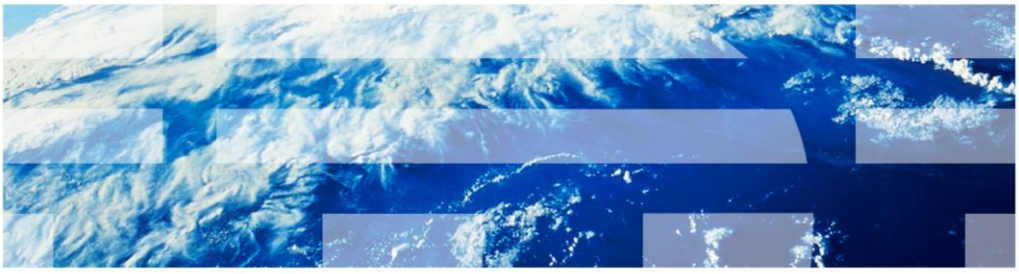
IBM

IBM PureApplication System and IBM Workload Deployer

IBM Business Process Management Pattern V8.0 Pattern Creation and Deployment



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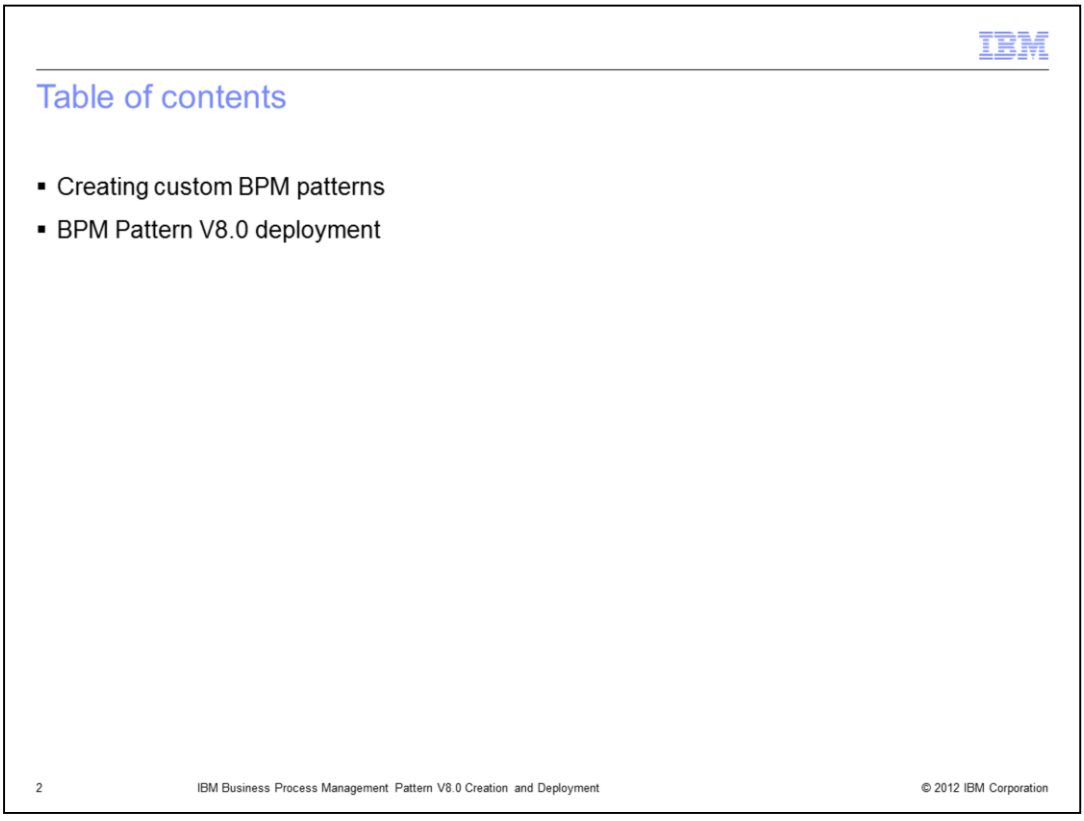
