

Session: 26CP / 409049



iSeries Operations Navigator Managing Hardware

IBM @server iSeries

Dennis Schmidt

dschmidt@us.ibm.com
User Technologies
IBM Rochester

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Overview

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- **Setting up to access hardware functions**
- **Service Tools Security**
 - Service tools user profiles
 - Service tools device profiles
 - Operations Console LAN connectivity
- **Operations Navigator Service Tools Window**
- **Disk Management**
- **Logical Partitions - LPAR**
- **Hardware Inventories**
 - Configuration and Service Folder
 - Management Central Inventory
- **Where to get more information**

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Setting Up Access to Hardware Functions

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Accessing Hardware Functions

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Application Administration

- Need to enable Disk Units in Application Administration to see the Disk Units folder in the Operations Navigator function tree

Service Table Entry

- Need to enable the port to access Disk Unit and Logical Partition functions
- Shipped disabled for your protection

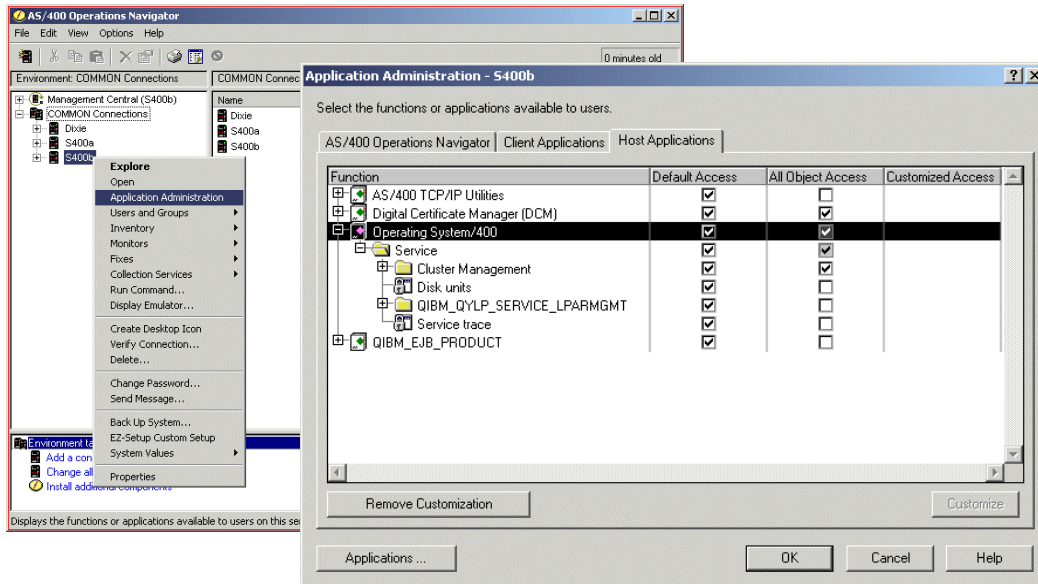
Service Tool authority

- Need to have a service tool user profile with the appropriate capabilities to access Disk Unit and Logical Partition functions

