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| Author                                    | Date          | Rev     |
| Pål K. Hansen                             | 25. June 2013 | 01      |

## TECDIS Synchronization Installation Guide

This document describes the steps needed to configure automatic chart database synchronization between two or more TECDIS or TELchart ECS systems.

### PREPARATIONS ON SHORE

1. Obtain the **System ID numbers** for all TECDIS and/or TELchart ECS units that are going to be included in the chart database synchronization. A procedure to obtain this number is included in the “Supporting Procedures” section.
2. Obtain **Software Version numbers** for each TECDIS and/or TELchart ECS. A procedure to obtain this number is included in the “Supporting Procedures” section.
3. Order a **Synchronization Upgrade Kit** from your TECDIS/ TELchart ECS supplier. Important: Specify all System ID numbers from step 1 and Software Version numbers from step 2 when ordering this kit.
4. When the synchronization upgrade kit is received, **verify that it contains new ‘JGeT’ type etokens** for each System ID number specified when ordering the kit and instructions for switching the etoken for each system.
5. For each TECDIS unit where the Software Version number obtained above is lower than **4.7.2.18**, verify that the synchronization upgrade kit contains update instructions and software. If not, obtain the appropriate **update instructions and software** from <http://www.telko.no/furuno/> or your support contact.
6. For each TELchart ECS unit where the Software Version number obtained above is lower than **3.7.2.18**, verify that the synchronization upgrade kit contains update instructions and software. If not, obtain the appropriate **update instructions and software** from <http://www.telko.no/furuno/> or your support contact.
7. Download **TECDIS-Sync-Installer.exe** from <http://www.telko.no/furuno/> and place it on a USB memory stick.
8. Download the **TECDIS Synchronization User Guide** from <http://www.telko.no/> and place it on a USB memory stick. Optionally print a copy of this guide for your own reference and/or to be left on the vessel as reference for the TECDIS operators.



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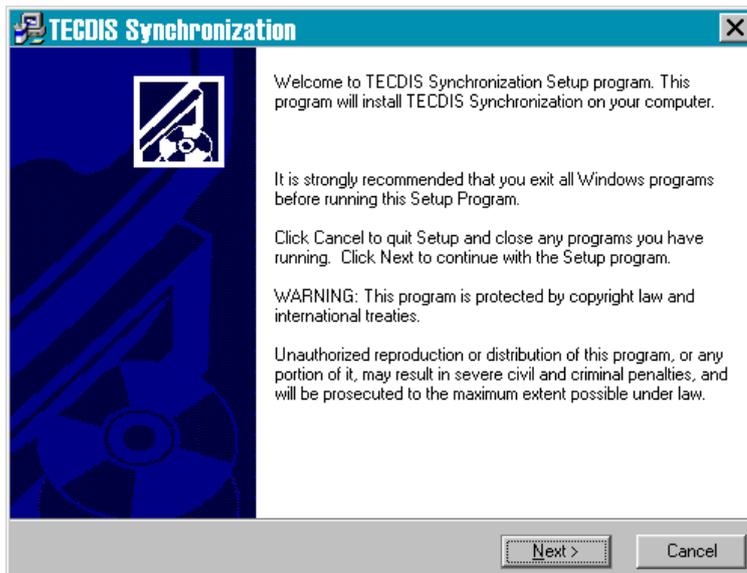
## INSTALLATION PROCEDURE

Perform the following steps on each TECDIS / TELchart ECS unit.

1. Obtain the System ID number and Software Version number for the unit by following the procedures included for this in the “Supporting Procedures” section further down.
2. Match the unit System ID with the ‘JGeT’ type etoken and update instructions supplied for the unit in the Synchronization Upgrade Kit.
3. Perform the update instructions from the Synchronization Upgrade Kit. When done, the unit should be using the new ‘JGeT’ type etoken and software version 4.7.2.18 (TECDIS) / 3.7.2.18 (TELchart ECS) or newer.

**Important: Keep the old etoken from the system and return it to your supplier! When returning it, the owner will be compensated for the cost of the new etoken.**

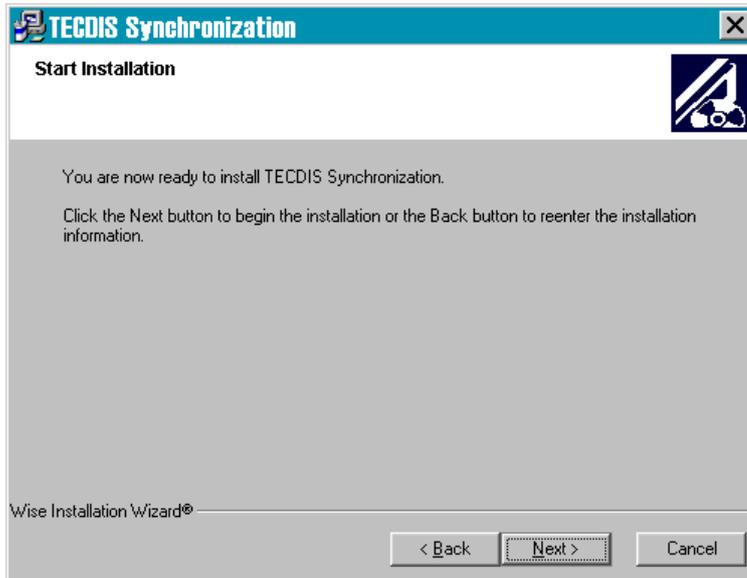
4. If the TECDIS software is running, insert the TECDIS Service Key and exit the TECDIS software (by pressing the toolbar button in the upper left corner of the display). Leave the TECDIS Service Key inserted.
5. Insert the memory stick containing **TECDIS-Sync-Installer.exe**, and run this installer.
6. Press ‘Next >’.



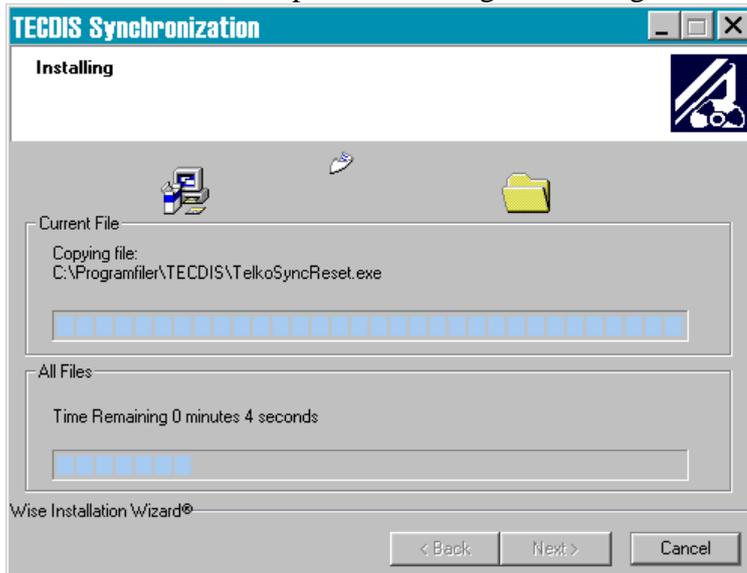


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7. Press 'Next >'.

