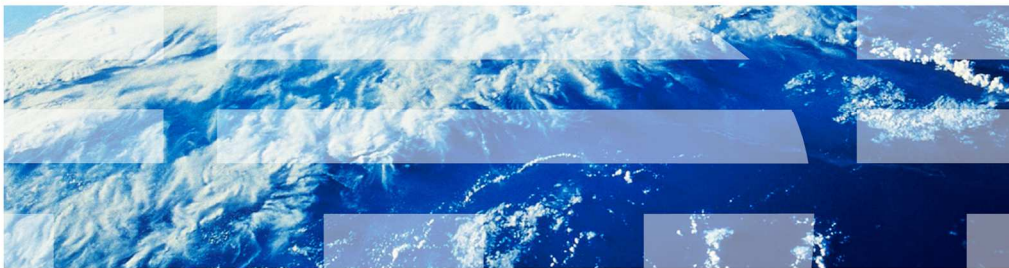

IBM PureApplication System

Plug-in development kit enhancements



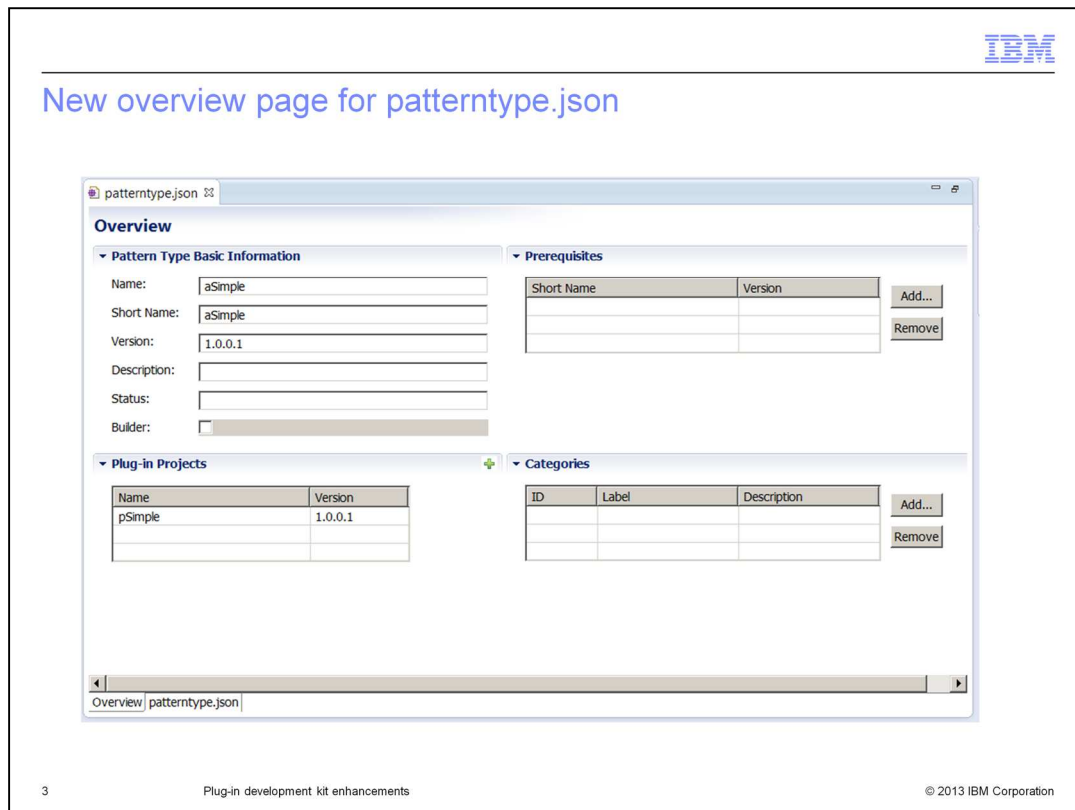
This presentation shows you the enhancements to the IBM PureApplication™ System plug-in development kit.

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- New pages for pattern type and plug-in JSON files
- Connect to a virtual machine (VM) with the new runtime perspective
- Connect to the system console
- Restart plug-in scripts from earlier stage
- Remote import of plug-in packages

There are several new features in IBM PureApplication System version 1.1 to help you more easily develop and test plug-ins. In this presentation, you see the new user interface for the JSON files which are used when building your plug-in. Also, there is a new runtime perspective which makes it easy to connect to a running virtual machine (VM). There are new features to make it easy to connect to the system console and to restart your plug-in scripts. Also, you can now perform remote imports of your plug-in packages.