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Application Administration

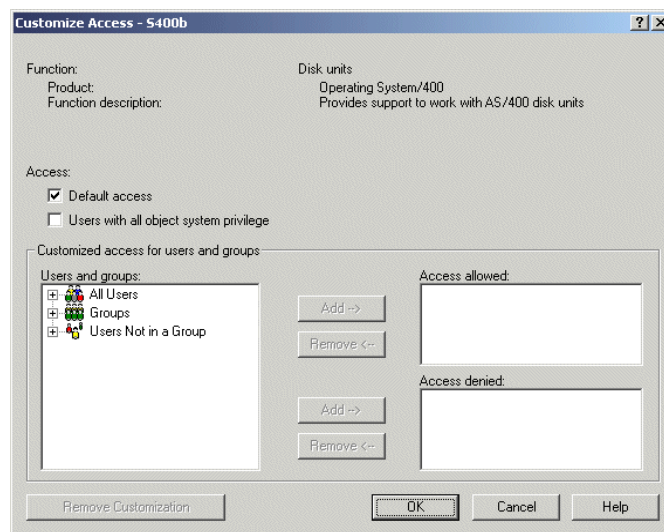
Accessing Hardware Functions



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Application Administration

Accessing Hardware Functions



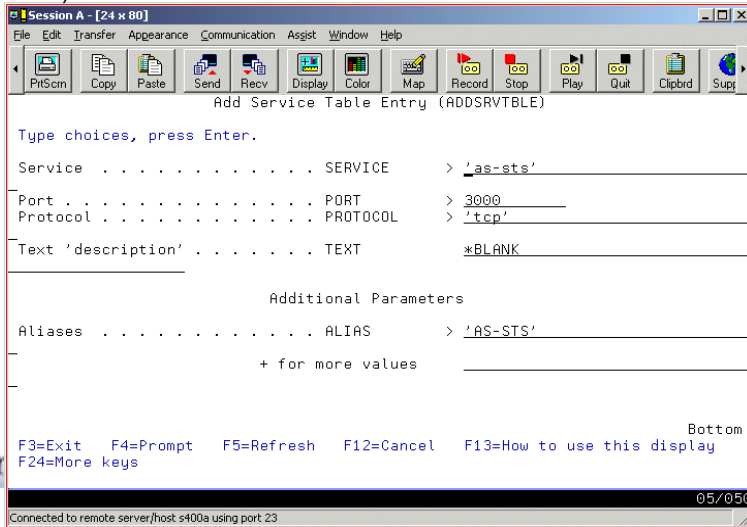
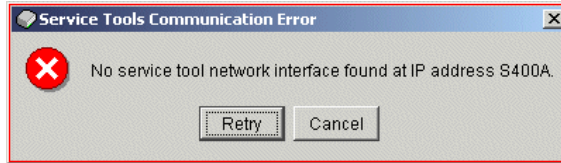
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Add Service Table Entry

Accessing Hardware Functions

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- If you see this error, first check if you have the service table entry enabled
 - ADDSRVTBLE SERVICE('as-sts') PORT(3000) PROTOCOL('tcp') TEXT('Service Tools Server') ALIAS('AS-STs')
 - After you add the service table entry you need to end TCP/IP (ENDTCP) and then restart TCP/IP (STRTCP)
 - You only need to do this once per system
- Service tools server port shipped disabled for your protection

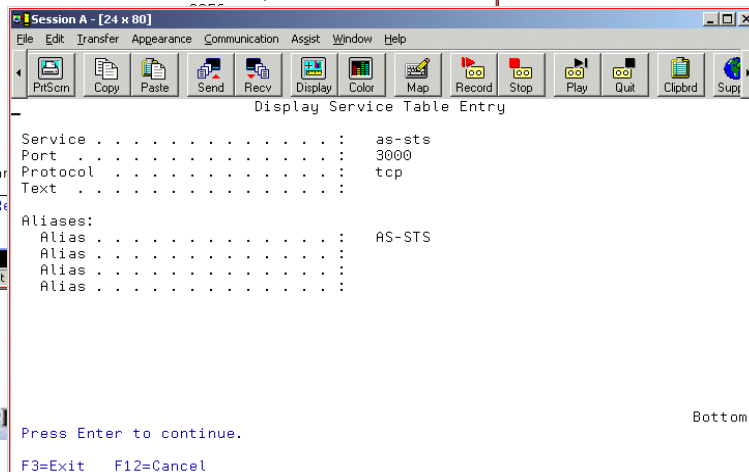
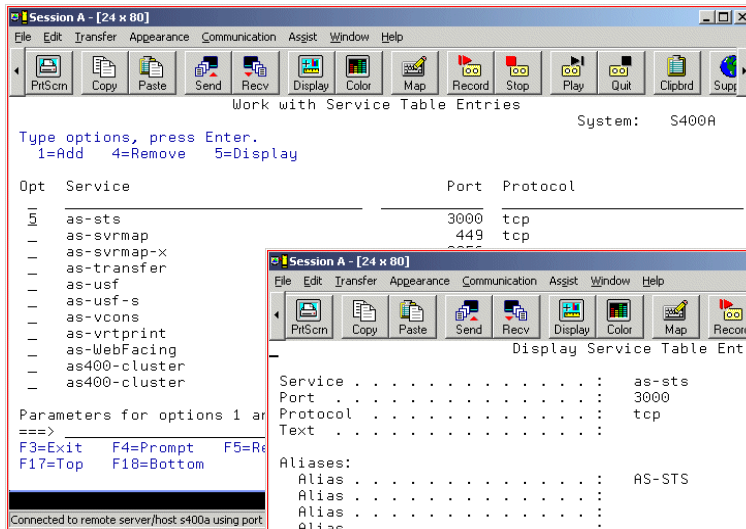


