Hosting and Service Configuration

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Two Faces of Hosting

- **Web Hosting**
  - Very traditional (from the ASMX days)
  - Easy to set up (typically no code)
  - Requires IIS
  - Limited to HTTP (unless you use WAS)
- **Self Hosting**
  - Can be any application
  - Requires some code
    - More control
  - Lets you set up custom hosting applications *(feature-rich)*

Self Hosting

- **The ServiceHost class**
  - Used in ALL hosting scenarios
  - IIS instantiates it for you
- **One-to-One with the Service**
  - Can optionally be provided with a base address *(more about that later)*
- **Requires Endpoint information**
  - Can either be fed from Configuration or from Code
- **Once "opened", services are listening and waiting**
- **Two options for housekeeping**
  - Close: Will wait for any in-progress calls
  - Abort: Will abort any in-progress calls *(client gets exception)*

Demo Time

Service Configuration

- **Subject of criticism by many**
  - Tell them to zip it!
- **Doesn't have to be over-verbose**
- **Most importantly, it makes sense – it is very readable**
- **Often gives you a great overview to a system's WCF environment**
  - If you're a consultant, that's invaluable
- **Defines services and endpoints**
- **Defines [optional] additional characteristics**

Demo Time

Web Hosting

- **Hosting handled by IIS**
  - Instantiates and manages **ServiceHost** instance automatically
- **Limited to HTTP (unless you use WAS)**
- **Used to require SVC file per-service**
  - Can now be all handled through configuration (.NET 4+)
- **Endpoint does not have complete address**
  - Uses hosting site deployment address
  - Can add trailing address name
- **Using custom host factory, can have full access to ServiceHost instance**
  - Can be used to feed it endpoint information procedurally

WAS

- **Requires IIS (not IIS Express)**
- **Requires a modification to applicationHost.config**
  - Can use an **appCmd.exe** script
- **Need to add the bindings to the site or application**
  - IIS Manager, Advanced Settings
- **Can then simply change config to host another binding**

Demo Time

No-Config Hosting

- **Host simply needs endpoint information**
- **Can get them from config if not provided through other means**
- **Can create endpoint information programmatically**
- **You decide where you get information from**
  - Database
  - Other XML structure
  - Other service
  - Simple hardcode (my example)

Demo Time

More on Self Hosting

- **Self Hosting can be provided by ANY application**
- **Console example is NOT a good example for UI interaction**
- **Some situations may desire a service (hosted in a UI app) to update UI**
- **By default, a service host opened in a UI will instantiate services on that thread**
  - Can be altered with a service behavior
  - Must remember to marshal when updating UI
- **More on that in upcoming module**
- **My host of preference?**
  - Old fashioned Windows Service (NT Service)