IceGrid Properties

On this page:

IceGrid.InstanceName

Synopsis

`IceGrid.InstanceName=`*name*

Description

Specifies an alternate identity category for the well-known IceGrid objects. If defined, the identities of the IceGrid objects become:

```
name/AdminSessionManager
name/AdminSessionManager-replica
name/AdminSSLSessionManager
name/AdminSSLSessionManager-replica
name/NullPermissionsVerifier
name/NullSSLPermissionsVerifier
name/Locator
name/Query
name/Registry
name/Registry-replica
name/RegistryUserAccountMapper
name/RegistryUserAccountMapper-replica
name/SessionManager
name/SSLSessionManager
```

If not specified, the default identity category is `IceGrid`.

IceGrid.Node.AllowEndpointsOverride

Synopsis

`IceGrid.Node.AllowEndpointsOverride=`*num*

If *num* is set to a non-zero value, an IceGrid node permits servers to override previously set endpoints even if the server is active. Setting this property to a non-zero value is necessary if the servers managed by the node use the object adapter operation `refreshPublishedEndpoints`. The default value of *num* is zero.

IceGrid.Node.AllowRunningServersAsRoot

Synopsis

`IceGrid.Node.AllowRunningServersAsRoot=`*num*

If *num* is set to a non-zero value, an IceGrid node will permit servers started by the node to run with super-user privileges. Note that you should not set this property unless the node uses a secure endpoint; otherwise, clients can start arbitrary processes with super-user privileges on the node's machine.

The default value of *num* is zero.

IceGrid.Node.*AdapterProperty*

Synopsis

`IceGrid.Node.`*AdapterProperty*`=value`

Description

An IceGrid node uses the adapter name `IceGrid.Node` for the object adapter that the registry contacts to communicate with the node. Therefore, adapter properties can be used to configure this adapter.

IceGrid.Node.CollocateRegistry

Synopsis

`IceGrid.Node.CollocateRegistry=`*num*

Description

If *num* is set to a value larger than zero, the node collocates the IceGrid registry.

The collocated registry is configured with the same properties as the standalone IceGrid registry.

IceGrid.Node.Data

Synopsis

```
IceGrid.Node.Data=path
```

Description

Defines the path of the IceGrid node data directory. The node creates `distrib`, `servers`, and `tmp` subdirectories in this directory if they do not already exist. The `distrib` directory contains distribution files downloaded by the node from an IcePatch2 server. The `servers` directory contains configuration data for each deployed server. The `tmp` directory holds temporary files.

IceGrid.Node.DisableOnFailure

Synopsis

```
IceGrid.Node.DisableOnFailure=num
```

Description

The node considers a server to have terminated improperly if it has a non-zero exit code or if it exits due to one of the signals `SIGABRT`, `SIGBUS`, `SIGILL`, `SIGFPE`, or `SIGSEGV`. The node marks such a server as disabled if num is a non-zero value; a disabled server cannot be activated on demand. For values of num greater than zero, the server is disabled for num seconds. If num is a negative value, the server is disabled indefinitely, or until it is explicitly enabled or started via an administrative action. The default value is zero, meaning the node does not disable servers in this situation.

IceGrid.Node.Name

Synopsis

```
IceGrid.Node.Name=name
```

Description

Defines the $name$ of the IceGrid node. All nodes using the same registry must have unique names; a node refuses to start if there is a node with the same name running already. This property must be defined for each node.

IceGrid.Node.Output

Synopsis

```
IceGrid.Node.Output=path
```

Description

Defines the path of the IceGrid node output directory. If set, the node redirects the `stdout` and `stderr` output of the started servers to files named `server.out` and `server.err` in this directory. Otherwise, the started servers share the `stdout` and `stderr` of the node's process.

IceGrid.Node.PrintServersReady

Synopsis

```
IceGrid.Node.PrintServersReady=token
```

Description

The IceGrid node prints "$token$ ready" on standard output after all the servers managed by the node are ready. This is useful for scripts that wish to wait until all servers have been started and are ready for use.