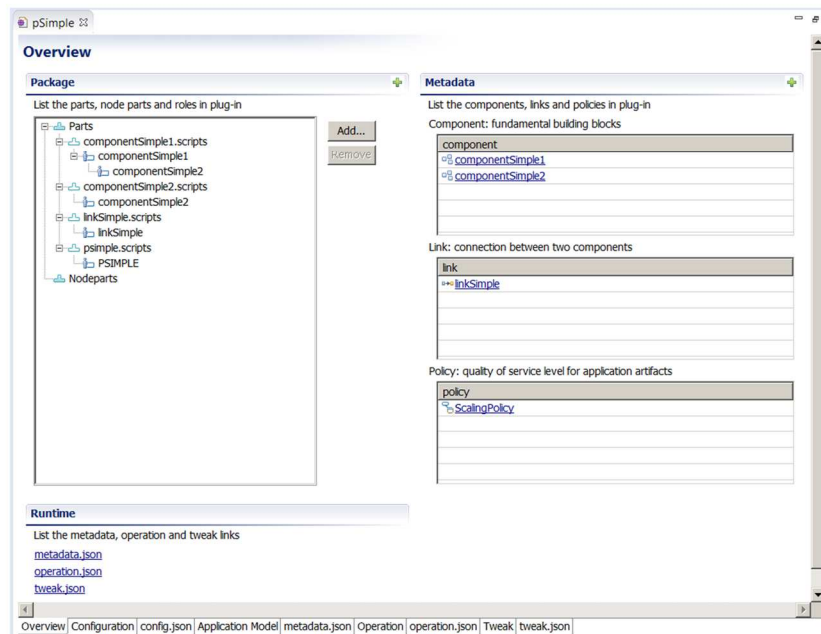
New overview page for patterntype.json



You can choose to work with your pattern type and plug-in projects in either a simple form-based user interface, or switch to a formatted text editor to modify the project configuration files directly. This slide shows you the new user interface for the pattern type JSON file, where there are tabs at the bottom to switch between the two views.

Values that you specify are immediately validated, and errors (such as missing required fields, duplicate IDs) are flagged for correction.

New pages for plug-in files



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This slide shows the new tabbed pages for the plug-in files. Using the tabs at the bottom, you can easily switch between the form-based view or the formatted text editor view.

Values that you specify are immediately validated, and errors (such as missing required fields, duplicate IDs) are flagged for correction. Changes that are made in either the form-based view or the source text editor are immediately reflected in both views. Using the tabs at the bottom you can switch to the other files, such as the configuration, application model, operation, and tweak files. This slide shows the overview tab where you can manage the shared services, packages, metadata, and runtime information.

Configuration and application model

Configuration

Plug-in Basic Information

ID:

Version:

Pattern Types

Type	Name	Version
primary	aSimple	1.0

Plug-in Files

Path:

Plug-in Parameters

Label	Value

Application Model

Metadata List
The list contains metadata elements that could be used for creating a virtual application pattern.

- componentSimple1
- linkSimple
- componentSimple2
- ScalingPolicy

Metadata details

Type:

ID:

Label:

Description:

Category:

Image(64x64):

Thumbnail(48x48):

Attributes

ID	Type	ID:
comp1attr	string	

Label:

Description:

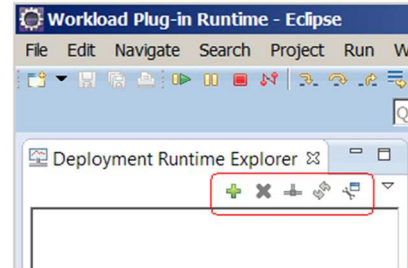
Required:

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Here you see the configuration and application model views in the new form-based editor. On the configuration tab, you can view and modify elements such as the pattern types, plug-in files and plug-in parameters. On the application model tab, you can view and modify various elements in the model including components, links and policies. For each of these you can enter the details such as ID, category, images and attributes.

