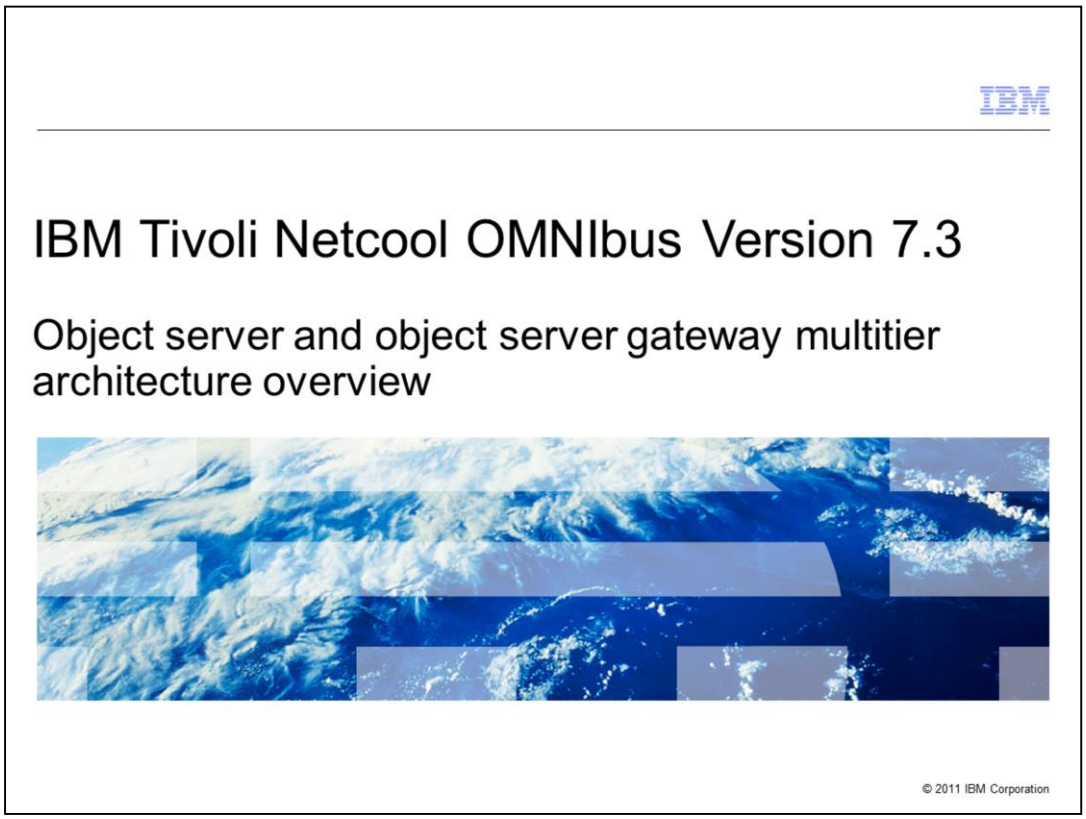

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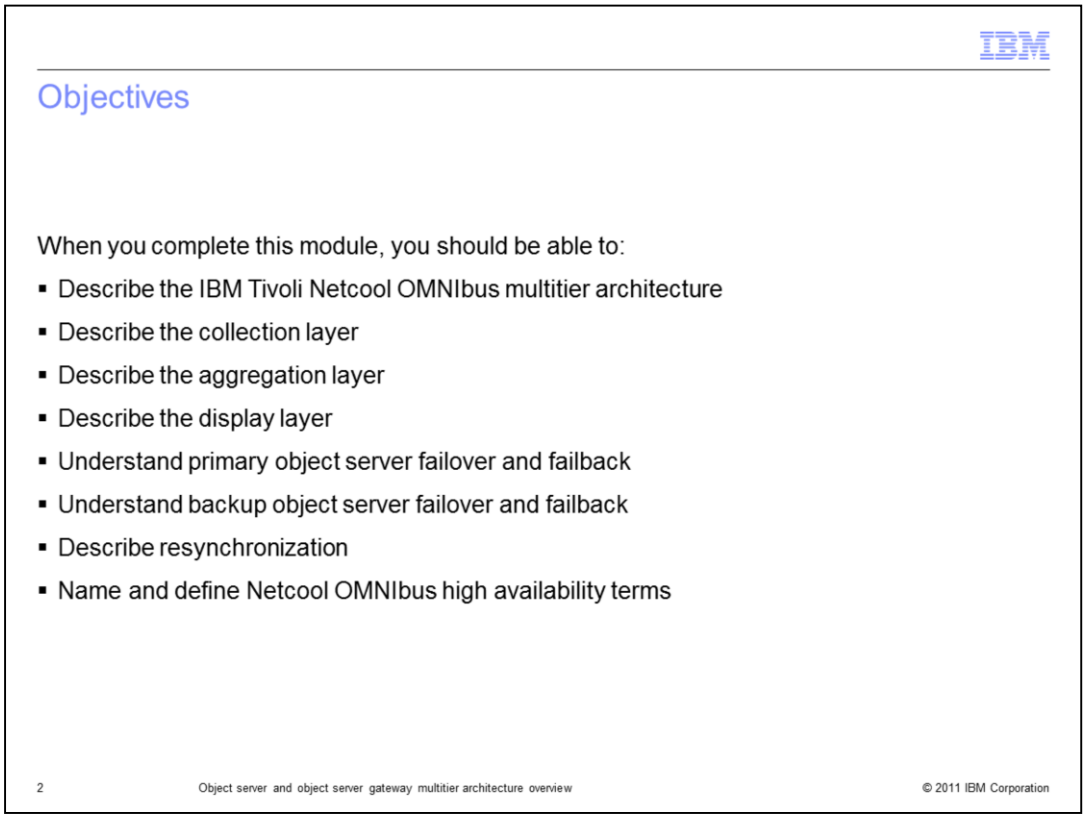
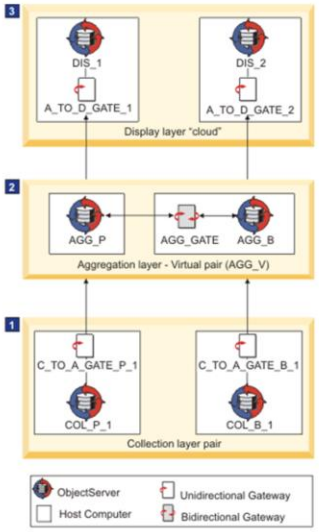
Object server and object server gateway multitier architecture overview.



When you complete this module, you should be able to:

- Describe the IBM Tivoli Netcool OMNIbus multitier architecture
- Describe the components and function of the Collection Layer, Aggregation Layer, and the Display Layer
- Understand Primary Object Server failover and failback processes
- Understand Backup Object Server failover and failback processes
- Describe the Resynchronization process and how it minimizes event loss
- Name and define terms used in describing Netcool OMNIbus high availability

