HMC — You Should Upgrade Yours to Version 7.3

Part II

By Pete Massiello

[In Part I of this we examined dependencies between the HMC and the FSP, as well as how to check the level of Server firmware on the FSP. In Part II we will examine how to check your HMC's level, doing the actual Upgrade to V7R3.1, and how to connect remotely via a browser.]

So far, we have discussed terminology and finding the release levels of the FSP and applying a Service Pack, yet the topic was suposed to be HMC. Well just as with any type of upgrade you do, the planning is the most important part of the upgrade.

Therefore, it was important that we first determined the level of the FSP firmware, and whether or not that level of firmware would communicate with both the current level of HMC code, as well as our anticipated level of HMC code, V7R3.

When it comes to upgrading the HMC, you can do the upgrade via Corrective Service Packs or Recovery CDs (which are actually bootable DVDs). Not all upgrades can be done via a Corrective Service Pack, for example you can't apply Corrective Service Packs to version 6.1 and get to V7.3. You **must** use the Recovery CDs and actually install a new version of the HMC software. You will order these Recovery CDs as you would any other software, either through your business partner or via IBM.

The Corrective Service Packs can be downloaded from a remote system via FTP to the HMC, or installed from a CD. When doing Corrective Service Packs, I prefer to go to the HMC website and download the CD images, and then burn the .iso images directly to CDs. This is the way that I have put PTFs onto the HMC for all previous releases, as well as applying service pack 1 to the HMC after upgrading to V7R3.

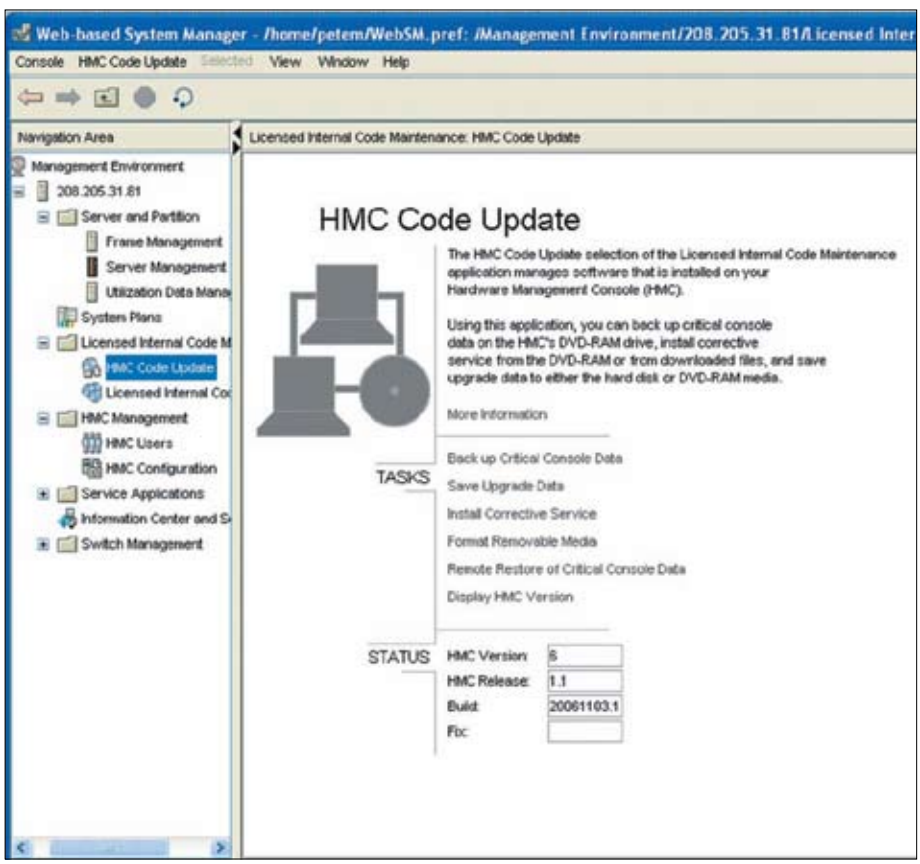

Figure 4. Display of current HMC version and release

The HMC is completely independent from the managed system (i5). The i5 and all partitions can remain active while maintenance is performed on the HMC, allowing you to easily keep your HMC at the latest maintenance level. If you are using the HMC as your console, you will lose your console while you reboot your HMC. You can just restart the consoles when the HMC comes back up, but it's just a note to be aware of. The HMC software level has to be maintained at the same level as managed system firmware, with periodic Service Packs, individual PTFs, or release upgrades. The HMC firmware is packaged as a full Recovery CD set or as a Corrective Service pack/fix image. The HMC recovery CDs are bootable images and can be used to perform a complete recovery of the HMC (scratch install) or an update to an existing HMC version. You should always have the last set of HMC Recovery CDs and your latest Critical Console Data Save to reconstruct your HMC in case of a disaster. More on Critical Console Data later if you are not familiar with that.