Connect to a VM – New runtime perspective

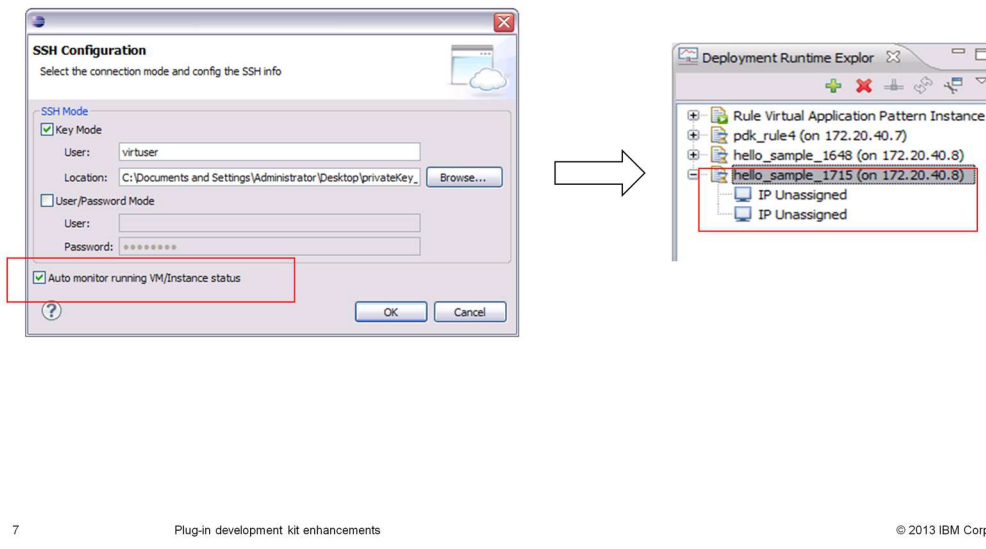
- New 'Workload plug-in runtime' perspective
- Icons in Explorer
 - Add new VM
 - Remove VM
 - Connect to VM
 - Refresh
 - Connection property



You can connect to a virtual machine in a virtual application instance to check the runtime status of the virtual machine or to debug an issue on a particular virtual machine. There is a new perspective that provides this functionality and it is called the “Workload plug-in runtime perspective.” In the deployment runtime explorer, there are several icons to allow you to add a VM, remove a VM, connect to a VM, refresh or update connection properties.

Connect to a VM – SSH and auto-monitoring

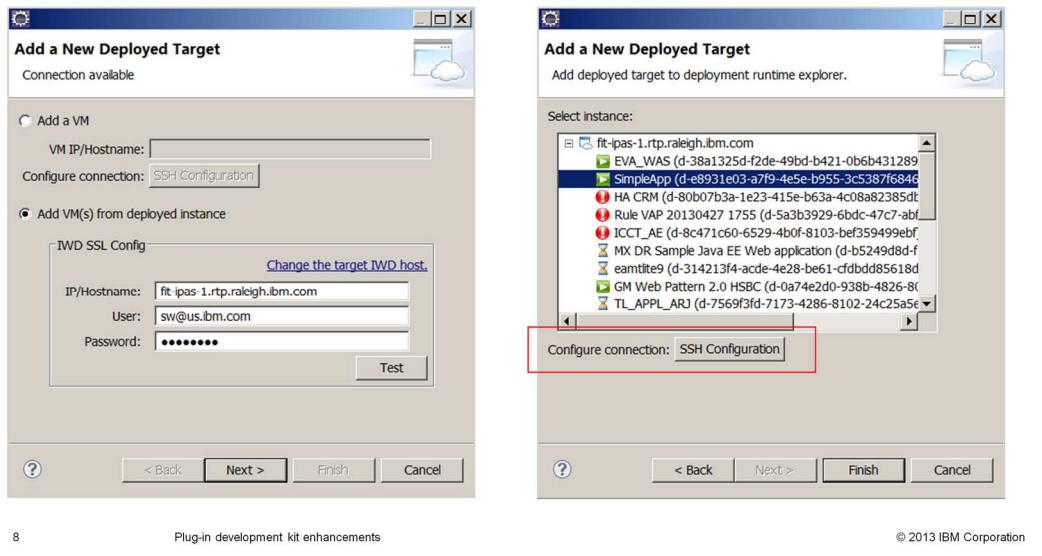
- Configure SSH – Currently only supports RSA key, not PPK



Click SSH Configuration to enter SSH properties for the VM's. Select the SSH connection mode: Key Mode or User/Password Mode. For virtual applications, you need to use Key Mode. If you are using Key Mode, enter the user name for the key. Click Browse and select the private key for the virtual application instance. Currently, only the RSA key files are supported, not the PPK key files. Select 'Auto monitor running VM/Instance status' to monitor instance status automatically. Initially, the IP address is unassigned but it shows the address automatically once it is assigned. As the deployment progresses, more details are displayed and logs are gathered.

