

## E. APPENDIX

### E.1 INSTALL POWEREDGE::RAC ON WIN32

As stated above Dell „RAC/ESM“ provides a quite lousy User Interface (the browser/java nightmare). Thanks to community effort there is an alternative. Harold van Oostrom created and coded a PERL-Module which is able to talk to the RAC. It can be used to remotely power the server on/off and read nearly any information the RAC provides. ([?more uses?](#)) The module and more information can be gathered at:

<http://www.lanceerplaats.nl/PowerEdge/RAC/>

The Module is known to work on Linux workstations. By chance I was the first one trying to get it up and running on a Win32-Workstation. It and I succeeded ;-) .

The environment I used:

```
WIN32 OPERATING SYSTEM:    M$ WINDOWS NT 4, SP6
PERL 5:                    ACTIVE STATE (AS) PERL 5.6.1 – BUILD 633
```

I have no experiences (yet) whether the procedure described later will succeed with AS Perl 5.8, Win 2000 or Win XP as well.

ActiveState is the most commonly used Perl distribution in the win32 world. A nice and useful feature that comes with it is the integrated package manager (ppm, ppm3) which can be used to install additional Perl modules. Active State Perl is available at:

<http://www.ActiveState.com>

Harold van Oostrom's module „PowerEdge::RAC“ requires the following modules to be installed:

<i>PE::RAC - required modules</i>	<i>Version required</i>	<i>AS Perl 5.6.1 Version provided</i>	<i>Comments</i>
MIME-Base64	2.12-14	2.12	If missing add with PPM
Digest-MD5	2	2.2	If missing add with PPM
libwww-perl	5.63-9		part of core AS distro (LWP, HTTP modules)
Crypt-SSLeay	0.49-8	0.51	installed from external source
XML-Simple	1.08-8	1.06	f missing add with PPM
XML-Parser	2.30-15	2.27	part of core AS distro (?)

#### PROCEDURE FOR SETTING UP „POWEREDGE::RAC“:

1. Check PERL installation:  
C:\> ppm query
2. Install the missing modules (besides Crypt-SSLeay)
3. Download the Crypt-SSLeay-Package from:  
<http://theoryx5.uwinnipeg.ca/ppmpackages/>

For some obscure reasons AS doesn't provide the Crypt-SSLEay-Library. It (and many other missing modules) can be found as ppd-Files (PPM's package file format) at the web site mentioned above.

4. Install the Crypt-SSLEay-Package (assuming you downloaded the package to C:\temp):  

```
C:\temp> ppm install Crypt-SSLEay.ppd
```

At the end you will be asked to download two vital dll's („ssleay32.dll“ and „libeay32.dll“) and where to put them. make shure you place them in some directory which is included in %PATH%. I transfered them to: C:\perl5\bin.
5. Download and unpack „PowerEdge:RAC“
6. „Install“ the RAC-Module:  
The RAC-Package is geared towards a CPAN-like installation. I read about ways to get this done with the free „nmake“-tool on win32-platforms too. I chose a different way.  
Get the RAC.pm-file from:  

```
<dir-where-you-unpacked>\PowerEdge-RAC-0.15\lib\PowerEdge
```

Choose a directory which is part of your @INC. Create a subdirectory named „PowerEdge“ in the chosen directory. Put the RAC.pm in there.  
In my case I placed it in: C:\perl5\site\lib\PowerEdge
7. Run a basic test:  
This test will check if all modules are installed properly:  

```
cd <dir-where-you-unpacked>
cd PowerEdge-RAC-0.15\t
perl 01-load.t
```
8. More testing:  
Actually – now you're done. Example scripts for using PowerEdge::RAC can be found at:  

```
<dir-where-you-unpacked>\PowerEdge-RAC-0.15\examples
```

Run „show\_all\_info.pl“ e.g.
9. You're done – enjoy it !