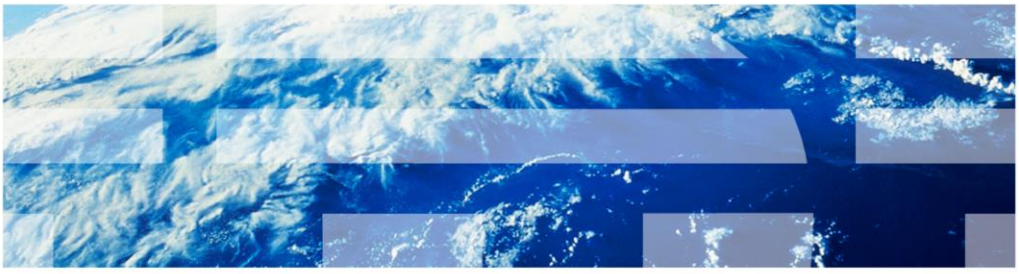
IBM

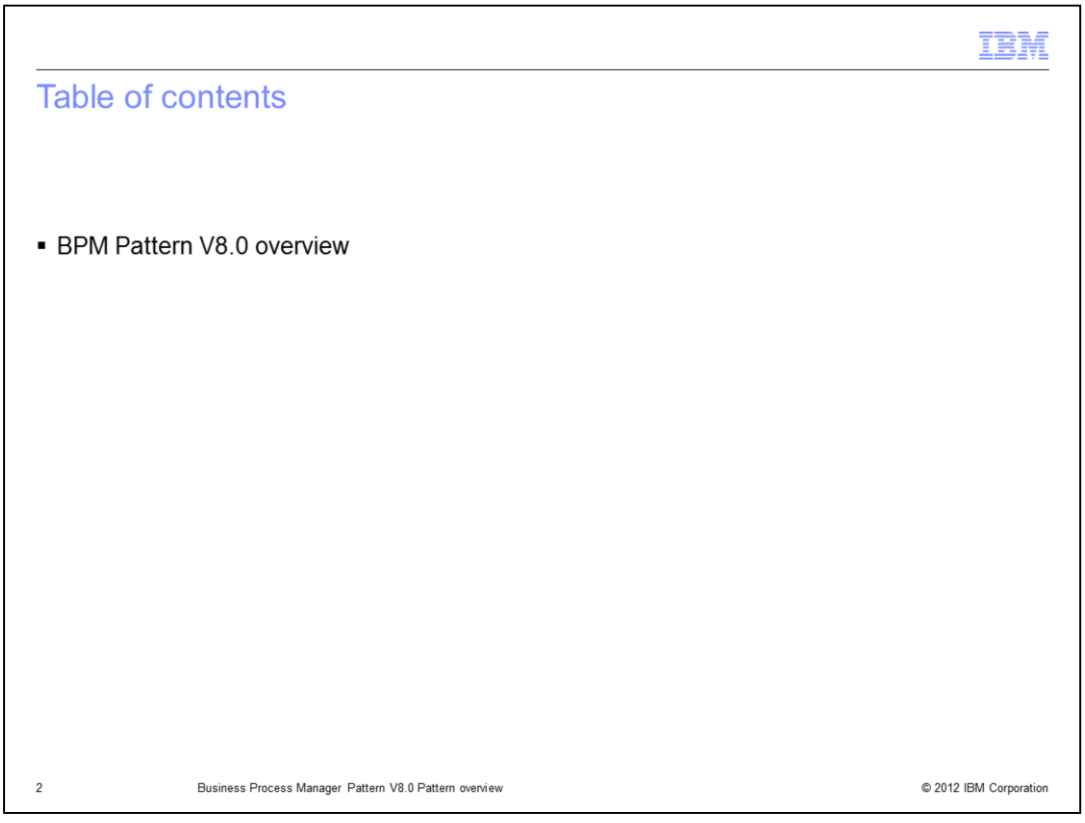
Business Process Manager Pattern V8.0 IBM PureApplication System and IBM Workload Deployer