Connect to a VM - Add a VM and select the target

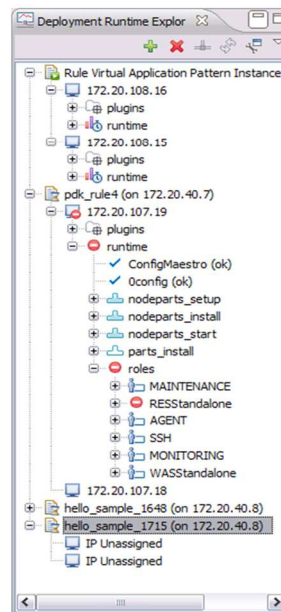
- Connect and select target



After you select to add a new VM to the explorer, you are prompted to select the target. To add a specific virtual machine from a deployed instance, select 'Add a VM'. Then enter the IP address of the virtual machine. To add all virtual machines in a virtual application instance on the system, select 'Add VMs from deployed instance'. Enter the IP address or host name, user name, and password for the system. Click 'Next' then select a virtual application instance. Note the button to set the SSH configuration properties for the VM.

Connect to a VM – Runtime explorer

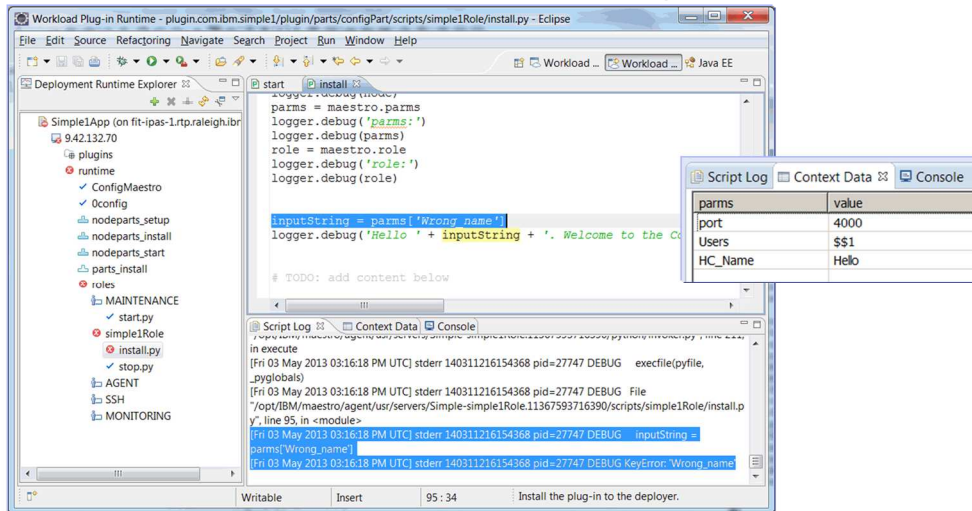
- List of virtual machines in the explorer view



Depending on the option that you chose in the previous step, the virtual machine is listed on its own or grouped with the virtual application instance that it belongs to. For each VM, you can see the IP addresses, roles and life cycle scripts. From here, you can modify scripts that exist in the local workspace and upload them to replace the scripts in the virtual machine, check the runtime log, and view context data. If you installed the debug plug-in, you can select the error script node and resume the deployment process from an error state, or restart the role life cycle scripts from the installation script.

Debugging using the runtime perspective

- Install the debug component with your virtual application
- Connect to the VM
- If there is a failure it shows the point of failure and the script log



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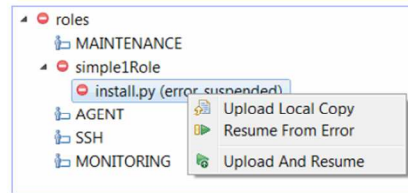
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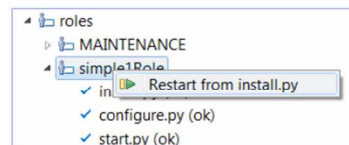
Using the runtime perspective, it is easy to debug your scripts. First, install the debug plug-in with your virtual application. The debug plug-in is provided in the plug-in development kit. Then, connect to the VM in the explorer view. Any failures are shown with a red icon in the explorer, and you can open the problem script to see the point of failure. In the script log tab, you can view any error messages that are associated with the failure. In the context data tab, you can see attribute values for the role.

