

IceStorm Properties

`IceStorm` is an IceBox service that you can install using any name you like. For example:

```
IceBox.Service.DataFeed=IceStormService,...
```

The service name you choose is also used as the prefix for IceStorm's configuration properties. In the example above, the IceStorm configuration properties would use the `DataFeed` prefix, as in `DataFeed.Discard.Interval=10`.

In the property descriptions below, replace `service` with the service name from your IceStorm configuration.

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Ice.Plugin.DB

Synopsis

```
Ice.Plugin.DB=IceStormSqlDB:createSqlDB
```

Description

The database storage mechanism used by IceStorm is abstracted in such a way that an alternate mechanism can be selected using the standard Ice plug-in facility. If this property is not defined, IceStorm uses [Freeze](#) as its default storage mechanism. Alternatively, you can define the `Ice.Plugin.DB` property as shown above to use a SQL database instead, in which case additional properties may also be necessary (see the `service.SQL` properties below).

Ice.Plugin.SQLThreadHook

Synopsis

```
Ice.Plugin.SQLThreadHook=IceStormService:createThreadHook
```

Description

This property is required when configuring IceStorm to use a SQL database for its persistent data. This plug-in ensures that SQL resources are cleaned up properly.

service.Discard.Interval

Synopsis

```
service.Discard.Interval=num
```

Description

An IceStorm server detects when a subscriber to which it forwards events becomes non-functional and, at that point, stops delivery attempts to that subscriber for *num* seconds before trying to forward events to that subscriber again. The default value of this property is 60 seconds.

service.Election.ElectionTimeout

Synopsis

```
service.Election.ElectionTimeout=num
```

Description

This property is used by a [replicated IceStorm deployment](#). It specifies the interval in seconds at which a coordinator attempts to form larger groups of replicas. If not defined, the default value is 10.

service.Election.MasterTimeout

Synopsis

```
service.Election.MasterTimeout=num
```

Description

This property is used by a [replicated IceStorm deployment](#). It specifies the interval in seconds at which a slave checks the status of the coordinator. If not defined, the default value is 10.

service.Election.ResponseTimeout

Synopsis

```
service.Election.ResponseTimeout=num
```

Description

This property is used by a [replicated IceStorm deployment](#). It specifies the interval in seconds that a replica waits for replies to an invitation to form a larger group. Lower priority replicas wait for intervals inversely proportional to the maximum priority:

```
ResponseTimeout + ResponseTimeout * (max - pri)
```

If not defined, the default value is 10.

service.Flush.Timeout

Synopsis

service.Flush.Timeout=num

Description

Defines the interval in milliseconds with which events are sent to [batch subscribers](#). The default is 1000ms.

service.InstanceName

Synopsis

service.InstanceName=name

Description

Specifies an alternate identity category for all [objects](#) hosted by the IceStorm object adapters. If not specified, the default identity category is `IceStorm`.

service.Node.AdapterProperty

Synopsis

service.Node.AdapterProperty=value

Description

In a [replicated deployment](#), IceStorm uses the adapter name `service.Node` for the replica node's object adapter. Therefore, [adapter properties](#) can be used to configure this adapter.

service.NodeId

Synopsis

service.NodeId=value

Description

Specifies the node ID of an IceStorm [replica](#), where *value* is a non-negative integer. The node ID is also used as the replica's priority, such that a larger value assigns higher priority to the replica. The replica with the highest priority becomes the coordinator of its group. This property must be defined for each replica.

service.Nodes.id

Synopsis

service.Nodes.id=value

Description

This property is used for a manual deployment of [highly available IceStorm](#), in which each of the replicas must be explicitly configured with the proxies of all other replicas. The value is a proxy for the replica with the given node *id*. A replica's object identity has the form *instance-name/node id*, such as `DemoIceStorm/node2`.

service.Publish.AdapterProperty

Synopsis

```
service.Publish.AdapterProperty=value
```

Description

IceStorm uses the adapter name `service.Publish` for the object adapter that processes incoming requests from publishers. Therefore, [adapter properties](#) can be used to configure this adapter.

`service.ReplicatedPublishEndpoints`

Synopsis

```
service.ReplicatedPublishEndpoints=value
```

Description

This property is used for a manual deployment of [highly available IceStorm](#). It specifies the set of endpoints returned for the publisher proxy returned from `IceStorm::Topic::getPublisher`.

If this property is not defined, the publisher proxy returned by a topic instance points directly at that replica and, should the replica become unavailable, publishers will not transparently failover to other replicas.

`service.ReplicatedTopicManagerEndpoints`

Synopsis

```
service.ReplicatedTopicManagerEndpoints=value
```

Description

This property is used for a manual deployment of [highly available IceStorm](#). It specifies the set of endpoints used in proxies that refer to a replicated topic. This set of endpoints should contain the endpoints of each IceStorm replica.

For example, the operation `IceStorm::TopicManager::create` returns a proxy that contains this set of endpoints.