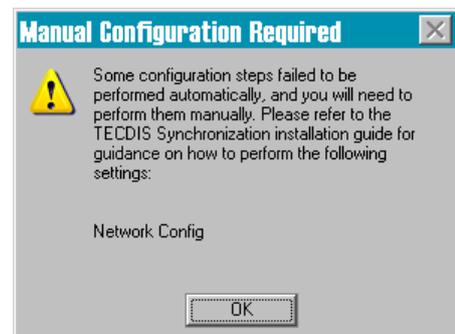


8. Wait while files are copied and settings are configured.



9. In special cases, one or more settings may fail to be configured automatically, and you will be notified of which configuration steps must be performed manually:

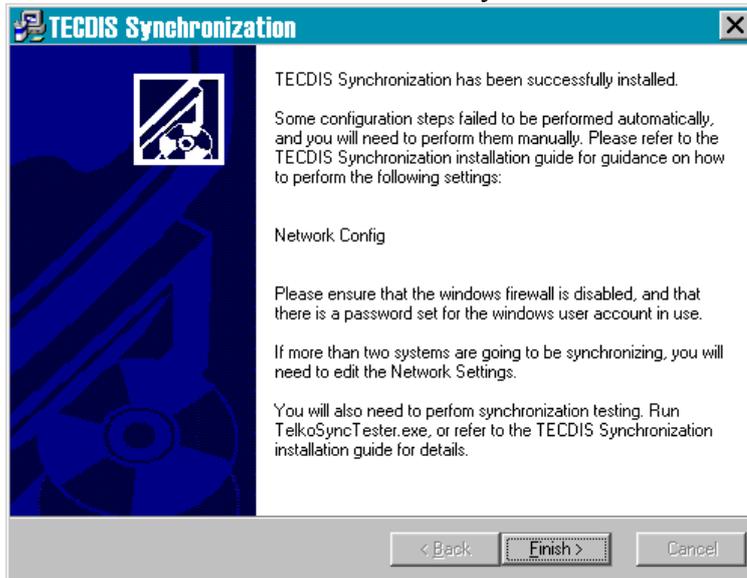
**Important: If this window appears, note down the steps that must be performed manually.**





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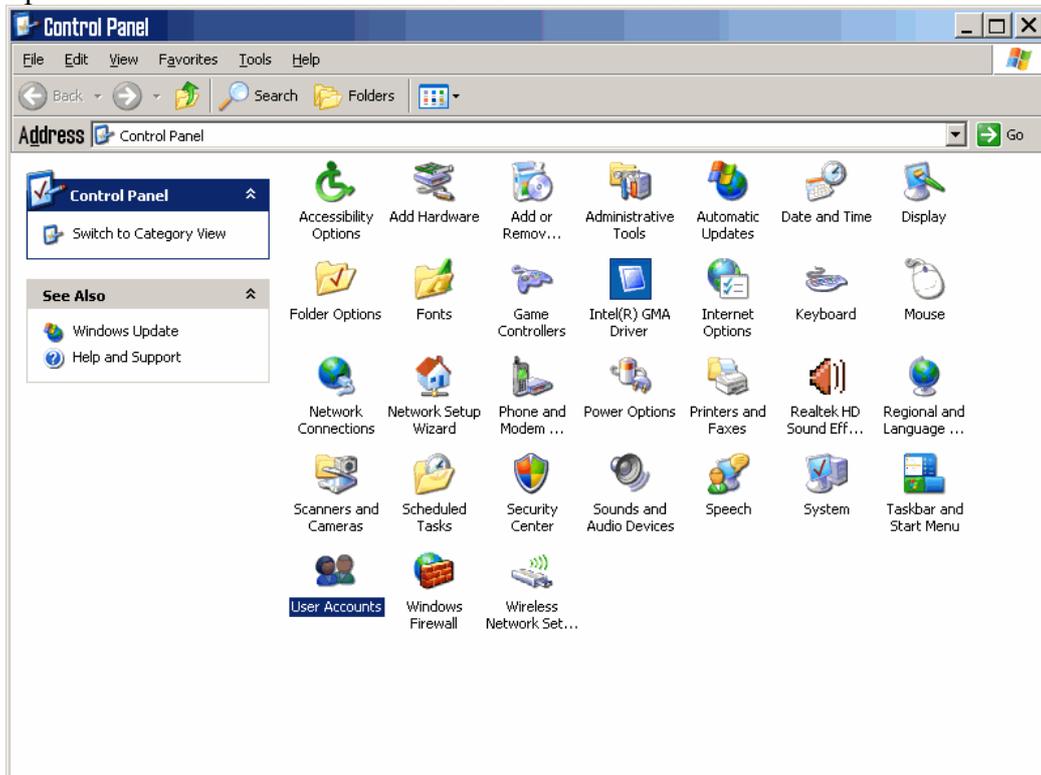
10. Press 'Finish' to close the TECDIS Synchronization Installer.



11. For any steps that failed to be configured automatically (that were noted in step 9), perform the separate procedure for each setting now. These procedures are described in the section “Manual Configuration Procedures”.

12. If this is not a TECDIS unit, perform the procedure “Configure Firewall” described in the section “Manual Configuration Procedures”.

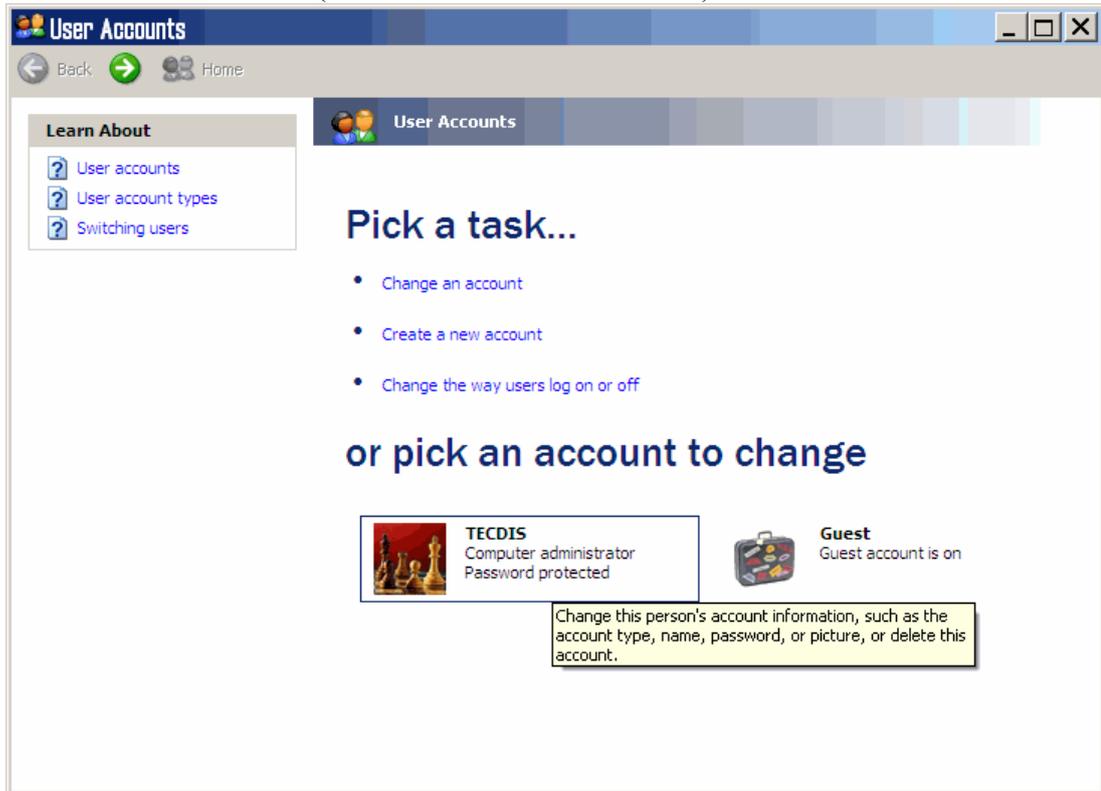
13. Open the Start menu and select ‘Control Panel’ and select ‘User Accounts’.