Pattern overview

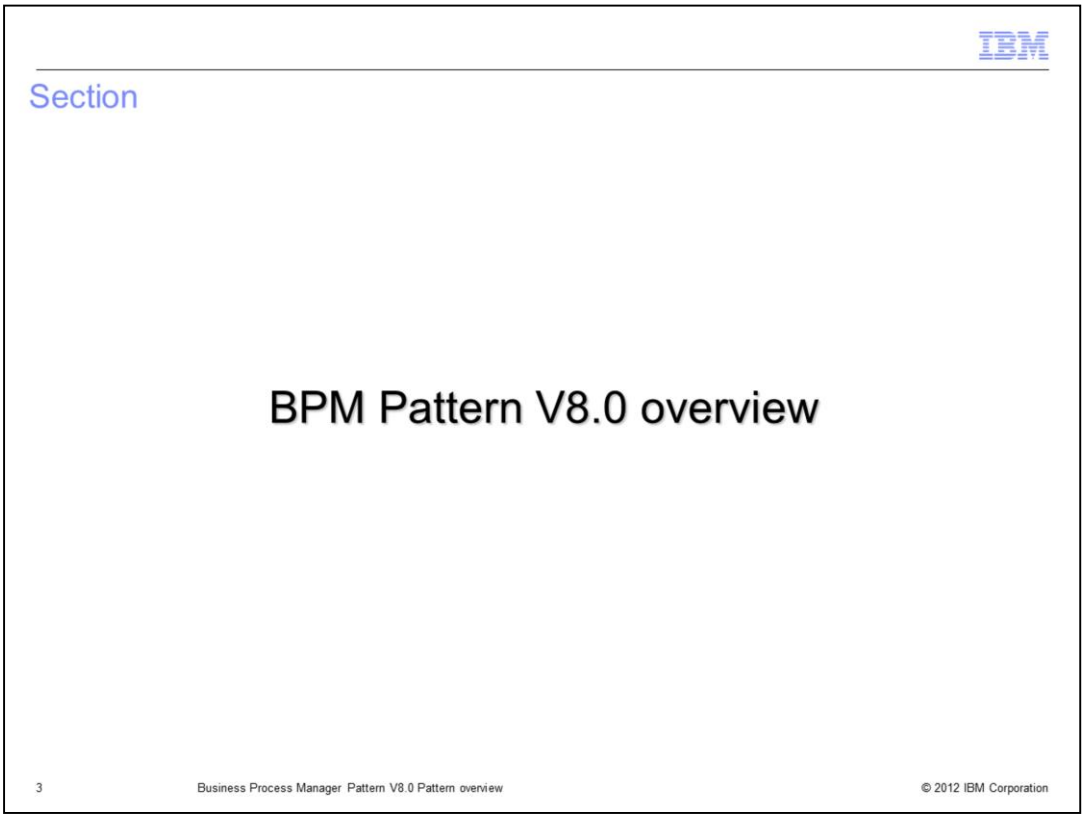


© 2012 IBM Corporation

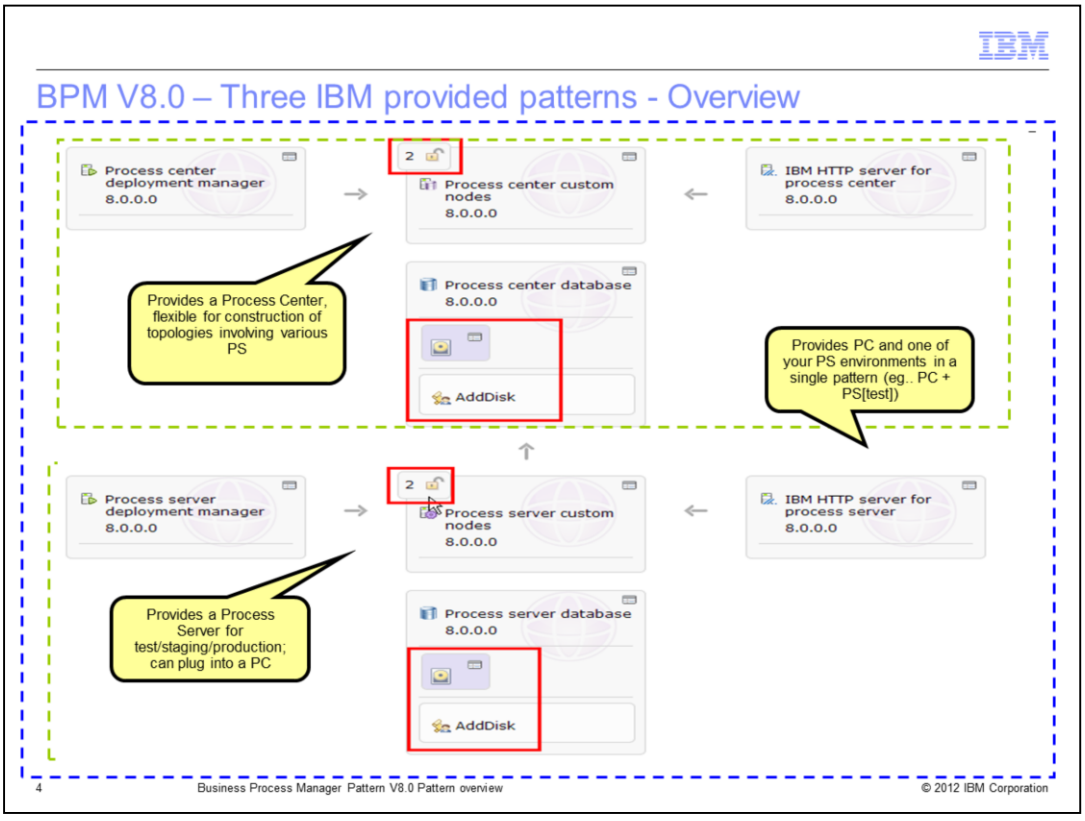
This presentation will cover a pattern overview of the BPM Pattern V8.0 in IBM PureApplication® System and IBM Workload Deployer.



The agenda is as on this slide.