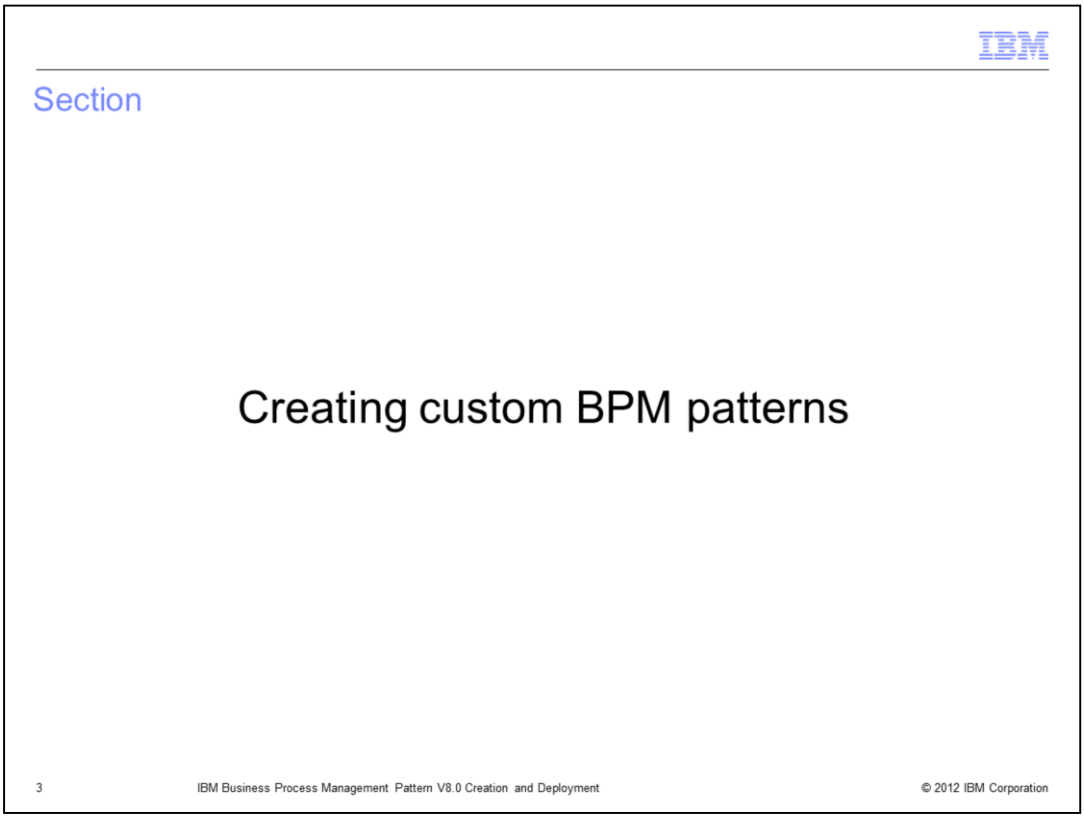
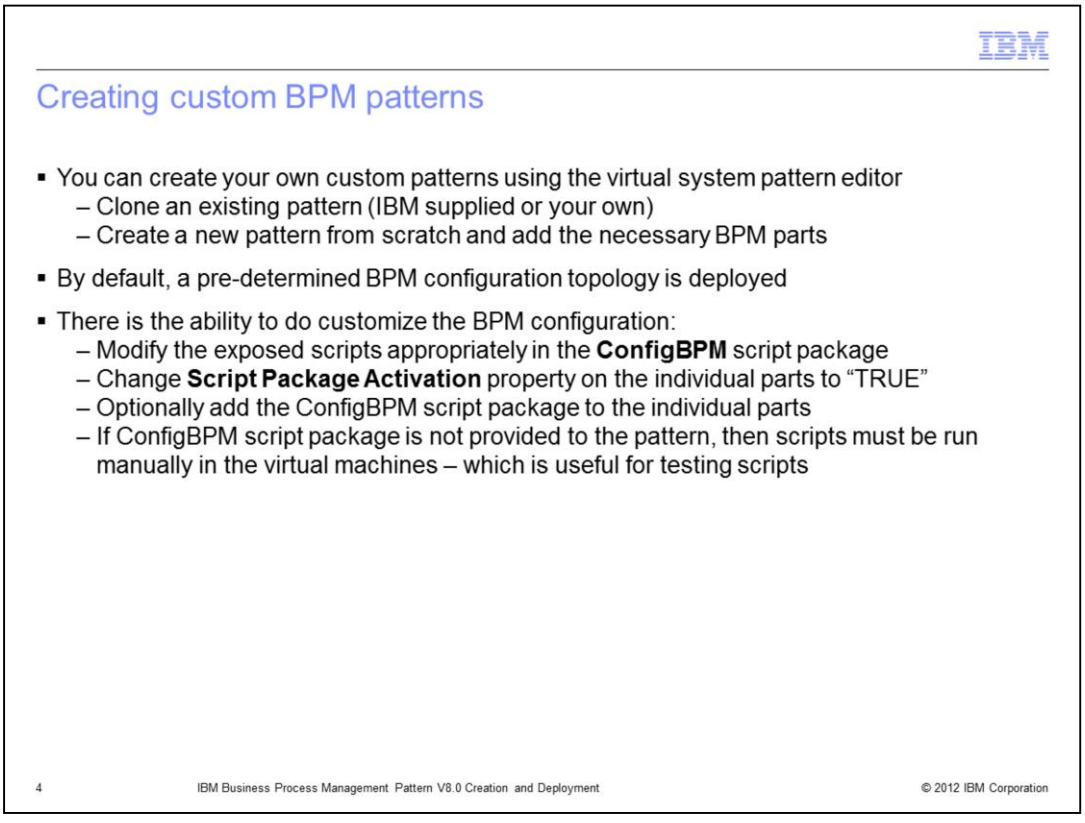
This presentation will cover the creation, editing, and deployment of the BPM Pattern V8.0 in IBM PureApplication System and IBM Workload Deployer.