Netcool OMNIbus multitier architecture overview

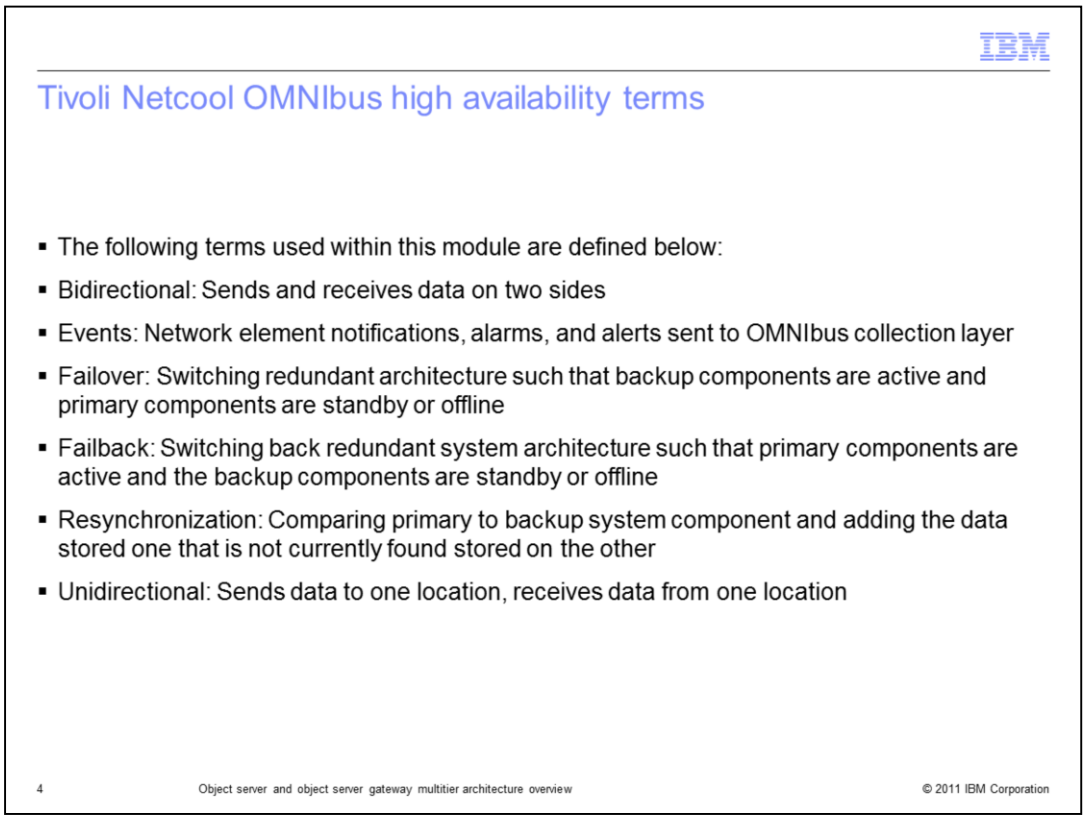


3 Object server and object server gateway multitier architecture overview

The IBM Tivoli Netcool OMNIbus multitier architecture is composed of as many as three tiers called the aggregation layer, display layer, and the collection layer.

The multitier architecture is based around the aggregation layer. An environment can start with a single pair of object servers with a bidirectional gateway in the aggregation Layer.

You can then add collection or display layers at any time.



The following terms are used within this module:

- Bidirectional: Sends and receives data on two sides. Each side of such a device can both send and receive data independent of the ports on the other interface side of the device

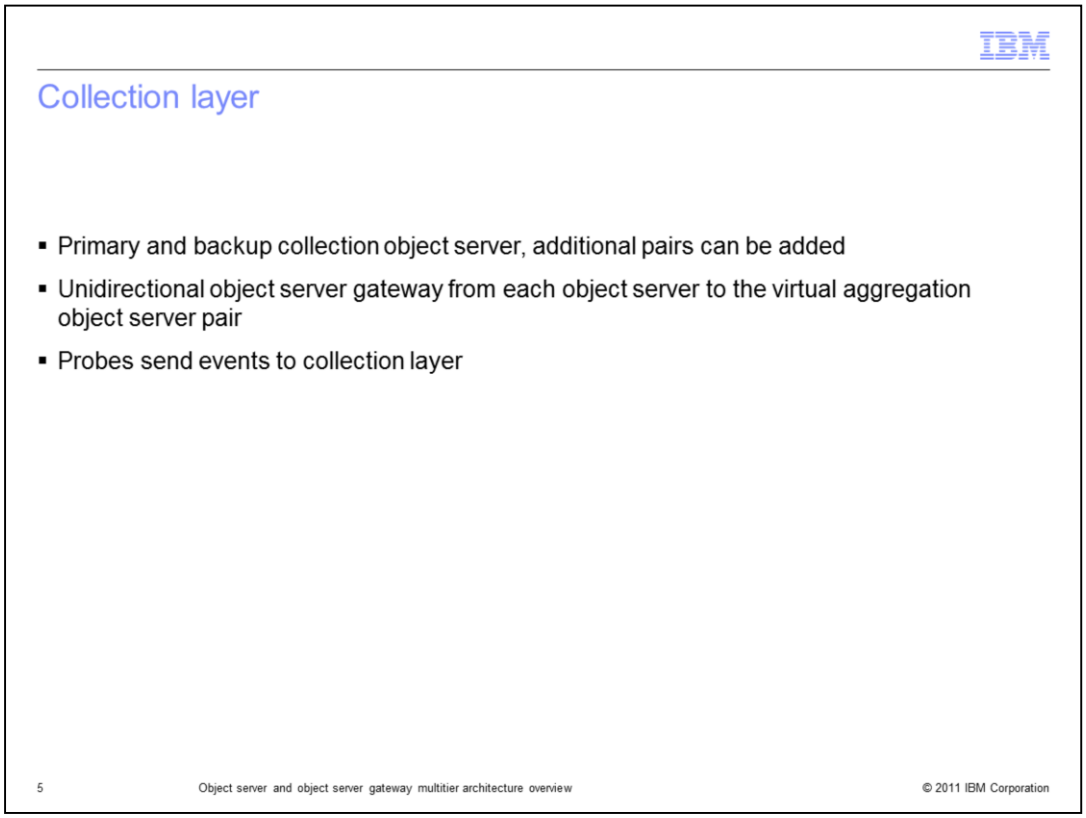
- Events: Network element notifications, alarms, and alerts sent to OMNIbus collection layer object servers