IceGrid.Node.ProcessorSocketCount

Synopsis

```
IceGrid.Node.ProcessorSocketCount=num
```

Description

This property sets the number of processor sockets. This value is reported by the `icegridadmin` `node sockets` command. On Windows Vista (or later), Windows Server 2008 (or later), and Linux systems, the number of processor sockets is set automatically by the Ice run time. On other systems, the run time cannot obtain the socket count from the operating system; you can use this property to set the number of processor sockets manually on such systems.

IceGrid.Node.PropertiesOverride

Synopsis

```
IceGrid.Node.PropertiesOverride=overrides
```

Description

Defines a list of properties that override the properties defined in server deployment descriptors. For example, in some cases it is desirable to set the property `Ice.Default.Host` for servers, but not in server deployment descriptors. The property definitions must be separated by white space.

IceGrid.Node.RedirectErrToOut

Synopsis

```
IceGrid.Node.RedirectErrToOut=num
```

Description

If *num* is set to a value larger than zero, the `stderr` of each started server is redirected to the server's `stdout`.

IceGrid.Node.Trace.Activator

Synopsis

```
IceGrid.Node.Trace.Activator=num
```

Description

The activator trace level:

0	No activator trace (default).
1	Trace process activation, termination.
2	Like 1, but more verbose, including process signaling and more diagnostic messages on process activation.
3	Like 2, but more verbose, including more diagnostic messages on process activation (e.g., path, working directory, and arguments of the activated process).

IceGrid.Node.Trace.Adapter

Synopsis

```
IceGrid.Node.Trace.Adapter=num
```

Description

The object adapter trace level:

0	No object adapter trace (default).
1	Trace object adapter addition, removal.
2	Like 1, but more verbose, including object adapter activation and deactivation and more diagnostic messages.
3	Like 2, but more verbose, including object adapter transitional state change (for example, "waiting for activation").

IceGrid.Node.Trace.Patch

Synopsis

`IceGrid.Node.Trace.Patch=num`

Description

The patch trace level:

0	No patching trace (default).
1	Show summary of patch progress.
2	Like 1, but more verbose, including download statistics.
3	Like 2, but more verbose, including checksum information.

IceGrid.Node.Trace.Replica

Synopsis

`IceGrid.Node.Trace.Replica=num`

Description

The replica trace level:

0	No replica trace (default).
1	Trace session lifecycle between nodes and replicas.
2	Like 1, but more verbose, including session establishment attempts and failures.
3	Like 2, but more verbose, including keep alive messages sent to the replica.

IceGrid.Node.Trace.Server

Synopsis

`IceGrid.Node.Trace.Server=num`

Description

The server trace level:

0	No server trace (default).
1	Trace server addition, removal.
2	Like 1, but more verbose, including server activation and deactivation, property updates, and more diagnostic messages.
3	Like 2, but more verbose, including server transitional state change (activating and deactivating).

IceGrid.Node.UserAccountMapper

Synopsis

```
IceGrid.Node.UserAccountMapper=proxy
```

Description

Specifies the proxy of an object that implements the `IceGrid::UserAccountMapper` interface for customizing the user accounts under which servers are activated. The IceGrid node invokes this proxy to map session identifiers (the user ID for sessions created with a user ID and password, or the distinguished name for sessions created from a secure connection) to user accounts.

As a proxy property, you can configure additional aspects of the proxy using properties.

IceGrid.Node.UserAccounts

Synopsis

```
IceGrid.Node.UserAccounts=file
```

Description

Specifies the file name of an IceGrid node user account map file. Each line of the file must contain an identifier and a user account, separated by white space. The identifier will be matched against the client session identifier (the user ID for sessions created with a user ID and password, or the distinguished name for sessions created from a secure connection). This user account map file is used by the node to map session identifiers to user accounts. This property is ignored if `IceGrid.Node.UserAccountMapper` is defined.

IceGrid.Node.WaitTime

Synopsis

```
IceGrid.Node.WaitTime=num
```

Description

Defines the interval in seconds that IceGrid waits for server activation and deactivation.

