Garuda: Mythical Link to the CLR

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What is Garuda?

- Garuda is an open-source Tcl package capable of loading and interacting with the CLR.
- Designed primarily for use with Eagle.
- Does not work on Mono because it lacks the native CLR API.
- Not TEA compliant; however, I would appreciate any help making it so.

How do I install it?

- Requires Tcl 8.4 or higher.
- Copy files to a directory in the **$auto_path**.

How do I load it?

(mostly automatically)

```
package require Garuda

eagle {
  # Eagle script here
  # (optional).
}
```

Diagnostic Configuration

```
#
# The Tcl command (with one
# argument) used to log all CLR
# lifecycle events and method
# calls.  May be defined as a
# no-op.
#
set Garuda::logCommand
```

Startup Configuration

(very rarely, if ever, required)

```
set Garuda::assemblyPath; # assembly file?

set Garuda::typeName; # qualified class?

set Garuda::methodFlags; # see GarudaInt.h

set Garuda::startupMethodName; # "Startup"

set Garuda::methodArguments; # extra args
```

Auto-Loader Configuration

```
set Garuda::useEnvironment
set Garuda::useRegistry
set Garuda::envVars
set Garuda::rootRegistryKeyName
set Garuda::startClr
set Garuda::startBridge
```

CLR Method Configuration

```
# send "control" directive
set Garuda::controlMethodName

# detach Tcl interpreter
set Garuda::detachMethodName

# initiate bridge shutdown
set Garuda::shutdownMethodName
```

Simple Usage

(create and invoke)

```
package require Garuda

eagle {
  set o1 [object create Foo]
  object invoke $o1 DoSomething
  set o2 [object create -alias Foo]
  $o2 DoSomething
}
```

Advanced Usage
(Excel Automation)

```
package require Garuda

eagle {
 object load -import –declare \
   Microsoft.Office.Interop.Excel

 set o [object create -alias \
  Microsoft.Office.Interop.Excel.ApplicationClass]

 $o Visible true
}
```

Introspection, Application Domain

```
% garuda clrappdomainid
1
```

Introspection, CLR Running?

```
% garuda clrrunning
1
```

Introspection, CLR Version

```
% garuda clrversion
v2.0.50727
```

Introspection, Internal State

```
% garuda dumpstate
packageMutex 0x013CE958↩
↪hModule 0x10000000↩
↪pClrRuntimeHost↩
↪0x00626C50 bClrStarted 1
```

Introspection, Package Id

```
% garuda packageid
Garuda 1.0↩
↪fba64d41d7ee08985af28564
  ↩
↪437fc26ead7c8ef6 {2011-↩
↪10-01 22:35:24 UTC}
```

CLR Management

```
garuda clrexecute

garuda clrstart

garuda clrstop
```

Managed Code Interaction

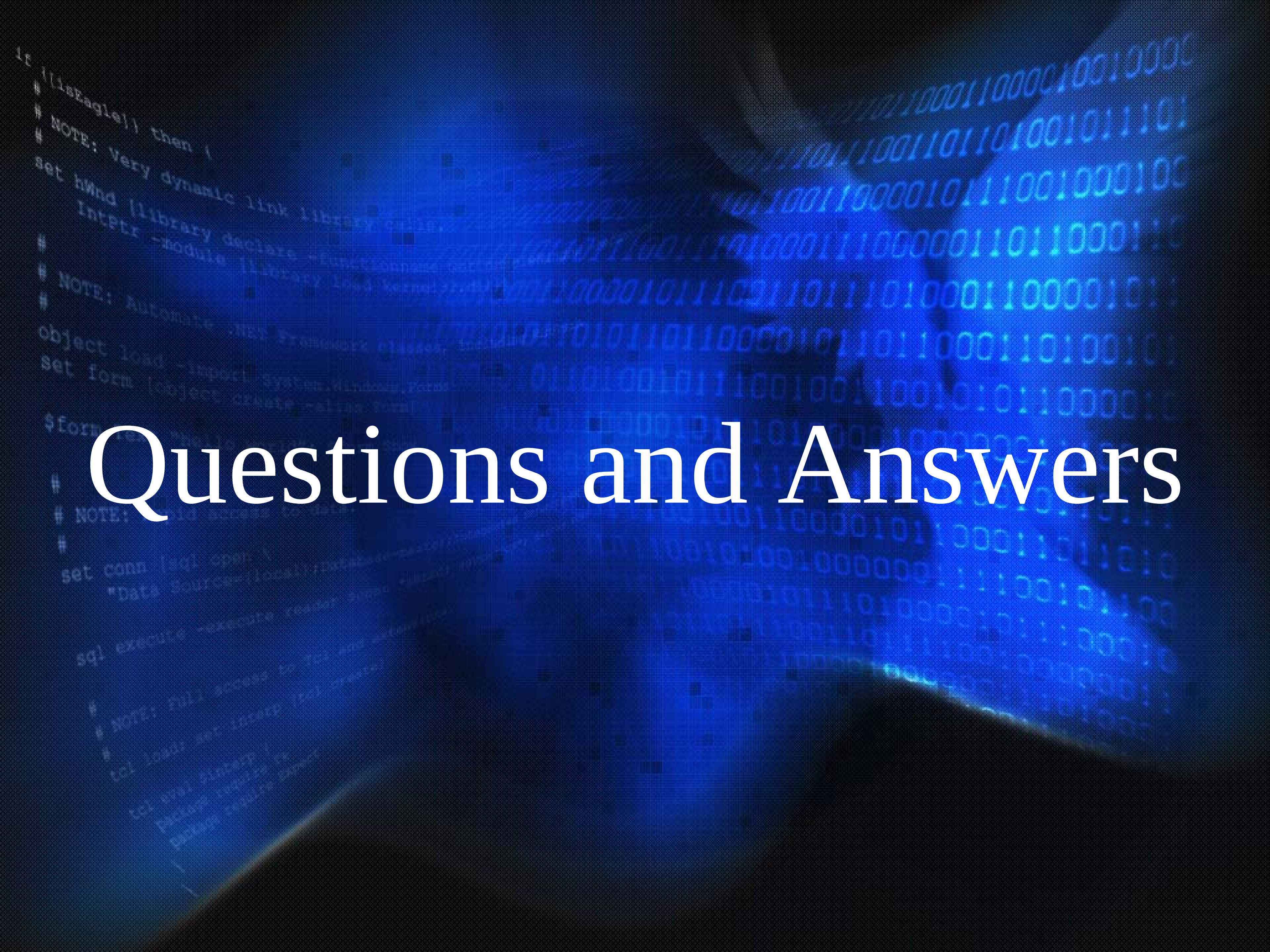
```
garuda startup

garuda control

garuda detach

garuda shutdown
```

Demonstration



Questions and Answers

Where is it?

http://eagle.to/