Upload and restart scripts

- After fixing the error, upload the new script



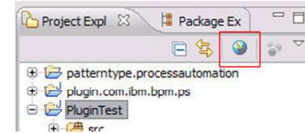
- Restart plug-in scripts from earlier stage



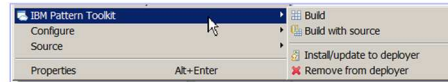
After you have fixed an error in a life cycle script, you can easily upload the script using the menu. There are options to upload the local copy and to resume the script from the point of failure. If you need to start from the beginning, then you can use the role menu to restart from the installation script. Note that you may need to manually perform any required cleanup before restarting the scripts.

Other changes

- New option to connect to system console
– ‘Navigate to Deployer’



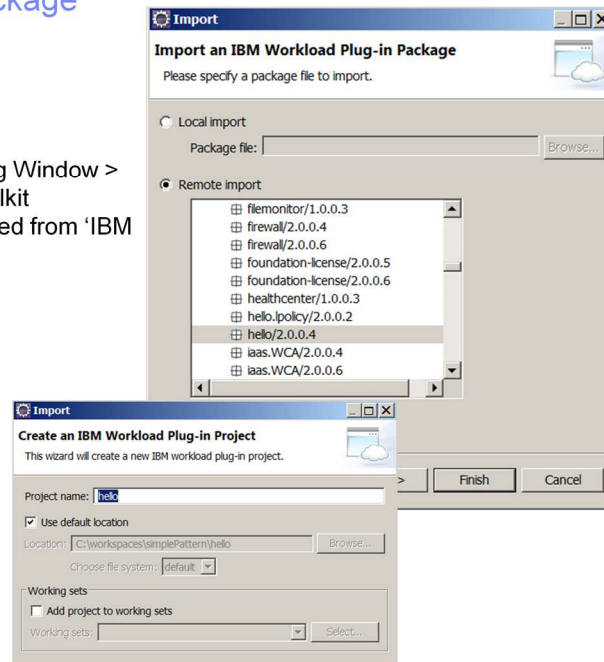
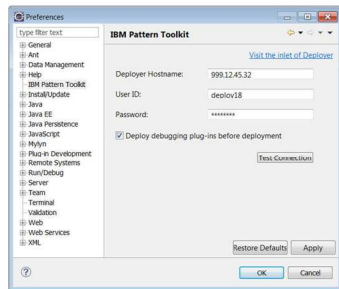
- Menu item renamed from IBM Workload Plug-in



If your system is configured in the IBM Workload Deployer preferences, the system console opens in your web browser. If your system is not configured in the IBM Workload Deployer preferences, the IBM Pattern Toolkit preferences page opens so that you can configure the settings for your system. After you enter the settings, you can open the system console in your web browser. The menu item to build and update the deployer has been renamed. Now it is called ‘IBM Pattern Toolkit’.

Import remote plug-in package

- New option for remote import
- First setup the connection using Window > Preferences > IBM Pattern Toolkit
 - ‘IBM Pattern Toolkit’ renamed from ‘IBM Workload Plug-in’



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You can import an existing plug-in project into your Eclipse plug-in development environment. You can import a project from your local workstation, or from PureApplication System if you are connected to your system from Eclipse. To connect to the PureApplication System, click Window > Preferences, then IBM Pattern Toolkit, then enter the IP address of your PureApplication System, and the user name and password. Note that the preferences option has been renamed from “IBM Workload Plug-in” to “IBM Pattern Toolkit”. The import wizard connects to the remote deployer and lists all of its plug-ins. Then, you choose the target and the wizard downloads and unzips the plug-in to the local workspace.

Summary

- You have reviewed the new capabilities in the plug-in development kit which should facilitate developing pattern types and plug-ins

In this presentation, you have reviewed the new capabilities in the plug-in development kit which make is easier to edit and debug your plug-ins.



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