.pQd's log

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Dell PowerEdge T20

2014-04-17, 20:22

i've bought 2x Dell PowerEdge t20 – they'll serve as HA pair of routers/vpn endpoints/file servers for a new office.

it was the first time i played with intel amt. it's not bad but neither perfect.

AMT

PowerEdge T20 has AMT 9.0; getting it working took a while. first i had to activate it; to enter the MBEx setup i pressed ctrl+p just after computer start – when dell logo is displayed. there i was asked for a password; i did not find one in dell's public documentation so i've spent a while with their support on the phone; the default pass is: *admin* and it has to be changed to something that is: at least 8 letters long, contains at least 1 small letter, at least 1 capital letter, at least one number and at least one special char. once MBEx [Intel Management Engine BIOS Extension] password is configured, in the same ctrl+p bios configuration i was able to:

- activate kvm giving me remote access to the computer's console using vnc over network
- activate IDE redirection [manageability commander tool>remote control>take control]
- disable user's consent needed to interact with the computer [it's a server, it'll not have kbd/display]
- configure network settings. it's a pitty that tagged vlans are not supported [at least not from ctrl+p bios. it seems that the manageability commander tool mes editor in the networking>advanced settings allows configuration of vlans]
- activate network access [there's separate option for that in the main menu]

note that ctrl+p menu cannot be accessed via kvm/vnc over the network. one has to enter and manipulate it from the keyboard and monitor directly attached to the server.

the next step is to download AMT tools for windows – i've used intel's Manageability Developer Tool Kit 7 and open manageability. then run *Manageability Commander Tool ME*, add known computer – provide the IP of the AMT set in the earlier step, select connect, then in the remote control tab, remote desktop, remote desktop settings select as follows:
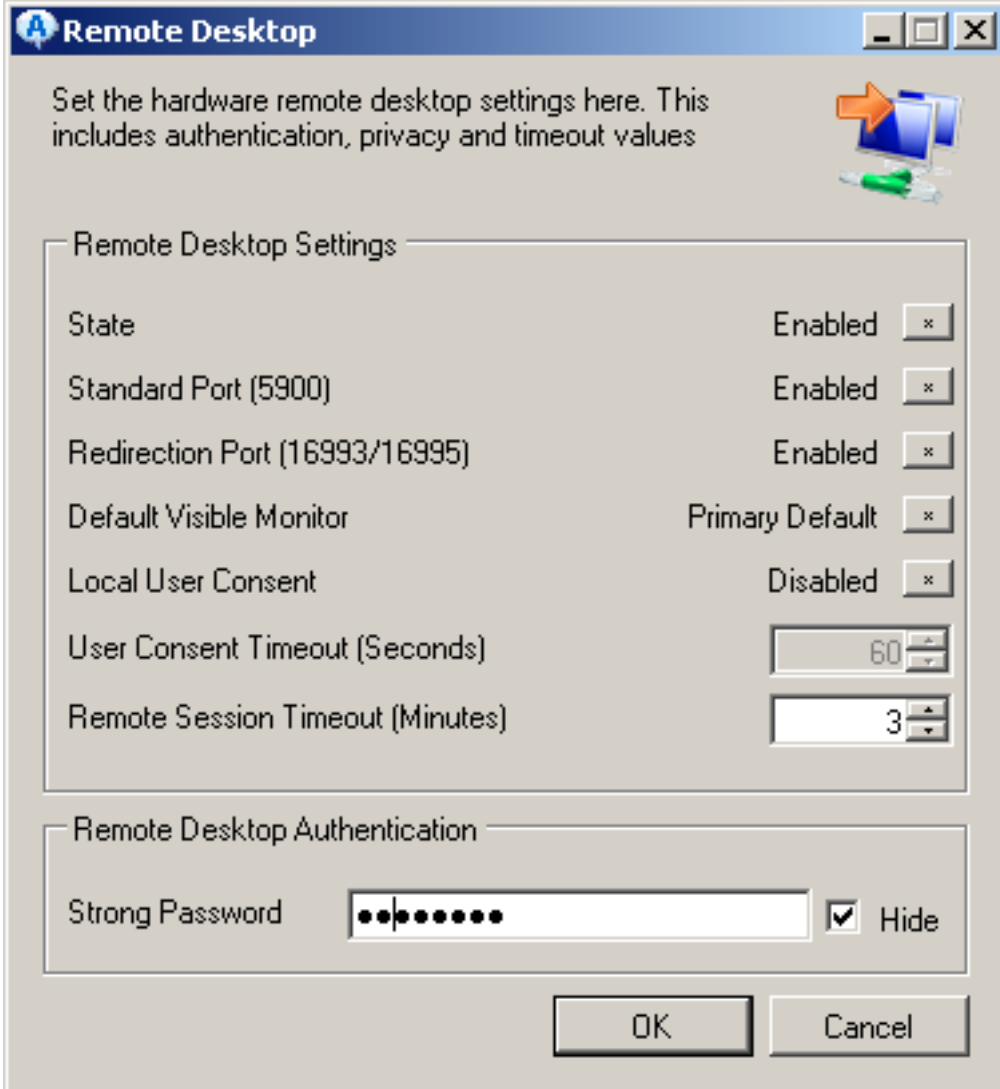
note that the password has to have exactly 8 chars, at least 1 capital letter, at least 1 small letter, at least 1 special character and 1 at least digit. once that's done you can use tightvnc viewer [version 1.3 will work, 2.7 – does not work.. go figure]. power control is possible via the web UI of amt – http://10.1.2.3:16992/logon.htm

all in all – not very straightforward but better than nothing; this server with amt costs a little bit more than just a DRAC card for more expensive PowerEdge servers.

network card

T20 comes with Intel's I217–LM lan card; debian wheezy – with 3.4 kernel – does not have support for that card. i've installed 3.13 kernel from backports and then the card became available from linux. AMT worked fine also with 3.4 kernels – it's independent from the OS.

the rest

yet another note: after upgrading to 3.14 kernel VNC via AMT stopped working for working linux. i could see the bios screen and grub but not the login prompt. it has something to do with the frame buffer display mode used for the console. workaround: in /etc/default/grub add: *GRUB_CMDLINE_LINUX="nofb nomodeset vga=normal"* and run *update–grub2* + reboot. console will be in low resolution text mode.

the server came with 1TB ST1000DM003–1CH162 disk that has quite aggressive power saving – the drive spins down after few minutes of inactivity. i have plenty of cron jobs started every few minutes so in regular use the drive will not be parked, but just from few hours of work with the setup i got few hundreds of starts/stops:

```
#smartctl  -d sat -a /dev/sdb|grep Load
```

```
193 Load_Cycle_Count            0x0032    100    100     000
```

helpful resources:

- http://blogs.bu.edu/mhirsch/2013/07/intel-amt-vpro-full-remote-kvm-control-without-proprietary-realvnc-viewer-plus/
- not exactly related – but it seems that some of Intel's NUCs also have AMT

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