

IBM Tivoli Software



## IBM Tivoli Directory Server 6.0 - Replication

Excerpt taken from presentation given on April 24, 2007  
Planning strategies involved in setting up an IBM Tivoli Directory Server replication topology

**Support Technical Exchange Web site**  
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# Introduction

## **Abstract:**

**This STE will discuss replication at ITDS 6.0 and will cover topics such as planning your topology, implementing replication in environment, and troubleshooting replication errors**

## **Objectives:**

- 1. Planning an effective topology**
- 2. Implementation with both webadmin and command line**
- 3. Best replication debugging practices**



## Agenda

1. Useful Links
2. Why Replicate?
3. Planning an effective replication topology
4. Preparing the systems for replication
5. Implementing replication via the webadmin
6. Implementing replication via command line
7. Resolving replication failures

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## Useful Resources before we get started...

- **Info Center for ITDS 6.0**  
<http://publib.boulder.ibm.com/infocenter/tivihelp/v2r1/index.jsp?toc=/com.ibm.IBMDS.doc/toc.xml>
- **Admin Guide:**  
[http://publib.boulder.ibm.com/infocenter/tivihelp/v2r1/index.jsp?topic=/com.ibm.IBMDS.doc/admin\\_guide.htm](http://publib.boulder.ibm.com/infocenter/tivihelp/v2r1/index.jsp?topic=/com.ibm.IBMDS.doc/admin_guide.htm)
- **Corrections Guide:**  
[http://www-1.ibm.com/support/docview.wss?rs=767&context=SSVJJU&q1=corrections&uid=swg21210430&loc=en\\_US&cs=utf-8&lang=en](http://www-1.ibm.com/support/docview.wss?rs=767&context=SSVJJU&q1=corrections&uid=swg21210430&loc=en_US&cs=utf-8&lang=en)
- **Troubleshooting Replication:**  
<http://publib.boulder.ibm.com/infocenter/tivihelp/v2r1/topic/com.ibm.IBMDS.doc/PDGuide12.htm>
- **Example Configurations:  
Command line –**  
[http://www-1.ibm.com/support/docview.wss?rs=767&context=SSVJJU&q1=debugging+and+replication&uid=swg27008752&loc=en\\_US&cs=utf-8&lang=en](http://www-1.ibm.com/support/docview.wss?rs=767&context=SSVJJU&q1=debugging+and+replication&uid=swg27008752&loc=en_US&cs=utf-8&lang=en)
- **Webadmin –**  
[http://www-1.ibm.com/support/docview.wss?rs=767&context=SSVJJU&q1=rgs3&uid=swg21218417&loc=en\\_US&cs=utf-8&lang=en](http://www-1.ibm.com/support/docview.wss?rs=767&context=SSVJJU&q1=rgs3&uid=swg21218417&loc=en_US&cs=utf-8&lang=en)



## Why would I use replication?

- **To provide failover functionality in case of a catastrophic hardware or software loss**
  - Redundancy
- **Balance read traffic**
- **Allow offline backup without taking an outage**
- **Application balancing**
- **Read only to the public, read-write to the private networks**



## Planning an effective replication topology

- 1. Identify systems for use which meet the requirements to run ITDS 6.0 (consult the ITDS 6.0 Install Guide)**
- 2. Plan the correct physical layout**
  - Firewall vs Public
  - Application needs
- 3. Effectively plan how to direct traffic at a SINGLE master for write traffic**
  - Load Balancer configuration
  - Correct application configuration



## Types of Topologies

- **There are 4 basic replication topologies:**
  - Peer to Peer
  - Supplier to Consumer
  - Gateway Replication
  - Forwarders
- **For this class we will discuss the most common topologies of Peer to Peer and the Supplier to Consumer configurations**



## Peer to Peer – vs – Master/Consumer

- **In a Peer to Peer relationship each ITDS server has both read and write access to the data**
- **Should Peer1 fail Peer2 will keep track of all changes made and will update Peer1 when it is recovered**
- **In a Supplier/Consumer relationship only the Supplier has read and write access to the data, while the Consumer is a read-only server.**



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