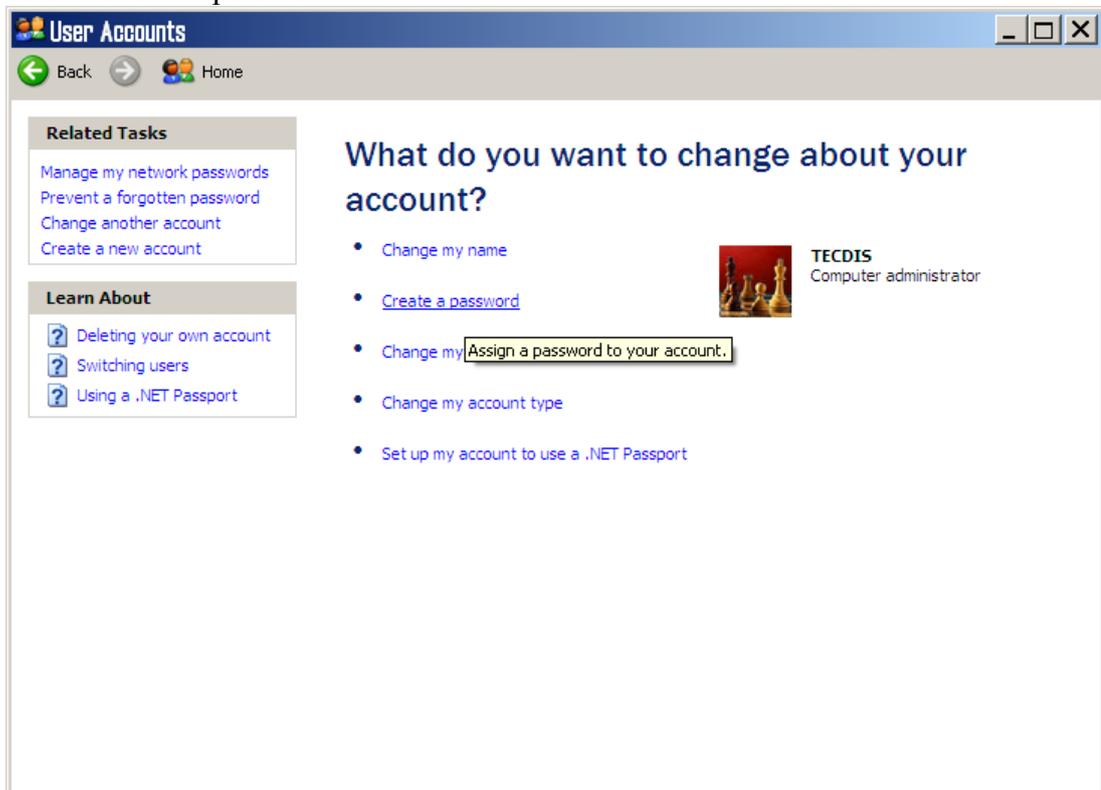


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14. Select the main account ('TECDIS' on a TECDIS unit).



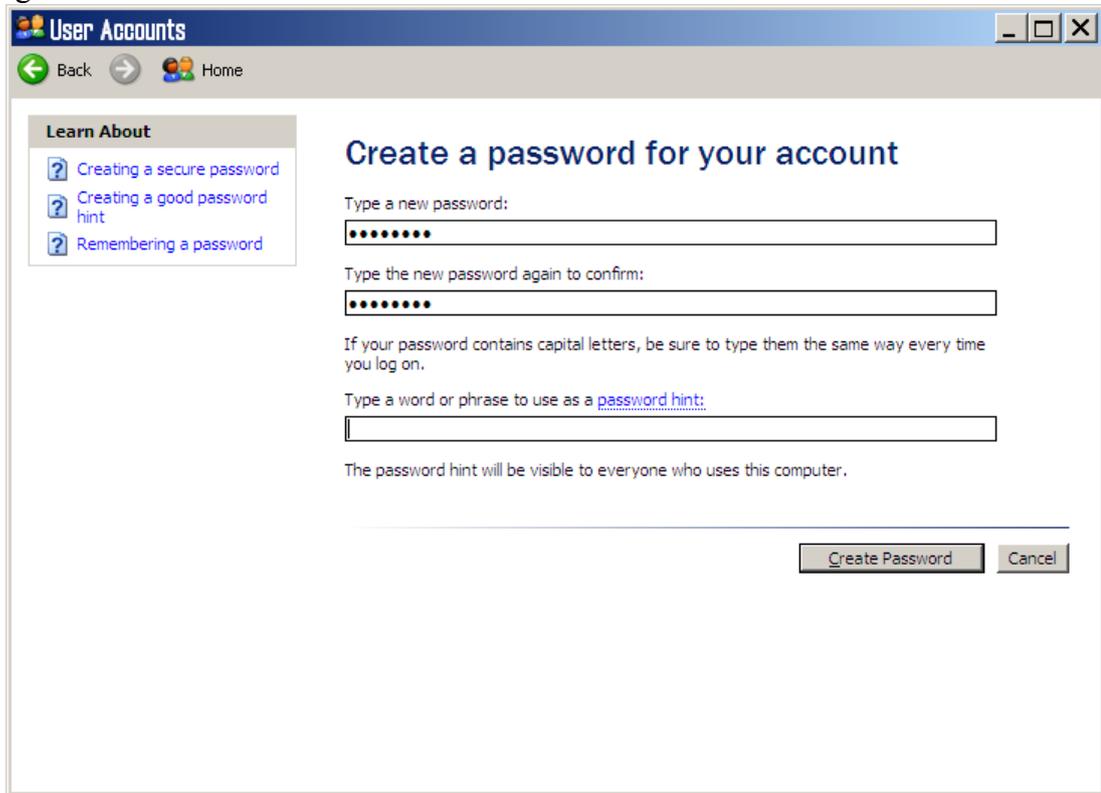
15. Select 'Create a password'.