- Failover: The switching of a duplex or redundant system architecture such that the backup components are active and the primary components are on standby or offline

- Failback: The switching back of a duplex or redundant system architecture such that the primary components are again active and the backup components are on standby or offline

- Resynchronization: A process that involves comparing a primary to a backup system component and adding the data stored on one that is not currently found stored on the other

- Unidirectional: Sends data in one direction only and receives data in one direction only

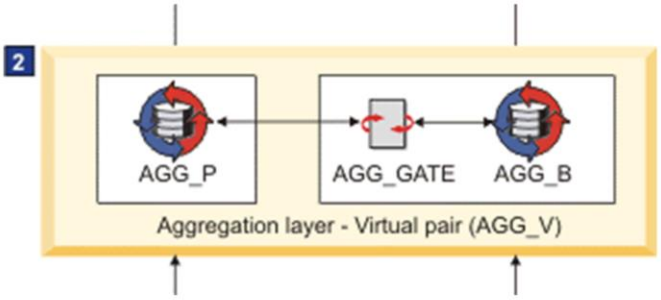


Probes and other event sources connect to the Collection layer. Collection layer events are initially correlated before being sent to the Aggregation layer.

The collection tier architecture differs from the aggregate tier with regard to the object server gateways. As you can see, both the primary and the backup collection layer object servers have their own uni-directional gateways These gateways only send data output from the Collection layer as input data to the aggregation layer object servers.

Aggregation layer

- Primary and backup object server pair
- Bidirectional object server gateway between primary and backup aggregate object servers