The agenda is as on this slide.



This section of the presentation will discuss the methods for creating customized BPM patterns.

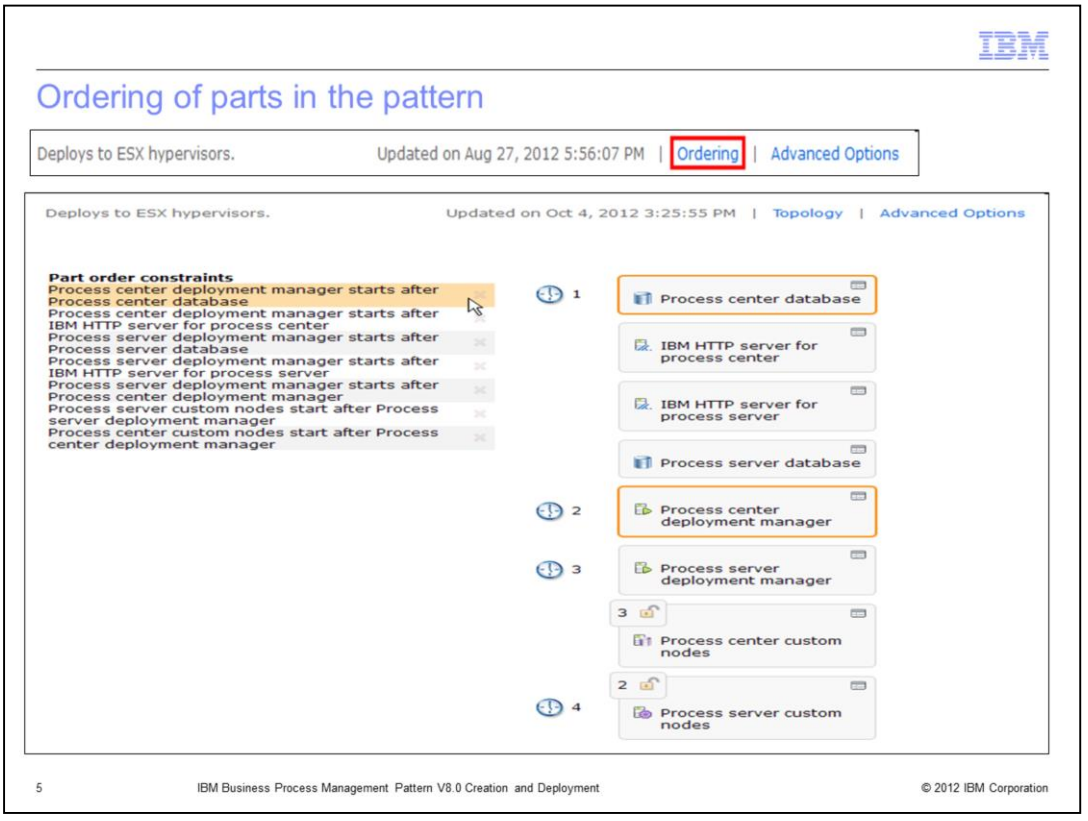


There are typically two methods used to create customized patterns. You can clone an existing pattern, and then edit it. This is the typical approach when attempting to customize the IBM provided patterns, as they are locked and cannot be modified. Or you can create a new pattern from a blank canvas, as you would for a stand-alone pattern.