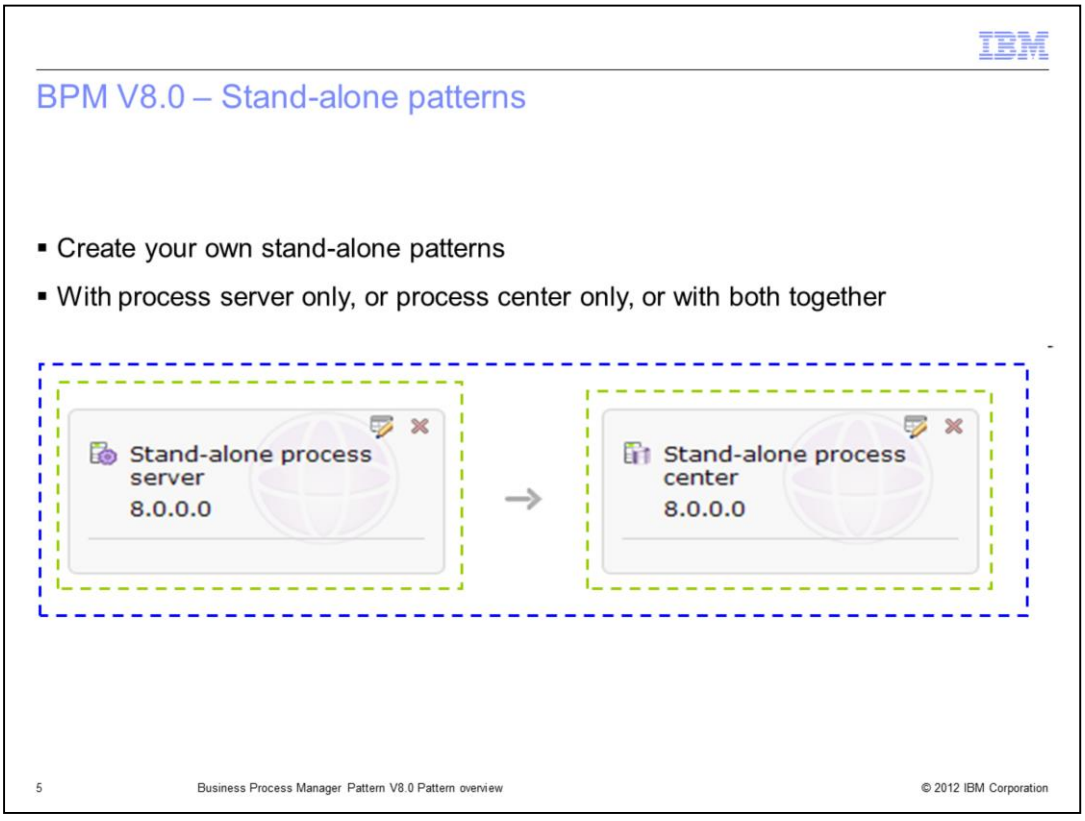


This section of the presentation will discuss details about the BPM patterns.

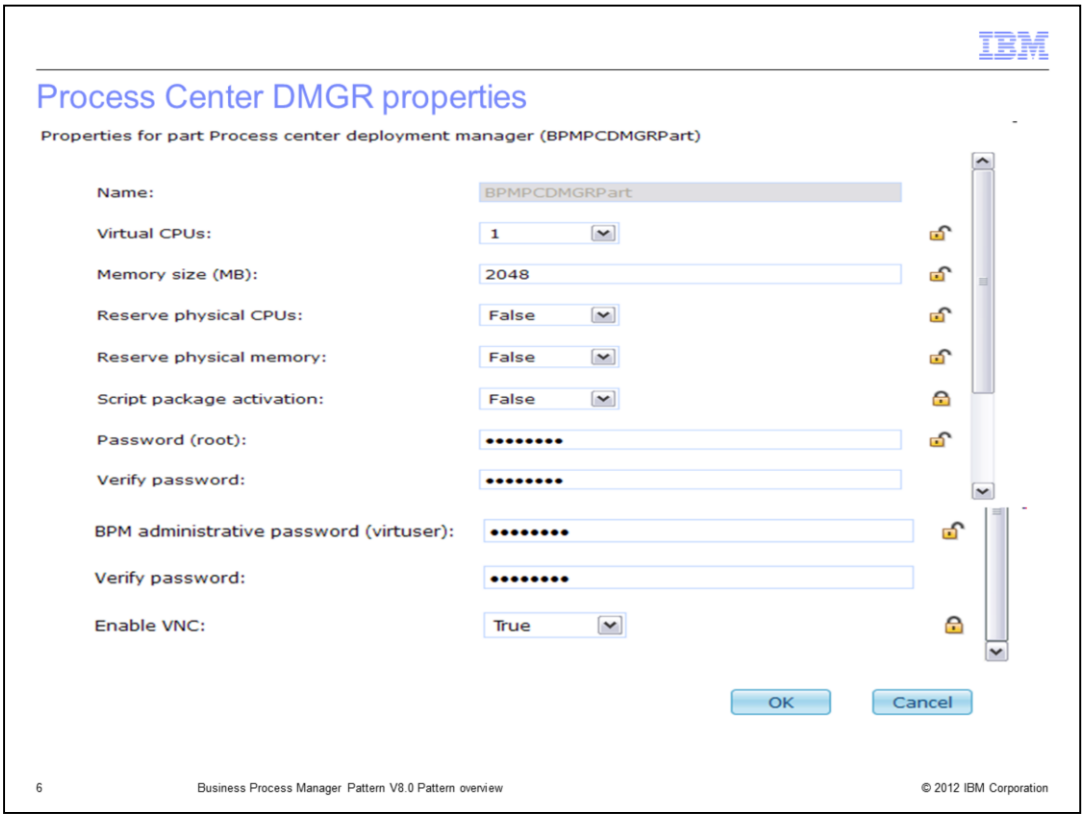


This slide shows the IBM provided pattern for both the Process Center and Process Sever combined into one pattern. The top half of the slide shows the process center parts and the bottom half shows the process server parts. As can be seen, the grouping of process center parts correlates exactly with the grouping of process server parts. When viewing the Process Center pattern, it will contain only the four process center parts seen in the slide. When viewing the Process Server pattern, it will contain only the four process server parts seen in this slide. Each part has a set of properties that are reviewed in the upcoming set of slides.

Note that both custom nodes have a counter (shown with a value of “2”) in the top left corner. When the pattern is in edit mode (in the Pattern Editor), this counter can be increased or decreased to customize the number of custom nodes that will be deployed. Additionally, by default, both database parts have the Raw disk Add-on and the AddDisk script package included. These will be discussed later in this presentation.