If a server is automatically activated and does not register its object adapter endpoints within this time interval, the node assumes there is a problem with the server and returns an empty set of endpoints to the client.

If a server is being gracefully deactivated and IceGrid does not detect the server deactivation during this time interval, IceGrid kills the server.

The default value is 60 seconds.

IceGrid.Registry.AdminCryptPasswords

Synopsis

```
IceGrid.Registry.AdminCryptPasswords=file
```

Description

Specifies the file name of an IceGrid registry access control list for administrative clients. Each line of the file must contain a user name and a password, separated by white space. The password must be a 13-character crypt-encoded string. If this property is not defined, the default value is `ad min-passwords`. This property is ignored if `IceGrid.Registry.AdminPermissionsVerifier` is defined.

IceGrid.Registry.AdminPermissionsVerifier

Synopsis

```
IceGrid.Registry.AdminPermissionsVerifier=proxy
```

Description

Specifies the proxy of an object that implements the `Glacier2::PermissionsVerifier` interface for controlling access to IceGrid administrative sessions. The IceGrid registry invokes this proxy to validate each new administrative session created by a client with the `IceGrid::Registry` interface.

As a proxy property, you can configure additional aspects of the proxy using properties.

IceGrid.Registry.AdminSessionFilters

Synopsis

`IceGrid.Registry.AdminSessionFilters=`*num*

Description

This property controls whether IceGrid establishes filters for sessions created with the IceGrid session manager. If *num* is set to a value larger than zero, IceGrid establishes these filters, so Glacier2 limits access to the `IceGrid::AdminSession` object and the `IceGrid::Admin` object that is returned by the `getAdmin` operation. If *num* is set to zero, IceGrid does not establish filters, so access to these objects is controlled solely by Glacier2's configuration.

The default value is 1.

IceGrid.Registry.AdminSessionManager.*AdapterProperty*

Synopsis

`IceGrid.Registry.AdminSessionManager.`*AdapterProperty*`=`*value*

Description

The IceGrid registry uses the adapter name `IceGrid.Registry.AdminSessionManager` for the object adapter that processes incoming requests from IceGrid administrative sessions. Therefore, adapter properties can be used to configure this adapter. (Note any setting of `IceGrid.Registry.AdminSessionManager.AdapterId` is ignored because the registry always provides a direct adapter.)

For security reasons, defining endpoints for this object adapter is optional. If you do define endpoints, they should only be accessible to Glacier2 routers used to create IceGrid administrative sessions.

IceGrid.Registry.AdminSSLPermissionsVerifier

Synopsis

`IceGrid.Registry.AdminSSLPermissionsVerifier=`*proxy*

Description

Specifies the proxy of an object that implements the `Glacier2::SSLPermissionsVerifier` interface for controlling access to IceGrid administrative sessions. The IceGrid registry invokes this proxy to validate each new administrative session created by a client from a secure connection with the `IceGrid::Registry` interface.

As a proxy property, you can configure additional aspects of the proxy using the properties.

IceGrid.Registry.Client.*AdapterProperty*

Synopsis

`IceGrid.Registry.Client.`*AdapterProperty*`=`*value*

Description

IceGrid uses the adapter name `IceGrid.Registry.Client` for the object adapter that processes incoming requests from clients. Therefore, adapter properties can be used to configure this adapter. (Note any setting of `IceGrid.Registry.Client.AdapterId` is ignored because the registry always provides a direct adapter.)

Note that `IceGrid.Registry.Client.Endpoints` controls the client endpoint for the registry. The port numbers 4061 (for TCP) and 4062 (for SSL) are reserved for the registry by the Internet Assigned Numbers Authority (IANA).

IceGrid.Registry.CryptPasswords

Synopsis

`IceGrid.Registry.CryptPasswords=file`

Description

Specifies the file name of an IceGrid registry access control list. Each line of the file must contain a user name and a password, separated by white space. The password must be a 13-character crypt-encoded string. If this property is not defined, the default value is `passwords`. This property is ignored if `IceGrid.Registry.PermissionsVerifier` is defined.

