Create Network Bridges for Windows 8 Programmatically

¡Be independent from OS updates – get your functionality supported using internal Windows APIs within weeks!

The Client Task

The Client's product was relying a lot on programmatically organized bridging on network adapters under Windows OS.

Up to Windows 7, it was not a problem, as the documented APIs existed and network bridges could be created by means of administrator scripts.

But starting with Windows 8, this functionality is not supported any more, and corresponding tools are removed from the scripts. The only way to create a network bridge is manual: using Network adapter settings in Control Panel.

As the specialists of the Client's development team stated that there were no interfaces for creation of network bridges in Windows 8, the product team was almost desperate – this would mean complete architecture rework of the product.

Fortunately, Apriorit Research Department had different opinion and suggested that to support Windows 8, the Client needed research of internal APIs.

Research Task

Apriorit Research and Reverse Engineering Group formulated 3-stage research plan:

1. Discover the system DLL, where the network bridge creation logic was implemented.
2. Reverse this DLL to get internal APIs names and description; retrieve the interaction scheme.
3. Describe corresponding interfaces and implement them in a prototype.

Working On

To discover the system DLL responsible for network bridges creation, several techniques were applied. Apriorit specialist used the proven combination of statistical analysis, API monitoring, and registry monitoring.

When it was found, reverse engineering started with kernel mode debug by means of WinDbg. At this stage, reverser faced some additional difficulties, as there is no symbolic data for this DLL on MSDN website. Symbolic data, i.e. function names usually help to guess what particular function does, thus reducing research scope. The complete research of Assembler code was performed.

Research report included interfaces and action sequence to create network bridge programmatically on Windows 8. Apriorit specialist also implemented a demo application (prototype) with the corresponding interfaces and logic.

Results

This 3-stage task took only 12 man-days to be completed. The technology was successfully integrated into the Client's product and provided painless Windows 8 support – and not a single architecture change.

What's next?

Get the **free estimation** of time and effort for your research task! Unlike many R&D service providers, we understand the specifics of research projects and completely rely on the professional skills of our specialists. So it won't be just one phrase with the total sum and dead line.

Apriorit free research estimation pack includes:

- Basic task dropdown with the research approaches indicated;
- Each task-approach time & effort estimation supported by our broad research project experience;
- Prototype development estimation.

After we've received your request for proposal, usually it takes 2-7 business days to prepare the estimation for your task.

¡ So let's start solution search right now with a zero-risk estimation stage !

All we need to start is a brief research task description sent to the info@apriorit.com with "RFP" mentioned in the subject.