

# Deployment and hosting

Getting your solution installed and configured



# Outline

- **Hosting and deployment concepts**
- **Managing deployment configuration**
- **Binding files**
- **Scripted and packaged deployment**

# BizTalk Server hosting model

- BizTalk Server provides *scalability* and *reliability* through hosts
- Two different *hosting models*
  - In Process – host is a Windows Service
  - Isolated – host is some other process (e.g. IIS)

# Hosts and host instances

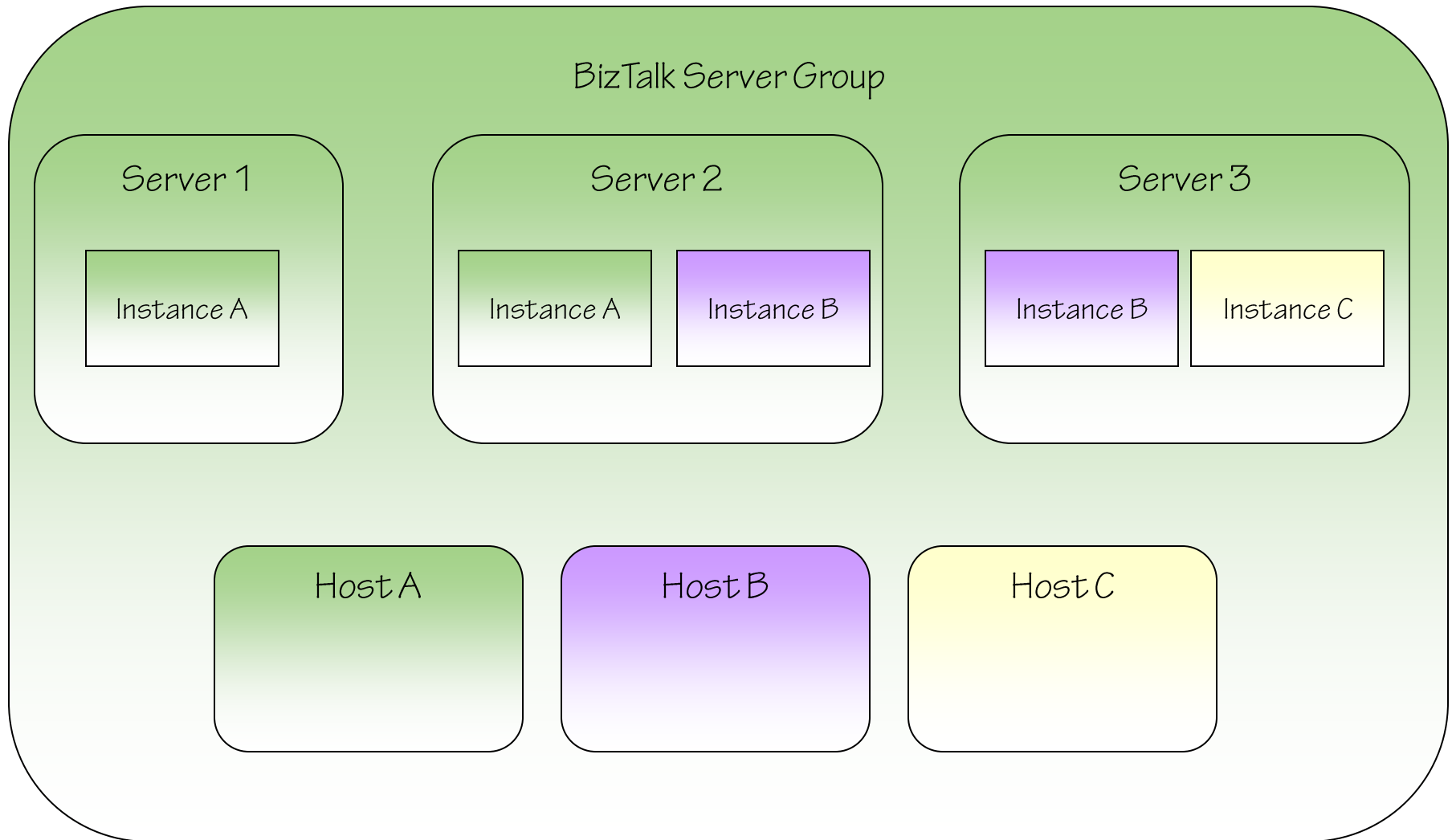
- **BizTalk host**

- *Logical definition* of a hosting process
- Defines the *security properties* (i.e. Windows groups, certificate)
- Host settings determine running of tracking services
- Must be defined as in process or isolated