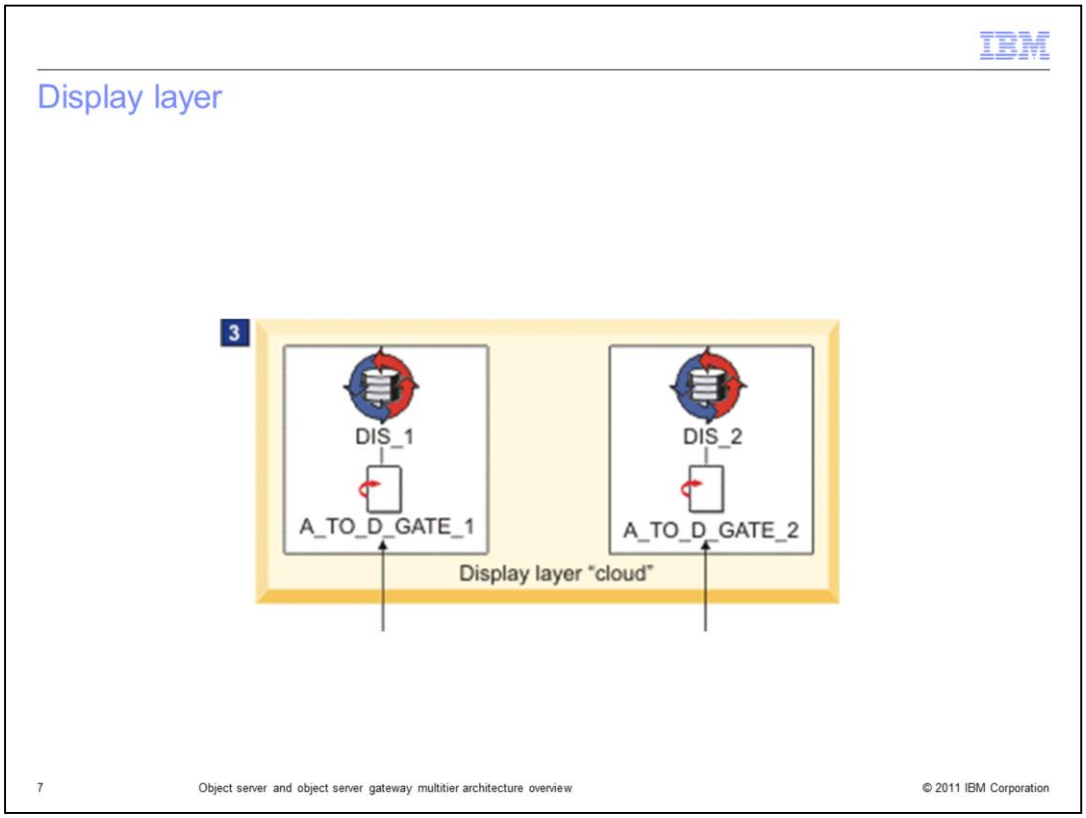


The aggregation layer tier is composed of three main components:

- A primary object server

- A backup object server

- A bidirectional object server gateway linked between the primary and backup object servers