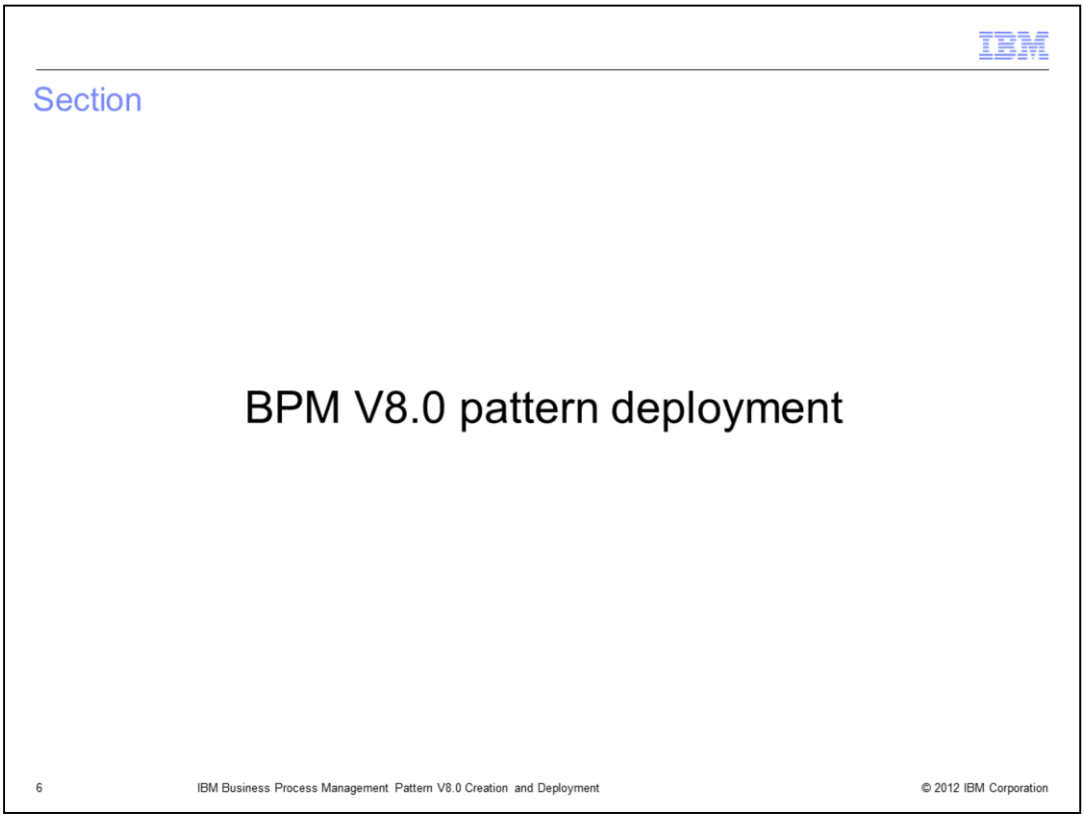
By default, any deployment of a BPM pattern will result in a pre-determined configuration, set by IBM. In order to customize the deployed configuration, several steps must take place. This process is explained in detail in the ConfigBPM script package presentation, and is introduced briefly here.

To customize the deployed configuration, you would complete these steps. First you must make your configuration changes in the ConfigBPM script package. Then you must change the Script Package Activation property from False to True on any or all of the parts in your pattern you want to customize.

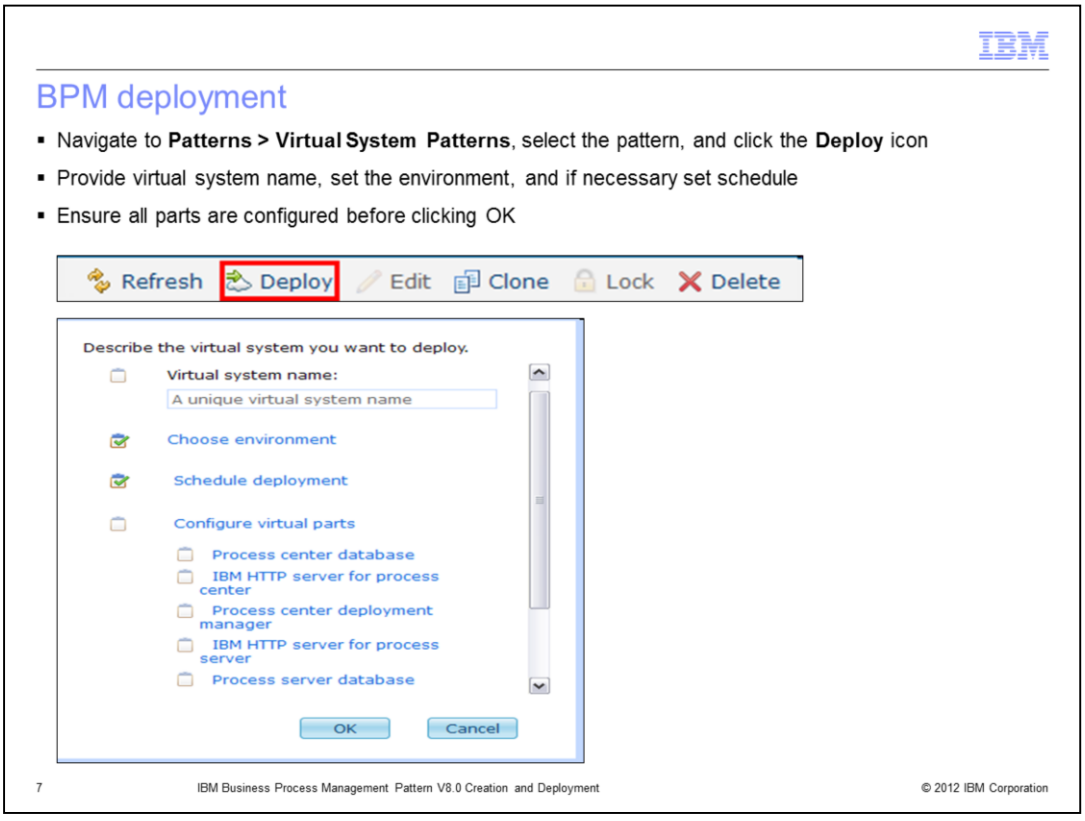
The configuration script package can be started in one of two ways. You can add the configuration script package to one or more parts in your pattern that you choose to customize, and the script package will run at deployment time. Or you can manually run your script package on one or more of the deployed virtual machines after deployment. The latter method is useful for testing script changes, since each deployment can take multiple hours, depending on how many parts and custom nodes it contains.