- **BizTalk host instance**

- *Physical instance* of a host on a specific server
- Must run as a member of the Windows group for the host
- Only *one instance* of a given host *per server*

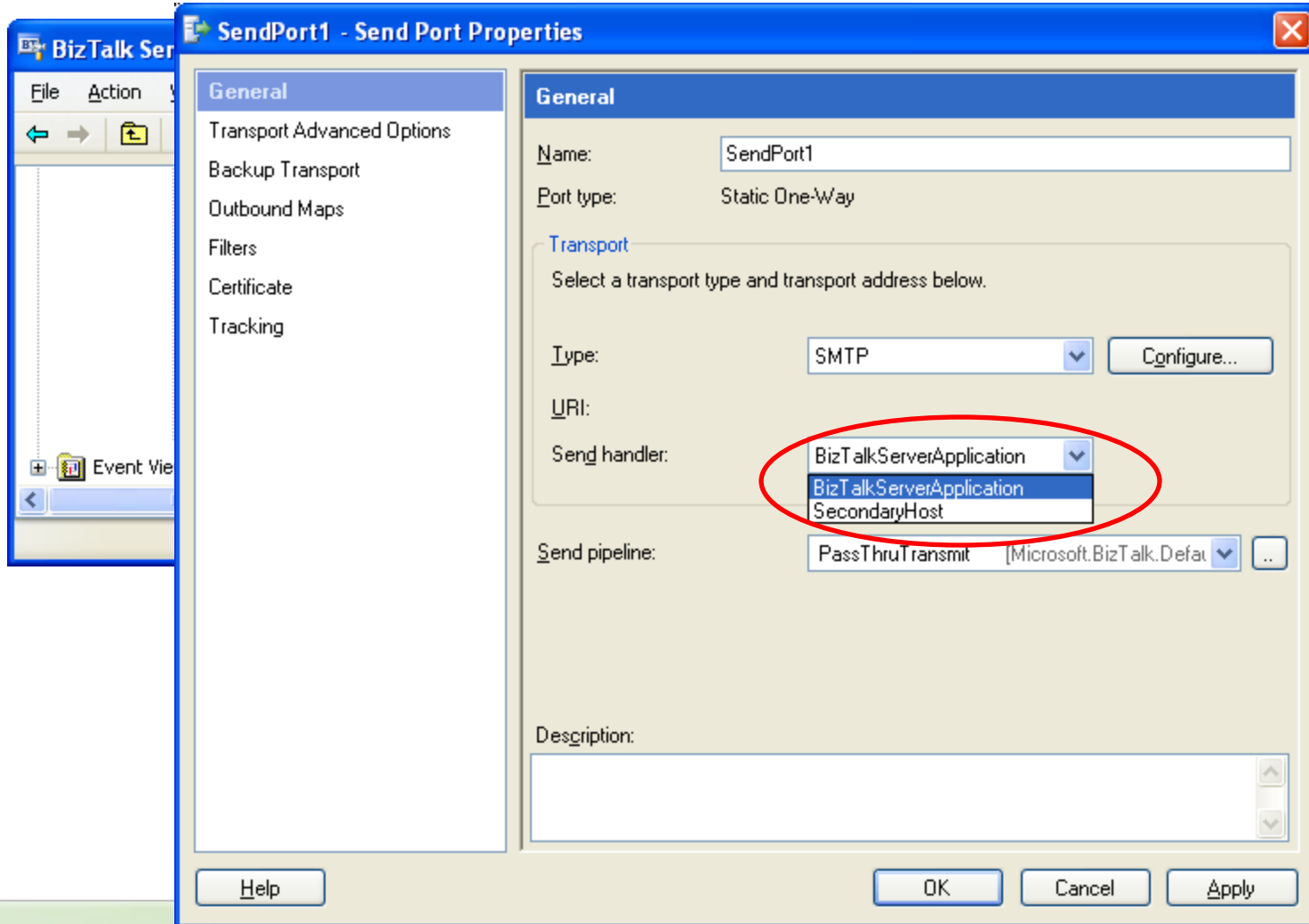
# Managing hosts



# Using hosts

- **Adapter (send/receive) management**
  - *Isolate* adapters onto their own servers
  - *Scale* sending and receiving functionality
- **Orchestration management**
  - *Isolate* long running or processor intensive orchestrations
  - Provide *failover* across several servers in the group

# Adapter configuration



# Orchestration configuration

**OrderProcessing.Ordering - Orchestration Properties**

General  
**Bindings**  
Tracking

**Bindings**

Select a host for enlistment and bind any logical ports in the orchestration to physical ports. A new physical port may be created by clicking on the combo box next to the logical port name.

