

Reestablishing a Broken Cisco CallManager Cluster SQL Subscription with CallManager 3.0, 3.1 and 3.2

Document ID: 13977

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Introduction

Replication of the SQL database is a core function of Cisco CallManager clusters. The server with the master copy of the database is called the publisher, while the servers that replicate the database are called subscribers.

In the event that your subscriber stops the replication of data from the publisher, you need to rebuild the publisher/subscriber relationship(s). In order to do this, go into the SQL Server database and manually rebuild the subscription.

Symptoms

This is a list of possible symptoms if the subscriber stops replicating from the publisher:

- Changes that are made on the publisher are not reflected on phones that are registered with the subscriber.
- Outbound calls fail on phones registered with the subscriber. As soon as you dial 9, you hear a re-order tone.
- Call Forward All (CFwdALL) does not work.
- IP phone displays Error Database.

Note: Refer to Using DBLHelper to Reestablish a Broken Cisco CallManager Cluster SQL Subscription for more information.

Prerequisites

Requirements

This document assumes that the SQL Administrator (sa) account password is available for both the publisher and subscriber.

Components Used

The information in this document is based on these software versions:

- Cisco CallManager 3.0, 3.1 and 3.2

Note: If you have Cisco CallManager version 3.3, refer to Reestablishing a Broken CallManager Cluster SQL Subscription with Cisco CallManager 3.3.

The information presented in this document was created from devices in a specific lab environment. All of the devices used in this document started with a cleared (default) configuration. If you work in a live network, ensure that you understand the potential impact of any command before you use it.

Conventions

Refer to the Cisco Technical Tips Conventions for more information on document conventions.

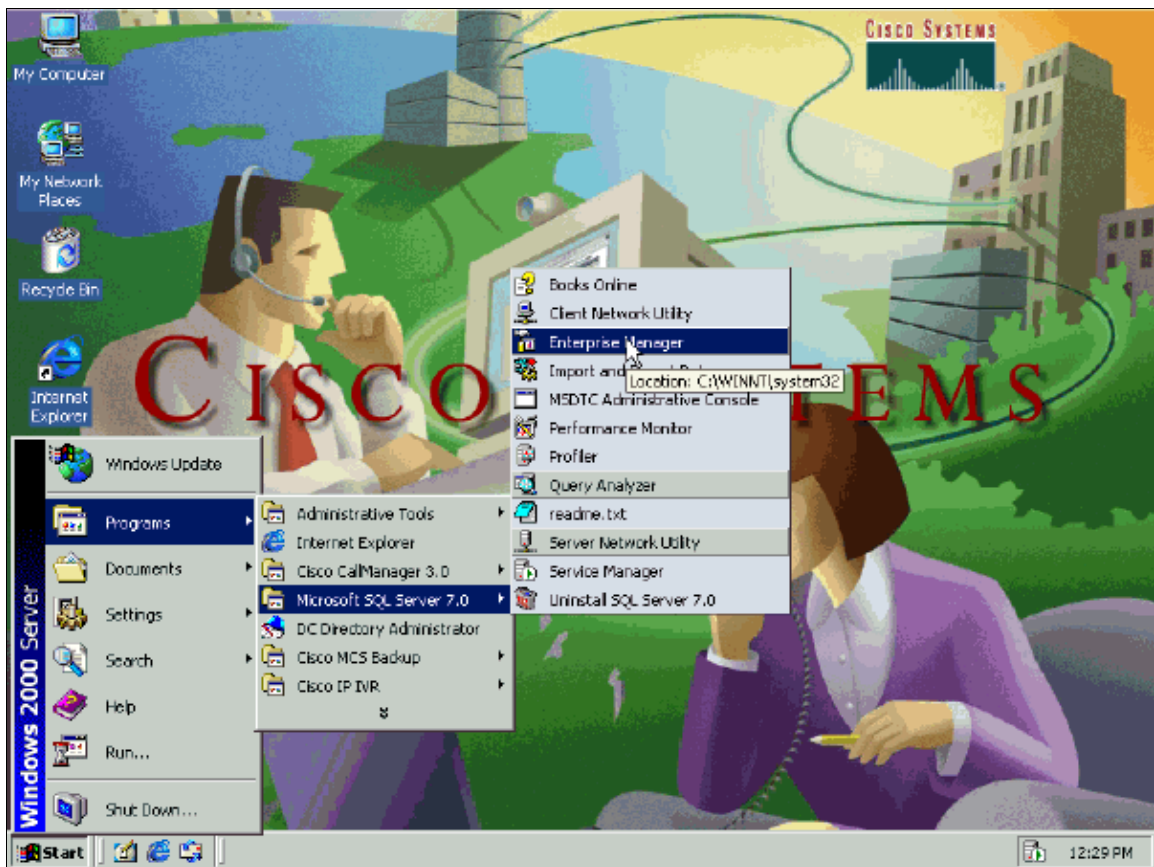
Reestablish the Relationship between Publisher and Subscriber

Complete these steps in order to reestablish the relationship between the two systems. First, the subscription of the subscriber needs to be recreated on the publisher. Then, the subscription needs to be deleted and recreated on the subscriber system.

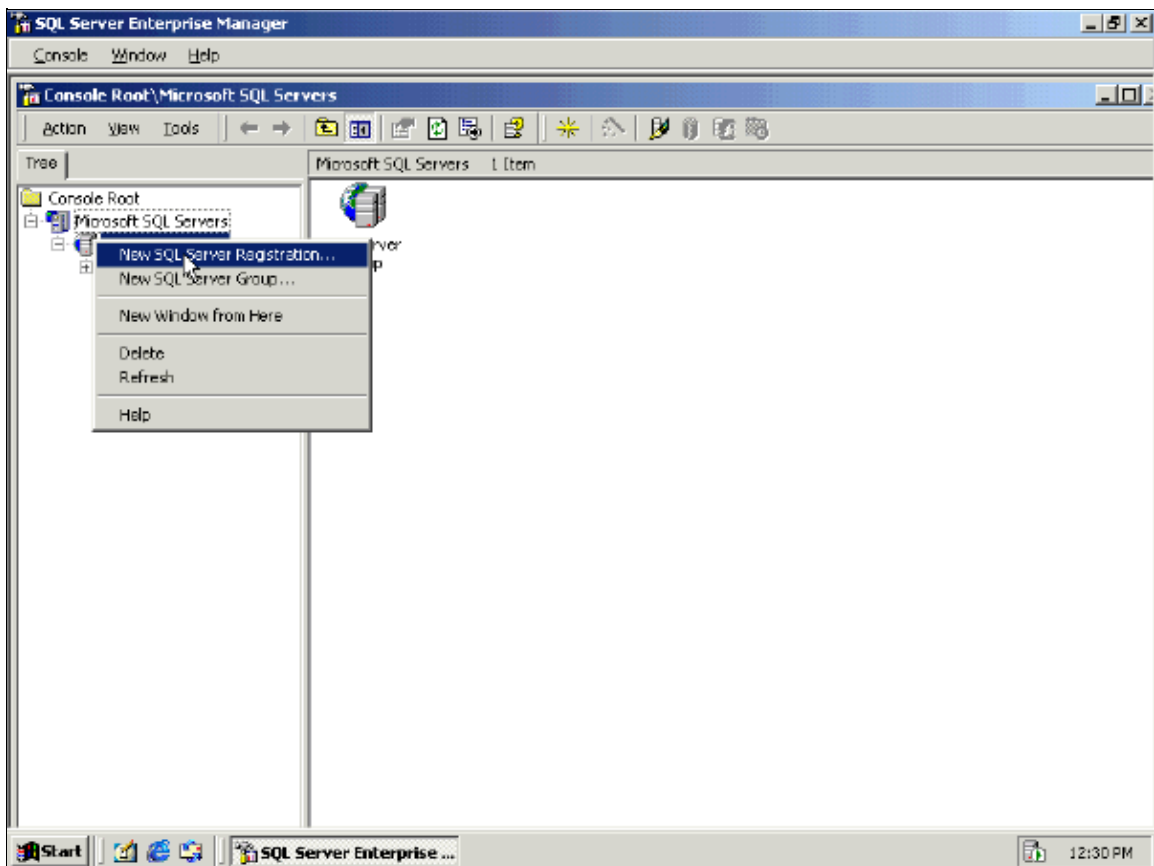
Recreate the Subscription on the Publisher

Complete these steps:

1. On the publisher, select **Programs > Microsoft SQL Server 7.0 > Enterprise Manager** in order to start the SQL Enterprise Manager.



2. The subscription can be recreated from the publisher. Under Microsoft SQL Server, select **New SQL Server Registration...**

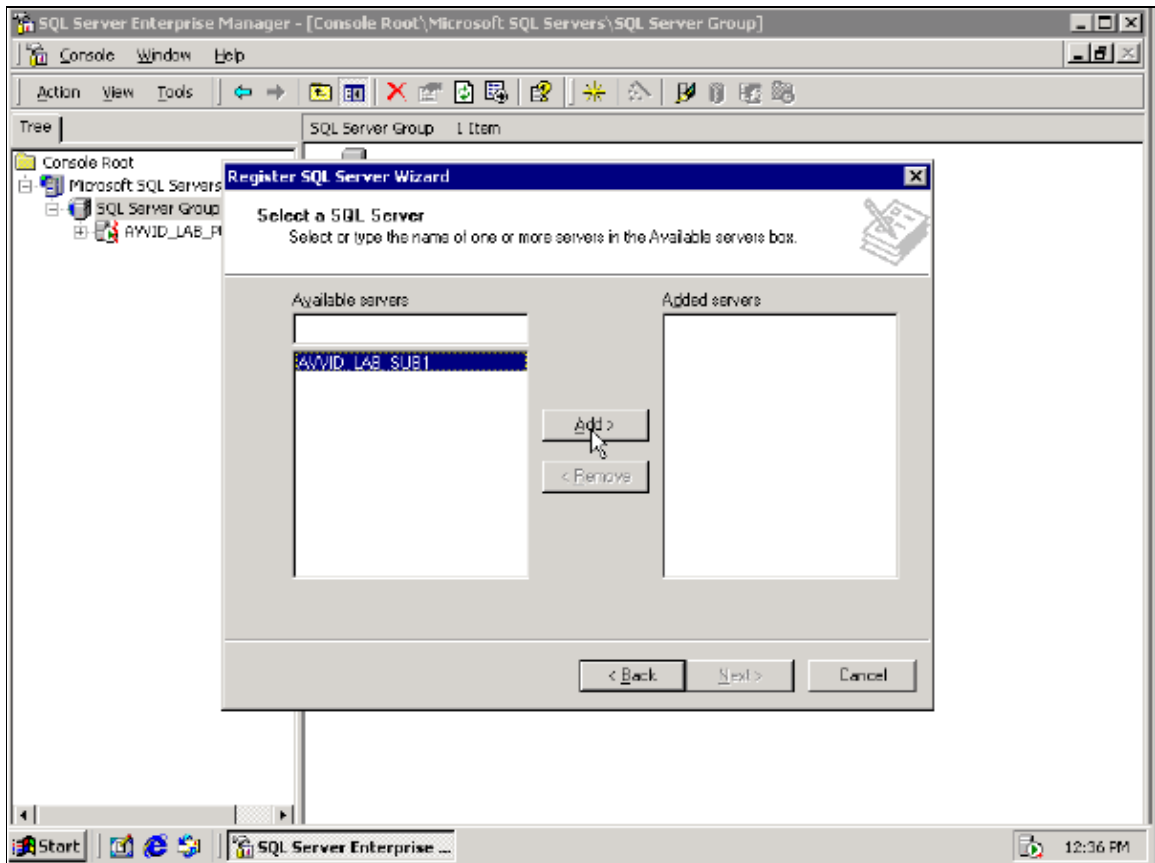


The Register SQL Server Wizard appears.