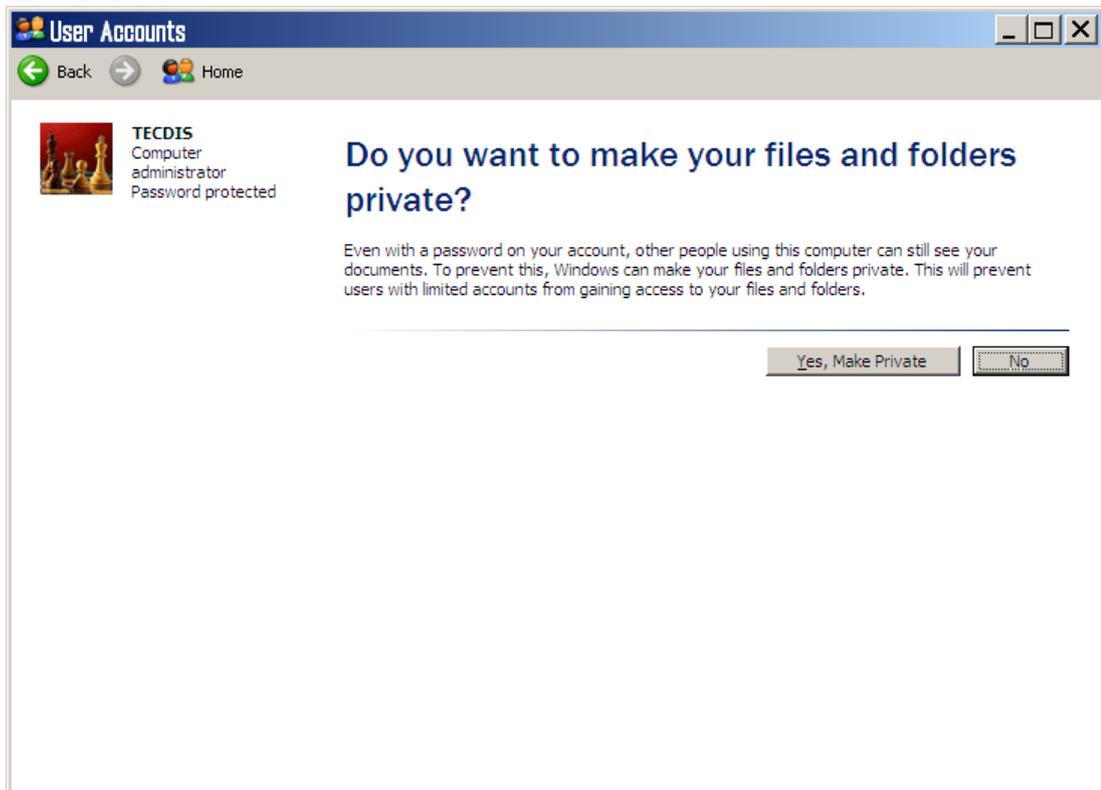


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16. Enter **'password'** in the fields 'Type a new password' and 'Type the new password again to confirm'. Then Press 'Create Password'.



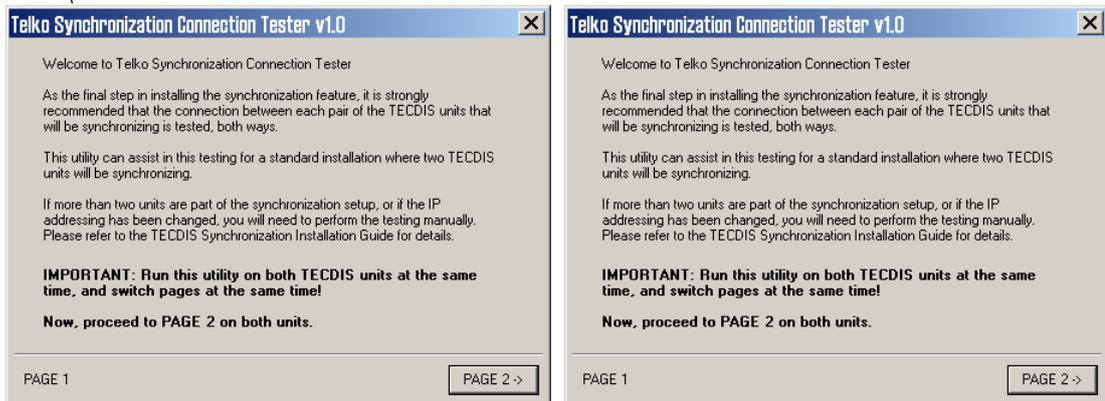
17. When asked the question 'Do you want to make your files and folders private?', answer 'No'.



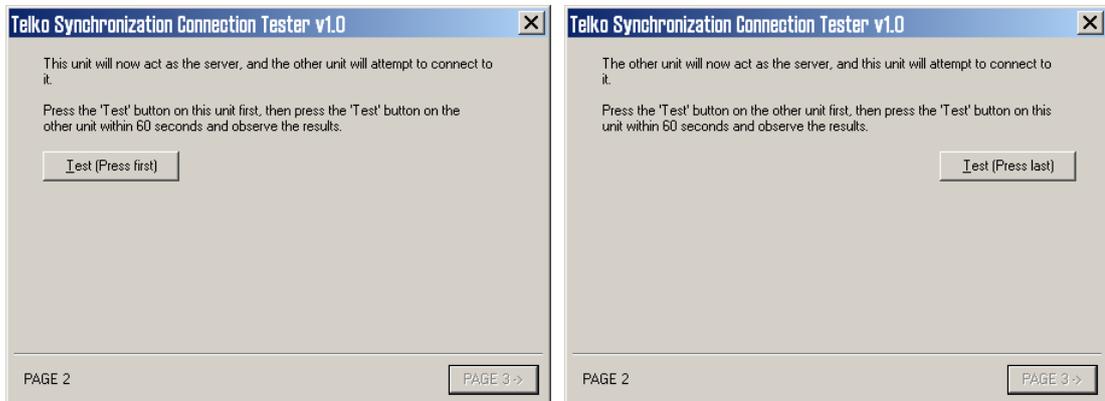


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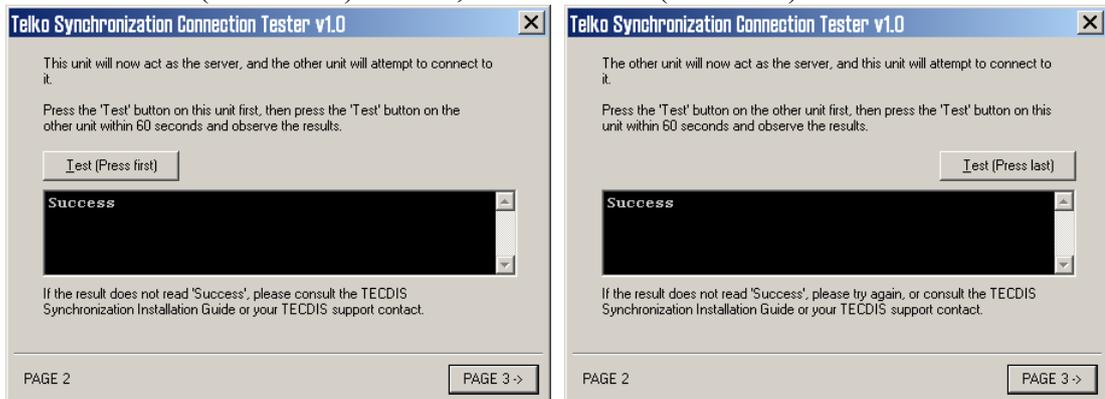
18. Repeat steps 1-17 for each additional unit.
19. If there are more than two units that will be synchronizing, or if one of the units is not a TECDIS unit, perform the procedure “Connection Testing” described in the section “Manual Configuration Procedures”. Otherwise, perform steps 20-26.
20. **On both TECDIS units**, start the program ‘TelkoSyncTester’ that can be found in the directory ‘C:\Program Files\TECDIS’ on a TECDIS unit, and in ‘C:\Program Files\TELchart ECS’ on a TELchart ECS unit.