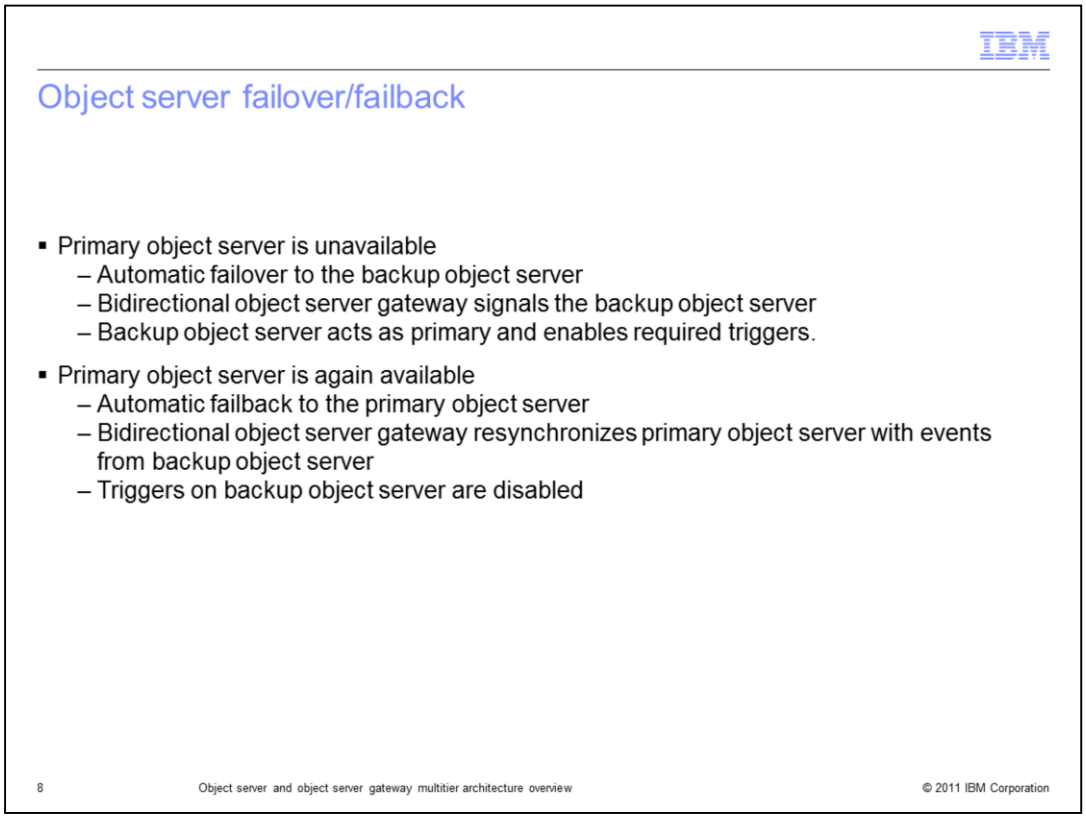


The display layer has a pair of display object servers.

Additional single display object servers can be added.

Unidirectional object server gateways bring events from the virtual aggregate object server pair to each display object server.

Desktop event lists and a web GUI/webtop connect to the display layer.



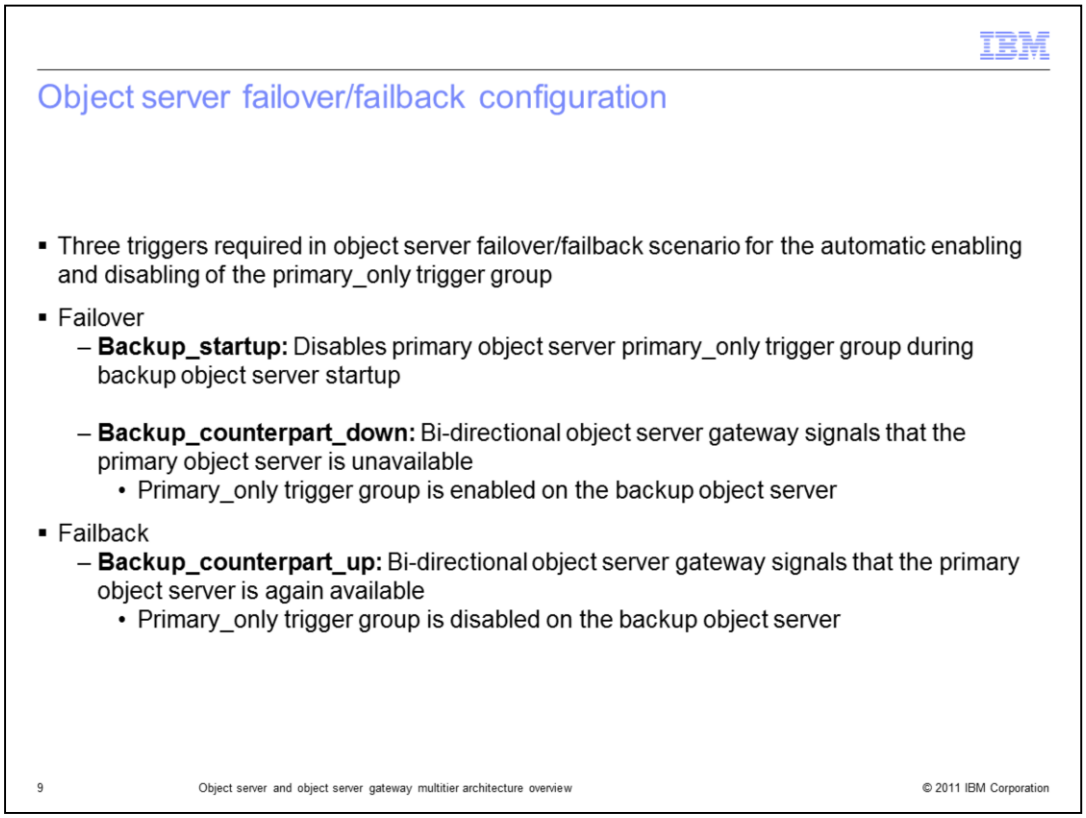
When the Primary Object Server is unavailable, clients automatically failover to the Backup Object Server.

The Bidirectional Object Server Gateway automatically signals the Backup Object Server that it is acting as primary and enables the required triggers.