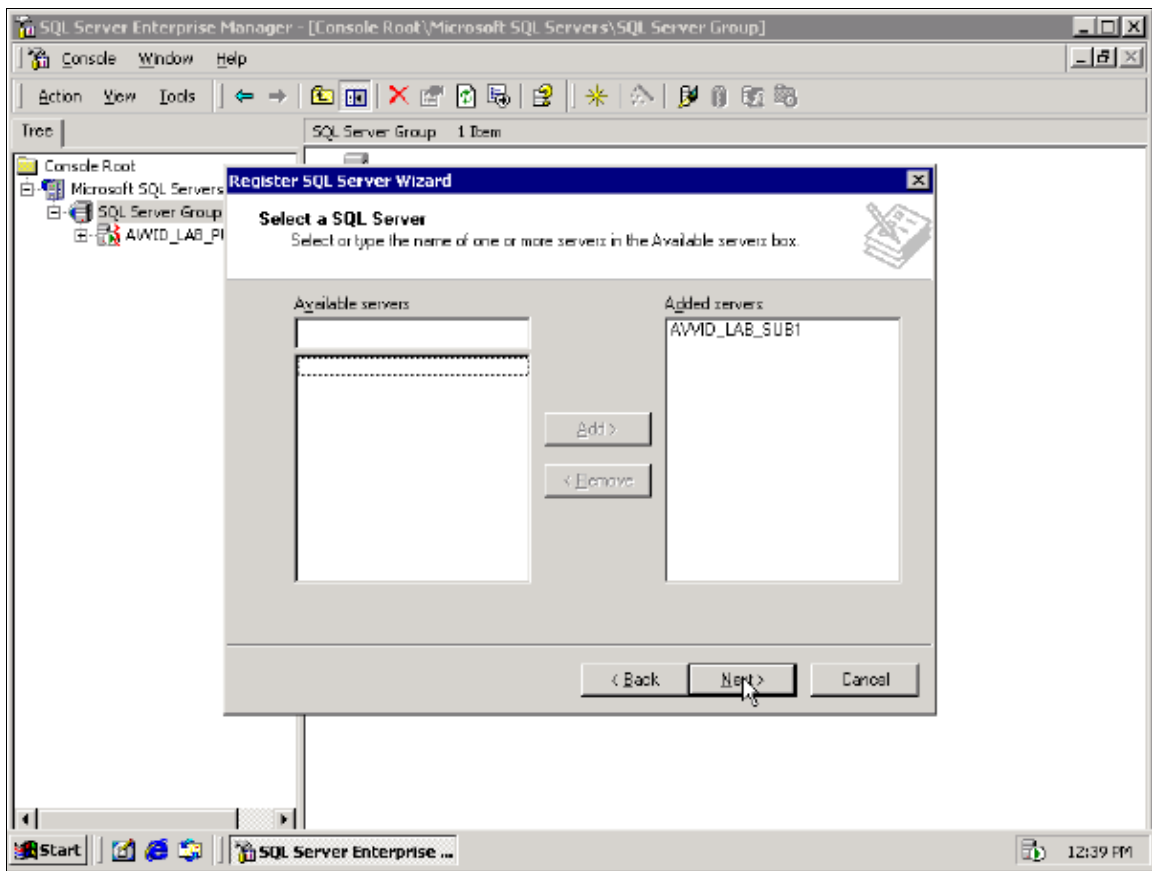
3. Make sure that the **From now on I want to perform the task without using a wizard** is *not* checked. Click **Next**.



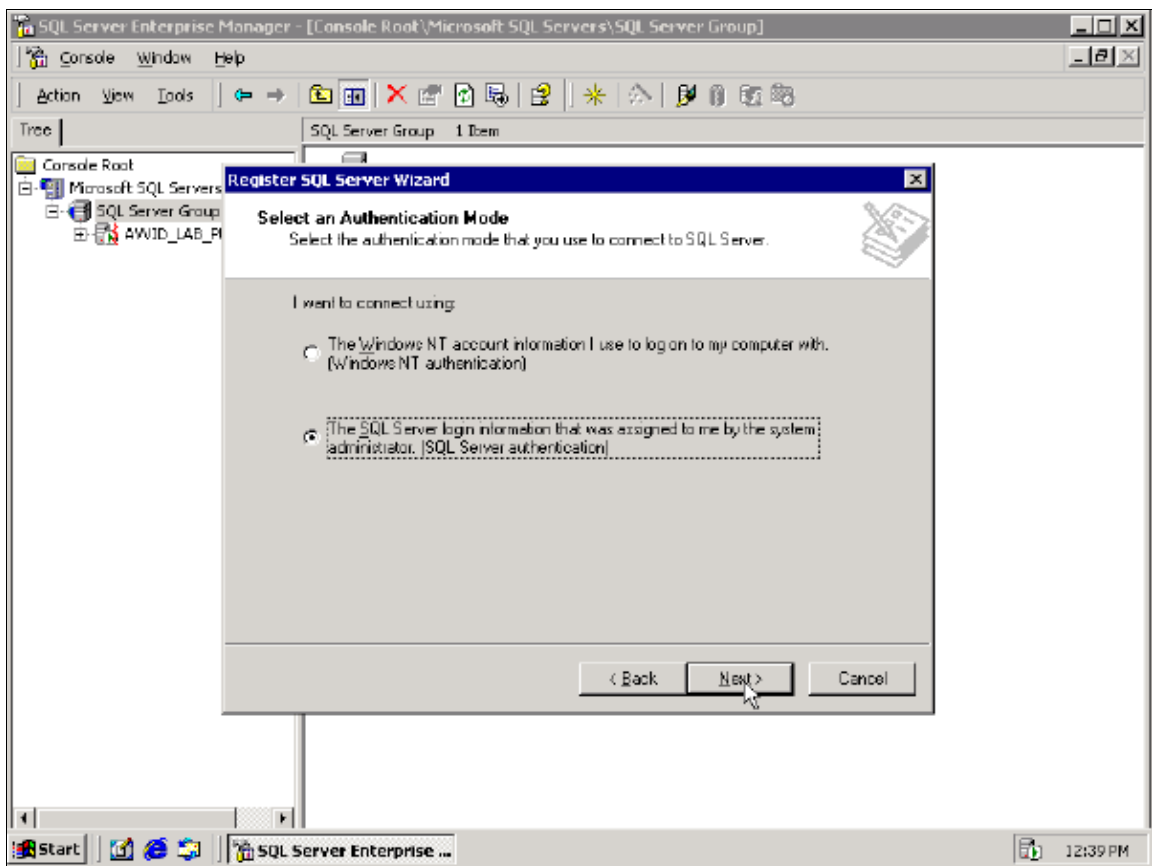
The other SQL servers that reside on the Cisco CallManagers need to appear in the Additional Servers box.



4. Select all servers and **Add** them to the Added servers box. Click **Next**.

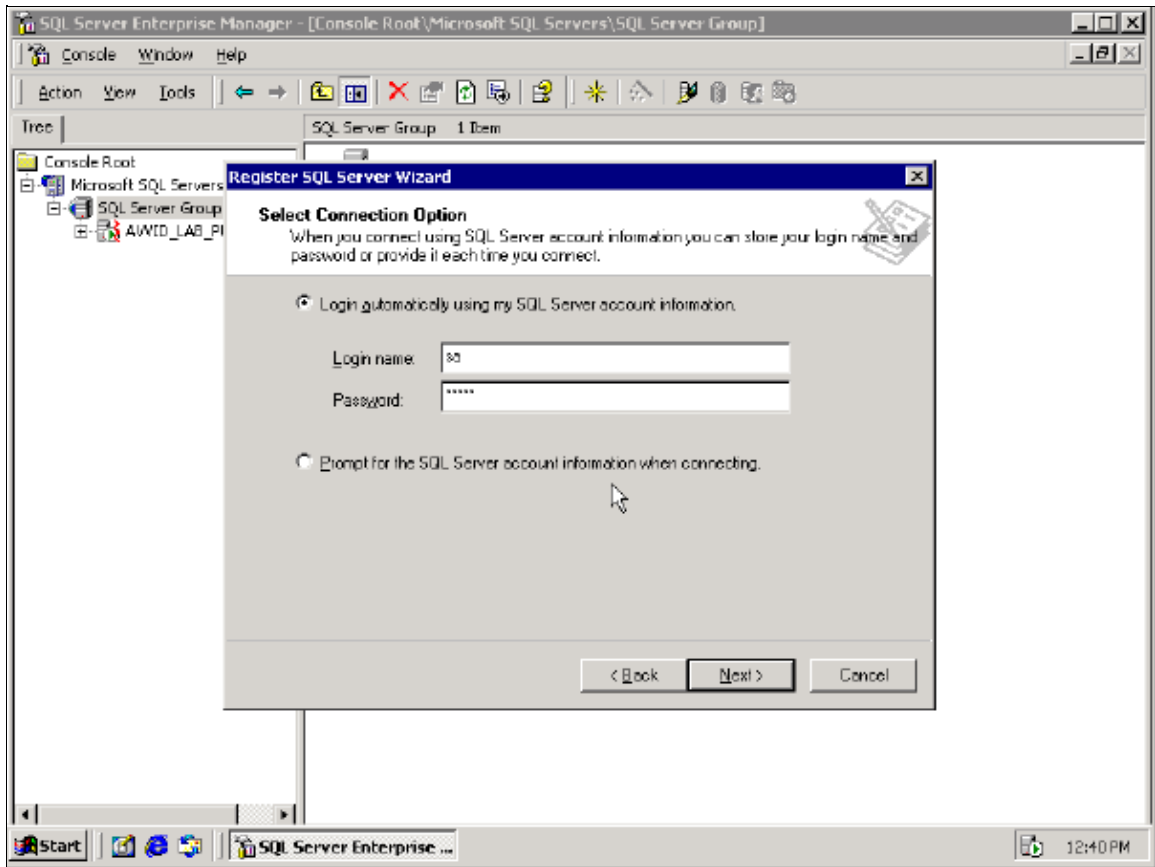


5. Select **The SQL Server login information that was assigned to me by the system administrator** and click **Next**.

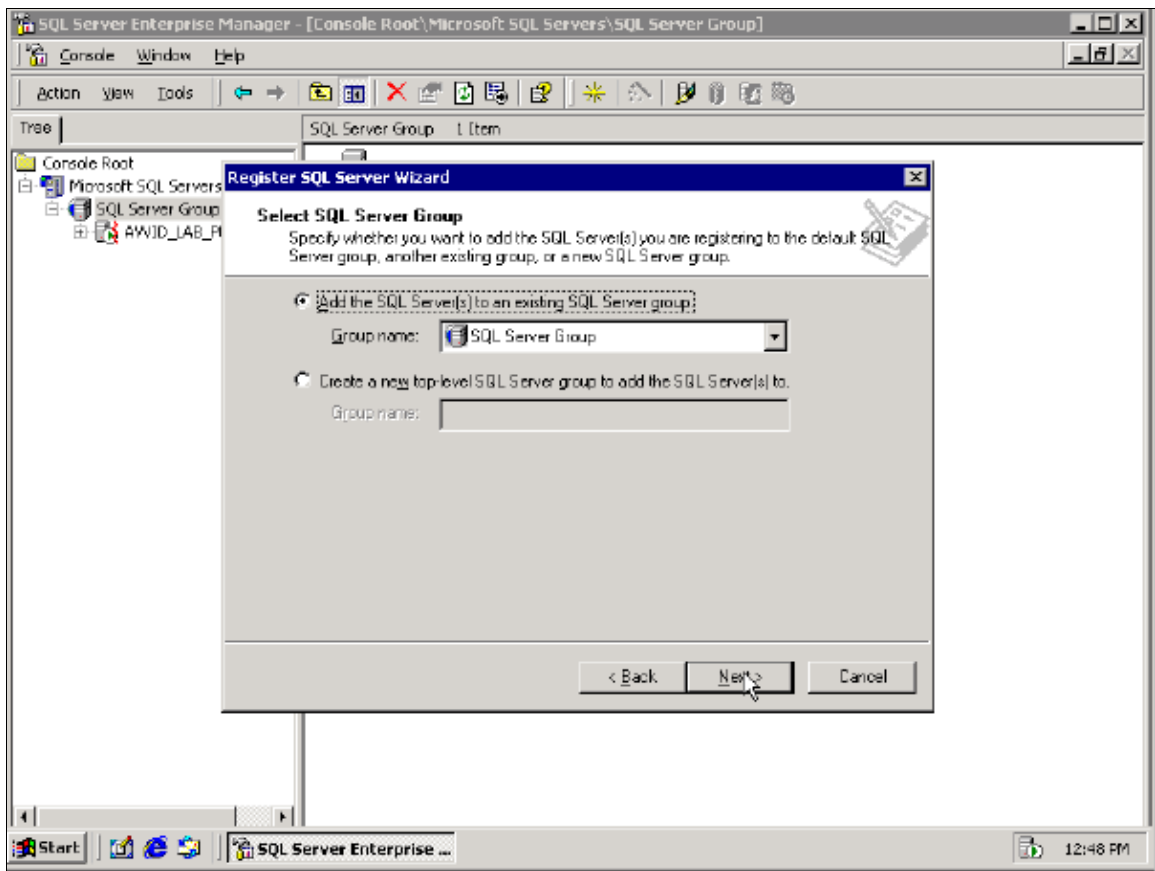


6. Use the "sa" account and password for the subscriber system on the next window.

Note: This is the sa account and password from the SUBSCRIBER system. The password is selected when the subscriber system is installed.