21. Press ‘PAGE 2 ->’ on both TECDIS units.



22. Press the ‘Test (Press First)’ button, then the ‘Test (Press last)’ button.



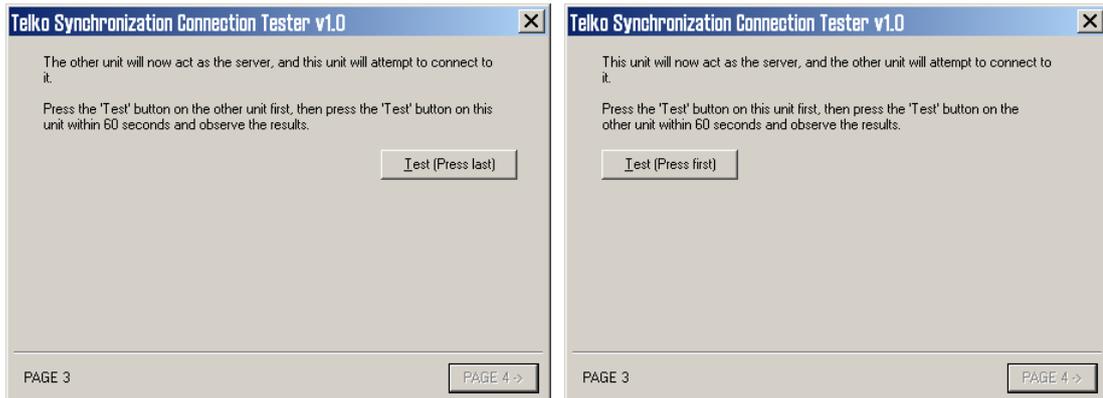


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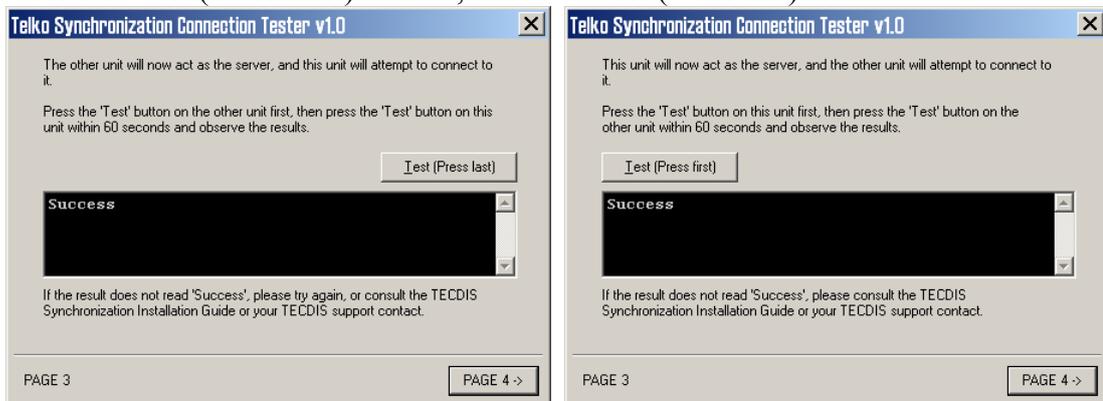
23. If the results windows do not read 'Success', check the network connection between the units and try again.

If the result is still not 'Success', go through the procedures in the section "Manual Configuration Procedures" below, and verify that the specified settings are set correctly. Try again. If the result is still not 'Success', report the error codes back to your support contact for assistance.

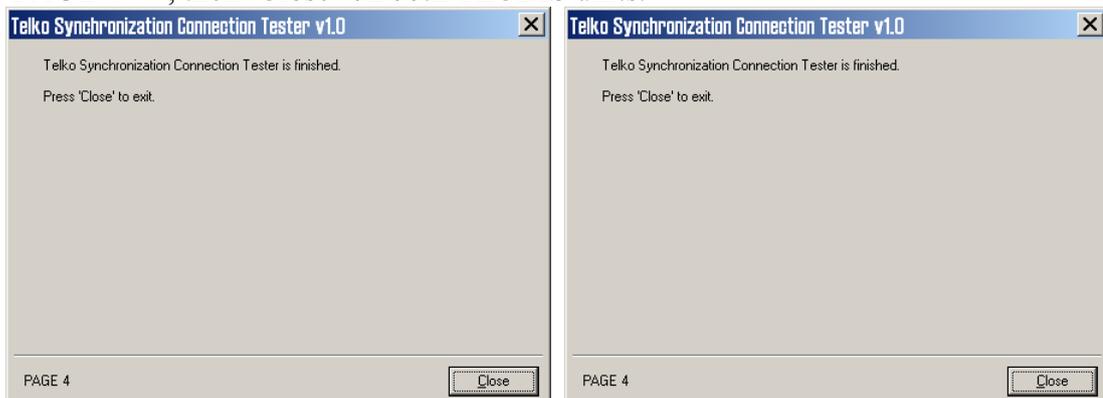
24. Press 'PAGE 3 ->' on both TECDIS units.



25. Press the 'Test (Press First)' button, then the 'Test (Press last)' button.



26. If the results are not 'Success', repeat the checks outlined in step 23. When done, press 'PAGE 4 ->', then 'Close' on both TECDIS units.





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27. Remove the TECDIS Service Key and restart the system.

The system will return to normal TECDIS mode in a few minutes and chart database synchronization will now be enabled. Note that any differences in the chart databases on the units included will now be synchronized.

28. Provide the operators of the systems with a copy of 'TECDIS Synchronization User Guide', either in electronic or paper form.



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## MANUAL CONFIGURATION PROCEDURES

The following procedures describe the manual procedures for some configuration settings that TECDIS-Sync-Installer may request to be performed manually. Only perform these procedures when instructed to do so in the main installation procedure.

### Network Config

The units that the synchronization feature will include in the synchronization process is determined by the configuration file **NetworkConfig.xml** found in the following directory (example of contents is shown with important lines shown in bold):

```
C:\Program Files\C-Map Professional SDK Runtime\System\Synchronization\NetworkConfig.xml
<?xml version="1.0" encoding="utf-8" ?>
<root>
  <!-- Local (this) node description, set the proper unique 'uid' for this node -->
  <!-- (Computer name for example) and node priority (priority should be unique) -->
  <!-- 1 means the highest priority, 2 - less priority, etc -->
  <selfInfo uid = "ECDIS-172.31.3.61" priority="1"/>
  <nodes>
    <!-- Remote nodes to synchronize with -->
    <!-- 'uid' describes the remote node ID, 'location' - Node IP address -->
    <node uid = "ECDIS-172.31.3.62" location = "172.31.3.62" />
    <!-- node uid = "RemoteNode2" location = "192.168.0.2"/-->
  </nodes>
</root>
```

1. For each unit, modify the NetworkConfig.xml file so that the line `<selfInfo ...` refers to the IP address of the unit in the signaling network.
2. For each unit, modify the NetworkConfig.xml file so that the line `<selfInfo ...` specifies a value for 'priority' that is different for each unit.
3. For each unit, modify the NetworkConfig.xml file so that it contains a `<node... line` for each of the remaining units (referring to the same 'uid' value specified in step 1 for each unit, and the IP address for the unit in the 'location' value).



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## Tecstart Config

The file **C:\Program Files\TECDIS\Tecstart.ini** defines which programs are started automatically when the TECDIS Service Key is not present during restart.

