close window

Web Exclusive

Print 🖶

AIX Tools You Can Use

June 2014 | by Jaqui Lynch

It's been several years since I've reviewed useful tools for the AIX administrator and, during that time, there've been some significant improvements. Of particular interest are the loopmount command, the emgr command, HMC Scanner, FLRT Lite, Fix Central and support notifications.

loopmount to Access Media

Trying to find and/or load install media can be very frustrating, especially since the DVD drives don't float between LPARs so most LPARs don't have DVD readers attached access to them. Many of us have set up massive NFS exports containing all of the information but there's a better way. For servers that have VIOS, you can use File Backed Optical (FBO). This lets you load ISO images of media into a repository on the VIOS, which can then be made available to the client LPARs on that server. However, this means duplicating the repositories on each server's VIOS. A better option is to use the loopmount command to mount ISO images directly into filesystems on an LPAR. This involves using software to rip the DVD or CD to an ISO image. Then the .iso file can be uploaded to an NFS server and, from there, mounted to the NFS client.

On the NFS client: Assuming the DVD ripped was the AIX v7 DVD 1 of 2 and is now called aixv7-base-1of2.iso, you change into the directory it's in and type:

```
Assume directory is /software
cd /software

mkdir /jaqui
loopmount –i aixv7-base-1of2.iso  -m /jaqui –o "-V cdrfs –o ro"
```

This mounts the AIX 7 base ISO as a filesystem called /jaqui. You can now create an lpp_source or spot from the ISO or you can simply read the files and process them.

Managing APARs With emgr

Sometimes an APAR is temporarily resolved with an emergency fix (efix) or interim fix (ifix). These are applied and removed using the emgr command. IBM has an excellent Technote on managing interim fixes and I highly recommend you read this. You can list all of the efixes installed using "emgr –l". It's recommended that you do this prior to installing maintenance. Normally, an efix is automatically removed when the PTF, Service Pack or Technology Level that corrects the issue is installed. However, it's always wise to check as, should you decide to back these out, the efix will have been removed and you'll need to reinstall it.

HMC Scanner

This is one of my favorite tools, especially for documentation. The HMC Scanner is a Java-based tool that

connects to your HMC and documents everything that the HMC can see. It will also connect to a Flex System Manager (FSM) and document the PureFlex environment. It's easy to install and can be run from Windows or AIX. I normally install it on an AIX system since I seem to have Java issues on Windows. Once it's installed, change into the directory and type something similar to:

```
./hmcScanner.ksh  hmcname  hscroot -p abc1234 -stats
```

Substitute your HMC name for hmcname and the correct username and password.

The end result is a spreadsheet organized in tabs that documents the HMC, servers, LPARs, physical slots, virtual Ethernet and shared Ethernet adapters, virtual SCSI configuration and mappings, virtual fibre mappings, and LPAR and virtual processor pool configurations. The –stats flag will show up to one year of CPU (etc.) usage based on data from the lslparutil command. Although this isn't an officially supported IBM tool, it is incredibly useful. I now request the output from this whenever I do performance studies as it gives a great breakdown of how everything is configured and interconnected.

FLRT LITE

The Fix Level Recommendation Tool (FLRT) has been around for a while now and the latest iteration is FLRT Lite. This single page has links to all the things that you may want to look at quickly. When you go to the website for FLRT Lite, you'll find a list of products and then, to the right, a suggestion survey link, FLRT resources and other resources. If you click on one of the product links, it provides a list of versions for that product along with information on recommended updates and upgrades, the release date, and the end-of-service date. This is very useful for planning. Right now, it covers firmware for Power Systems, PureFlex and Power blades, the HMC, AIX, PowerVM VIOS, PowerHA, Cluster Systems Management (CSM), GPFS (general parallel filesystem), LoadLeveler and some of the parallel environments.

Under FLRT resources, you'll find information on what's new in FLRT, how to use it, how to determine your fix levels and a help file for scripting. Scripting lets you run a script on an LPAR and query the online FLRT data to determine recommended updates for that LPAR.

Under other resources are links to systems software maps, VIOS to NIM master mapping, AIX/VIOS security tables, AIX HIPER tables and VIOS service life information. The system software maps let you select your server and click through to find out supported, recommended and latest levels of AIX, IBM i or PowerVM VIOS for that server. There's also a link to the supported combinations for HMC and server firmware (called the POWER code matrix). That matrix also shows the release data and end-of-service date for firmware. This is incredibly useful when planning upgrades. The VIOS to NIM master mapping provides minimum NIM master levels for each VIOS level, thus ensuring you can use NIM to install and recover your VIOSs. The AIX/VIOS security tables and the AIX HIPER tables provide a list of known security or critical issues along with links on how to fix them with a direct link to the actual fix. These are all things I've had to spend considerable time trying to find and now they're all linked to from the FLRT Lite pages.

At the very top is a link to a survey to improve FLRT. Please send suggestions in via this link. I've met with the e-tools team, and they read these and are very willing to make changes to improve the product.

Finally, there's the original FLRT that lets you provide information about your setup and have it reviewed with recommendations for updates being made based on your system. It also lets you save your configuration so you can upload it again in the future. The full version of FLRT does provide some support for certain IBM storage and additional support is available at the System Storage Interoperation Center (SSIC).

The FLRT team has been very active in social media. You can search on "fix level recommendation tool" on YouTube and you can follow them on Twitter (http://twitter.com/IBM_FLRT).

Fix Central

Fix Central is the location we all use to search for and download fixes and updates for our system's software, hardware and operating system. I normally click on the "Select product" tab, then select the operating system. However, it was never easy to find APARs. I just discovered there's an easy way to search for APARs. For example:

1. Click on Select Product>AIX>v7.1.
2. Select fix search and hit continue.
3. On the next page, check only the APARs box and then enter your search term.

Fix Central also has a YouTube channel—search "fix central ibm" to find them. Fix Central is also piloting a new inventory upload facility that lets you scan your system and upload the results to produce a customized list of fixes and updates. You can allow IBM to save it for you or you can do a one-time-use upload.

My Notifications

My Notifications lets you sign up to receive customized notifications of support information. Multiple options are available including publications, hints and tips, product flashes, downloads and drivers. These are also linked to from the Electronic Support website.

Proactive Support

IBM has become much more proactive in the area of support. From FLRT Lite to HMC Scanner and My Notifications, it has become much simpler to figure out recommended updates and to download and install them. Remember you do need to have a software maintenance agreement (SWMA) for the server to download fixes and a hardware maintenance agreement (HWMA) for the server to download and install firmware. You can check the status of your SWMA at the entitled software website listed in the following references. The key on that site is to look to the right and change Power (IBM i) to Power (AIX) if you're looking for AIX entitlements. You can then view SWMA status for your servers. And lastly don't forget the IBM Techdocs and Redbooks websites—they provide information on a significant number of topics and tools.

Many thanks to Susan Caunt and her e-tools team for providing the tools and information to support this article.