

Global Business Process Outsourcing Provider

A global provider of information management and strategic business process outsourcing solutions serving the Federal Government and U.S. Armed Forces.



CHALLENGE

- The client was contracted by the Federal Government to develop a major application for a branch of the U.S. Armed Forces. A government qualification test to gauge the client's progress was quickly approaching, but the application still lacked an automated installer, which was a critical component of the project that needed to be delivered.



SOLUTION

- Revenera's Global Consulting Services reacted instantly to the client's request for information and delivered a comprehensive installation solution using InstallShield.



BENEFITS

- With Revenera's help and expertise, the client was able to deliver a professional and reliable install experience that met all requirements, was on time, and within budget.

Summary

- The client was rapidly approaching a critical software application delivery date for the Federal Government.
- Although the application itself was on target, the install program was not yet meeting the necessary requirements despite four months of effort by a third party contractor.
- The client reached out to Revenera to evaluate the existing install program and create a time table for a complete solution.
- Within 24 hours a Revenera Principal Consultant met with the client's project management team to review the project.
- Within 72 hours Revenera proposed and the client accepted a complete statement of work and the project began.
- Revenera's consulting teams executed the complete scope of work and successfully delivered the project on-time.

Background

The client's overall project was to develop a mission critical application for a branch of the U.S. Armed Forces that would deliver timely and highly sensitive data regarding the treatment and care of American soldiers. The very large application included a substantial number of parameters which made the automated installer requirements for the application very complex. Despite the client's four month investment in a 3rd party contractor to produce the installer, the job was less than 10% complete.

Project Challenges

Extremely tight and critical deadline: The client's application was on schedule and performing well functionally, but would still fail an imminent Federal Government qualification test without a required, fully functional installer. Failing the test would jeopardize ongoing federal funding for the client's entire project.

Unable to re-use existing work: The existing install was created over the course of four months by an outside consultant that was no longer on-site and was less than 10% complete. The work

completed did not have a strong, logical foundation and was not supported by the contractor, which meant the client's only hope for a long-term, serviceable solution was to enlist Revenera to rebuild the install from start to finish.

A large number of parameters: Due to the enormous size of the application and the large number of configuration options, any installation would be prone to data entry errors without any field-level data validation on the dialogs.

Scope

Given a firm 30-day deadline, Revenera was tasked with creating two InstallShield Windows Installer programs to deliver each variation of the client's application. The existing details for each project were spelled out in a 580+ page installation document which detailed a complex hand install process. Each product included over 4700 files and required extensive system configuration.

The Revenera Technical Solution

Revenera consultants created two InstallShield projects. Some of the features of those projects include:

- **Prerequisite checks:** It was important for the install to evaluate the user's system as early in the install process as possible. This avoided installing the application on non-conforming systems and alerted the user prior to making changes to the system. As there were a number of prerequisites (both standard and custom), using InstallShield's Prerequisites made it easy to install the third-party applications.
- **Custom dialogs:** The uniqueness of the install process required the creation of a dozen custom dialogs. Using InstallShield's Custom Dialog Editor made this process quick and effective. Many of the dialogs used custom actions to validate the data entered into the fields.

"This project was extraordinary given the intricacy of the scope and small window of time to make it perfect I could tell right away, this was a challenge I wanted to accept."

LESLIE EASTER

—PRINCIPAL CONSULTANT, REVENERA



- **Custom actions:** The post-install configuration process was significant and it required over two dozen custom actions. These custom actions were written in both C# and C++, and all of the custom actions wrote relevant status messages to the Windows Installer log file to aid in debugging. The pre-install configuration checks and field validation were equally complex, and they were all handled as similar custom actions. The custom actions handled configuration and validation items such as:
 - Provide default dialogs values such as available Oracle database names, available installation drives and detected IP addresses
 - Validate Oracle username and password
 - Validate the complexity of passwords with Department of Defense standards
 - Install, configure and start NT services
 - Configure IIS virtual directories
 - Add web extensions
 - Run SQL scripts
 - Install security certificates in the Java keystore and Windows certificate store
 - Provide password encryption
- **Installation Best Practices:** All aspects of the installations, including the design of the components, the implementation of the custom actions, and the final installation media, used proven setup best practices.

The Revenera Logistical Solution

From its team of InstallShield consultants, Revenera selected two principal consultants to head the effort. To save costs, both consultants worked remotely and leveraged web and phone conferencing to provide up-to-the-minute status to the client team. These consultants provided over 30+ years combined install program experience using InstallShield and Windows Installer.

Local unit testing: Each consultant provided significant local testing prior to making a testable build available to the client.

VPN access: With VPN access, each consultant was able to test directly on the client test VMware images.

Remote access to source control: With access to the client's source control tree, images that were available for testing could be checked in. In addition, updated files were quickly made available through source control.

Final Status

With every effort critical to the client's success, Revenera was able to successfully deliver the entire project in advance of the deadline. Not only did the software install exceed the testing requirements, it also led to a continued business relationship with the client.

NEXT STEPS

Adapt to industry changes quickly, get to market faster
and deliver an engaging customer experience with InstallShield.

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