1. If the unit is a TECDIS unit, modify Tecstart.ini so that it specifies that **'TelkoSynchronizer'** is started before 'Telch5', with a delay of **15**.

Example:

| Tecstart.ini before | Tecstart.ini after             |
|---------------------|--------------------------------|
| [TSCOMMAND]         | [TSCOMMAND]                    |
| CL01=NoSM /S        | CL01=NoSM /S                   |
| CL02=Nmeaserver     | CL02=Nmeaserver                |
| CL03=Telch5         | CL03= <b>TelkoSynchronizer</b> |
| CL04=Nautosv1       | CL04=Telch5                    |
| CL05=               | CL05=Nautosv1                  |
| CL06=               | CL06=                          |
| CL07=               | CL07=                          |
| CL08=               | CL08=                          |
| CL09=               | CL09=                          |
| CL10=               | CL10=                          |
| CL11=               | CL11=                          |
| CL12=               | CL12=                          |
| CL13=               | CL13=                          |
| CL14=               | CL14=                          |
| CL15=               | CL15=                          |
| CL16=               | CL16=                          |
| [TSTIME]            | [TSTIME]                       |
| CT01=3              | CT01=3                         |
| CT02=10             | CT02=10                        |
| CT03=20             | CT03= <b>15</b>                |
| CT04=               | CT04=20                        |
| CT05=               | CT05=                          |
| CT06=               | CT06=                          |
| CT07=               | CT07=                          |
| CT08=               | CT08=                          |
| CT09=               | CT09=                          |
| CT10=               | CT10=                          |
| CT11=               | CT11=                          |
| CT12=               | CT12=                          |
| CT13=               | CT13=                          |
| CT14=               | CT14=                          |
| CT15=               | CT15=                          |
| CT16=               | CT16=                          |

2. If the unit is a TELchart ECS unit, ensure that **TelkoSynchronizer** is started minimum 5 seconds after the windows desktop is shown, but always before TELchart ECS is started.

Some alternative ways to accomplish this:

- Establish a shortcut to TelkoSynchronizer on the desktop and instruct users to start this shortcut before TELchart ECS.
- Establish a .bat file starting TelkoSynchronizer first, then telchECS.exe, and replace the TELchart ECS icon on the desktop with a shortcut to this .bat file.
- Install and use Tecstart.ini as on a TECDIS unit (see step 1).

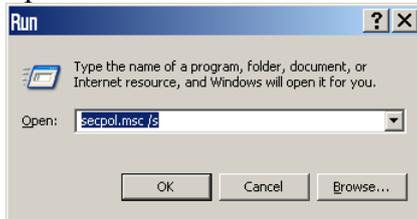


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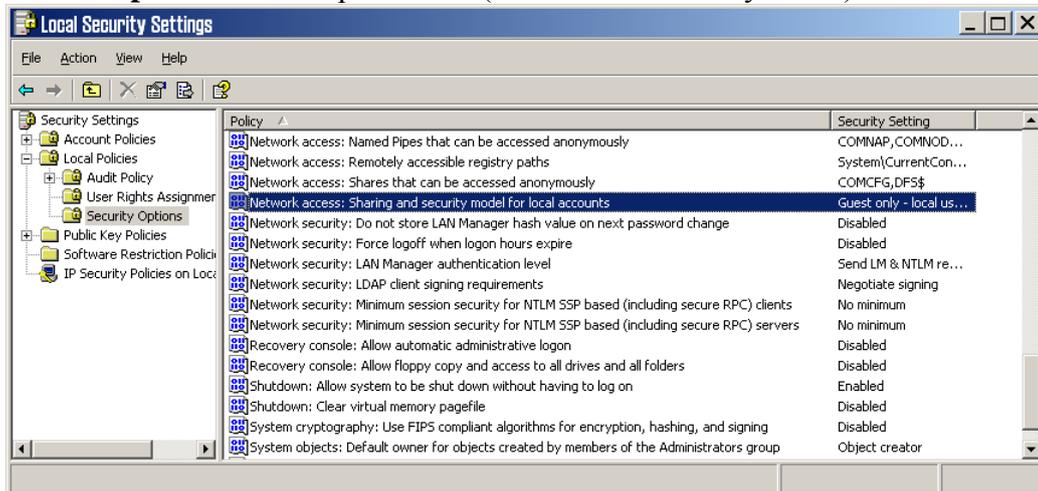
## Windows Setting 1

The name of this setting is 'Sharing and security model for local accounts'.

1. Open the 'Start' menu and select 'Run'.



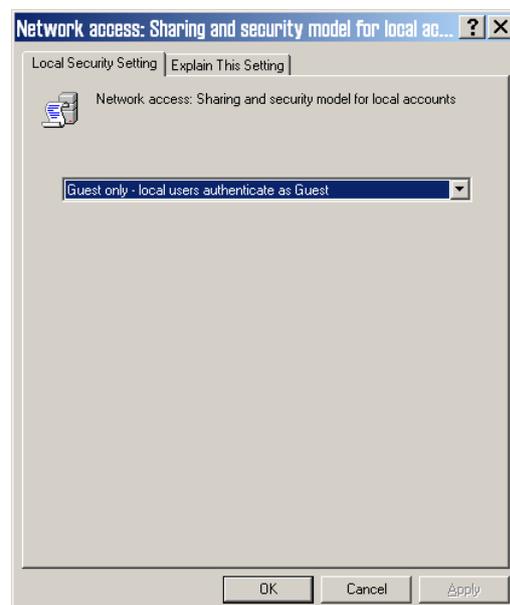
2. Enter 'secpol.msc /s' and press 'Ok' (or 'Enter' on the keyboard).



3. On the left, select 'Local Policies', 'Security Options'. Then double click 'Network access: Sharing and security model for for local accounts'.

4. Ensure that the value 'Guest only – local users authenticate as Guest' is selected and press 'Ok'.

5. Close the 'Local Security Settings' window.



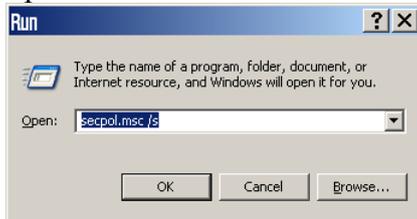


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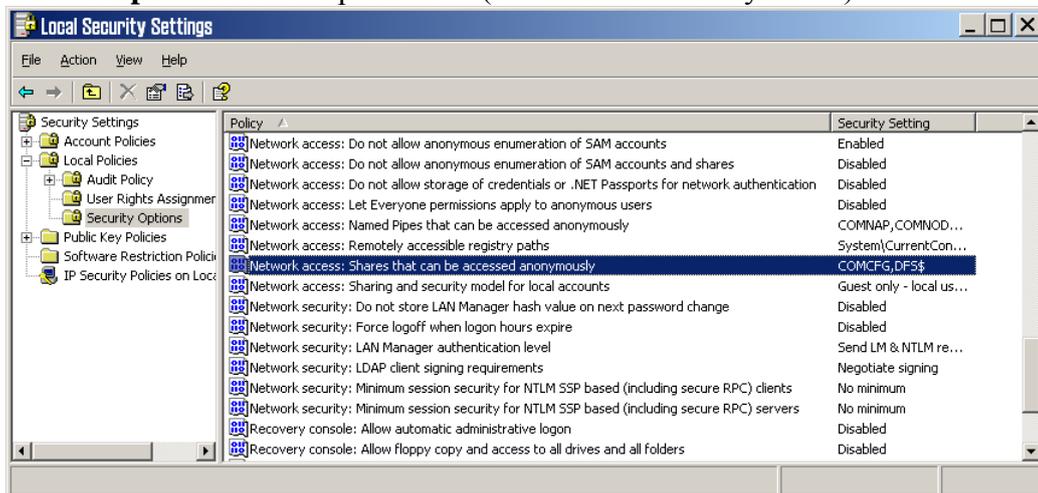
## Windows Setting 2

The name of this setting is 'Shares that can be accessed anonymously'.

