

Multiple Workspace Support

Multi-Workspace Support

The Java Content Repository (JSR-170/JSR-283) standard requires that content repositories be composed of one or more workspaces which contain the actual content nodes. Workspaces are intended to be used to store different branches of the same node graph (see http://wiki.apache.org/jackrabbit/DaidsModel#Rule_.233:_Workspaces_are_for_clone.28.29.2C_merge.28.29_and_update.28.29.).

Resource Resolution

By default, only the default workspace will be consulted during resource resolution.

Configuration

To enable multi-workspace resource resolution, set the `resource.resolver.multiworkspace` configuration property of PID `org.apache.sling.jcr.resource.internal.JcrResourceResolverFactoryImpl` to true. This can be done via the Web Console on the Configuration screen.

Apache Sling Resource Resolver

Configures the Resource Resolver for request URL and resource path rewriting.

Resource

/apps

+

-

Search Path

/libs

+

-

The list of absolute path prefixes applied to find resources whose path is just specified with a relative path. The default value is ["/apps", "/libs"]. If an empty path is specified a single entry path of ["/"] is assumed. (resource.resolver.searchpath)

Namespaces

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Mangling

Defines whether namespace prefixes of resource names inside the path (e.g. "jcr:" in "/home/path/jcr:content") are mangled or not. Mangling means that any namespace prefix contained in the path is replaced as per the generic substitution pattern "/*([[:^:]]+):/_\$1/" when calling the "map" method of the resource resolver. Likewise the "resolve" methods will unmangle such namespace prefixes according to the substitution pattern "/*([[:^:]]+)/_/\$1:". This feature is provided since there may be systems out there in the wild which cannot cope with URLs containing colons, even though they are perfectly valid characters in the path part of URI references with a scheme. The default value of this property if no configuration is provided is "true". (resource.resolver.manglenamespaces)

Allow Direct Mapping

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Whether to add a direct URL mapping to the front of the mapping list. (resource.resolver.allowDirect)

Virtual URLs

/:/

+

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List of virtual URLs and there mappings to real URLs. Format is <externalURL>:<internalURL>. Mappings are applied on the complete request URL only. (resource.resolver.virtual)

URL Mappings

/:/

+

-

/content:/:

+

-

/system/docroot:/:

+

-

List of mappings to apply to URLs. Incoming mappings are applied to request URLs to map to Content paths, outgoing mappings are applied to map Content paths to URLs used on subsequent requests. Form ist <externalURLPrefix><op><internalURLPrefix> where <op> is ">" for incoming mappings, "<" for outgoing mappings and ":" for mappings applied in both directions. Mappings are applied in configuration order by comparing and replacing URL prefixes. Note: The use of "-" as the <op> value indicating a mapping in both directions is deprecated. (resource.resolver.mapping)

Mapping Location

/etc/map

The path to the root of the configuration to setup and configure the ResourceResolver mapping. The default value is /etc/map. (resource.resolver.map.location)

Enable Multi Workspaces

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If this is enabled, multiple workspaces are supported This includes registering observation listeners for all workspaces and allows to resolve resources from other workspaces than the default one. (resource.resolver.multiworkspace)

Configuration Information

Persistent Identity (PID)

org.apache.sling.jcr.resource.internal.JcrResourceResolverFactoryImpl

Configuration Binding

Unbound or new configuration

Save

Reset

Abort

By default, Sling's JCR Resource Resolver will resolve resources from the default workspace (typically named "default"). An alternate workspace can be specified by including a workspace as a colon-delimited prefix to the path. For example:

```
Resource res = resResolver.getResource( "ws2:/path/to/node" );
```

Request-based Resolving

When resolving a resource based on an `HttpServletRequest`, the workspace name can also be provided through a request attribute named `org.apache.sling.api.resource.ResourceResolver/use.workspace`. Note that Sling does not provide any mechanism to set this attribute. Since resource resolution occurs very early in the Sling request pipeline (see <http://sling.apache.org/site/filters.html>), you must set this attribute either outside of Sling (i.e. in a Servlet Filter) or in the Authentication phase.

If this attribute is set at the time of resolution (i.e. is passed to `ResourceResolver.resolve(HttpServletRequest)` or `ResourceResolver.resolve(HttpServletRequest, String)`), then future invocations of `ResourceResolver.adaptTo(Session.class)` will return a `javax.jcr.Session` logged into the requested workspace.

This request-bound workspace is also used for `findResources()` and `queryResources()`.

Impact on Resource instances

Regardless of how a Resource is resolved in a non-default workspace, the path of the resolved resource will contain the workspace name as a path prefix. This means that `Resource.getPath()` will not equal `Resource.adaptTo(Node.class).getPath()`.

JCR Resource Events

The `jcr.resource` bundle includes support for converting JCR Observation events into OSGi EventAdmin events. Once multi-workspace support is enabled, resource events will be sent for JCR events across all workspaces, with the resource path containing the workspace prefix.

Script Resolution

By default, scripts are always resolved from the default workspace, regardless of how the Resource Resolver is configured. The default workspace for scripts can be configured separately from the default workspace for resources by setting the `servletresolver.defaultScriptWorkspace` configuration property of PID `org.apache.sling.servlets.resolver.SlingServletResolver` to `true`.

Apache Sling Servlet/Script Resolver and Error Handler

The Sling Servlet and Script Resolver has multiple tasks: One it is used as the ServletResolver to select the Servlet or Script to call to handle the request. Second it acts as the SlingScriptResolver and finally it manages error handling by implementing the ErrorHandler interface using the same algorithm to select error handling servlets and scripts as is used to resolve request processing servlets and scripts.

Servlet Registration

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The default root path assumed when registering a Servlet whose Servlet registration properties define a relative path. The default value is "/apps". This path should be part of the search path configured in the Resource Resolver Factory otherwise a thus registered servlet may not be found. (servletresolver.servletRoot)

Script User

This optional property can specify the repository user who is used to read the scripts. If none is specified the admin user is used by default. (servletresolver.scriptUser)

Cache Size

200

This property configures the size of the cache used for script resolution. A value lower than 5 disables the cache. (servletresolver.cacheSize)

Script Workspace

The workspace name which should be used as a default for script resolution. (servletresolver.defaultScriptWorkspace)

Use Request Workspace

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If enabled, the primary workspace name for script resolution will be the same as that used to resolve the request's resource. (servletresolver.useRequestWorkspace)

Use Default Workspace

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If enabled and if use request workspace is enabled and no scripts are found using the request workspace, also use the default workspace. If use request workspace is disabled, this value is ignored. (servletresolver.useDefaultWorkspace)

Execution Paths

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The paths to search for executable scripts. If no path is configured this is treated like the default (/ = root) which allows to execute all scripts. By configuring some paths the execution of scripts can be limited. If a configured value ends with a slash, the whole sub tree is allowed. Without a slash an exact matching script is allowed. (servletresolver.paths)

Configuration Information

Persistent Identity (PID)

org.apache.sling.servlets.resolver.SlingServletResolver

Configuration Binding

Unbound or new configuration

Save

Reset

Abort

Script resolution can also be configured to look first (or only) in the same workspace as the resource.

If `servletresolver.useRequestWorkspace` is `true` and `servletresolver.useDefaultWorkspace` is `false`, **only** the workspace containing the resource will be used for resolution.

If `servletresolver.useRequestWorkspace` is `true` and `servletresolver.useDefaultWorkspace` is also `true`, the resource's workspace will be consulted first and, if nothing is found, the default workspace will be checked.