Host: BizTalkServerApplication

Bindings:

Inbound Logical Ports

|                  |                  |
|------------------|------------------|
| OrderReceivePort | OrderProcessing  |
| ShippingAckPort  | Ordering_ShipAck |

Outbound Logical Ports

|                  |                  |
|------------------|------------------|
| NorthwindSQLPort | Ordering_SQL     |
| ShippingPort     | ShipRequest_MSMQ |

Help OK Cancel Apply



# Deployment concepts

- Two core concepts to understand related to deployment
  - Applications
  - Binding files

# BizTalk applications

- **Applications are a new concept in BizTalk 2006**
- **Provide core container for deploying and managing artifacts**
  - Schemas, maps, orchestrations, rules, ports, BAM, BAS, etc.
- **Applications provide management centralization as well**
  - Start and stop an application – all ports and orchestrations
  - No longer need to manually start all ports

# Application considerations

- **Items that must be unique in BizTalk Server can be shared**
  - Create an application for shared artifacts and deploy them
  - Add a reference from the consuming applications
- **When using references the other app must exist on install**
  - Install the dependency application first
  - Ensure that it is already installed

# Bindings

- **All port and orchestration configuration referred to as *bindings***
  - Port bindings between orchestration and physical ports
  - Port configuration: address, pipeline, adapter settings, etc.
  - Role/party information
- **Bindings can be *exported* to XML**
  - Passwords masked and must be edited
- **Bindings can be *imported* into an application**
  - Creates and configures all ports
  - Can configure the enabled status of receive locations

# BizTalk deployment

- **BizTalk deployment is a two step process**
  - Deploy *metadata* to configuration databases
  - Deploy *assemblies* to the GAC
- **Two primary options when deploying BizTalk applications**
  - *MSI* deployment
  - *Scripted* deployment

# MSI deployment

- **Use the application as deployed in development**
- **Add resources to the application**
  - Binding files for all environments
  - BAM tracking profiles & business rule policies
  - .NET Assemblies and other files
  - Certificates

# MSI deployment

- **On a single server**

- *Import from MSI* in administration console
- Extracts the metadata and configuration from the MSI package
- Deploys BAM
- Publishes rule policies

- **On all servers**

- *Run the MSI* file
- Installs assemblies to the GAC
- Creates virtual directories for HTTP/SOAP receives
- Copies files to the install directory

# MSI extensibility

- Add *pre or post processing scripts* to the MSI file
- Scripts can be run on *import* or *install*
- In some cases, scripts can use other files in the install



# Scripting deployment

- Primary tool in scripted deployments is the *BTSTask* tool
- **BTSTask** allows for
  - Creating/removing an application
  - Adding/removing resources including BizTalk assemblies
  - Importing or exporting MSI and binding files
- **BTSTask does not support**
  - Starting and stopping an application
  - Add or removing references

# Versioning artifacts and applications

- **As new versions are to be released**
  - For *long running processes*, may need to complete on old version
  - Updating individual *artifacts* versus entire *application*
  - Default behavior in some cases is to use latest version
- **.NET versioning is used by BizTalk assemblies**
  - To run multiple versions, increment the version information
  - Not changing the version number may cause problems

# Versioning an orchestration

- **Deploy new version (1.1)**
  - Deploy orchestration
  - Create new receive locations or send ports if necessary
- **Unenlist old version (1.0)**
- **Enlist and start new version (1.1)**
  - Often done programmatically in a transaction with previous step
- **Running instances will continue on 1.0**
  - When all 1.0 instances are complete, undeploy 1.0
- **New instances will run on 1.1.**

# Summary

- Applications provide the core for deploying and managing
- Binding files contain all of the configuration for an application
- MSI allows for easily repeatable process for deployment
- MSI provides for deploying other resources in the solution
- Scripting support for automated build environments
- Extensibility in the import and install process
- Versioning is possible and based on .NET versioning

# References

- **Understanding BizTalk Server Application Deployment**
  - <http://www.microsoft.com/downloads/details.aspx?familyid=423b9bf5-0f98-48cb-ab71-10244922b8db&displaylang=en>
- **BizTalk Developers Troubleshooting Guide**
  - <http://download.microsoft.com/download/3/7/6/376a6f6c-8c97-4ab5-9d5a-416c76793fbb/bts06developerstroubleshootingguide.doc>