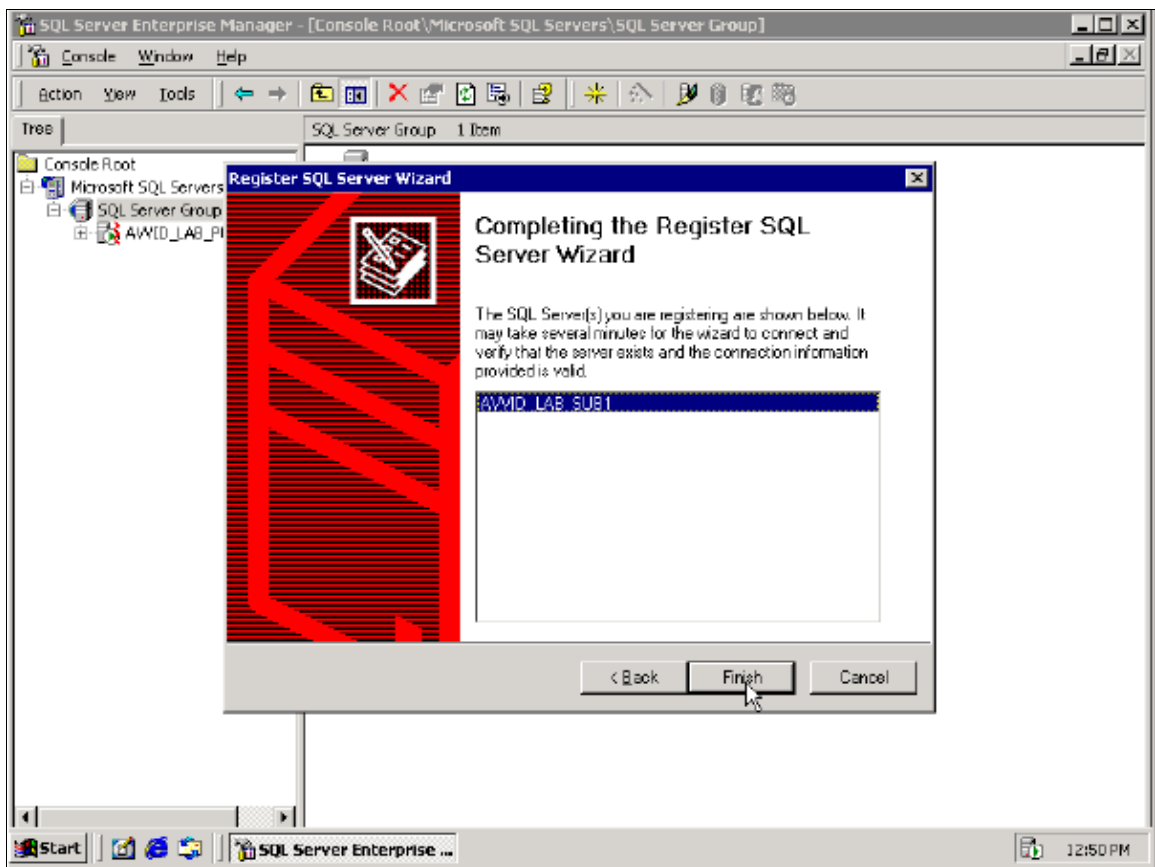


7. Choose the option to **Add the SQL server(s) to the existing SQL Server group** in the Select SQL Server Group window. The Group name chosen here is *SQL Server Group*.

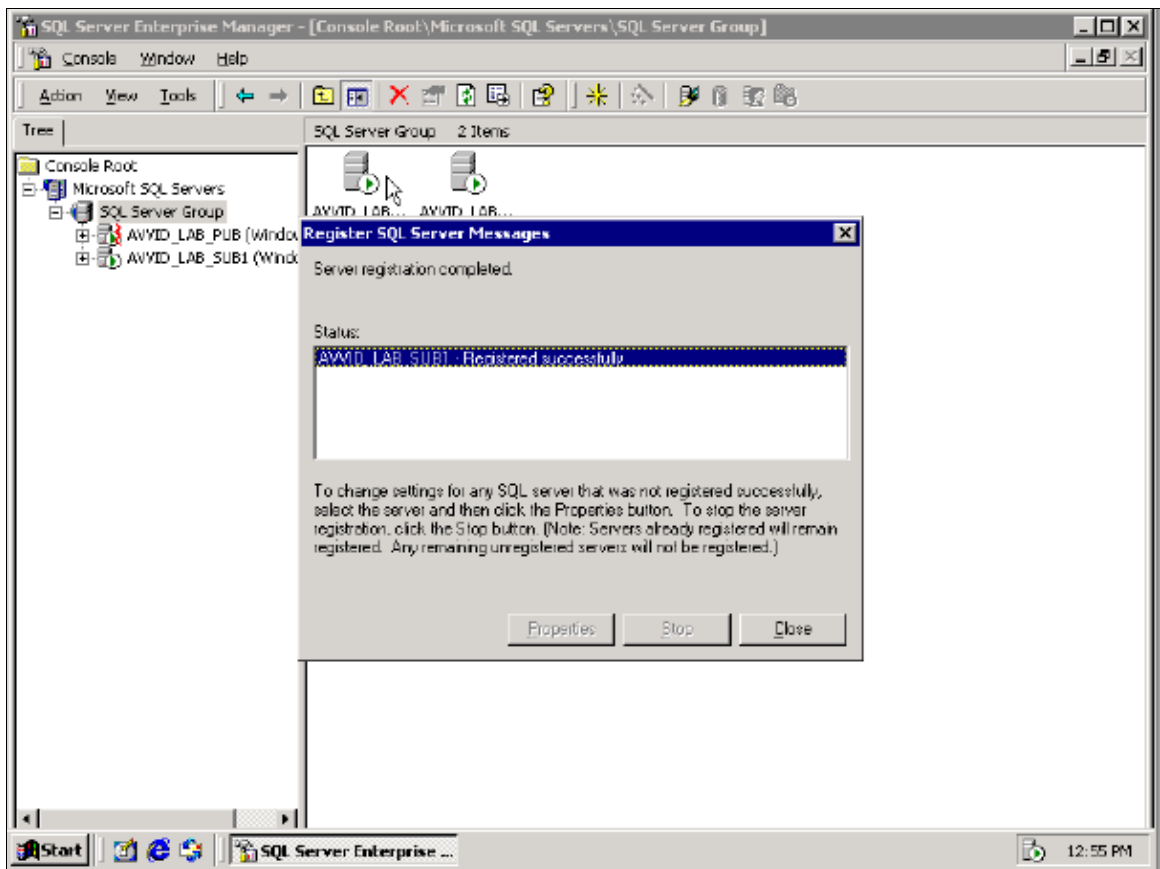


8. Click **Finish**.

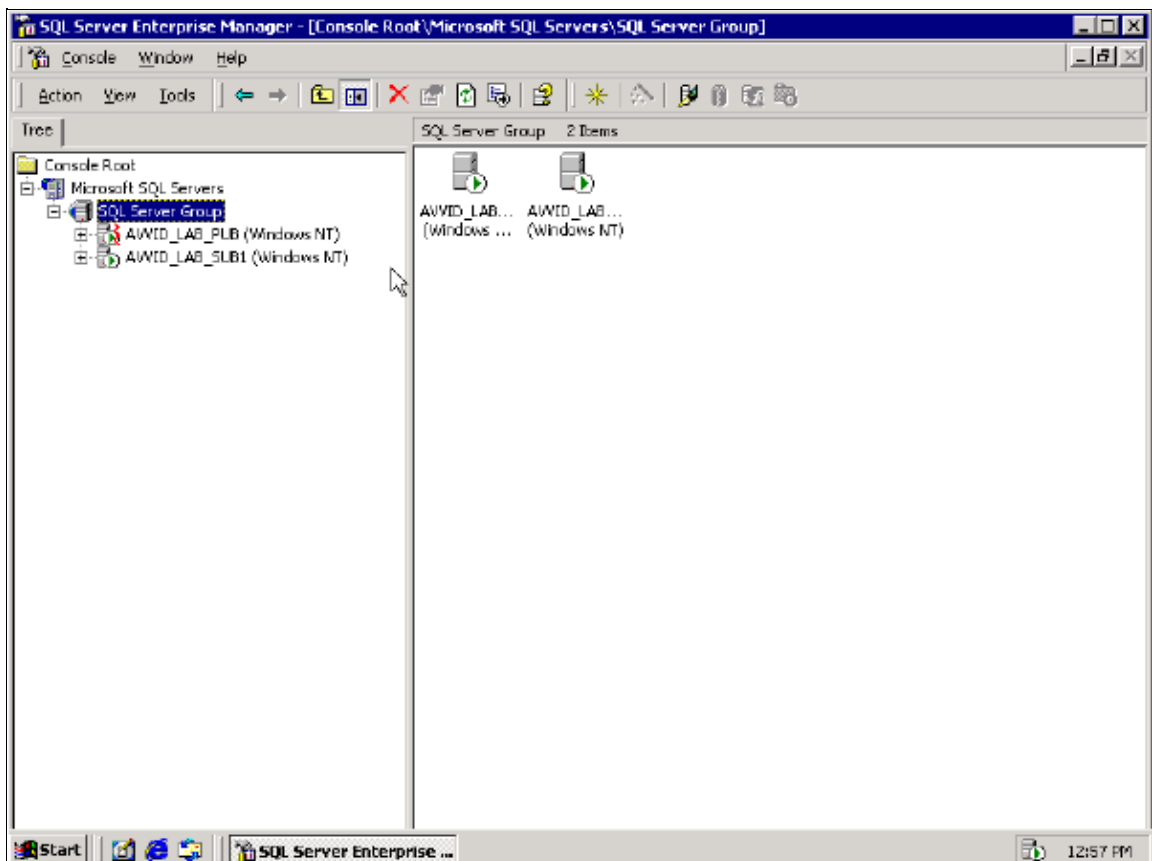
The status of the addition of the added server(s) displays.



9. The message states "Registered successfully". Click **Close**.



Something like this window appears.



If you see the two servers listed, it means that they are recognized by the publisher. Data can be shared with these servers.

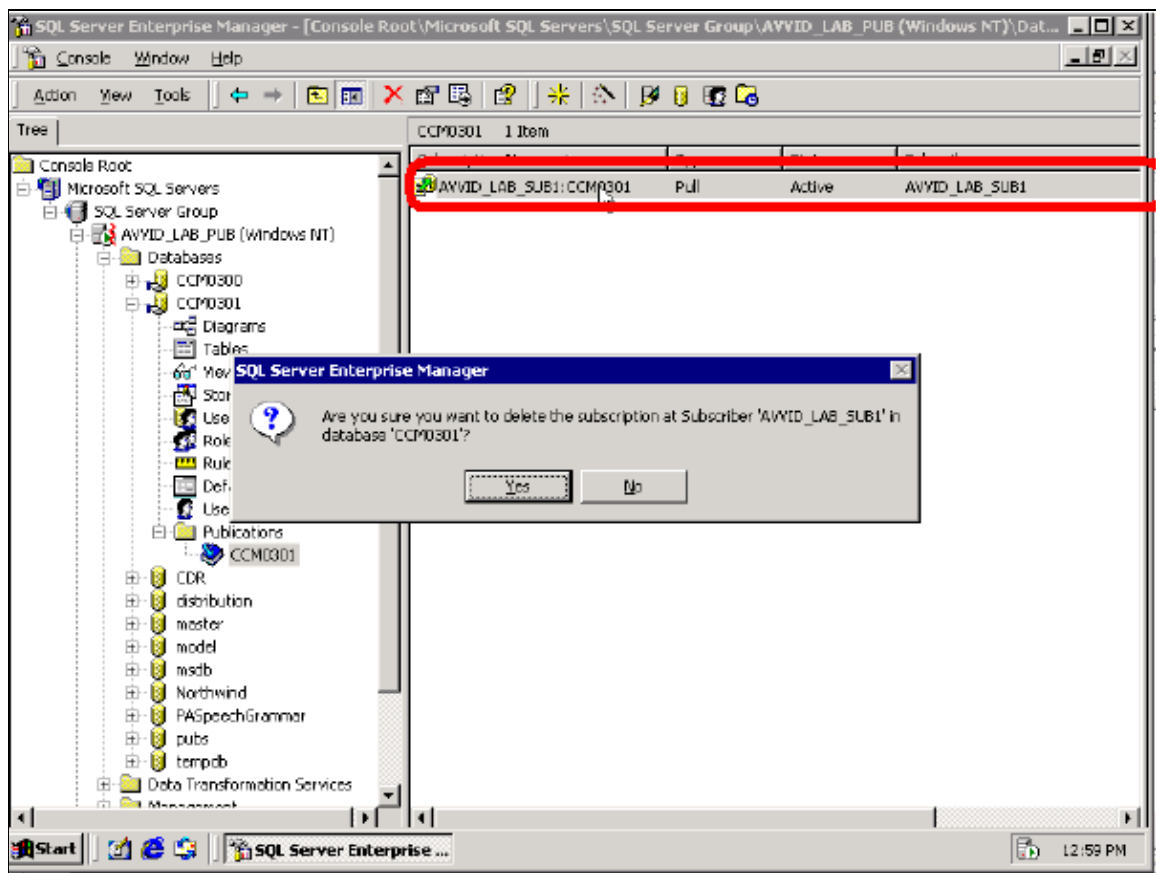
Delete the Subscription on the Publisher