In a similar way, you can create one pattern for the stand-alone process server part, another pattern for the stand-alone process center part, and another pattern with both the process server and process center stand-alone parts. These patterns are not provided by IBM, and therefore must be created as your own new patterns.



The part properties are seen by clicking the properties icon in the top right corner of each part in the previous slide. Shown here are the properties for the process center deployment manager part. These same properties are also in the other parts, the custom node, HTTP server and database parts. Only the process server deployment manager part has some additional properties, as seen on the next slide.

Each part has the following properties:

Name: The name of the part, which can be used for scripting purposes

Virtual CPUs: IBM provides a default configured for a production environment; use the pull-down to modify the value if required

Memory size: IBM provides a default configured for a production environment; modify the value if required

Reserve physical CPUs: Provides the ability to reserve physical CPUs for this virtual machine (of the amount in the Virtual CPUs property)

Reserve physical memory: Provides the ability to reserve physical memory for this virtual machine (of the amount in the Memory size property)

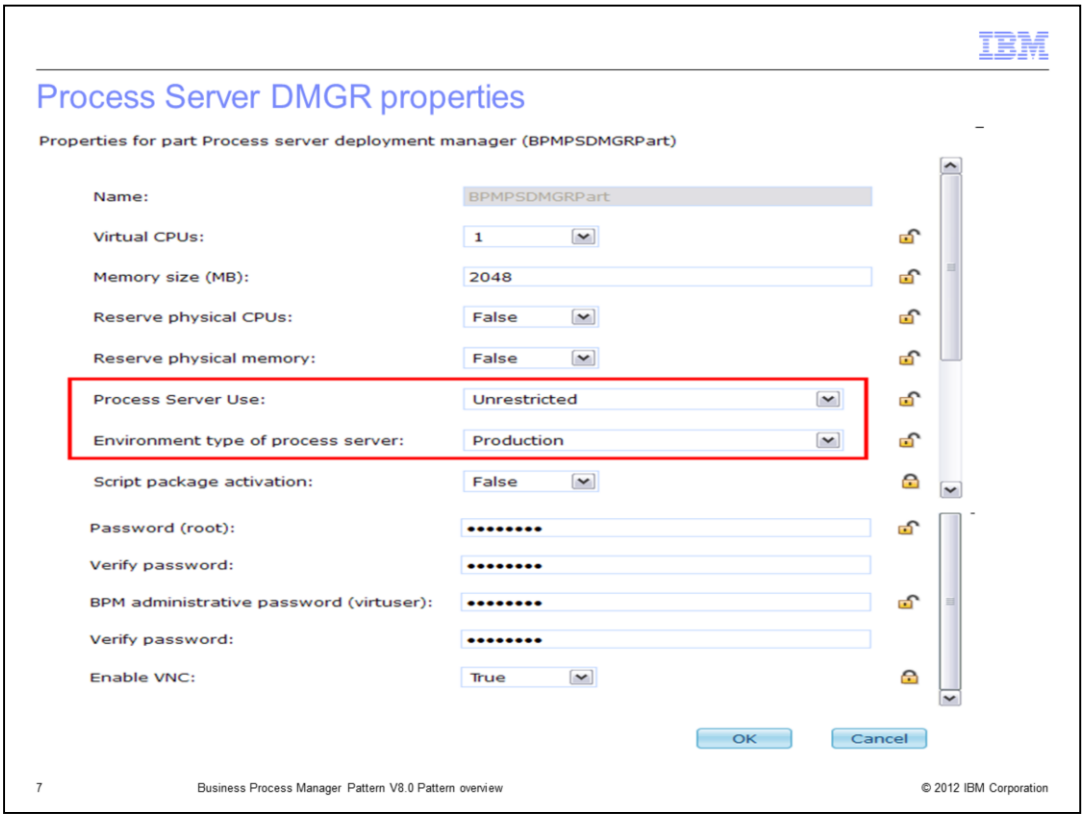
Script package activation: Use default configuration or allow for customized configuration by way of a configuration script package (details provided elsewhere)

Password (root): The root ID password

BPM administrative password (virtuser): The virtuser ID password. Note that the virtuser ID cannot be customized at this time.

Enable VNC: Enable the VNC console.