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Add Service Table Entry

Accessing Hardware Functions

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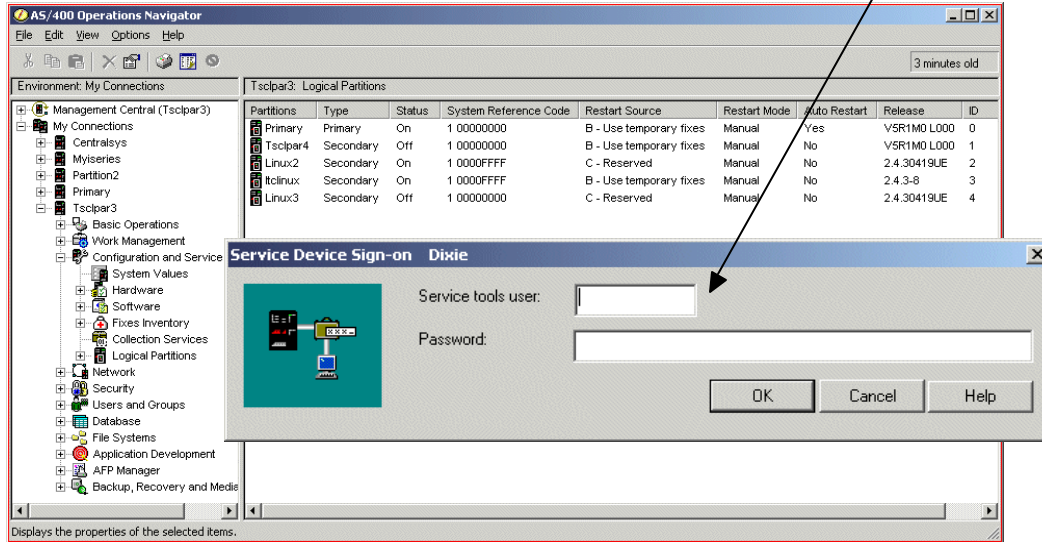
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Service Tool Authority

Accessing Hardware Functions

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- To access Disk Units and Logical Partitions (LPAR) you will need to sign on with a service tools user profile with the appropriate capabilities



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Service Tools Security

DST, SST, and Operations Console

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Service Tools Security Overview

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- New Service Tools security in V5R1
- New password level - 128 character CaSe SeNsItIvE passwords
- Protects access to DST, SST, and Operations Console LAN connectivity
 - Dedicated Service Tools (DST)
 - System Service Tools (SST)
 - Operations Navigator
 - Service Tools Window
 - Disk Management
 - Logical Partitions
- Service Tools User profiles
- Service Tools Device profiles
- Operations Console LAN connectivity

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Accessing Service Tools

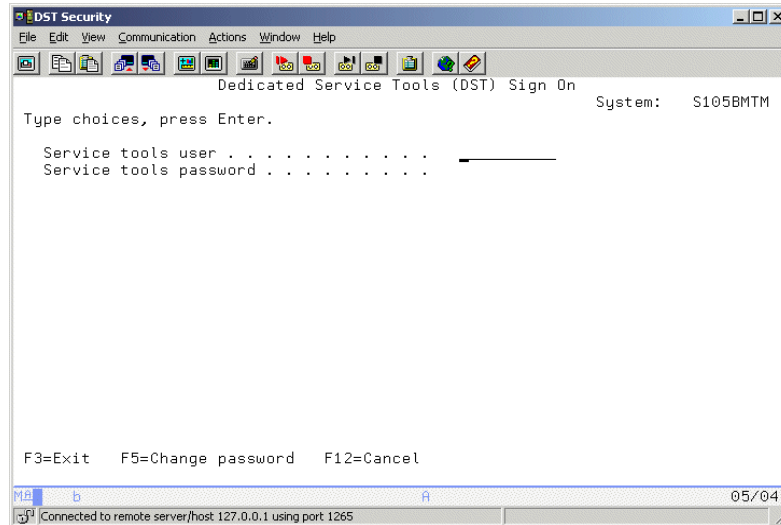
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Accessing Service Tools