`service.Send.Timeout`

Synopsis

```
service.Send.Timeout=num
```

Description

IceStorm applies a send timeout when it forwards events to subscribers. The value of this property determines how long IceStorm will wait for forwarding of an event to complete. If an event cannot be forwarded within `num` milliseconds, the subscriber is considered dead and its subscription is cancelled. The default value is 60 seconds. Setting this property to a negative value disables timeouts.

`service.SQL.DatabaseType`

Synopsis

```
service.SQL.DatabaseType=type
```

Description

This property determines the type of the database for `QSqlDatabase::addDatabase`. Permissible values of `type` are `QSQLITE`, `QMYSQL`, `QPSQL`, and `QODBC`.

service.SQL.DatabaseName

Synopsis

service.SQL.Database=*name*

Description

This property determines the name of the database for `QSqlDatabase::setDatabaseName`. For SQLite, *name* is the file name for the database. For MySQL and PostgreSQL, *name* is the database name. For SQL Server, *name* is the DSN name.

For MySQL, the specified database must already exist.

service.SQL.HostName

Synopsis

service.SQL.HostName=*name*

Description

This property determines the host name for `QSqlDatabase::setHostName`. For PostgreSQL and MySQL, *name* is the database host name. For SQL Server, *name* is the host name and server name separated by a backslash, such as `localhost\SQLExpress`. For SQLite, this property has no effect and need not be set.

service.SQL.Port

Synopsis

service.SQL.Port=*num*

Description

This property determines the port number for `QSqlDatabase::setPort`.

service.SQL.UserName

Synopsis

service.SQL.UserName=*name*

Description

This property determines the user name for `QSqlDatabase::setUserName`. For SQLite, this property has no effect and need not be set.

service.SQL.Password

Synopsis

service.SQL.Password=*password*

Description

This property determines the password for `QSqlDatabase::setPassword`. For SQLite, this property has no effect and need not be set.

service.TopicManager.AdapterProperty

Synopsis

service.TopicManager.AdapterProperty=value

Description

IceStorm uses the adapter name *service.TopicManager* for the topic manager's object adapter. Therefore, [adapter properties](#) can be used to configure this adapter.

service.Trace.Election

Synopsis

service.Trace.Election=num

Description

Trace activity related to elections:

0	No election trace (default).
1	Trace election activity.

service.Trace.Replication

Synopsis

service.Trace.Replication=num

Description

Trace activity related to replication:

0	No replication trace (default).
1	Trace replication activity.

service.Trace.Subscriber

Synopsis

service.Trace.Subscriber=num

Description

The subscriber trace level:

0	No subscriber trace (default).
1	Trace topic diagnostic information on subscription and unsubscription.
2	Like 1, but more verbose, including state transitions for a subscriber (such as going offline after a temporary network failure, and going online again after a successful retry, etc.).

service.Trace.Topic

Synopsis

`service.Trace.Topic=num`

Description

The topic trace level:

0	No topic trace (default).
1	Trace topic links, subscription, and unsubscription.
2	Like 1, but more verbose, including QoS information, and other diagnostic information.

`service.Trace.TopicManager`

Synopsis

`service.Trace.TopicManager=num`

Description

The topic manager trace level:

0	No topic manager trace (default).
1	Trace topic creation.

`service.Transient`

Synopsis

`service.Transient=num`

Description

If `num` is a value greater than zero, IceStorm runs in a fully transient mode in which no database is required. Replication is not supported in this mode. If not defined, the default value is zero.

`IceStormAdmin.TopicManager.Default`

Synopsis

`IceStormAdmin.TopicManager.Default=proxy`

Description

Defines the proxy for the default IceStorm topic manager. This property is used by `icegridadmin`. IceStorm applications may choose to use this property for their configuration as well.

`IceStormAdmin.TopicManager.name`

Synopsis

`IceStormAdmin.TopicManager.name=proxy`

Description

Defines a proxy for an IceStorm topic manager for `icegridadmin`. Properties with this pattern are used by `icestormadmin` if multiple topic managers are in use, for example:

```
IceStormAdmin.TopicManager.A=A/TopicManager:tcp -h x -p 9995
IceStormAdmin.TopicManager.B=Foo/TopicManager:tcp -h x -p 9995
IceStormAdmin.TopicManager.C=Bar/TopicManager:tcp -h x -p 9987
```

This sets the proxies for three topic managers. Note that `name` need not match the instance name of the corresponding topic manager — `name` simply serves as a tag. With these property settings, the `icestormadmin` commands that accept a topic can now specify a topic manager other than the default topic manager that is configured with `#IceStormAdmin.TopicManager.Default`. For example:

```
current Foo
create myTopic
create Bar/myOtherTopic
```

This sets the current topic manager to the one with instance name `Foo`; the first `create` command then creates the topic within that topic manager, whereas the second `create` command uses the topic manager with instance name `Bar`.