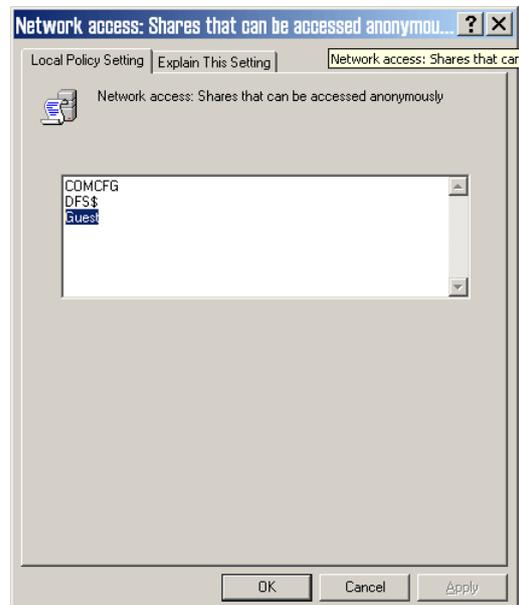
1. Open the 'Start' menu and select 'Run'.



2. Enter 'secpol.msc /s' and press 'Ok' (or 'Enter' on the keyboard).



3. On the left, select 'Local Policies', 'Security Options'. Then double click 'Network access: Shares that can be accessed anonymously'.



4. Add a new line specifying 'Guest' to the value and press 'Ok'.
5. Close the 'Local Security Settings' window.

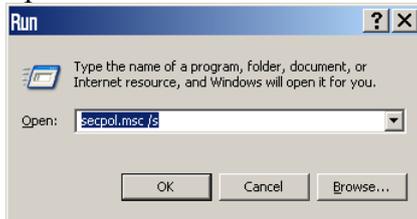


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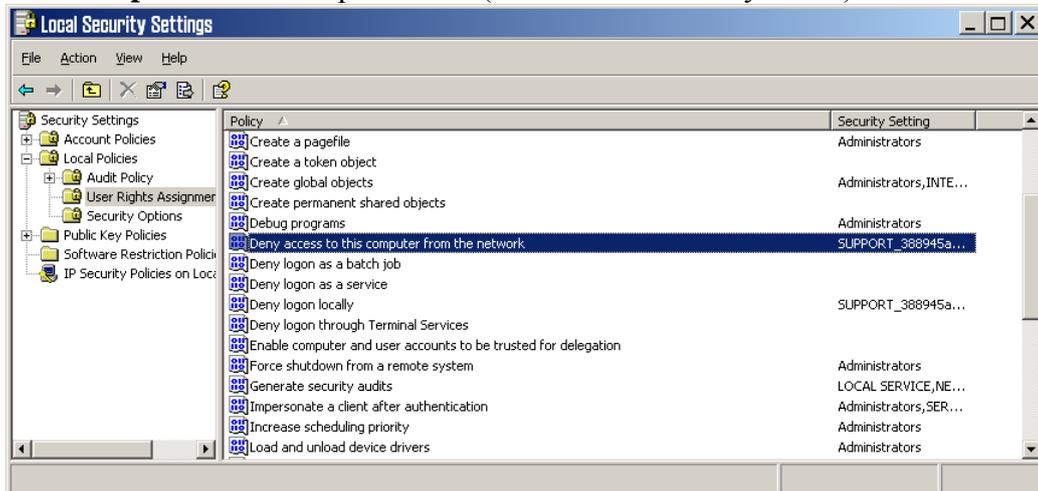
### Windows Setting 3

The name of this setting is 'Deny access to this computer from the network'.

1. Open the 'Start' menu and select 'Run'.



2. Enter 'secpol.msc /s' and press 'Ok' (or 'Enter' on the keyboard).



3. On the left, select 'Local Policies', 'User Rights Assignment'. Then double click 'Deny access to this computer from the network'.