When editing a BPM pattern or creating a new pattern, the ordering of the parts within the pattern is critical to the success of the deployment. You cannot rely on the **Topology** view to know the order; instead one must click the **Ordering** link while in the Pattern Editor. For an IBM provided pattern or one that you create yourself, this will show you the IBM provided built-in part order constraints for the ordering of the virtual machine startups. Clicking on each of the constraints will highlight the parts involved. If you attempt to violate the built-in constraints, the pattern editor will display an error message and revert the change.



This section of the presentation will discuss pattern deployment and viewing the running instance after deployment.



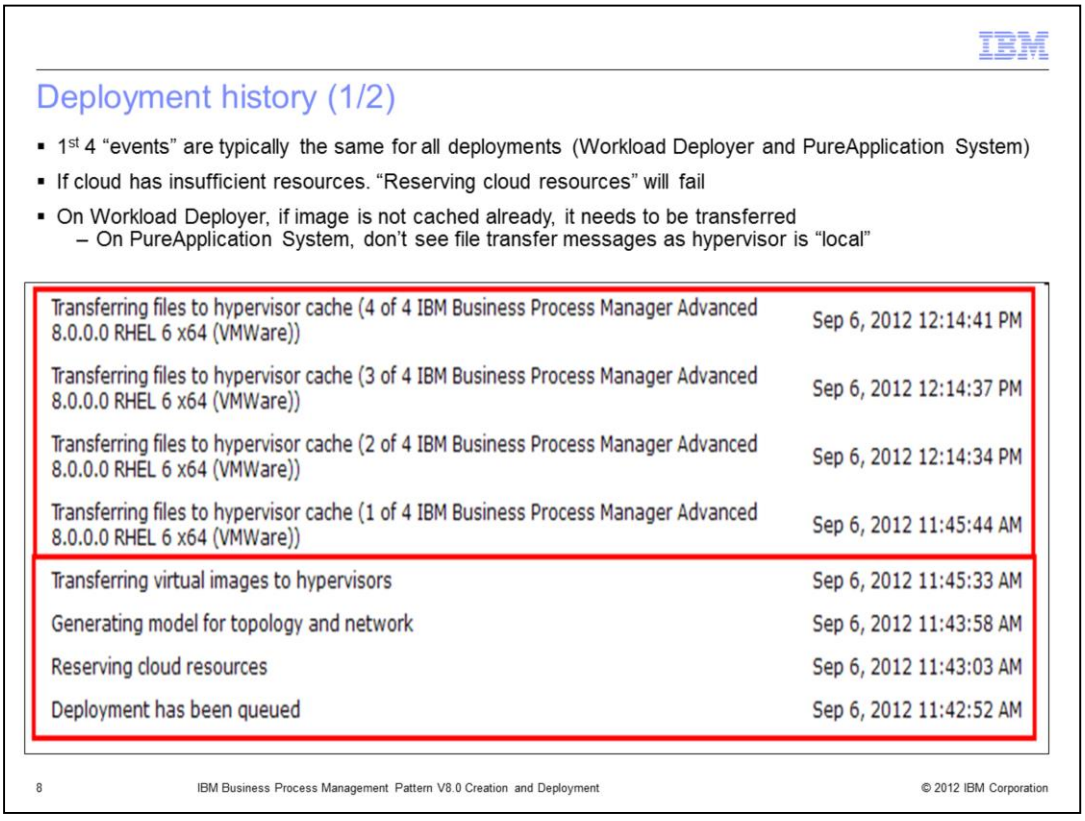
To deploy any virtual system pattern, navigate to Patterns > Virtual Systems Patterns, and select the pattern to be deployed. Once displayed, click the Deploy icon, and a pop-up screen is displayed prompting for various deployment properties. There are four sets of properties in this pop-up window. Each one of the four has a box to the left of it, which will or will not have a check mark. If it does not have a check mark, input is required. If it has a check mark, then it has the minimal required information, however you should always verify the information to ensure it is what you require to deploy the pattern successfully.