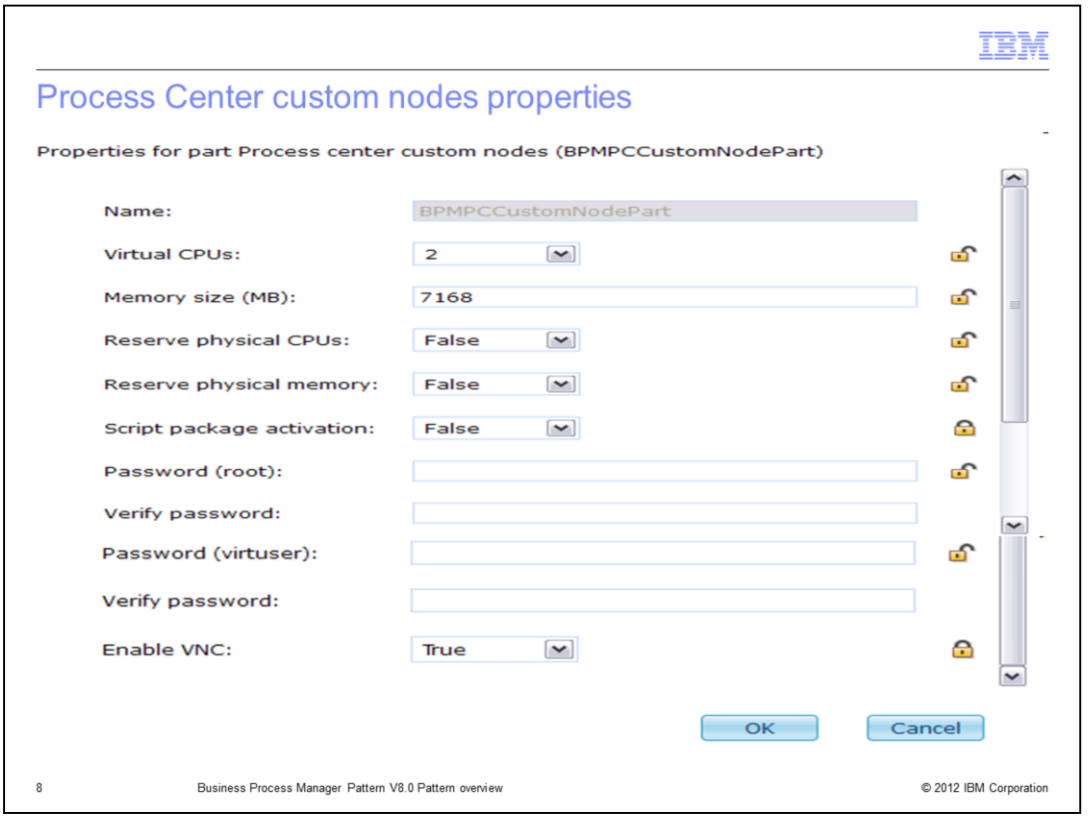
Observe the locks to the right of most of the properties. If the lock is “unlocked”, then you will have the opportunity to modify that property at deployment time. If it is “locked”, then that property is not displayed at deployment time, and the current value is used.



As stated on the previous slide, the process server deployment manager part has two additional properties.

Process Server use: This property is related to licensing, and can be either Unrestricted (production) or non-production.

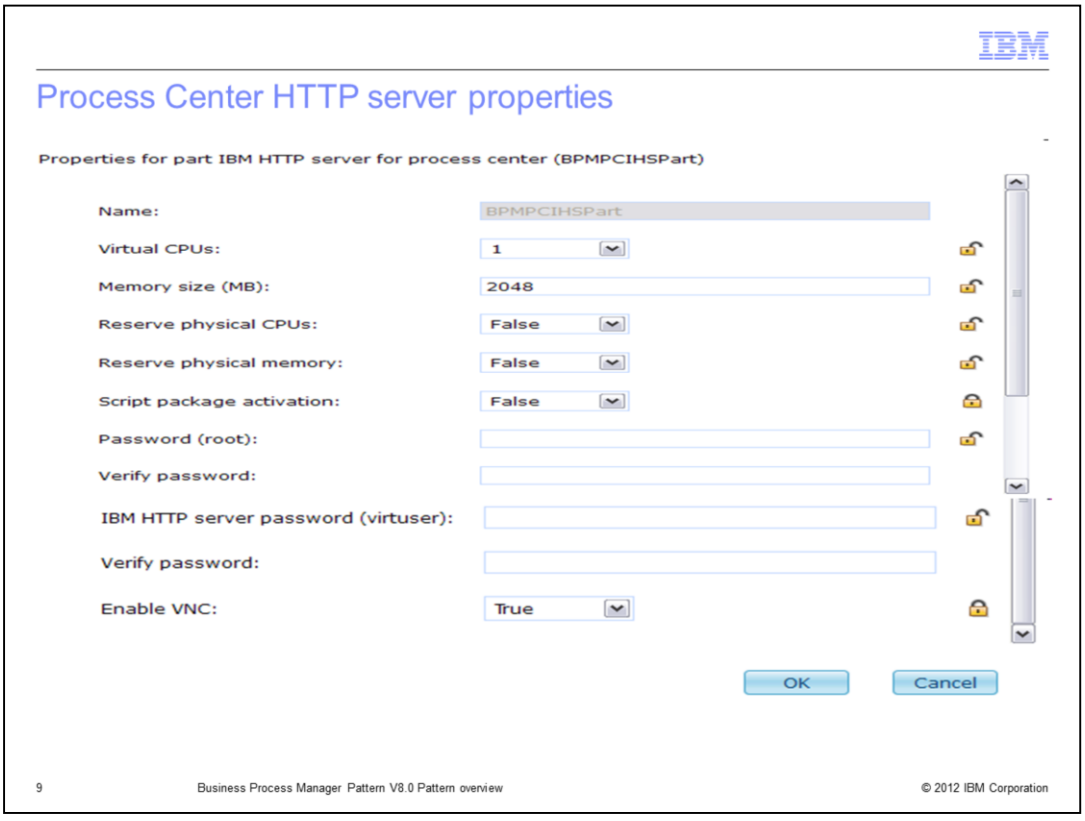
Environment type of process server: The possible values are Production, Staging and Test, and are used in exactly the same way as the base BPM product.