4. If there is a line specifying 'Guest' in the value, **remove the 'Guest' line**.

5. Close the 'Local Security Settings' window.



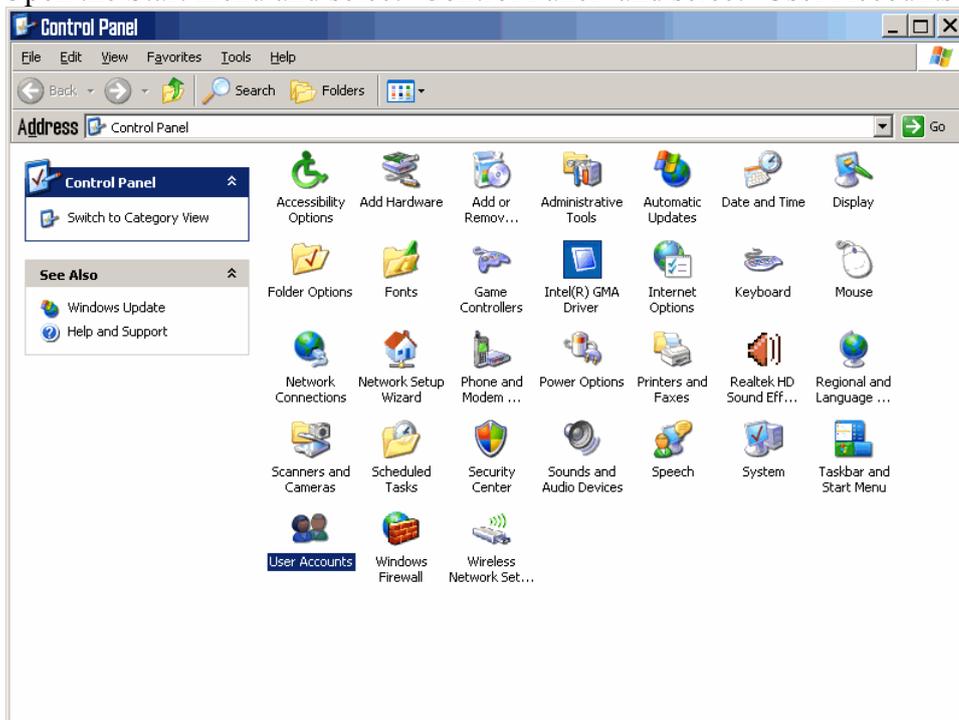


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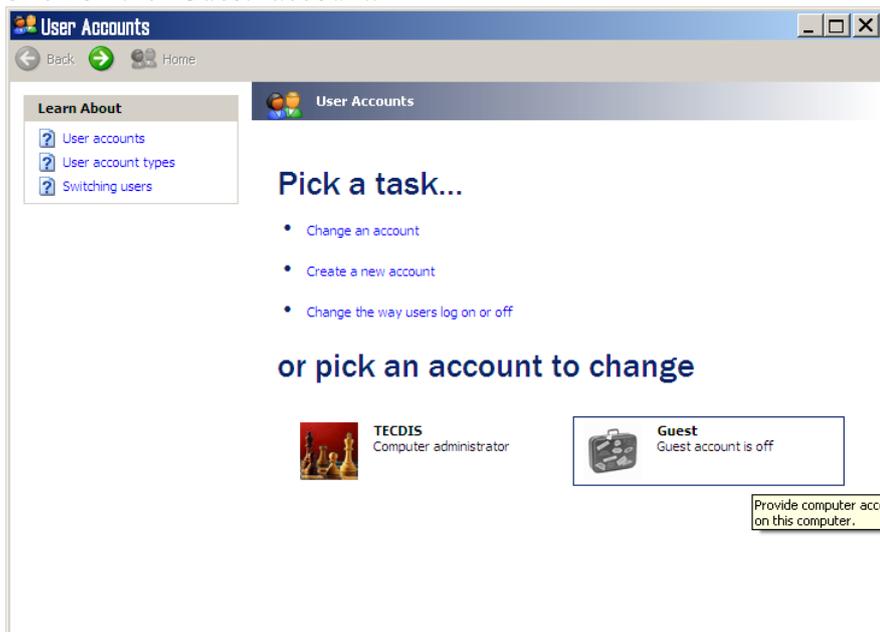
## Windows Setting 4

This setting entails enabling the windows 'Guest' user account.

1. Open the Start menu and select 'Control Panel' and select 'User Accounts'.



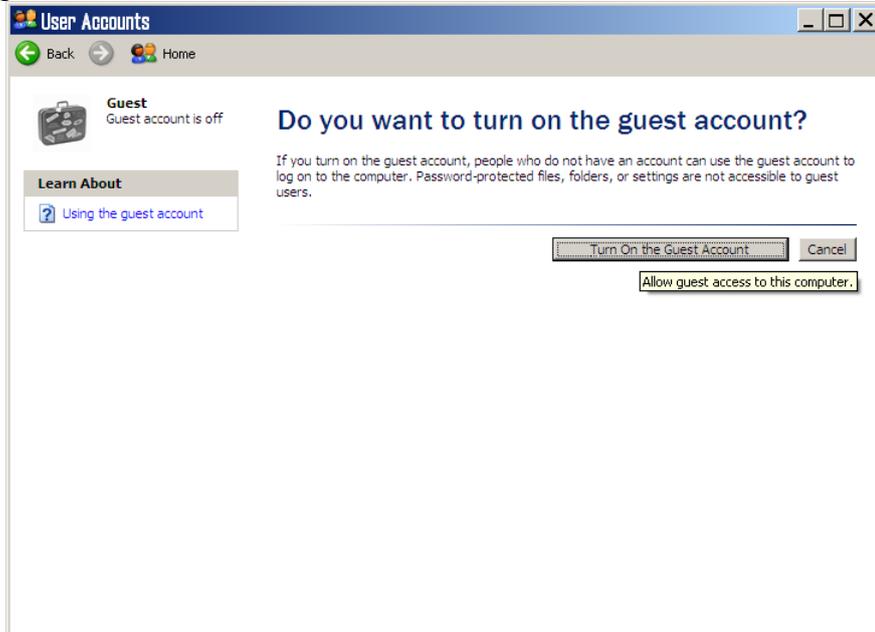
2. Click on the 'Guest' account.





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3. When asked ‘Do you want to turn on the guest account?’, press ‘**Turn On the Guest Account**’.





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## Connection Testing

Manual connection testing is achieved by running two utility programs from the command line between each possible pair of units that will be synchronizing.

Perform the following on each possible pair of units:

1. Identify the IP addresses of both units in the pair (IP addresses are shown in the title bar of TECDIS / TELchart ECS Setup).
2. Open the 'Start' menu and select 'Run'. Type in 'cmd' and press 'Ok' (or 'Enter' on the keyboard).
3. On the command prompt, typ in

```
cd "\\Program Files\TECDIS"
```

and press 'Enter'.

4. On one unit, enter 'makepipe' and press 'Enter'.

```
C:\WINDOWS\system32\cmd.exe - makepipe
Microsoft Windows XP [Version 5.1.2600]
(C) Copyright 1985-2001 Microsoft Corp.
C:\Documents and Settings\TECDIS>cd "\\Program Files\TECDIS\"
C:\Program Files\TECDIS>makepipe
-
```

5. On the other unit, enter 'readpipe' followed by the IP address of the unit in step 4.

```
C:\WINDOWS\system32\cmd.exe
C:\Program Files\TECDIS>readpipe 172.31.3.61
Success
C:\Program Files\TECDIS>
```



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- Verify that both units show 'Success'.

```
C:\WINDOWS\system32\cmd.exe
Microsoft Windows XP [Version 5.1.2600]
(C) Copyright 1985-2001 Microsoft Corp.

G:\Documents and Settings\TECDIS>cd "\Program Files\TECDIS\"
C:\Program Files\TECDIS>makepipe
Success
C:\Program Files\TECDIS>_
```

If the unit in step 4 does not respond, you can press **Ctrl-C** to return to the command prompt.

If 'Success' is not shown, check the network connection, IP address setup and the other windows settings, and repeat connection testing.

- Repeat steps 1-6, but this time run 'makepipe' on the other unit of the pair.
- Repeat steps 1-7 for each possible pair of units.



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## SUPPORTING PROCEDURES

The following two procedures show how the System ID number and software version number of a TECDIS system. The same procedures are applicable for a TELchart ECS system.

### ***Determining the TECDIS Software version number***

The following procedure determines the full TECDIS software version number, and provides a method for determining the version number without restarting the system:

1. On the TECDIS or TECDIS TCS, check if the menu folders on the right side of the screen are visible.
2. If they are not, press the folder icon at the upper right corner of the screen, labeled 'Tool menu folders'.
3. Select the menu folder labeled 'Chart'.
4. Press the button named '?' to the immediate left of the buttons 'S52' and 'INT1'. A chart legend window will be displayed.
5. Note the TECDIS software version number specified in the first entry of the chart legend (TECDIS Software). The version number is the value of this field up to the # character.

### ***Determining the TECDIS System ID number***

The System ID number for each TECDIS unit is required for the on shore preparations for the software update. This number can be determined in one of three ways:

#### **A. Physical Inspection**

1. Inspect the label connected to the USB license dongle attached on the rear side of the TECDIS processor. The System ID is noted on this label.

#### **B. Using TECDIS Setup**

1. Insert the TECDIS Service Key in the TECDIS processor.
2. In the TECDIS main display, exit the TECDIS software by pressing the icon in the upper left corner of the display. Press 'YES' to confirm.
3. Start TECDIS Setup by clicking the TECDIS Setup shortcut on the desktop.
4. Select the 'Licensing' folder.
5. The System ID is displayed in the lower half of the TECDIS Setup window (C-Map License area).

#### **C. Using TECDIS**

1. Follow the procedure for determining the full TECDIS software version number, and note the five digits immediately following the '#' sign in the 'TECDIS Software' entry in the chart legend. Appending this number to the text 'Telko eT' constitutes the full System ID.



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## Document Revision History

| Revision | Date       | Changes          |
|----------|------------|------------------|
| 01       | 25.06.2013 | Initial release. |