IceGrid.Registry.Data

Synopsis

`IceGrid.Registry.Data=path`

Description

Defines the path of the IceGrid registry data directory. The directory specified in `path` must already exist. This property must be defined only when the registry uses Freeze or SQLite for its database storage.

IceGrid.Registry.DefaultTemplates

Synopsis

`IceGrid.Registry.DefaultTemplates=path`

Description

Defines the path name of an XML file containing default template descriptors. A sample file named `config/templates.xml` that contains convenient server templates for Ice services is provided in the Ice distribution.

IceGrid.Registry.DynamicRegistration

Synopsis

`IceGrid.Registry.DynamicRegistration=num`

Description

If `num` is set to a value larger than zero, the locator registry does not require Ice servers to preregister object adapters and replica groups, but rather creates them automatically if they do not exist. If this property is not defined, or `num` is set to zero, an attempt to register an unknown object adapter or replica group causes adapter activation to fail with `Ice.NotRegisteredException`. An object adapter registers itself when the `adapter.AdapterId` property is defined. The `adapter.ReplicaGroupId` property identifies the replica group.

IceGrid.Registry.Internal.*AdapterProperty*

Synopsis

`IceGrid.Registry.Internal.AdapterProperty=value`

Description

The IceGrid registry uses the adapter name `IceGrid.Registry.Internal` for the object adapter that processes incoming requests from nodes and slave replicas. Therefore, adapter properties can be used to configure this adapter. (Note any setting of `IceGrid.Registry.Internal.AdapterId` is ignored because the registry always provides a direct adapter.)

IceGrid.Registry.NodeSessionTimeout

Synopsis

`IceGrid.Registry.NodeSessionTimeout=`*num*

Description

Each IceGrid node establishes a session with the registry that must be refreshed periodically. If a node does not refresh its session within *num* seconds, the node's session is destroyed and the servers deployed on that node become unavailable to new clients. If not specified, the default value is 30 seconds.

IceGrid.Registry.PermissionsVerifier

Synopsis

`IceGrid.Registry.PermissionsVerifier=`*proxy*

Description

Specifies the proxy of an object that implements the `Glacier2::PermissionsVerifier` interface for controlling access to IceGrid sessions. The IceGrid registry invokes this proxy to validate each new client session created by a client with the `IceGrid::Registry` interface.

As a proxy property, you can configure additional aspects of the proxy using properties.

IceGrid.Registry.ReplicaName

Synopsis

`IceGrid.Registry.ReplicaName=`*name*

Description

Specifies the name of a registry replica. If not defined, the default value is `Master`, which is the name reserved for the master replica. Each registry replica must have a unique name.

IceGrid.Registry.ReplicaSessionTimeout

Synopsis

`IceGrid.Registry.ReplicaSessionTimeout=`*num*

Description

Each IceGrid registry replica establishes a session with the master registry that must be refreshed periodically. If a replica does not refresh its session within *num* seconds, the replica's session is destroyed and the replica no longer receives replication information from the master registry. If not specified, the default value is 30 seconds.

IceGrid.Registry.Server.*AdapterProperty*

Synopsis

`IceGrid.Registry.Server.`*AdapterProperty*`=`*value*

Description

The IceGrid registry uses the adapter name `IceGrid.Registry.Server` for the object adapter that processes incoming requests from servers. Therefore, adapter properties can be used to configure this adapter. (Note any setting of `IceGrid.Registry.Server.AdapterId` is ignored because the registry always provides a direct adapter.)

IceGrid.Registry.SessionFilters

Synopsis

`IceGrid.Registry.SessionFilters=`*num*

Description

This property controls whether IceGrid establishes filters for sessions created with the IceGrid session manager. If *num* is set to a value larger than zero, IceGrid establishes these filters, so Glacier2 limits access to the `IceGrid::Query` and `IceGrid::Session` objects, and to objects and adapters allocated by the session. If *num* is set to zero, IceGrid does not establish filters, so access to objects is controlled solely by Glacier2's configuration.

The default value is 0.