The first step is to provide the Virtual system name of your choosing. The name must be unique within this system.

The second step is the Choose environment set of properties. Click Choose environment, and another pop-up opens where you can provide the environment profile, or potentially the cloud group if this is a Workload Deployer system. If this is a PureApplication System, you may also need to select an IP group if there are more then one within the environment profile.

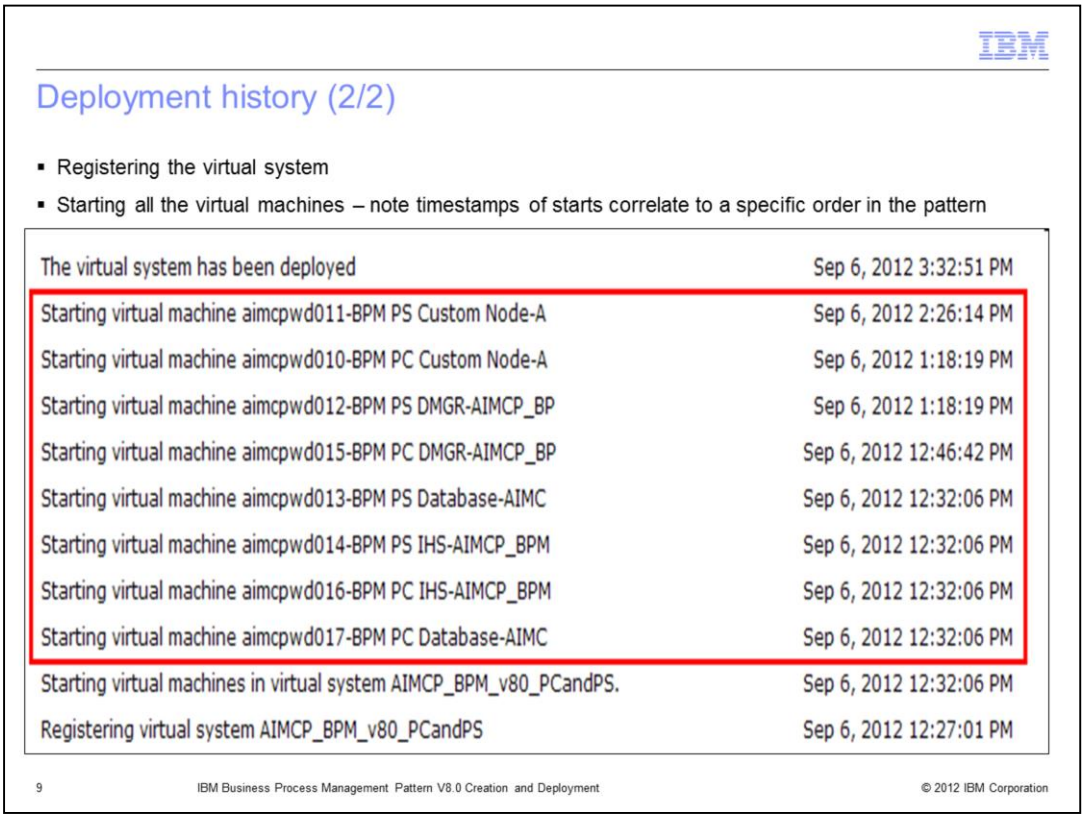
The third step is the Schedule deployment set of properties. You can schedule it in the future, and limit the time taken for the deployment. The default is to deploy immediately, and to have the deployment run indefinitely.

The fourth step is the Configure virtual parts set of properties. Here you get the opportunity to again modify any of the properties for each part (as seen on previous slides) that were not locked at edit time.