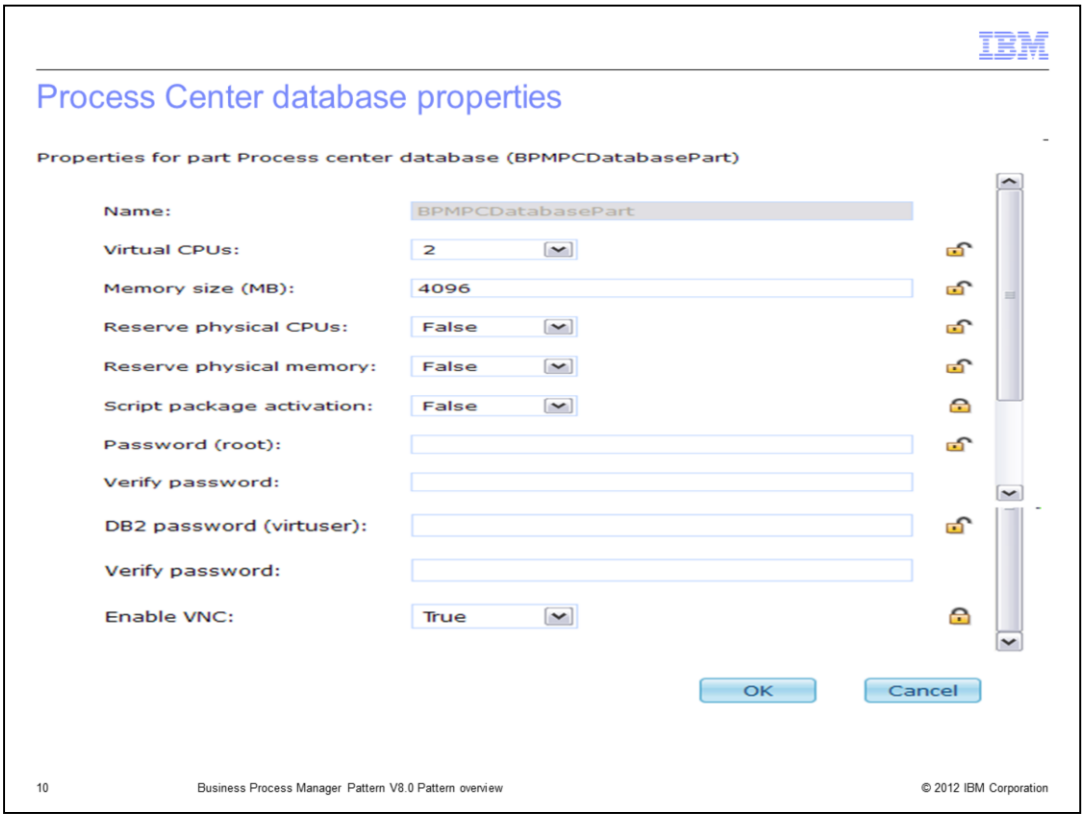
All the other parts have the same properties as the process center deployment manager. The only potential changes from part to part are the values for the Virtual CPUs and the Memory size, which are customized for a production environment.

In a non-production environment, if your CPU and memory resources are limited, you can reduce the amount of CPUs and memory provided to each part. However, do not reduce the memory too much, as it is possible for a deployment to hang if a virtual machine does not have adequate memory resources. Additionally, for each custom node part, you can reduce the number of nodes from the default value of two to one.

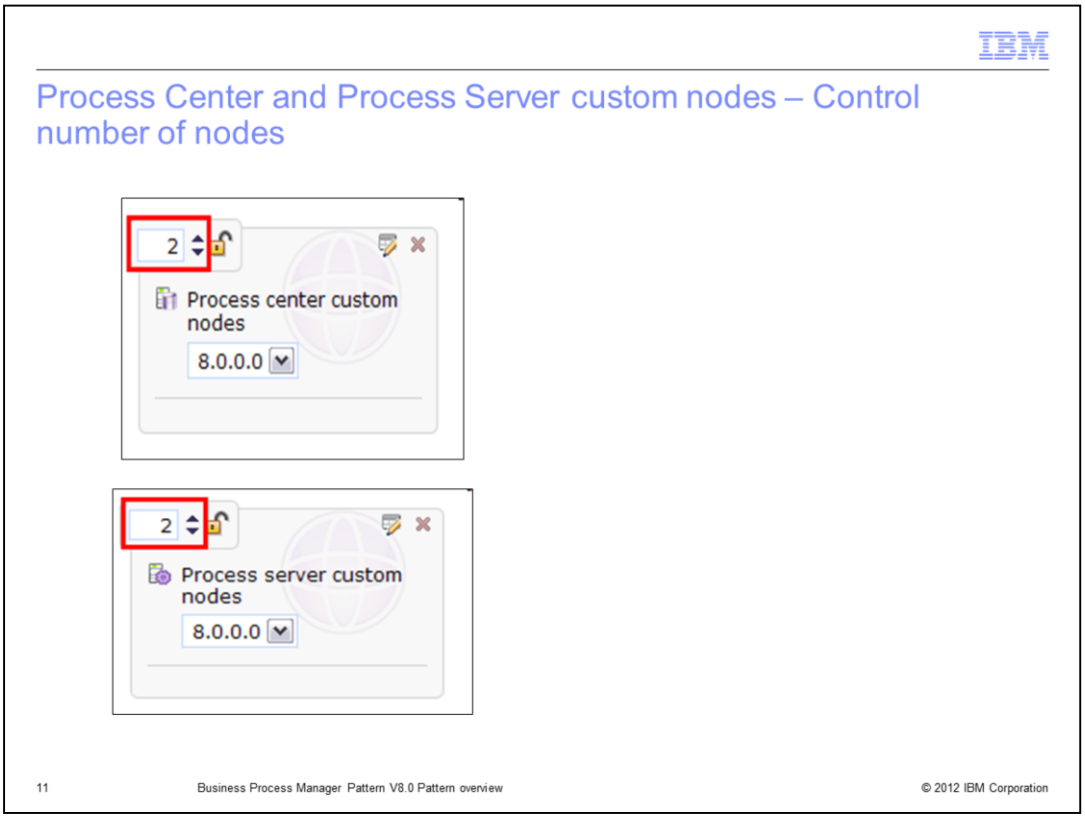
Shown here is the process center custom node part. The process server custom node part has the same properties.



