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Using the Systems Planning Tool for Disaster Recovery

SPT simplifies systems planning and can be used to repair your IT environment

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The Systems Planning Tool (SPT) is not only a great tool for architecting a system, but it is also a very useful tool for documentation and recovery. In the article "[Architecting AIX and the System p Server](#)," writer Ken Milberg outlines the advantages of SPT. In this article I'll describe how to install and use SPT.

Installation

SPT requires a live Internet connection as it's browser based. The tool can be downloaded from IBM. The most current, full version is 3.08.095 and there is an accompanying update for 3.09.012. After agreeing to the terms and conditions, the .exe files are downloaded. It's important to check the site frequently, as there are regular updates. Features are dependent on the hardware management console (HMC) software version and the virtual I/O server (VIOS) version installed. For the purposes of this article we will assume HMC v7.3.3 and VIOS v1.5.

There are several ways to create a system plan. One is to export a .sysplan file from the HMC. This should be done regularly, especially after a change is made to an LPAR definition. In addition to creating the .sysplan file on the HMC, I also print it to a .pdf file and keep it as my documentation of the server setup. The second way is to build the system plan from scratch when designing a server. That .sysplan file can then be used at order time to ensure the cards are deployed in the slots and on the planars that provide the best options for performance and redundancy.

Use

I use SPT for two things: Documentation and verification. It can also be used as input to econfig, the IBM Power Systems Configuration tool, for ordering and deployment into the HMC. For every LPAR, SPT provides not only the memory and processor information but also the information on virtual Ethernet and virtual SCSI slots and a list of all of the resources the LPAR uses. Additionally, SPT provides diagrams of the server and planars with a list of the slots and the cards in them. If I ever have to rebuild the system, I can work from a printout if I can't find the .sysplan file.

After installation, clicking on the SPT icon will bring up the tool in a Web browser. Currently, Microsoft Internet Explorer and Mozilla Firefox both support SPT. You may also need to enable pop ups for your browser, as SPT makes extensive use of pop ups. Additionally SPT uses JavaScript, so active scripting will need to be installed and enabled. By default, SPT uses the first TCP/IP port after 6001, unless you provide it with a specific port. To change the default port, go into “Settings” when SPT is up.

Once you build a .sysplan file or bring one over from the HMC, it can be saved and changes can be made. If the .sysplan file is brought in from an HMC or Integrated Virtualization Manager (IVM), it will have to be converted before it can be edited. The option to convert shows up when the file is imported. There is also a Copy/Import Partitions Wizard that allows you to only import specific LPARs into the system plan you’re creating. This can be very useful for pre-documenting the move of an LPAR. When the final copy is ready to use for deployment or with econfig, then it gets exported in the correct format. Instructions to do this are on the bottom of the page when you save the .sysplan file. Additionally, you can use the Report function within SPT to generate a .txt version.

Creating a System Plan

The first step is to launch SPT (after it’s installed). This is typically done by clicking “Start,” “Programs,” “IBM Systems Planning Tool,” and then “System Planning Tool.” SPT opens in the default Web browser. The initial window only has one option, which is “Launch.” Go ahead and click on that. Fill in a title and description, and then choose from one of the provided options: Creation from scratch, importing from a system or creation based on IBM samples, existing performance data or new workloads. If you select “Creation from scratch,” and then click on “Next,” the next page is where the system is built; you pick the system, whether it is being planned for an order and what the control interface will be. As an example, for an 8204-E8A (p6-550) you’re given the option of HMC or IVM. For this example, I chose Power Systems, 9117-MMA, HMC (I actually had no choice since p6-570 requires an HMC) and I checked the box for “New order” and then clicked “Next.”

Under system attributes, I chose a 16-core 4.4 GHz server with 10 cores active and 232 GB of memory, and clicked “Next.” Now it’s time to define the partitions. This is where you can create LPARs from scratch and also import an LPAR definition from another .sysplan file. This is also where you can define multiple pools and allocate the LPARs to them. Once you’ve allocated CPU resources, click “Next” to go to the Memory tab, then allocate memory resources and again click “Next.” You’ll now see a summary of the server along with a list of the required licenses. Clicking “Finish” will bring you back to the initial screen, where you can edit the configuration, add the adapters and so on. When you edit and click on the Hardware tab at the top, it brings up a list at the left and the Central Electronic Complex (CEC) at the top. As you click on an adapter, a “+” will show you the slots where it’s valid. Go through each CEC and add the adapters, assigning them to the various LPARs.

At the bottom of the page you’ll see validation messages, provided these are all green or yellow, then the system plan has validated. It’s important to read those messages carefully before continuing. Once you’re done you can save and print the system plan.

As you can see it’s fairly simple to create a system plan once SPT is installed. The system plan is a critical component of planning and, more importantly, of documenting the running or planned systems. Having been asked to recover an undocumented system, I cannot stress

enough the value of the system plan as part of any disaster recovery plan. Although I didn't go into a lot of detail on how to create a system plan from the HMC or IVM, it's highly recommended that one is created before and after every change. Additionally, major changes and new systems should always be built in SPT before an order is placed to ensure they validate.

References

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