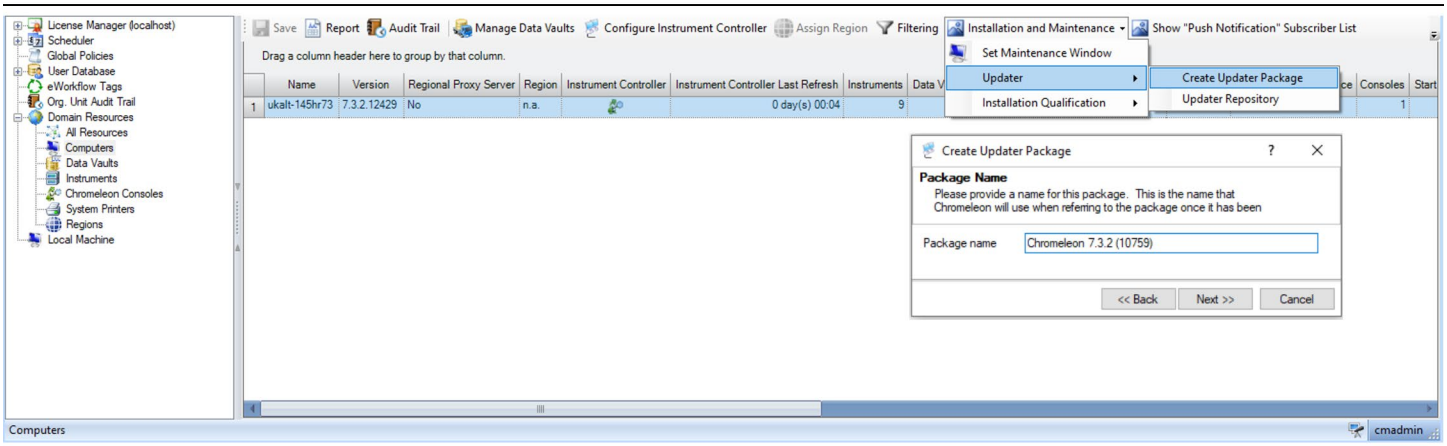

Figure 1. The Chromeleon Updater Service tool makes it easy to create update packages and then manage and qualify the update after it is installed.

"Chromeleon CDS is flexible enough to allow our customers to perform upgrades by themselves. We have several examples of customers like Maxime who have been able to upgrade their enterprise system on their own in less than a day. Chromeleon CDS can be adapted to a lot of IT architectures, and we help our customers to design their own environment based on their needs and challenges. Enterprise documentation is there to support our customers before, during, and after the installation of an upgrade to ensure the Chromeleon software roll out is seamless."

–Clément Morisset, Enterprise Implementation Specialist supporting IFPEN, Thermo Fisher Scientific

Key functionalities of the Chromeleon Updater Service include:

- **Automated updates:** It allows IT administrators to schedule and deploy software updates automatically, as long as the package has a Thermo Fisher Scientific or a Microsoft™ Windows™ certificate, eliminating the need for manual installation on each individual computer.
- **Centralized management:** Updates can be managed from a single, centralized location, making it easier to ensure that all systems are running the latest version of the software. Updates can be rolled out to one computer, a group of computers, or all computers in a controlled manner.
- **Minimized downtime:** Updates can be scheduled during off-peak hours or pre-agreed maintenance windows to minimize disruption.
- **Uninterrupted operations:** The Updater Service tool is aware of instrument acquisition and will wait until the instrument has completed its current injection or sequence before starting the update.
- **Easy distribution:** The Updater Service tool not only distributes Chromeleon software packages, but can also handle other software packages such as updates to the underlying databases in the system.
- **Notification system**: The service provides notifications about available updates, successful update, or any issues that occurred during the update process.

Chromeleon CDS Enterprise support maximizes return on investment

For maximum return on investment, IFPEN decided to have a Chromeleon CDS Support and Maintenance Agreement (SMA). The SMA includes technical support via phone, email and remotely provided by dedicated Thermo Fisher Scientific software experts. It also includes product updates and technical resources such as access to a knowledge base containing descriptions of resolved issues. Having an enterprise support contract helps customers fix any issues quickly, keeping downtime to a minimum.

Maxime Visconte noted, "The first implementation was done with the Thermo Fisher services and implementation team, and so far, we have more than doubled the size of our installation, added new servers, and upgraded databases using the documentation and support that is part of the Chromeleon CDS SMA. The knowledge base is absolutely comprehensive. I can support myself using it. The support team has been nothing short of extraordinary. Their answers are fast, precise, and comprehensive."

> “It's been a very pleasant experience to implement Chromeleon software as an IT manager. The software is well documented. It's very easy to convey what needs to be done, what processes we need, and what versions are supported. Chromeleon software has also changed the way we do things in the laboratory. It allows our lab technicians and engineers to work collaboratively and develop new methods that can be shared between the two sites. It allows us to work from home. It has also allowed us to improve the way we use and manage our data.”
>
> –Maxime Visconte

Conclusion

IFPEN meets its enterprise-level CDS administration needs and more, using Chromeleon CDS. Using the Updater Service tool, IT can schedule and automatically install software updates and review IQ across multiple sites from one centralized location. This feature has eliminated the need for IT staff to travel to every location to manually install updates on each computer, saving time and costs. Customers with an active SMA can easily download updates from the support portal and automatically roll them out for one, groups, or all computers in a controlled way, in order to maintain network bandwidth. In addition, IFPEN can choose to schedule update processes over weekends or within a pre-agreed maintenance window when systems usually are not in use, minimizing impact on users and downtime.

About Maxime Visconte

Maxime is Head of Laboratory and Industrial IT at IFPEN, France’s leading research institute on the energy transition. After earning an M.Eng in Chemical Engineering and working in the industry for a few years as an Advanced Process Control Engineer, he is now in charge of facilitating data acquisition for IFPEN researchers across all of IFPEN’s labs and pilot-scale industrial units.

IFP Energies Nouvelles Lyon site. (photo courtesy of IFP Energies Nouvelles)

About IFP Energies Nouvelles

IFP Energies Nouvelles (IFPEN) is a public research, innovation, and training organization in the fields of energy, transport, and the environment. From research to industry, technological innovation is central to its activities. IFPEN’s areas of expertise include climate, environment and circular economy; renewable energies; sustainable mobility; and responsible oil and gas.

IFPEN operates from two sites in France: Rueil-Malmaison (outside of Paris) and Lyon. The two sites host research and innovation (R&I) activities, with the Lyon site housing large-scale equipment and pilot units designed to perform tests on a pre-industrial scale. The Rueil site has nearly 1,000 employees, including more than 70 doctoral students and post-doctoral researchers. The Lyon site has nearly 800 employees, including 85% in R&I.

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