When the Primary Object Server is again available, clients automatically failback to the Primary Object Server.

The Bidirectional Object Server Gateway resynchronizes the Primary Object Server with events from the Backup.

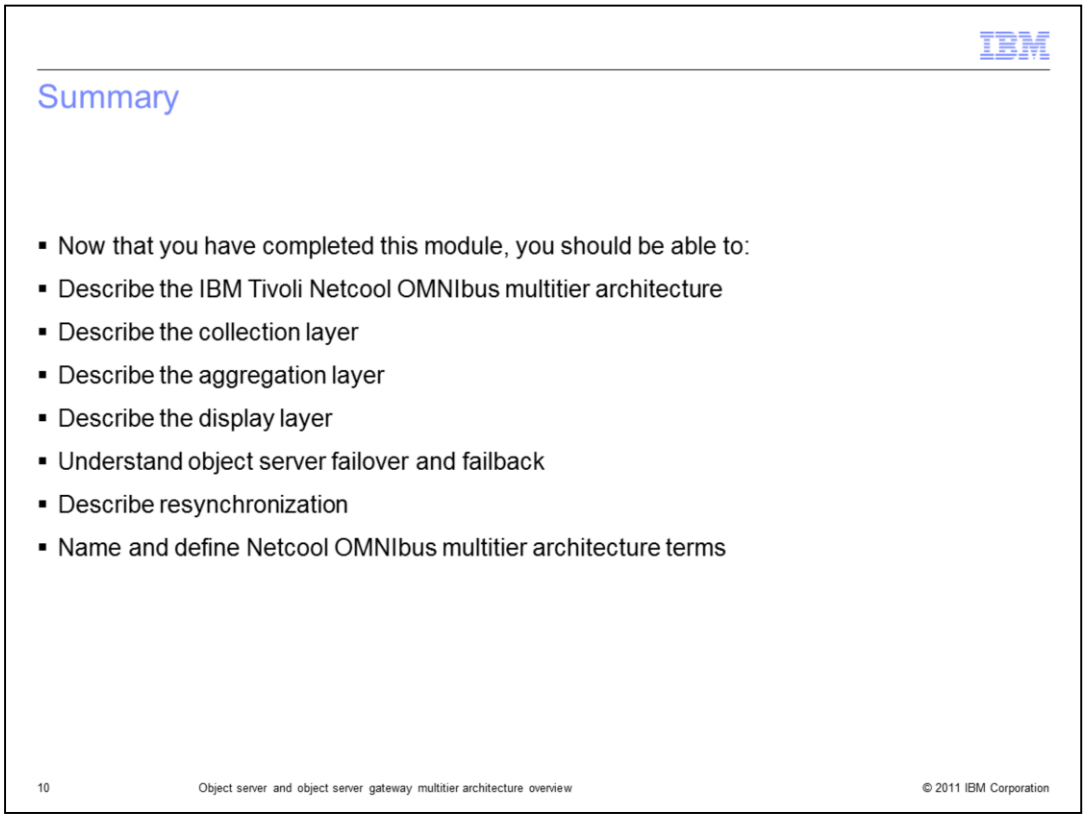
When the Primary object server is active the triggers on Backup Object Server are disabled.



Three object server triggers are used during controlled failover/failback – backup_startup, backup_counterpart_down, and backup_counterpart_up.

During the failover process the backup object server starts and the bidirectional object server gateway sends notification that the primary object server is not available. The primary_only trigger group on the primary object server is disabled while the primary_only trigger group on the backup object server is enabled.

During the failback process the bi-directional gateway sends notification that the primary object server is back online. At this time the primary_only triggers are disabled on the backup object server while those on the primary object server are restored.



Now that you have completed this module, you should be able to:

- Describe Tivoli Netcool OMNIbus multitier architecture

- Describe the components and function of the Collection Layer, Aggregation Layer, and Display Layer

- Understand primary object server failover and failback processes

- Understand backup object server failover and failback processes

- Describe the resynchronization process and how it minimizes event loss

- Name and define terms used in describing Netcool OMNIbus high availability

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