Complete these steps:

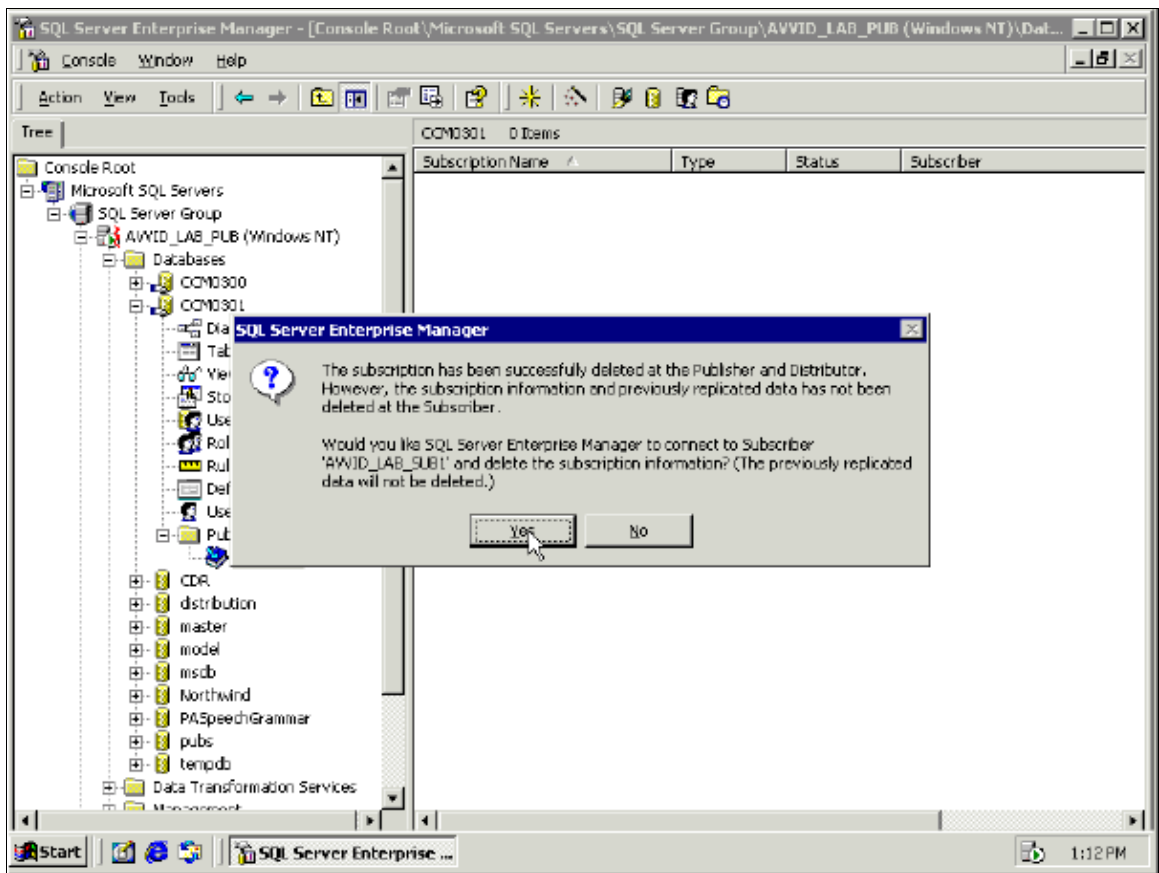
1. Under the Enterprise Manager, navigate to the SQL Server tree and locate the Publication for the CCM0301 database (**Microsoft SQL Servers > SQL Server Group > Machine_name > Databases > CCM0301 > Publications**). Select the Cisco CallManager subscription that fails and delete the entry.



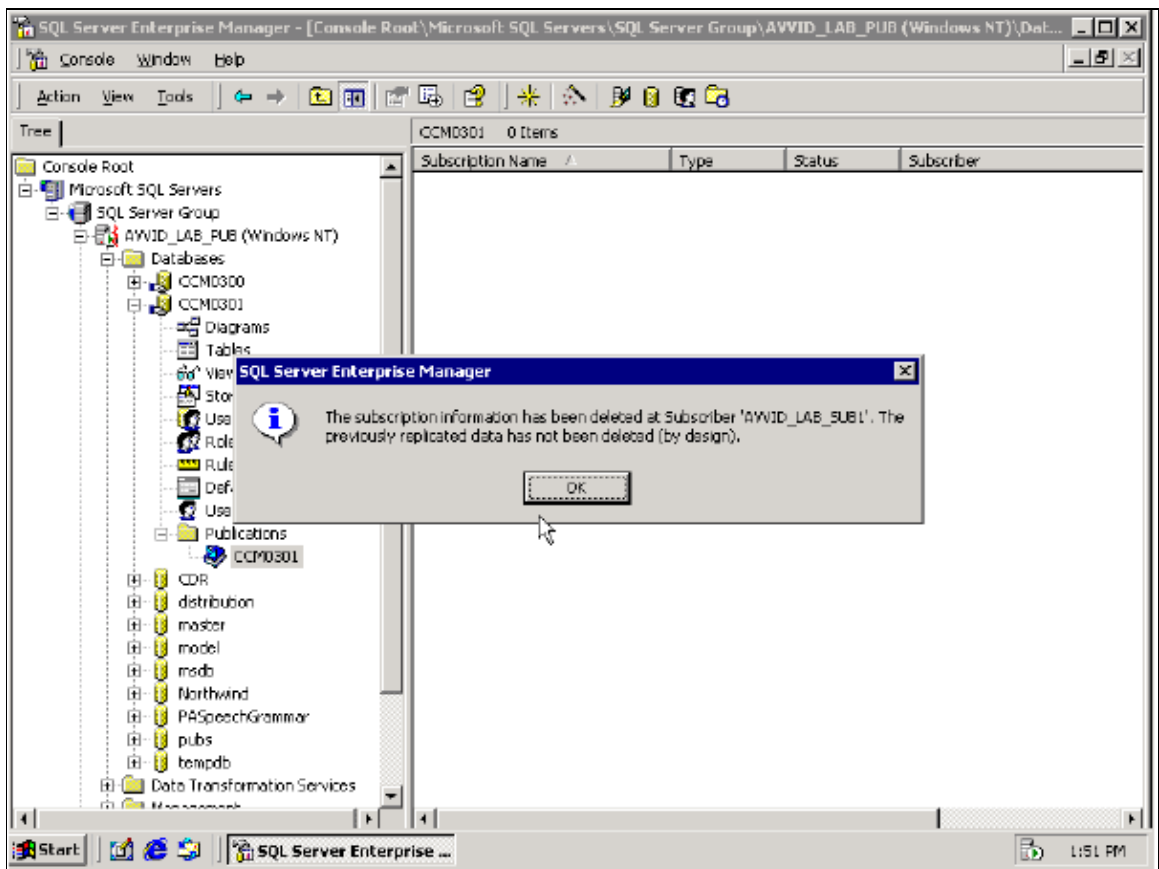
Caution: Select the area as shown by the arrow in this graphic. Do not delete the book icon on the left.



2. There is a warning that indicates that the subscription is removed at the publisher, but not the subscriber. Click **Yes** if you want to connect to the subscriber and delete the subscription.



3. The next message indicates that the subscription is deleted but the data is not deleted. Click **OK**.

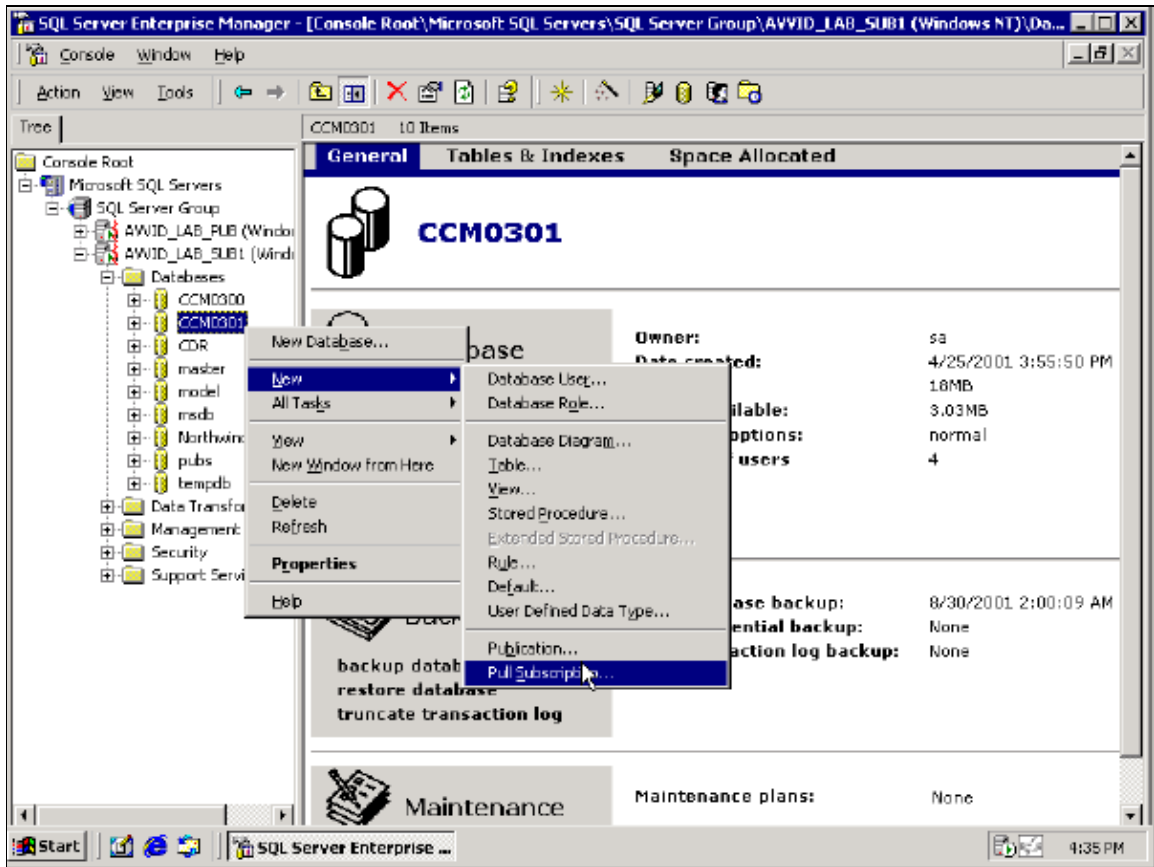


Recreate the Subscription on the Subscriber

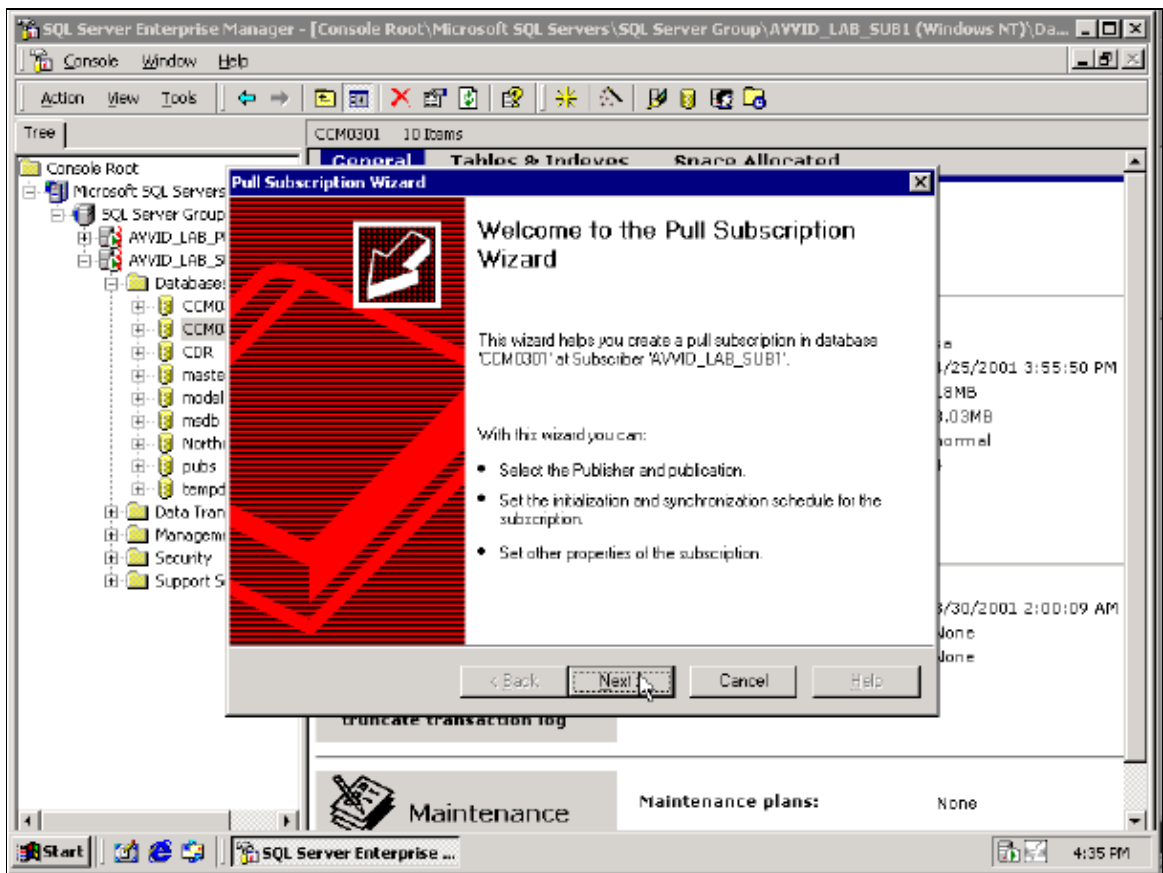
Complete these steps:

1. The subscription must be added back into the subscriber SQL server. Select the SQL server name of the subscriber that you just deleted from the publisher. In this configuration, the publisher is AVVID_LAB_PUB and the subscriber is AVVID_LAB_SUB1. You have just deleted the AVVID_LAB_SUB1 subscription from the AVVID_LAB_PUB publication. In order to resubscribe to the publication, choose the **AVVID_LAB_SUB1** SQL server and select the **CCM0301** database. Right-click to get the menu. Then select **New > Pull Subscription** from the menu.

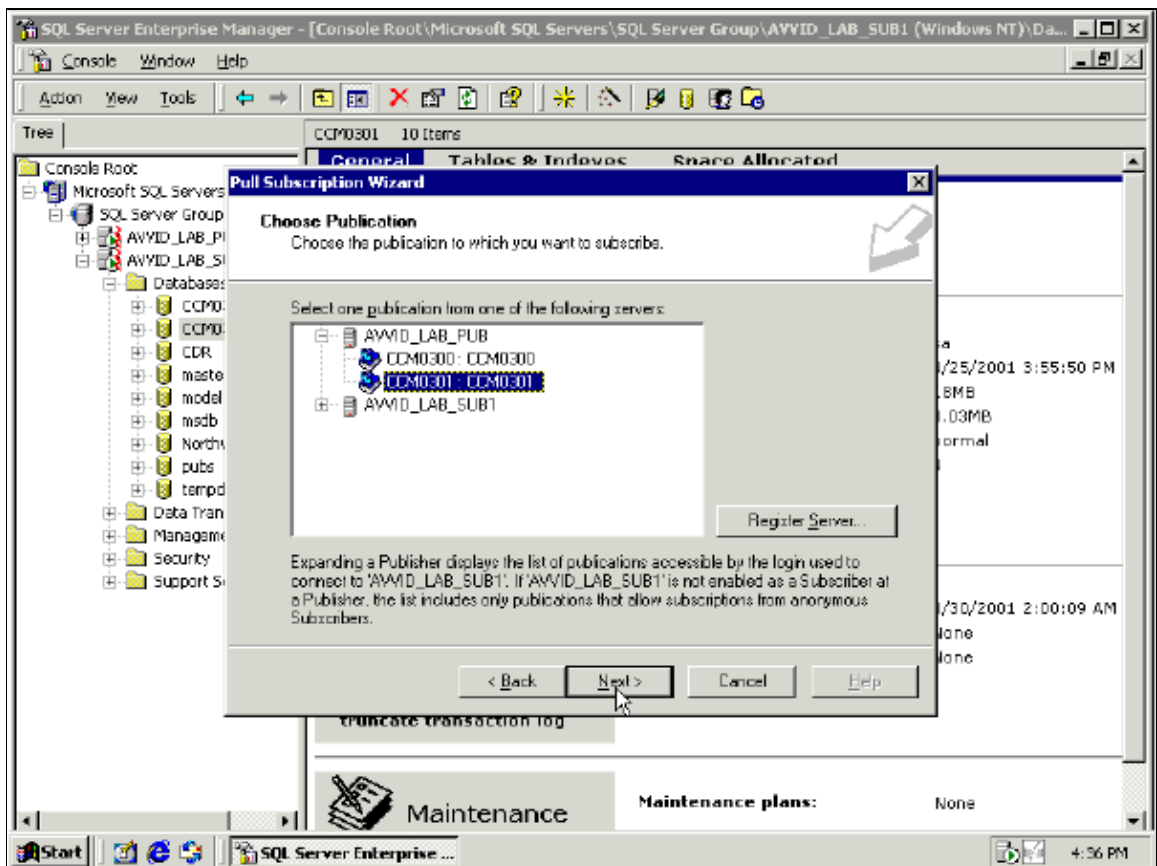
Note: Always choose the latest version of the database, not the earlier (CCM0301 in this example) version.



2. Click **Next** when the Pull Subscription Wizard appears.

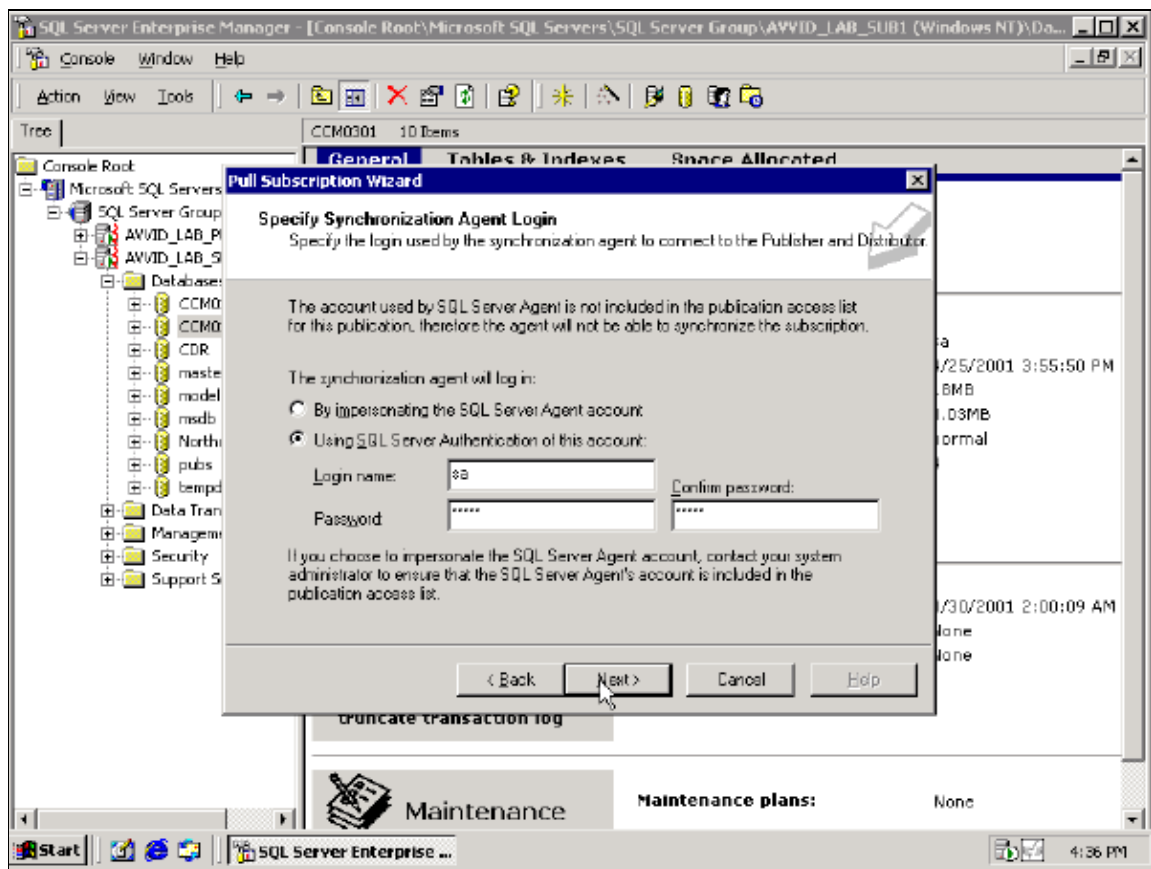


3. On the Choose Publication window, expand the publisher (which needs to be listed) and select the CCM0301 database. Click Next.

