Connector/Net Advanced Deployments

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Who Am I?

- **Reggie Burnett**
- **.NET (and part-time server) hacker**
- **Original author of popular ByteFX MySQL ADO.Net provider**
- **Joined MySQL in April 2004**
What Will Be Covered?

• Optimization/Debugging techniques
• Using Connector/Net with MySQL Embedded
• Using Connector/Net with Pocket PC
• Using Connector/Net with Mono
Optimization/Debugging Techniques
Use Prepared Statements

• Available with 4.1 & 5.0
• Setting CommandText requires Prepare
• Much faster – uses binary protocol
• 20-30% faster than non-prepared
Use Readers

• DataSet objects are VERY, VERY slow
• Readers can be used for binding to controls (listbox, combobox, etc)
• Normally, you cannot execute any command while a reader is active
• They optimize memory usage
• Readers == Use Result
SequentialAccess

- MySqlDataAdapter.Fill uses it
- Only use with large columns that could cause memory problems
- It allows access only to a single column at a time
- Accessing prior columns throws an exception
Enable Logging

- Available from 1.0
- Uses native Trace system
- Enable with “logging=yes”
- Direct output with TraceListener objects.
- Only requires changing .config file
- Custom TraceListeners can be used
Configuring a TraceListener

```xml
<system.diagnostics>
  <trace autoflush="false" indentsize="4">
    <listeners>
      <add name="myListener" type="System.Diagnostics.TextWriterTraceListener"
           initializeData="c:\myListener.log" />
    </listeners>
  </trace>
</system.diagnostics>
```
Usage Advisor

• Available with Connector/Net 1.1
• Outputs to registered listeners
• Enable with “usage advisor=yes”
• Points out speed problems with your app
  – Queries that are not using an index
  – Not reading all columns/rows
Working with Embedded MySQL
Uses

- Allows use of MySQL without installation
  - Autoplay, kiosk style app
  - Use database without installation
- Small footprint
- Same Connector/Net usage
- Can work where MySQL is already installed
Usage

• Enable with “driver=embedded”
• Put libmysqld.dll into load path
• Use “option file=xxx” to specify the my.ini file
• Enter your embedded options
  –[embedded] or [server] section
• Copy over the share and data folders!
Limitations

- No support for ISAM tables
- No support for RAID or replication
- No stack traces
- No outside connections (TCP/IP, etc)
Demo
Mobile Connector/Net
Introduction

• Available with Connector/Net 1.1
• Works with the .Net Compact Framework
• Uses new MySql.Data.Ce.dll assembly
• Namespace hasn’t changed
Features Not Available

- Various connection types
  - Shared memory
  - Named pipes
  - Unix sockets
- TraceListeners
- Config files
Demo Mobile Explorer
Connector/Net & Mono
Status of Mono

• Current development version is 1.1.6
• SWF implementation improving rapidly
• Base compiler and JIT very advanced (even more than MS in some cases)
• ADO.Net implementation has providers for MySQL, SQL Server, Oracle, and many others
Development Process

• Command line tools very similar to .NET
• SharpDevelop is available for Windows
• MonoDevelop is available for GTK
• Base connector should work “out of the box”
Demo
Thank you!