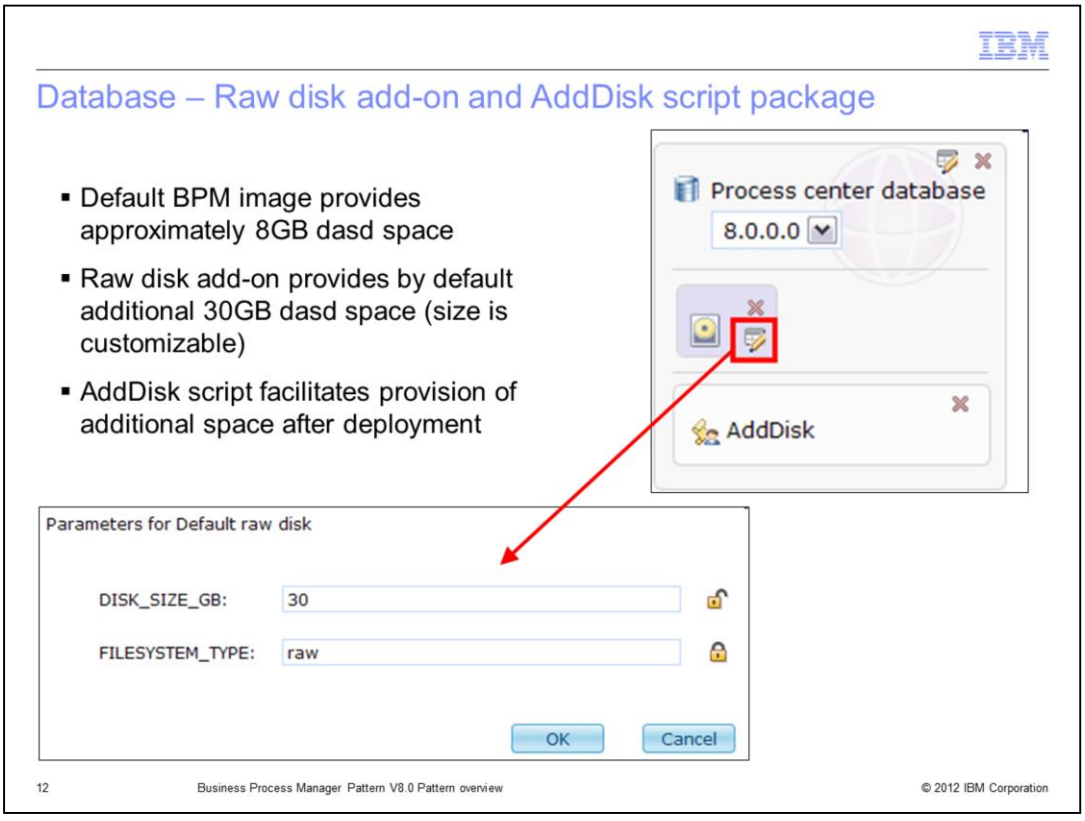
Shown here is the process center HTTP server part. The process server HTTP server part has the same properties.



Shown here is the process center database part. The process server database part has the same properties.



As previously mentioned, each custom node part has a counter in the top left corner that can be increased or decreased as required while editing the pattern in the **Pattern Editor**. This will control the number of nodes generated at deployment time, one virtual machine per node. As shown elsewhere, you will also have the opportunity to manually scale the number of nodes during runtime (after deployment).



The default BPM image provides approximately 8GB of storage for the DB2® database, for each of the process center and process server databases. This amount of space typically is not sufficient in a production environment, and therefore a Raw disk add-on is included in each database part. By default, this raw disk add-on is sized at 30GB, but you can modify it as required. The BPM product will look after formatting and mounting this “add-on” disk at deployment time.

After deployment, if you find that you still have insufficient dasd space for your databases, you can add a storage volume to the database virtual machine. The AddDisk script package is provided in the pattern so that you do not need to login to the database virtual machine to mount the disk or add it to the DB2 storage path. Instead invoke the AddDisk script from the console, and it will automatically mount the disk using the current date-time stamp to qualify the directory path name. Additionally the script will automatically add the disk to the database storage path. More details about this process is provided in another presentation called Scaling.

Summary of resources for default PC and PS patterns

Part	CPU	Memory	x2	Image size GB	Database size GB	Total dasd GB
PC DMGR	1	2,048	no	32	0	32
PC Custom Node	4	14,336	yes	64	0	64
PC IHS	1	2,048	no	32	0	32
PC Database	2	4,096	no	32	30 **	62
PS DMGR	1	2,048	no	32	0	32
PS Custom Node	4	14,336	yes	64	0	64
PS IHS	1	2,048	no	32	0	32
PS Database	4	4,096	no	32	30 **	62
Totals	18	45,456				380GB

© 2012 IBM Corporation

This slide summarizes the CPU, memory and DASD resource requirements for the default pattern containing both the process server and process center parts, for a total of eight parts.