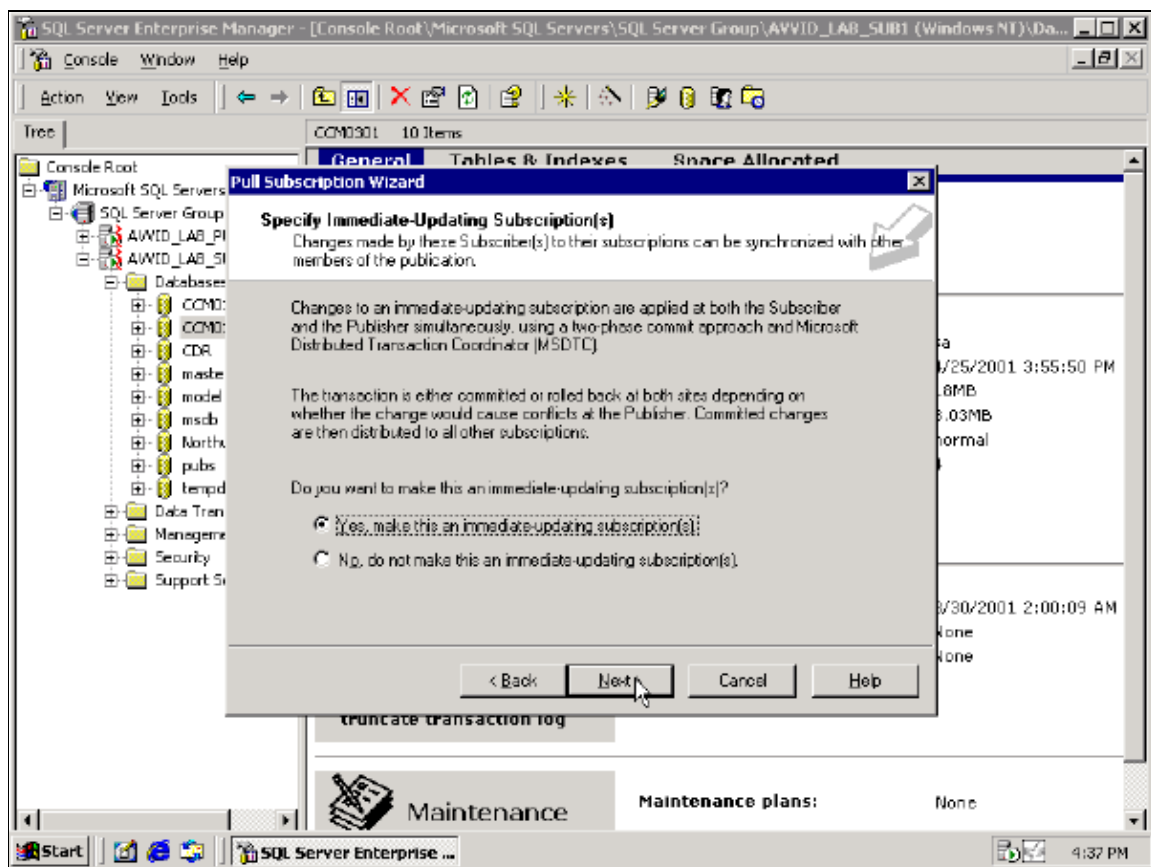


4. Select **Using SQL Server Authentication of this account** on the Specify Synchronization Agent Login window

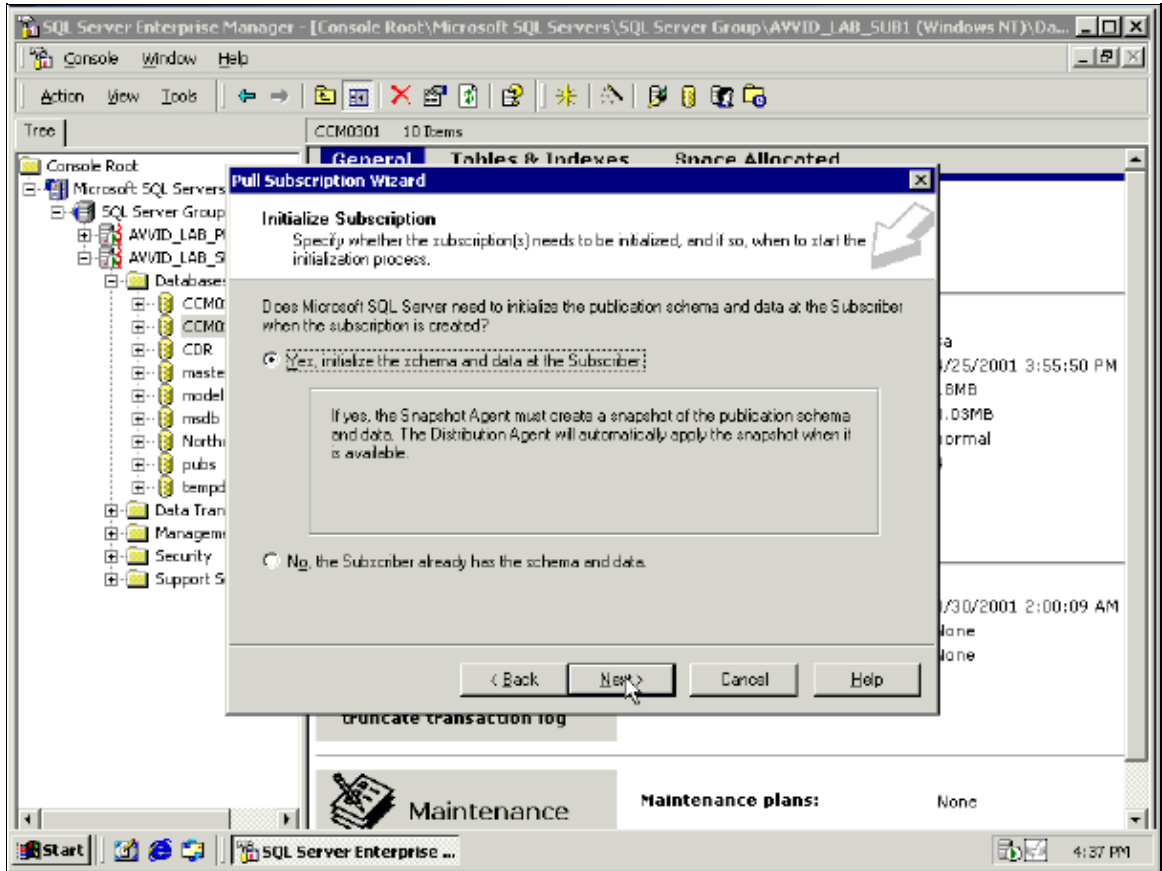
. The login name is sa and the password is the same password as the publishers 'sa' account.



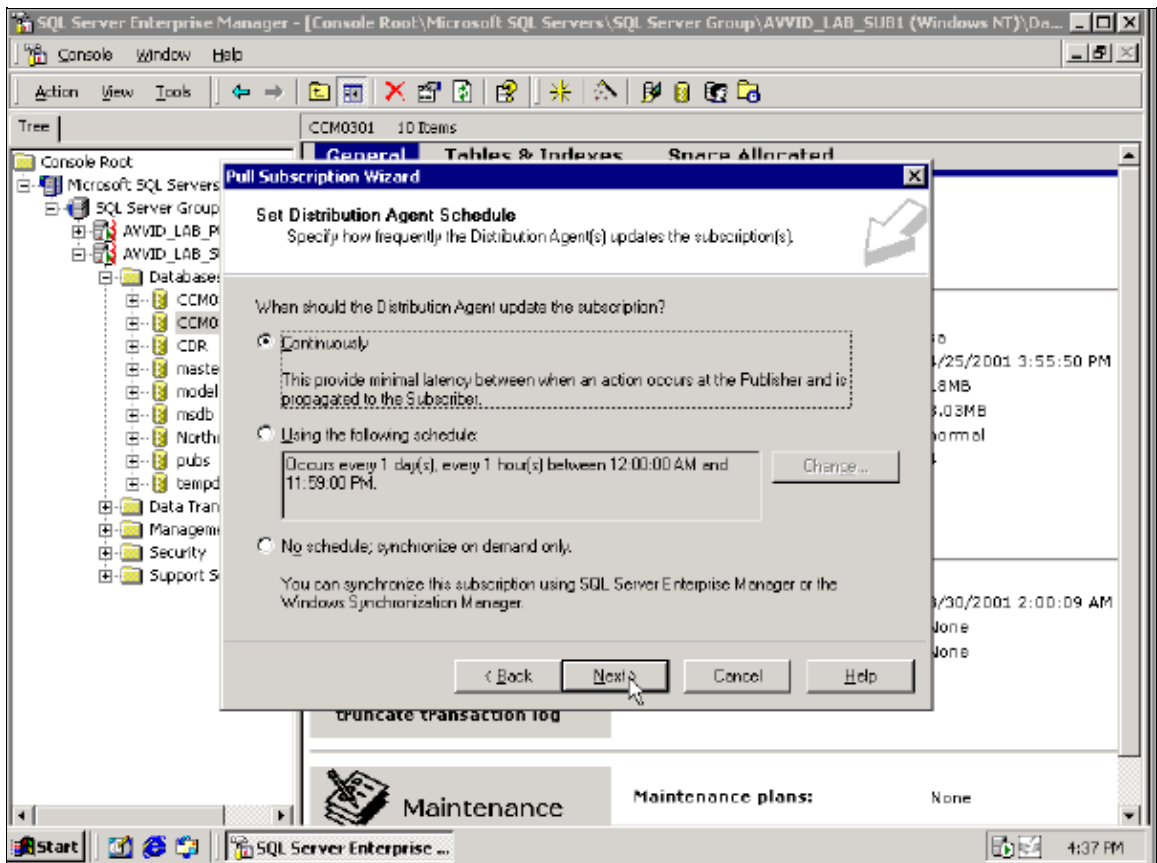
5. Select **Yes, make this an immediate-updating subscription(s)** on the Specify Immediate-Updating Subscription(s) window. Then click **Next**.



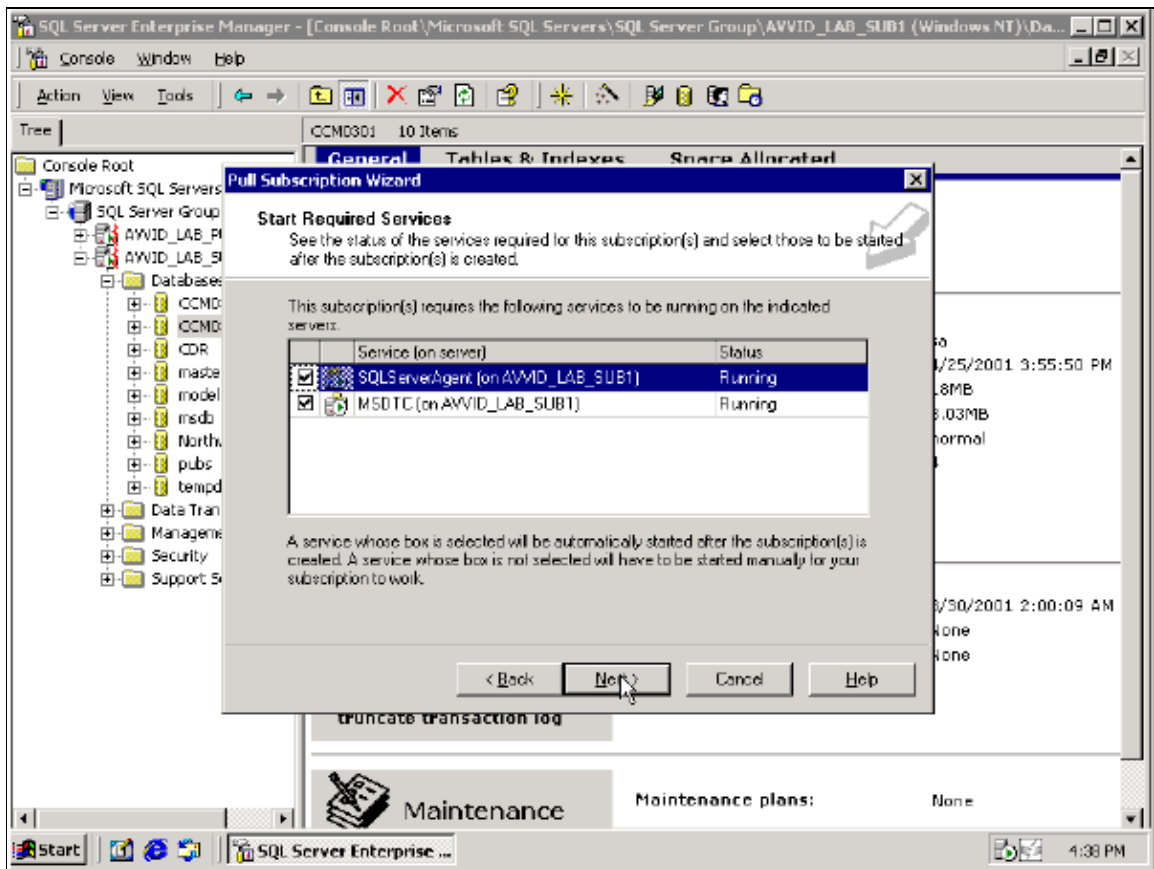
6. Select **Yes, initialize the schema and data at the Subscriber** on the Initialize Subscription window and click **Next**.



7. Select **Continuously** on the Set Distribution Agent Schedule window and click **Next**.

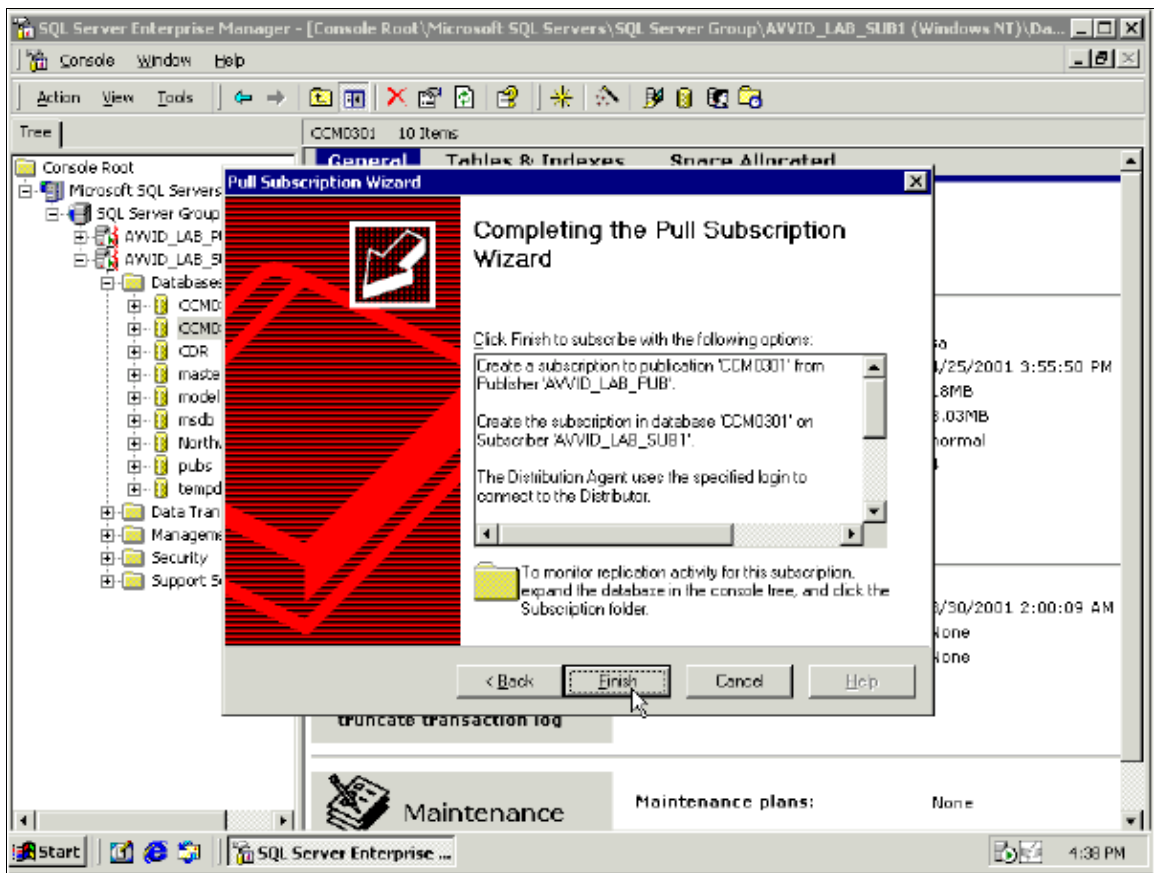


- The next step verifies that both the SQL server agent and the Microsoft DTC services run. Click **Next**.

