SvCom 4.0

How to make creating NT service applications easier with the help of Alexey Dynnikov

Reviewed by Primoz Gabrijelcic

When you get into really serious Windows development, you may well need to create NT service applications. Borland's input is half-hearted: Delphi includes support for NT service application writing, but as you work with this framework, you'll soon discover its less-polished parts!

As always with Delphi, independent developers have come to the rescue. In the case of NT services, the main guy is Alexey Dynnikov, author of the SvCom suite (visit www.aldyn.ru to learn more). Currently this is for Delphi only (Delphi 3 and better), but Alexey promises it will soon be available for C++Builder. SvCom offers classes, components, experts and tools for the development of service applications and use of the NT security framework (security identifiers, access control lists, etc).

SvCom's main selling point is that it can do some tricks that Delphi's `TService` cannot perform.

➤ *Figure 1: Debugging services with SvCom.*

For starters, you can deploy an SvCom-based service to a Windows 9x/ME system. Of course, the Windows 9x family does not support services and the NT services API, but it does support pseudo-services: applications that are started before the logon dialog is displayed. SvCom includes a DLL which emulates the NT services API on Windows 9x systems. As long as you remember to deploy this DLL (which is included with the full source in the registered version), your application is safe and will run on any Win32 system (as long as it doesn't use other NT-specific functionality, but that's an entirely different story).

Service debugging is also much improved. Typically, Delphi requires you to either start the service and then attach to it, or to run the service in the IDE and then quickly start it with the Service Control Manager or the `NET START` command. While this is a simple and easy to follow procedure, it becomes quite tedious when you have to execute it some ten times in a row... With SvCom, you just run

the service with the `/debug` switch and it will automatically load a special debugging module (from a provided DLL), from which you can simulate service start, stop, pause and continue events. Debugging becomes as trivial as we are used to with other applications: press `F9` and Delphi does the rest.

Another important advantage of SvCom compared to `TService` is that it supports ActiveXs correctly. Why Delphi's `TService` is inappropriate for this is beyond the scope of this short review: you can read more on that subject on Alexey's website. Suffice to say that, with SvCom, you can build a DCOM server in a service. Besides reimplementing the ActiveX framework to achieve this, SvCom also adds some pretty smart default behaviour. The `ComService` class (the base class for DCOM-supporting services) revokes the COM object class factories when it is paused and re-registers them when it continues. That causes the DCOM server to reject new connections when it is paused, but to still serve clients which are already connected, to protect them from data loss. Needless to say, you can disable this behaviour and implement service pausing in any manner you like.

The last important improvement is support for interactive services. SvCom eases the building of interactive services (you don't have to separate out the form-specific part into another DLL) and adds two components: one to detect user logon/logoff and another to prevent problems with forms after logon and subsequent logon.

I'm running out of space, but I'd like to add that there is much more hidden inside SvCom. It adds message processing support to services, includes a timer component that automatically disables when a service is stopped, there's a function to enumerate running processes (that works on all the Win32 architectures), there is a command-line service controller that works with Windows NT/2000 and Windows 9x/ME. There is also a
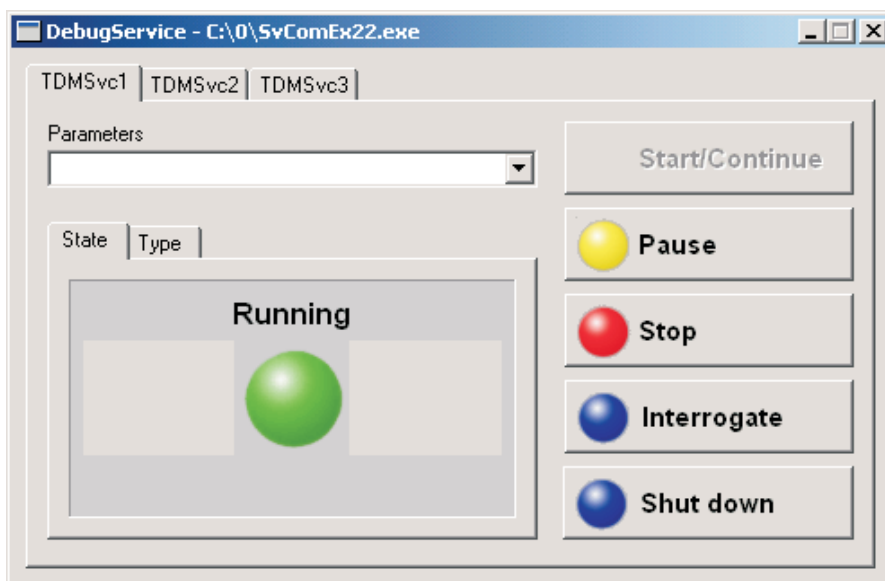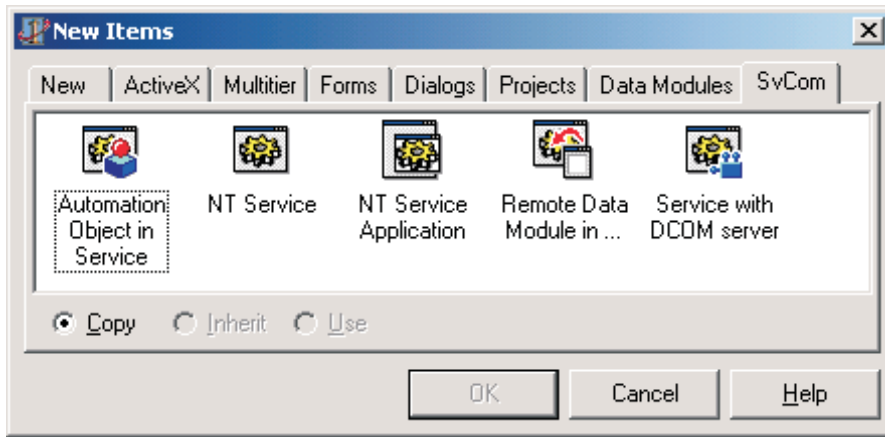
➤ *Figure 2: Various service types are supported.*

bunch of components to handle NT security-related tasks, processing of security IDs and manipulation of access control lists (ACLs).

As with the most free- and shareware Delphi products, the help could be improved a lot. The great online tutorials and good support from Alexey will ease the beginner's problems, but at the end of the day you will still want to look at the SvCom source code sometimes.

The SvCom is nag-ware. It is fully functional but the unregistered version shows nag screen at each service startup. Registration removes nag screen and gives you the complete source code. For serious NT service developers, SvCom is a real bargain at €115.95 (about $99). Recommended!

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