Before we upgrade our HMC to V7R3, we need to make sure we are at HMC V6R1.2. The way to check our HMC code level, is on the left-hand panel: expand Licensed Internal Code Maintenance and then select HMC Code Update. The Right-hand panel will now display the HMC version and release of the software running on the

HMC, in the status area. If you are on V6R1.2, then you are fine to upgrade to V7.3. If not, you need to insure that you upgrade the HMC to a version that is compatible with your current level of the FSP. As you can see in **Figure 4**, we are not on V6R1.2, so we would need to apply Corrective Service first to get us to V6R1.2. Remember, before upgrading you must make sure that your level of FSP Firmware and the HMC level will be able to communicate between each other. You might also need to go back and forth upgrading the FSP and the HMC to bring them up to the right release in step as we make our way to V7R3.

Now let's assume that we are running V6R1.2 on our HMC, our FSP firmware is 01_SF240_299 or higher (at the time of this writing 01_SF240_320 would be the recommended firmware). We need to think about a backup before we do our upgrade. There are two types of backups on the HMC: saving the Upgrade Data and saving the Critical Console Data. In order to do a backup of the HMC, you must be a member of one of the following roles: Super administrator, Operator, or Service representative. If you use HSCROOT as the Userid to sign onto your HMC, you will be a member of Super Administrator and have the required authorities. Just as a side note, I sure do hope you have created a few other Userids, but that is a whole separate topic on HMC management.

You should normally be doing a backup of the Critical Console Data. I usually schedule this to run once a week on my HMC scheduler, and then each week just swap between a few DVDs that we use for this backup. This will backup the User-ids, User Preferences, HMC Configuration files, HMC log files, and all of the HMC updates that have been added through installation of Corrective Service.

Right before—and **only** right before—an upgrade, you want to do a backup of the Upgrade Data. The Upgrade data can be saved to a designated special disk partition on the HMC, which is the default for this type of backup, or alternatively to external DVD media. I recommend that you do both. Backing up of your Upgrade Data allows you to restore all of your settings after your upgrade. I have been burned on earlier HMC upgrades, and I can't say it enough, it will only take about 2 minutes. **Make sure you backup your Upgrade Data to external DVD media before you start.**

If you have never backed up to your DVD, don't worry—it's easy: Just put your blank DVD-RAM media into the DVD Drive on the HMC, and on the left panel expand Licensed Internal Code Maintenance, select HMC Code Update, and then on the right-hand panel select Format Removable Media. You can put both backups on the same media, but I prefer to keep mine separate, so I would format another DVD-RAM at this point for my Upgrade Data. When that completes normally, from the same panel select Save Upgrade Data. Backup that Upgrade Data to the DVD, which will also back it up to the special HMC disk partition. When that completes successfully, we are ready to upgrade.

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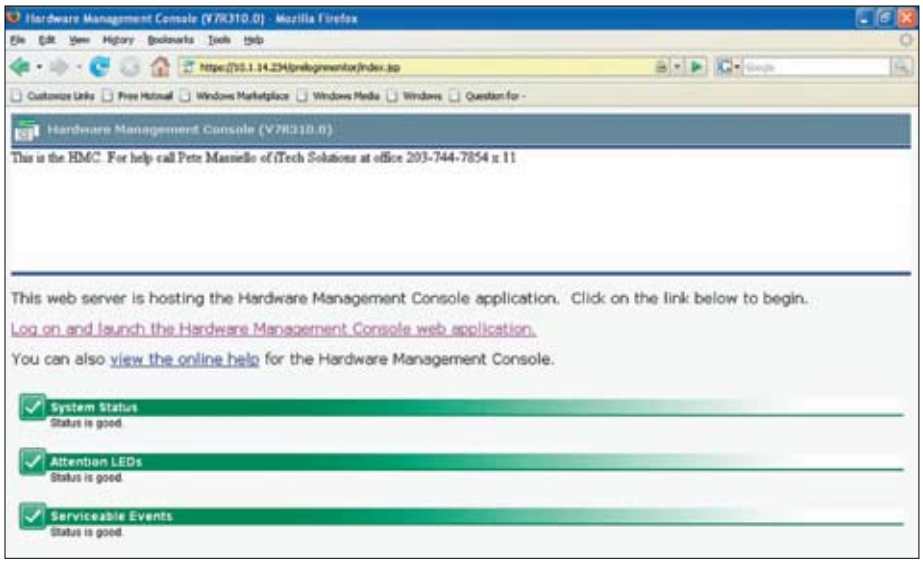

Figure 5. HMC Welcome screen

Upgrade Steps

1. Remove the DVD Media from the DVD drive to which we just wrote our Upgrade Data, and replace it with Disk 1 of the V7.3 Recovery media. (If you are using any 5250 console sessions, you should end them now.) Then, close the HMC application by selecting the Console menu option from the top of the screen on the menu bar, and then Exit. The HMC will display an option box: select reboot. This will shutdown the HMC and start the upgrade process.