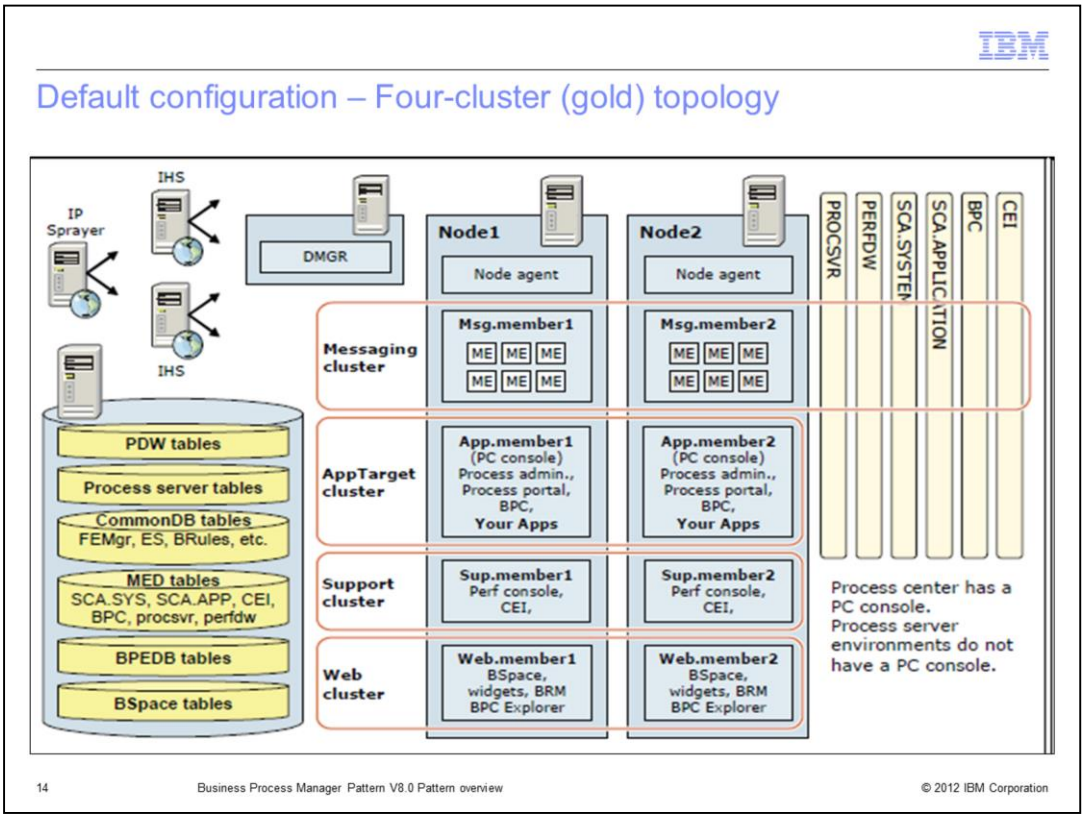
The CPU and Memory columns have the values as they are in the individual part properties.

The “x2” column is indicating that the custom node parts have their resources “doubled” as, by default, two virtual machines are created for each custom node part.

The image size column shows the 32gb image size (seen in the hardware section of the bpm virtual image) and doubles the size for the dual custom nodes.

The database size is taken from the Raw disk Add-on properties – the default is 30GB. This value can be adjusted – for example, a test environment likely requires much less then 30GB.

Therefore the total amounts for this default pattern with both the process center and process server parts is 18 virtual CPUs, 45456 GB of virtual memory, and 380 GB of dasd space.



This slide was taken from a V7.5.1 Redbook on BPM topologies, and it's main purpose here is to show the default topology deployed with the BPM Pattern V8.0 as a four cluster gold topology across the number of nodes of your choosing. The default number of nodes is two.

Trademarks, disclaimer, and copyright information

IBM, the IBM logo, ibm.com, DB2, and PureApplication are trademarks or registered trademarks of International Business Machines Corp., registered in many jurisdictions worldwide. Other product and service names might be trademarks of IBM or other companies. A current list of other IBM trademarks is available on the web at "Copyright and trademark information" at http://www.ibm.com/legal/copytrade.shtml

THE INFORMATION CONTAINED IN THIS PRESENTATION IS PROVIDED FOR INFORMATIONAL PURPOSES ONLY.
THE INFORMATION CONTAINED IN THIS PRESENTATION IS PROVIDED FOR INFORMATIONAL PURPOSES ONLY. WHILE EFFORTS WERE MADE TO VERIFY THE COMPLETENESS AND ACCURACY OF THE INFORMATION CONTAINED IN THIS PRESENTATION, IT IS PROVIDED "AS IS" WITHOUT WARRANTY OF ANY KIND, EXPRESS OR IMPLIED. IN ADDITION, THIS INFORMATION IS BASED ON IBM'S CURRENT PRODUCT PLANS AND STRATEGY, WHICH ARE SUBJECT TO CHANGE BY IBM WITHOUT NOTICE. IBM SHALL NOT BE RESPONSIBLE FOR ANY DAMAGES ARISING OUT OF THE USE OF, OR OTHERWISE RELATED TO, THIS PRESENTATION OR ANY OTHER DOCUMENTATION. NOTHING CONTAINED IN THIS PRESENTATION IS INTENDED TO, NOR SHALL HAVE THE EFFECT OF, CREATING ANY WARRANTIES OR REPRESENTATIONS FROM IBM (OR ITS SUPPLIERS OR LICENSORS), OR ALTERING THE TERMS AND CONDITIONS OF ANY AGREEMENT OR LICENSE GOVERNING THE USE OF IBM PRODUCTS OR SOFTWARE.

© Copyright International Business Machines Corporation 2012. All rights reserved.

© 2012 IBM Corporation