IceGrid XML Features

IceGrid provides some convenient features to simplify the task of defining descriptors in XML.

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Adding Flexibility with Targets

An IceGrid XML file may contain optional definitions that are deployed only when specifically requested. These definitions are called targets and must be defined within a `target` element. The elements that may legally appear within a `target` element are determined by its enclosing element. For example, a `node` element is legal inside a `target` element of an `application` element, but not inside a `target` element of a `server` element. Each `target` element must define a value for the `name` attribute, but names are not required to be unique. Rather, targets should be considered as optional components or features of an application that are deployed in certain circumstances.

The example below defines targets named `debug` that, if requested during deployment, configure their servers with an additional property:

XML

```
<icegrid>
    <application name="MyApp">
        <node name="Node">
            <server id="Server1" ...>
                <target name="debug">
                    <property name="Ice.Trace.Network" value="2"/>
                </target>
                ...
            </server>
            <server id="Server2" ...>
                <target name="debug">
                    <property name="Ice.Trace.Network" value="2"/>
                </target>
                ...
            </server>
        </node>
    </application>
</icegrid>
```

Target names specified in an `icegridadmin` command can be unqualified names like `debug`, in which case every target with that name is deployed, regardless of the target's nesting level. If you want to deploy targets more selectively, you can specify a fully-qualified name instead. A fully-qualified target name consists of its unqualified name prefaced by the names or identifiers of each enclosing element. For instance, a fully-qualified target name from the example above is `MyApp.Node.Server1.debug`.

Including Descriptor Files

You can include the contents of another XML file into the current file using the `include` element, which is replaced with the contents of the included file. The elements in the included file must be enclosed in an `icegrid` element, as shown in the following example:

XML

```
<!-- File: A.xml -->
<icegrid>
    <server-template id="ServerTemplate">
        <parameter name="id"/>
        ...
    </server-template>
</icegrid>

<!-- File: B.xml -->
<icegrid>
    <application name="MyApp">
        <include file="A.xml"/>
        <node name="Node">
            <server-instance template="ServerTemplate" .../>
        </node>
    </application>
</icegrid>
```

In `B.xml`, the `include` element identifies the name of the file to include using the `file` attribute. The top-level `icegrid` element is discarded from `A.xml` and its contents are inserted at the position of the `include` element in `B.xml`.

Note that the file name of an included file is relative to the application descriptor, not relative to the working directory.

You can include specific targets from a file by specifying their names in the optional `targets` attribute. If multiple targets are included, their names must be separated by whitespace. The example below illustrates the use of a target:

XML

```
<!-- File: A.xml -->
<icegrid>
    <server-template id="ServerTemplate">
        <parameter name="id"/>
        ...
    </server-template>
    <target name="targetA">
        <server-template id="AnotherTemplate">
            ...
        </server-template>
    </target>
</icegrid>

<!-- File: B.xml -->
<icegrid>
    <application name="MyApp">
        <include file="A.xml" targets="targetA"/>
        <node name="Node">
            <server-instance template="ServerTemplate" .../>
            <server-instance template="AnotherTemplate" .../>
        </node>
    </application>
</icegrid>
```

See Also

- Using IceGrid Deployment
- IceGrid Administrative Utilities