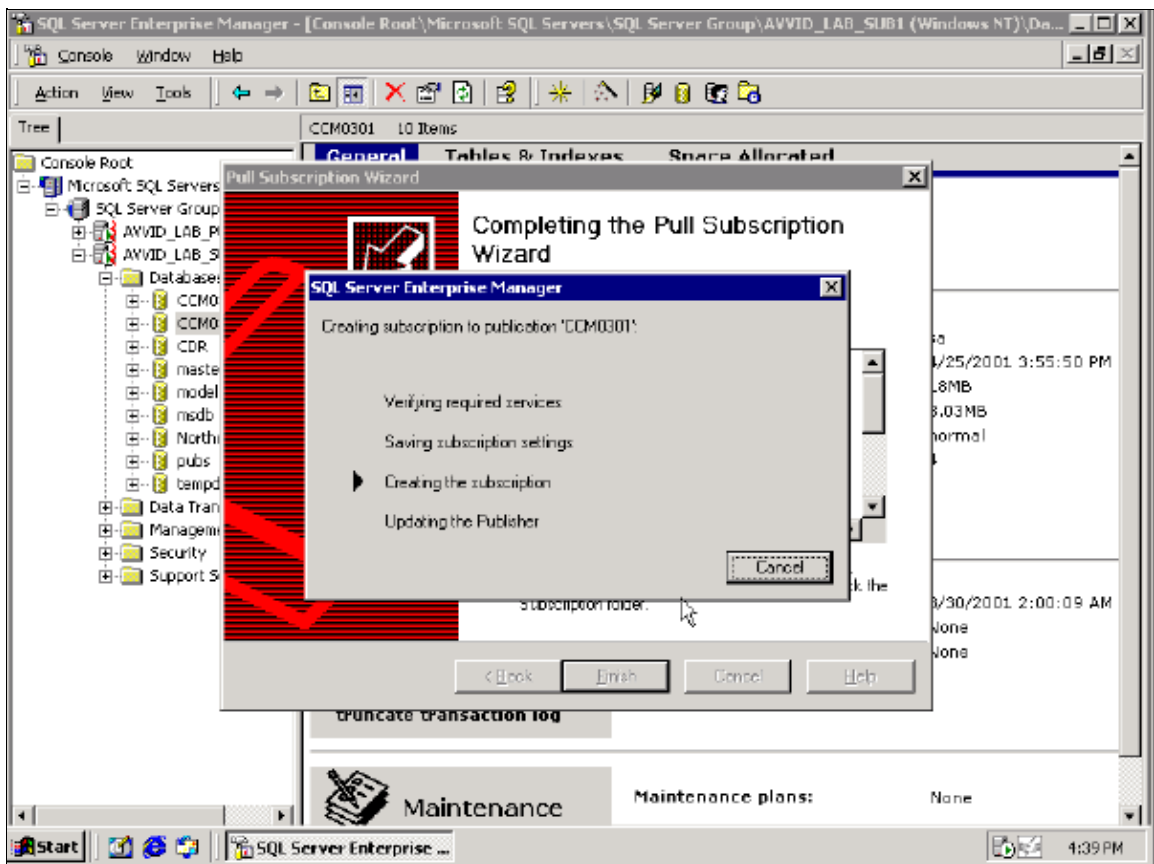


- Click **Finish** on the Completing the Pull Subscription Wizard window.

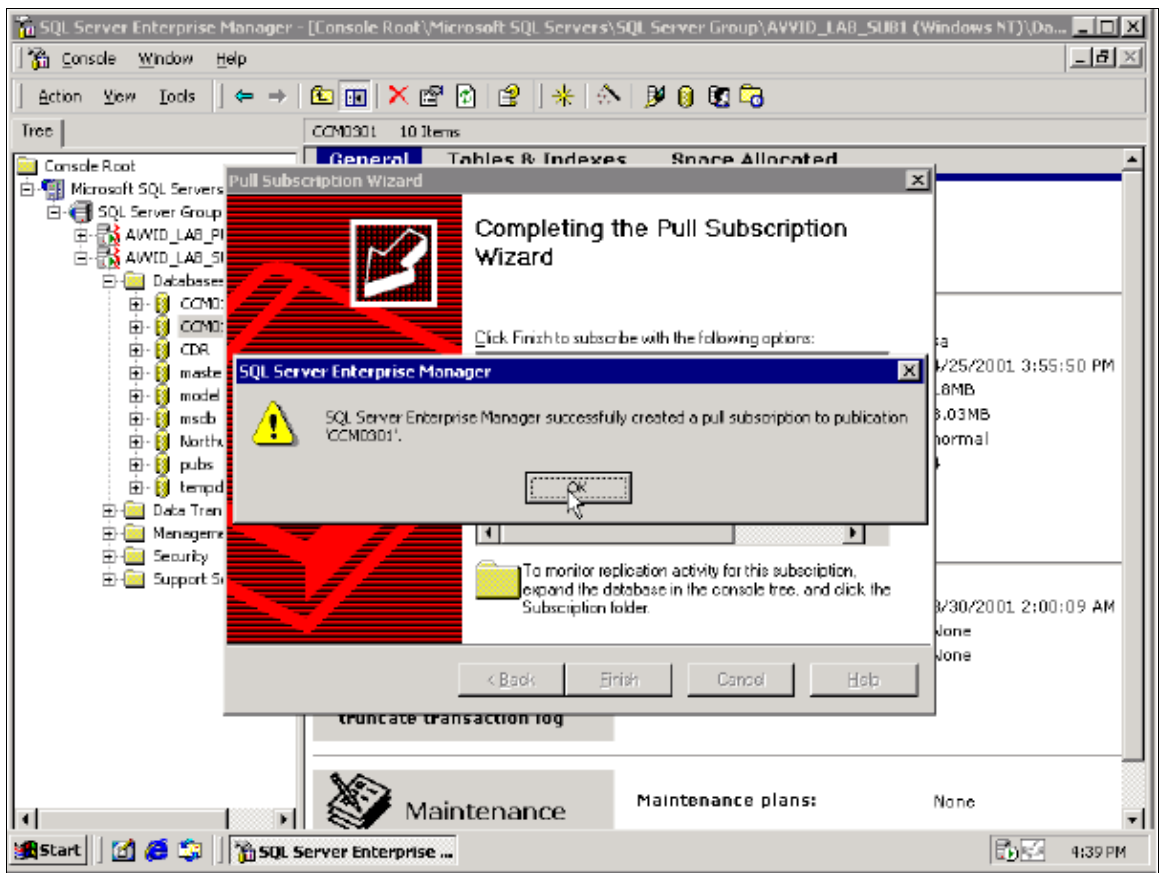
The Wizard sets up the subscription and displays a success when completed.



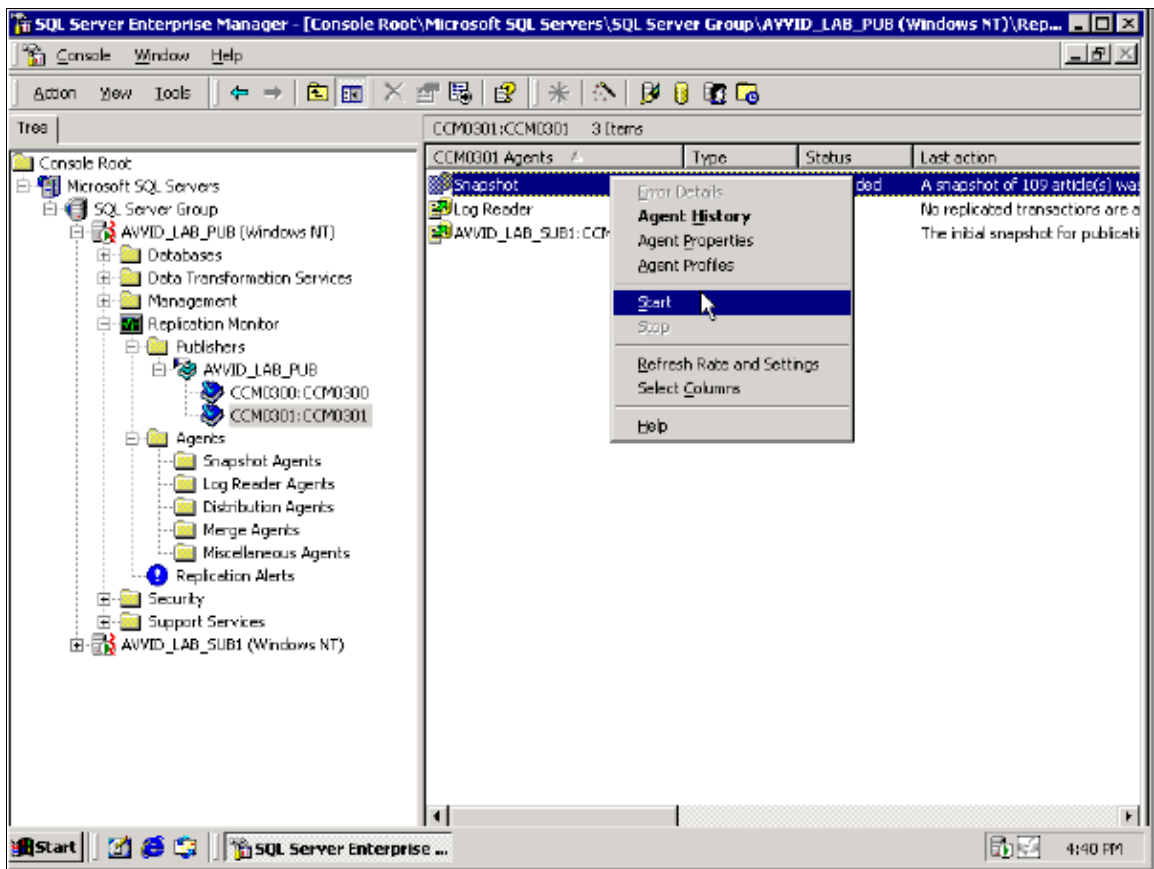
The Wizard sets up the subscription.



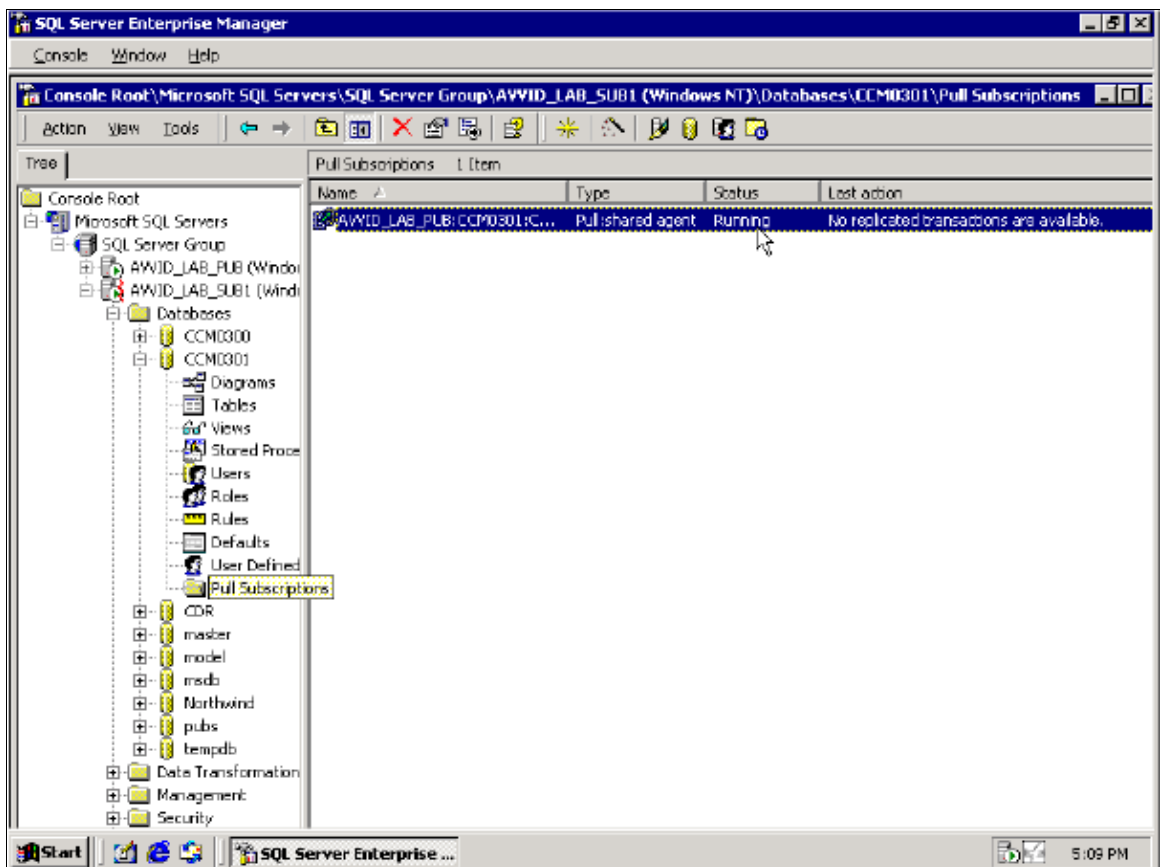
A display that indicates success appears when the process completes.



