

HOWTO: Manage Firmware using Inventory Scout

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Stay within n-2 levels!

Best practices regarding firmware levels is to keep them within n-2 levels (n being the latest level). Inventory Scout (invscout) is the tool that works in tandem with the MDS (Microcode Discovery Service) that helps you find your outdated firmware including README files describing the urgency and what to watch out for as you prepare for the window to update.

The process begins with downloading a recent microcode catalog. I am always having to google for the microcode catalog, which is at the heart of the process - so here is a short HOWTO that provides the links you need, and describes the process to keeping your systems with "best practices".

Step 1: Inventory Scout

Inventory Scout (invscout) is a program that scans all the firmware (including the system firmware) and verifies installed firmware with the latest levels available from IBM. Non-IBM firmware is not checked. As firmware levels of something is updated frequently (usually two or more times a week - remember - there are lots of devices) you will need to download a recent copy of (use right-click to save!) catalog.mic . If you have never updated this file (/var/adm/invscout/microcode/catalog.mic) the contents is a single text line just listing headers.

Once you (right-click) download catalog.mic and copy it to /var/adm/invscout/microcode/catalog.mic run the command invscout without any arguments. Your output will be something like this:

```
michael@x054:[/var/adm/invscout]invscout
```

```
***** Command ---- V2.2.0.15
```

```
***** Logic Database V2.2.0.2
```

```
Initializing ...
```

```
Identifying the system ...
```

```
Working ...
```

```
Getting system microcode level(s) ...
```

```
Scanning for device microcode level(s) ...
```

```
101 devices detected; each dot (.)
```

```
represents 10 devices processed:
```

.....

Writing Microcode Survey upload file ...

Microcode Survey complete

The output files can be found at:

Upload file: /var/adm/invscout/x054.mup

Report file: /var/adm/invscout/invscout.mrp

Report file: /var/adm/invscout/invscout.mrrup

To transfer the invscout 'Upload file' for microcode comparison, see your service provider's web page.

Step 2: Use the MDS webapp

Upload the /var/adm/invscout/hostname`.mup to the MDS (Microcode Discovery Site) to get a report and links to new microcode (when applicable). Note: the catalog.mic file is updated often and the MDS tool may complain that your catalog is one day old. Don't worry too much about that. But if it is months old I recommend downloading a current catalog.mic and re-running invscout.(See useless MDS report below!)

```
-rw-r--r--  1 root  system      88 Jan 09 2010  catalog.mic
```

The upload file is /var/adm/invscout/hostname`.mup (in my example /var/adm/invscout/x054.mup) is only as good as the catalog.mic (database) the system devices and adapters is compared with. The next step will "warn" me if the catalog used is not current. Mine is quite old - and empty - so I'll get a warning.

The file is 88 bytes (headers only, see above) so the Action, Installed levels and Latest Available fields are blank or specify "Research"

With a current catalog your MDS report could look something like this (I have not updated my firmware for a while!!)

The second section of the report provides the links to the description of the changes (Read These!!) as well as a link to download manually.

Step 3: Verify Firmware and Software Levels

Now that you have your firmware levels get your AIX software levels (e.g. oslevel -s, ioslevel, lspp -L, etc.) and prepare to fill in a dialog to get fix level recommendations! Go to the FLRT (Fix Level Recommendation Tool) and verify that firmware and software levels are up to date and/or compatible.

My system is a POWER4 - and no longer in the FLRT input, so I just choose a system type and a firmware level. These are my inputs:

After pressing Submit I get the following as a report. Looks like I should be updating my AIX and my firmware for a best fit.