

Stats Facility

The Ice run time uses the `Ice::Stats` interface to report the number of bytes sent and received over the wire on every operation invocation:

Slice

```
module Ice {
    local interface Stats {
        void bytesSent(string protocol, int num);
        void bytesReceived(string protocol, int num);
    };

    local interface Communicator {
        Stats getStats();
        // ...
    };
};
```

The Ice run time calls `bytesReceived` as it reads data from the network and `bytesSent` as it writes data to the network. A very simple implementation of the `Stats` interface could look as follows:

C++

```
class MyStats : public virtual Ice::Stats {
public:
    virtual void bytesSent(const string& prot, Ice::Int num)
    {
        cerr << prot << ": sent " << num << " bytes" << endl;
    }

    virtual void bytesReceived(const string& prot, Ice::Int)
    {
        cerr << prot << ": received " << num << " bytes" << endl;
    }
};
```

To register your implementation, you must pass it in an `InitializationData` parameter when you [initialize a communicator](#):

C++

```
Ice::InitializationData id;
id.stats = new MyStats;
Ice::CommunicatorPtr ic = Ice::initialize(id);
```

You can install a `Stats` object on either the client or the server side (or both). Here is some example output produced by installing a `MyStats` object in a simple server:

```
tcp: received 14 bytes
tcp: received 32 bytes
tcp: sent 26 bytes
tcp: received 14 bytes
tcp: received 33 bytes
tcp: sent 25 bytes
...
```

In practice, your `Stats` implementation will probably be a bit more sophisticated: for example, the object can accumulate statistics in member variables and make the accumulated statistics available via member functions, instead of simply printing everything to the standard error output.

[See Also](#)

- [Communicator Initialization](#)