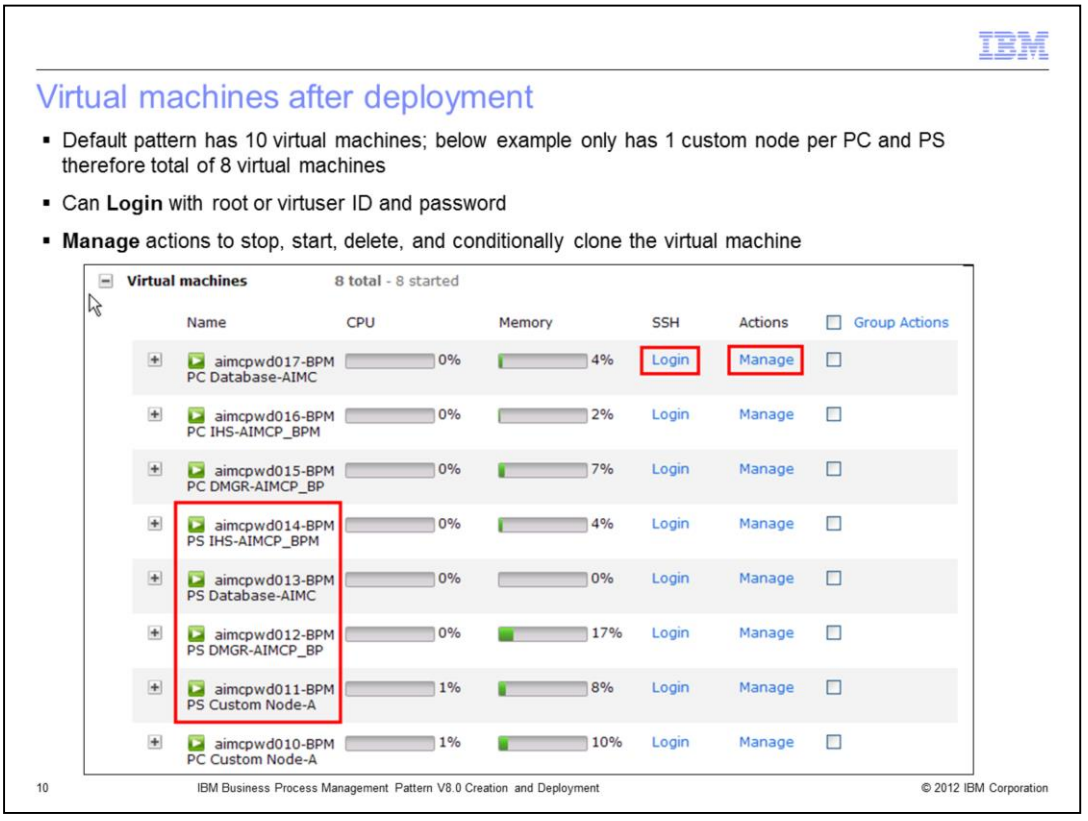
Once deployment is initiated, progress can be monitored by watching the History section of the deployed virtual system instance. The history is read from the bottom up.

The deployment is first queued until it is ensured that all the resources are available for this pattern. If resources are not available, the deployment will fail at this point. The next major step is to transfer the BPM virtual image to the hypervisor. If this is a PureApplication System, then the transfer completes quite quickly, as the hypervisor is "local." However if it is a Workload Deployer system and the image has never been cached, then the transfer can take some time.



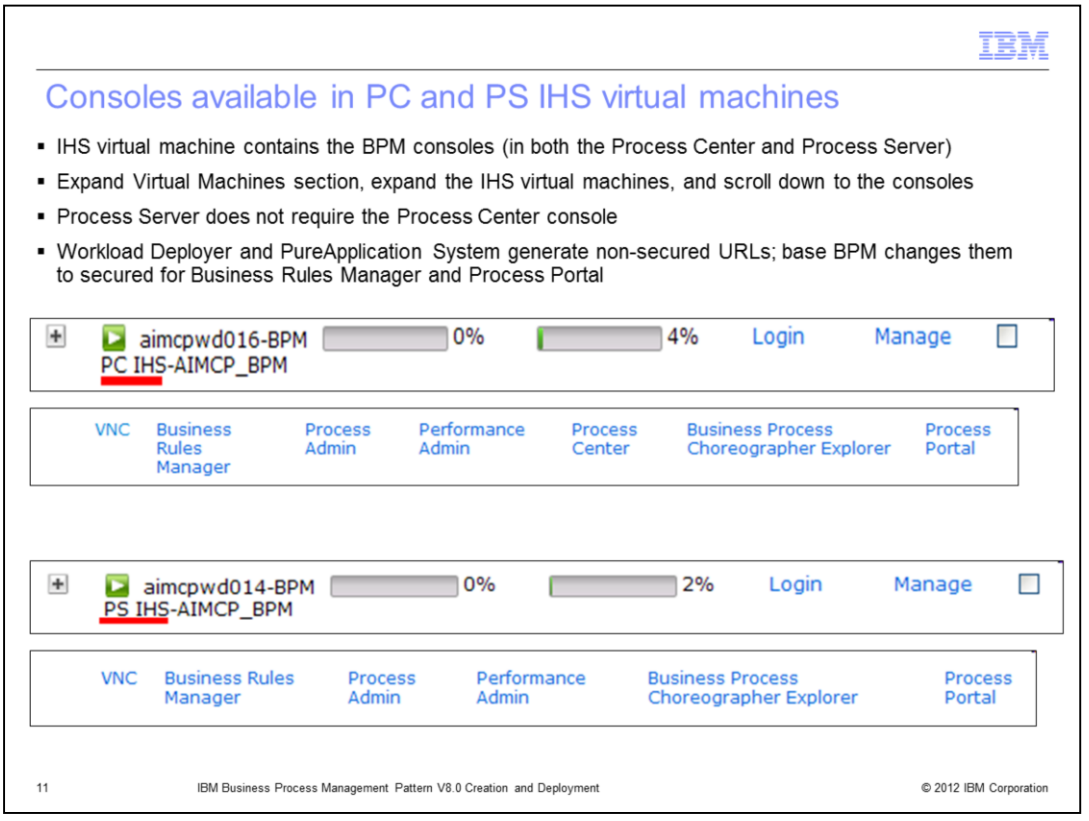
Continuing with the History, the virtual system is registered, and then each of the virtual machines is built, started, and has the appropriate parts “installed” unto it. Note the start times for each virtual machine do correlate with the ordering of parts seen on a previous slide. Once the message stating “the virtual system has been deployed” is displayed, the BPM deployment is ready for use.