10. Now that the subscription is created, the snapshot agent must be run in order to get the data out to the subscriber for synchronization. Select the publisher SQL server and navigate to **Replication Monitor > Publishers > Machine_name > CCM0301** subscription. Select the **Snapshot** entry and choose **Start**. The snapshot agent runs at this point. It takes about three to five minutes to complete the task. Once the snapshot agent completes, the pull agent starts to apply the snapshot to the subscriber. This takes another three to five minutes.



- Once the pull subscription completes, on the publisher, select the subscriber SQL server and open the pull subscriptions for the CCM0301 database. The subscription needs to be in an active state and it needs to wait for updates.



Note: If the last action still reads "Waiting for snapshot agent to become available", press **F5** in order to refresh the screen.

At this time, the subscriber is now resynchronized with the publisher and updates are recorded in the local subscriber SQL database.

Verify the SQL Subscription Works

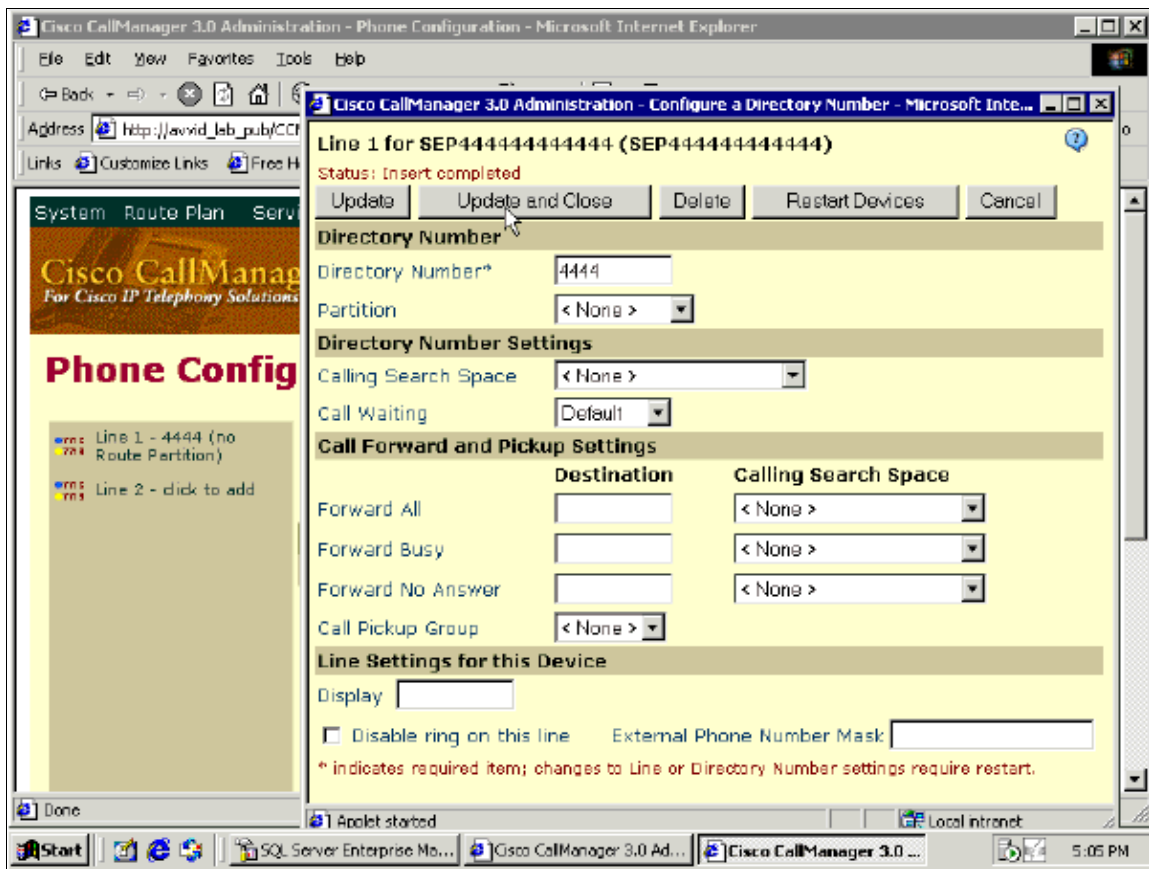
Complete the steps:

1. Create a device on the publishing server that is easily recognizable to test the propagation of data. Click **Insert**.

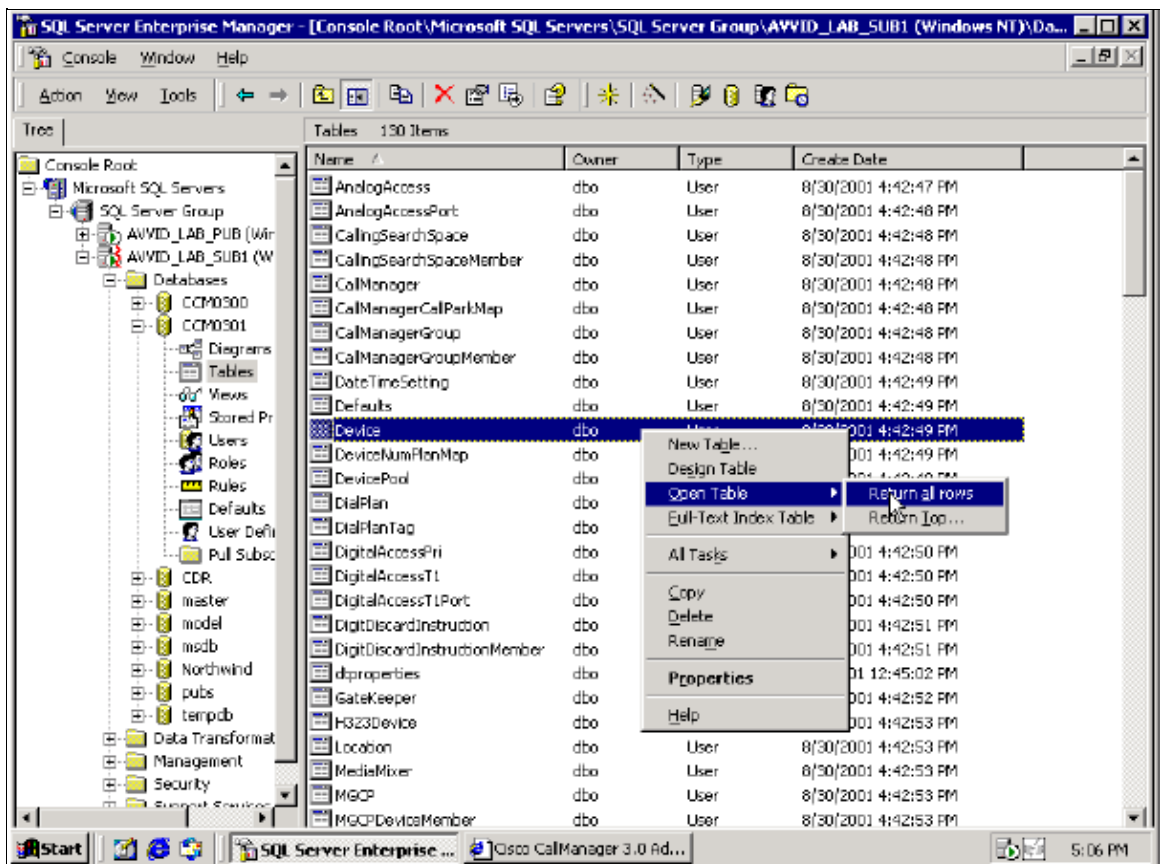
The screenshot shows the Cisco CallManager 3.0 Administration interface in a Microsoft Internet Explorer browser window. The browser's address bar shows the URL: `http://awwid_job_pub/CCMAdmin/phoneconfig.asp`. The page title is "Cisco CallManager Administration - Phone Configuration". The main content area is titled "Phone Configuration" and includes a "Back to Find/List Phones" link. A sidebar on the left contains the text: "Lines can be added after the new phone is inserted in the database." The main form is titled "Phone: New" and has a status of "Ready". It features "Insert" and "Cancel" buttons. Below the buttons is a section for "Phone Configuration (Model = Cisco 7940)" with a "Device Information" sub-section. The form fields are as follows:

Field	Value
MAC Address*	444444444444
Description	SEP444444444444
Device Pool*	Default (view details)
Location	<None >
Calling Search Space	<None >

2. The device does not need to be functional. Click **Update and Close**.



- Go into the SQL Enterprise Manager, expand the SQL subscriber in question and look in the database table to see if the new device is present.



The more recognizable the device is, the easier it is to find.

pid	name	description	hwModel	hwDeviceProtocol	hwProtocolSide	specialLoadInform	hwDevicePool
-1011CA955-2C66-4	SEP003094C27795	Auto 1000	7	0	1	<NULL>	-18189EB6-780C
-E5B643EF-C1A7-4	SEP003094C27918	Auto 2002	7	0	1		-18189EB6-780C
-FD857B8B-DD37-4	SEP003094C28138	Garys cube 1001-7	7	0	1		-18189EB6-780C
-75A2093F-D08F-4	SEP003094C2856B	SEP003094C2856B	7	0	1		-18189EB6-780C
-FD753F7A-9CCL-4	SEP003094C28286	Auto 2019	7	0	1		-373C75DC-4B61
-1331E78CC-6946-4	SEP003094C34F69	SEP003094C34F69	7	0	1		-18189EB6-780C
-4526A20D-0E91-4	SEP003094C35703	Auto 2023	7	0	1		-7040B442-6081
-33E82250-D896-4	SEP003094C3799A	Auto 2010	7	0	1	<NULL>	-18189EB6-780C
-1B2476BD-35D3-4	SEP003094C3808C	Auto 2005	7	0	1	<NULL>	-18189EB6-780C
-6C2F2773-DF92-4	SEP003094C38971	SEP003094C38971	7	0	1		-18189EB6-780C
-E6444576-4A43-4	SEP003094C38E62	3000	7	0	1		-18189EB6-780C
-5D05A074-FDBE-4	SEP003094C3AD64	Auto 2026	7	0	1		-18189EB6-780C
-8E88C8EC-D66F-4	SEP003094C38FFE	Martha's phone	7	0	1		-18189EB6-780C
-2992DBE0-6526-4	SEP003094C3C1FE	3002	7	0	1		-18189EB6-780C
-D98B9514-4D49-4	SEP003094C3CCD4	Auto 2004	7	0	1	<NULL>	-18189EB6-780C
-FF22678D-262F-4	SEP00503EFFF0A89	Genev Test	7	0	1		-04B4D704-4791
-D0403163-5D3F-4	SEP00B06409E8C3	Auto 2030	2	0	1	<NULL>	-18189EB6-780C
-A8F26943-D667-4	SEP123456899879	SEP123456899879	7	0	1		-18189EB6-780C
-979158FD-D3F5-4	SEP235436357452	SEP235436357452	8	0	1		-18189EB6-780C
-770E8999-04F4-4	SEP404040404040	SEP404040404040	6	0	1		-373C75DC-4B61
-603416BA-7F7D-4	SEP444444444444	SEP444444444444	8	0	1		-18189EB6-780C
-003F8784-2674-4	SEP987321456985	test2 7940	8	0	1		-18189EB6-780C
-F38C39F6-121F-4	SEP999568999999	SEP999568999999	7	0	1		-18189EB6-780C
-5AF0B947-EDC6-4	SEP999999993000	3000 intercept	7	0	1		-18189EB6-780C
-7509F32C-0747-4	SEP999999993001	3001 intercept	7	0	1		-18189EB6-780C
-E43F9DA3-1B8A-4	SEP999999993002	3002 intercept	7	0	1		-18189EB6-780C
-4C297199-9D1B-4	SEP999999996500	6500 PA	7	0	1		-18189EB6-780C
-203D605A-5359-4	SEP999999996501	PA 6501	7	0	1		-18189EB6-780C
-A5230140-D63B-4	SEP999999996502	PA 6502	7	0	1		-18189EB6-780C
-C4DD6625-D7DD-4	SEP999999996503	PA 6503	7	0	1		-18189EB6-780C
-741A4DE6-F226-4	SEP999999999999	SEP999999999999	7	0	1		-18189EB6-780C

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- [Voice Technology Support](#)
- [Voice and IP Communications Product Support](#)
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Updated: Feb 03, 2006

Document ID: 13977