IceGrid.Registry.SessionManager.*AdapterProperty*

Synopsis

`IceGrid.Registry.SessionManager.`*AdapterProperty*`=`*value*

Description

The IceGrid registry uses the adapter name `IceGrid.Registry.SessionManager` for the object adapter that processes incoming requests from client sessions. Therefore, adapter properties can be used to configure this adapter. (Note any setting of `IceGrid.Registry.SessionManager.AdapterId` is ignored because the registry always provides a direct adapter.)

For security reasons, defining endpoints for this object adapter is optional. If you do define endpoints, they should only be accessible to Glacier2 routers used to create IceGrid client sessions.

IceGrid.Registry.SessionTimeout

Synopsis

`IceGrid.Registry.SessionTimeout=`*num*

Description

IceGrid clients or administrative clients might establish a session with the registry. This session must be refreshed periodically. If the client does not refresh its session within *num* seconds, the session is destroyed. If not specified, the default value is 30 seconds.

IceGrid.Registry.SSLPermissionsVerifier

Synopsis

`IceGrid.Registry.SSLPermissionsVerifier=`*proxy*

Description

Specifies the proxy of an object that implements the `Glacier2::SSLPermissionsVerifier` interface for controlling access to IceGrid sessions. The IceGrid registry invokes this proxy to validate each new client session created by a client from a secure connection with the `IceGrid::Registry` interface.

As a proxy property, you can configure additional aspects of the proxy using properties.

IceGrid.Registry.Trace.Adapter

Synopsis

`IceGrid.Registry.Trace.Adapter=`*num*

Description

The object adapter trace level:

0	No object adapter trace (default).
1	Trace object adapter registration, removal, and replication.

IceGrid.Registry.Trace.Application

Synopsis

`IceGrid.Registry.Trace.Application=`*num*

Description

The application trace level:

0	No application trace (default).
1	Trace application addition, update, and removal.

IceGrid.Registry.Trace.Locator

Synopsis

`IceGrid.Registry.Trace.Locator=`*num*

Description

The locator and locator registry trace level:

0	No locator trace (default).
1	Trace failures to locate an adapter or object, and failures to register adapter endpoints.
2	Like 1, but more verbose, including registration of adapter endpoints.

IceGrid.Registry.Trace.Node

Synopsis

`IceGrid.Registry.Trace.Node=`*num*

Description

The node trace level:

0	No node trace (default).
1	Trace node registration, removal.
2	Like 1, but more verbose, including load statistics.

IceGrid.Registry.Trace.Object

Synopsis

`IceGrid.Registry.Trace.Object=`*num*

Description

The object trace level:

0	No object trace (default).
1	Trace object registration, removal.

IceGrid.Registry.Trace.Patch

Synopsis

`IceGrid.Registry.Trace.Patch=`*num*

Description

The patch trace level:

0	No patching trace (default).
1	Show summary of patch progress.

IceGrid.Registry.Trace.Replica

Synopsis

`IceGrid.Registry.Trace.Replica=`*num*

Description

The server trace level:

0	No server trace (default).
1	Trace session lifecycle between master replica and slaves.

IceGrid.Registry.Trace.Server

Synopsis

`IceGrid.Registry.Trace.Server=`*num*

Description

The server trace level:

0	No server trace (default).
1	Trace server registration, removal.

IceGrid.Registry.Trace.Session

Synopsis

```
IceGrid.Registry.Trace.Session=num
```

Description

The session trace level:

0	No client or admin session trace (default).
1	Trace client or admin session registration, removal.
2	Like 1, but more verbose, includes keep alive messages.

IceGrid.Registry.UserAccounts

Synopsis

```
IceGrid.Registry.UserAccounts=file
```

Description

Specifies the file name of an IceGrid registry user account map file. Each line of the file must contain an identifier and a user account, separated by white space. The identifier will be matched against the client session identifier (the user ID for sessions created with a user ID and password, or the distinguished name for sessions created from a secure connection). This user account map file is used by IceGrid nodes to map session identifiers to user accounts if the nodes' `IceGrid.Node.UserAccountMapper` property is set to the proxy `IceGrid/RegistryUserAccountMapper`.