Note the start and end times of this deployment – it took approximately 3 hours and 50 minutes to install and configure a process center and a process server, each with one node. Deployment times can vary depending on whether it is Workload Deployer or PureApplication System, on the customization done to the pattern, how busy the system is, and many other factors. But the key point is that it takes significantly less time then if you were to do an installation using traditional means.



Once the deployment has completed, one can view the virtual machines in the Virtual machines section of the deployed instance. What is shown in this slide is a deployment with only one custom node per process center and process server, for a total of eight virtual machines. The names of the virtual machines tell you which part was deployed on that virtual machine. For example, the first one in the list has “PC Database” imbedded in the name, therefore it is the process center database virtual machine. The last one has “PC Custom Node” imbedded in the name, therefore it is the process center custom node. As can be seen there are four virtual machines for the process center and four for the process server, as expected.

In this view, you can click the Login link to SSH into the virtual machine with either the root or virtuser ID, and it’s password. Also, there is the Manage link where one can perform some operations against the virtual machine such as clone, stop, start and delete.

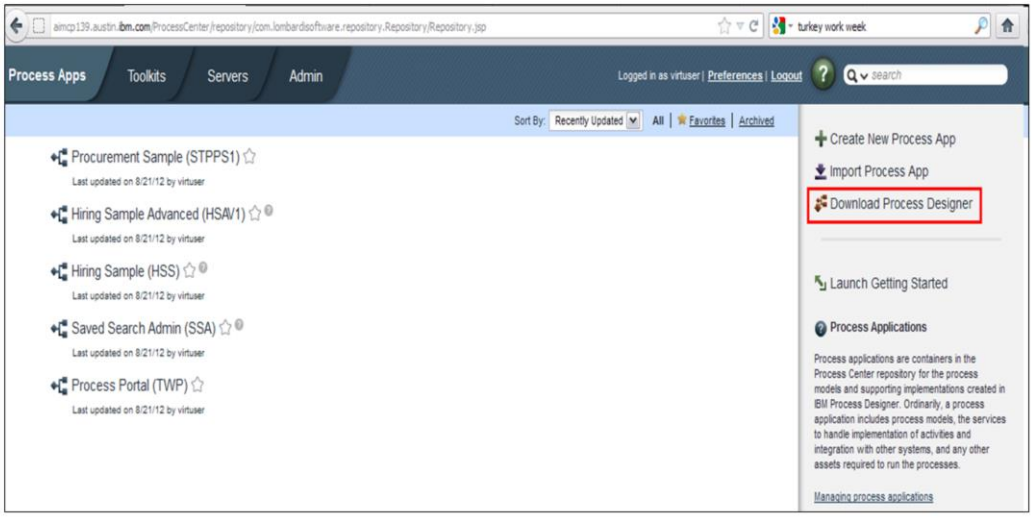


Each of the virtual machines, when expanded, has a Console section with one or more consoles. If the VNC property is enabled in the part's properties before deployment, then that virtual machine will have a VNC console link. The process center HTTP server virtual machine (with "PC IHS" in the name) also has six additional BPM related servers for the various BPM tools. The process server HTTP server virtual machine (with "PS IHS" in the name) has the same consoles as the process center HTTP server, with the exception of the process center console, which is to be expected.

Note that the URLs for the BPM consoles are originally all unsecured. The core BPM product will modify the URL to be secured for the Business Rules Manager and Process Portal only at this time. A feature request is in place to make all BPM console links secure.

Selecting the Process Center console

- Can use console link in Workload Deployer or bookmark the URL in your browser (for any console)
- All consoles require the virtuser ID and password provided during deployment
- Download Process Designer to workstation - automatically configured to connect to PC it was downloaded from



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Selecting the **Process Center** console from the previous slide will open a new browser tab, and prompt for login credentials. Use the virtuser ID and password. When logged in, you can find the option to download the Process Designer. The download will burn in information to automatically connect to the process center it was downloaded from.

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