Service Tools User Profiles

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- To access service tools you need to sign on with a Service Tools user profile and password
- Includes
 - DST
 - SST
 - Operations Navigator
 - ▶ Service Tools Window
 - ▶ Disk Management
 - ▶ Logical Partitions



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Important Facts About Service Tools User Profiles

Service Tools User Profiles

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- Shipped profiles
 - QSECOFR
 - 11111111
 - 22222222
 - QSRV
- Passwords
 - Are set to disabled. You'll be prompted to set a new password the first time you use the profile. Be sure you are the one to reset the password.
 - Are **CASE SENSITIVE!** And, can be 128 characters long.
- Profiles are disabled after 3 unsuccessful attempts
 - Sign on with OS/400 QSECOFR and use command CHGDSTPWD
 - If you have disabled both your DST and OS/400 QSECOFR profiles...
 - ▶ Recovery is a slip or scratch install!
- Service Tools profiles are **NOT** the same as OS/400 user profiles!
 - Service Tools user profile QSECOFR can have a different password than OS/400 QSECOFR

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Notes: Work with Service Tools User Profiles

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Authorized users could previously access any service tool on the system if they had a valid password and user ID. Users who needed access to only one tool could access all tools. This posed a potential security risk. For example, the Display/Alter/Dump tool was previously available to any OS/400 profile with *ALLOBJ authority. It was also available via the DST interface to users who needed access to service tools for tasks such as disk management.

The administrator may now create user-defined profiles that can be granted functional privilege to the service tools. Users can then be granted privileges to specific tools, such as disk unit management or LPAR, or to a group of tools.

There is a limit of 96 user-defined profiles for a total number of 100, including the four supplied by IBM.

Among the four IBM-supplied profiles is the new profile QSRV.

The HELP text contains some details of the operation performed by selecting an option from the menu.

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Notes: Service Tools User Profiles

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The service tools user profiles are based on the Dedicated Service Tools (DST) users of earlier releases.

DST had three profiles - QSECOFR, 22222222 and 11111111. The QSECOFR service profile for DST was a separate entity from the Operating System/400 (OS/400) user of the same name. This policy of separate profiles for the DST and for the OS/400 levels is maintained in the new function that was introduced at V5R1M0.

The major changes to these service users are

- A service profile and password is required in order to enter the System Service Tools (SST)
- Administrator can create additional service tool user profiles
- Service tools user profiles can be used at the DST

Service tool user profiles created by the administrator have limited privileges. It is necessary to explicit grant authority for any additional functions required by the user. Any Service Tools user profiles created by the administrator are able to access DST.

The shipped profiles of QSECOFR, 22222222, 11111111 and the newly shipped QSRV all come with defaults specific to their profile.

All IBM supplied profiles are shipped expired. The exception is the user 11111111's which will be left unexpired to support operations console. Operations console uses 11111111's to establish initial connectivity to the system.