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2. The HMC will start to read the media in the DVD-RAM drive and the upgrade Wizard window will appear.
3. Select Upgrade, and then click Next.
4. Select Upgrade from media, and then click Next.
5. Click Finish to start the Upgrade process. It will take about 20 minutes to read the first DVD, and then the message below will appear on the console and the DVD Drive will open. Remove the DVD from the DVD Drive, and place the second DVD (Disk 2 of the V7.3 Recovery media) into the DVD Drive.

```
1 – Install additional software from media.
2 – Finish the installation at a later date.
    Please enter your selection.
```

6. Select Option 1 and press Enter. Be careful, because the HMC keyboard is very sensitive, and sometimes you will get additional "Enters" when you only hit enter once and expected just one. The following prompt is displayed:

```
Please insert the media into the drive
and press Enter.
```

7. The HMC Wizard will complete the upgrade. At that point, you can remove the second DVD from the drive, and replace it with the backup of the Upgrade Data that you wrote just prior to starting the upgrade. The HMC restores the data backed up by the Save Upgrade Data task, and then completes the booting process. Remove the DVD and allow the HMC to boot itself.

We have now completed the upgrade, and we can sign onto the HMC. You will be presented with the HMC Welcome screen (**Figure 5**) and you can select "Log on and launch the Hardware Management Console web application" from this menu. This will then provide us with our new HMC GUI. See **Figure 6**. This GUI alone is worth upgrading for, since it is very easy and intuitive to use. I would hope that the rest of IBM's tools in the future would have the same look and feel as this does. I think the best part of the HMC is that now you can connect remotely by entering from any browser https://hmcaddress, and you will have the same interface as if you were attached to the HMC locally. You must have your HMC Port ETH1 connected to your corporate

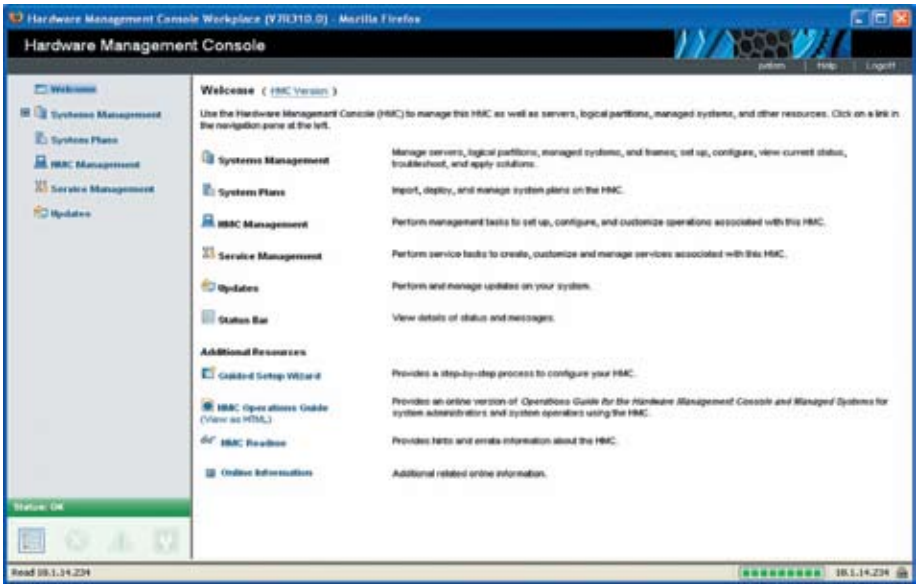

Figure 6. The new HMC GUI

network and configured for this to work. Remember, you need to enter https and not just http. For those people who used WebSM with the previous version of the HMC, you will be delighted that you can get rid of it. This new browser interface is fast, quick, and you do not need anything located on your desktop. You can see below, all I did was start my Firefox browser (Internet Explorer works as well), enter the address of my HMC, and my connection to my HMC is there. Just as if I was sitting in the computer room. We have upgraded all of our customers to this version of the HMC, and they all love the interface of the new HMC. After upgrading to this new version of the HMC, don't forget that there is a Corrective Service pack that needs to be installed. It's called Service Pack 1, and we have installed this on all of our HMCs and our customer's HMCs.

About the Author

Pete Massiello has been working with the AS/400, iSeries, i5 since 1989, focusing on systems management and technical support. He has held numerous technical positions through out his career. He is the President of iTech Solutions Group, an IBM Advanced Business Partner delivering solutions and services to System i shops throughout the US. He is a member of IBM's certification test writing team, an IBM eServer Certified Systems Expert with certifications in iSeries Design, Administration, Implementation, LPAR, and HMC management. Pete has a BS in Computer Science from Hofstra University, and an MBA from the University of New Haven. He is President of the Fairfield CT AS/400 User Group (FASUG), a past member of the COMMON Board of Directors, and a frequent speaker at user groups.

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