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Service Tools User Profiles

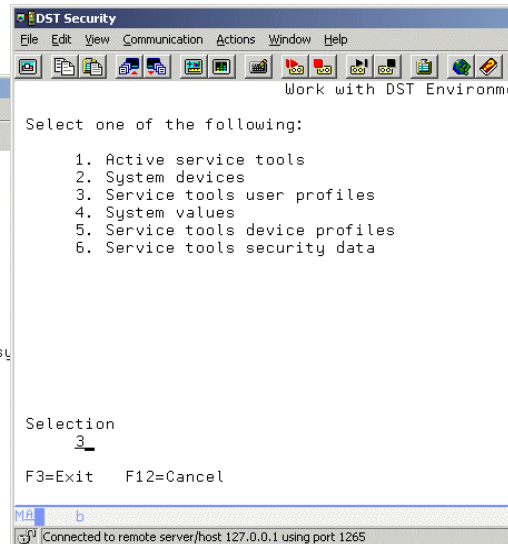
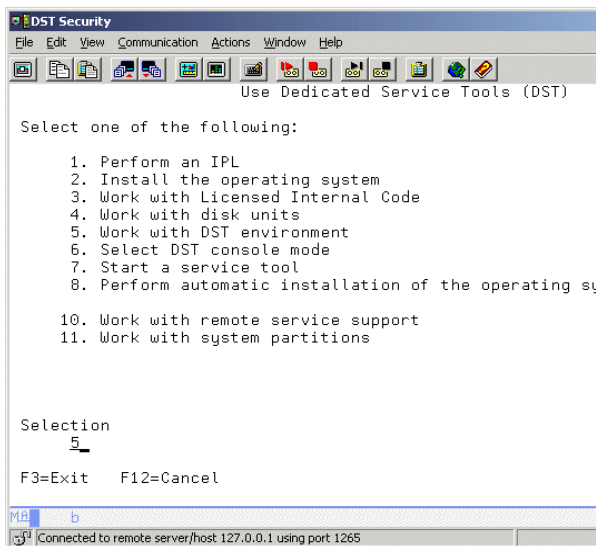
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Managing Service Tools User Profiles

Service Tools User Profiles

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- Can only setup through green-screen DST

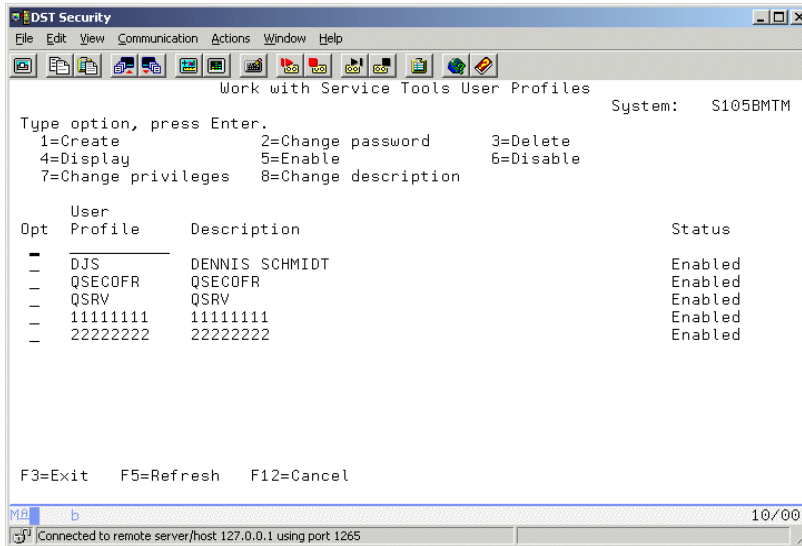


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Managing Service Tools User Profiles

Service Tools User Profiles

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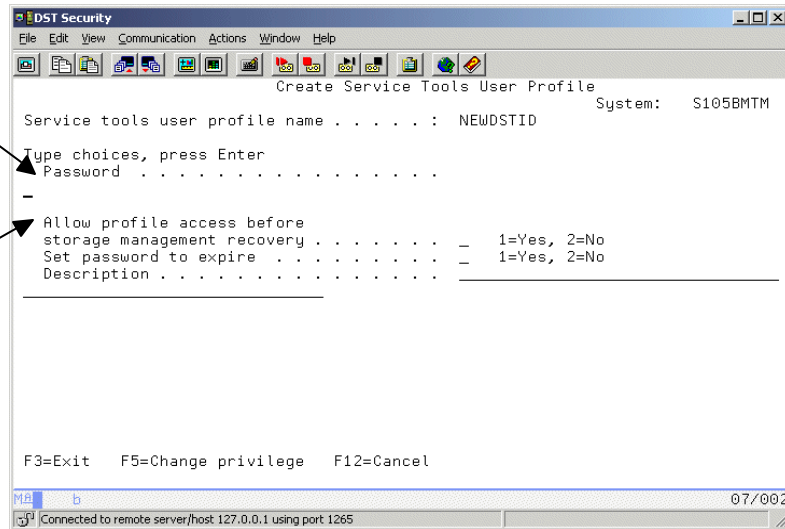
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Creating Service Tools User Profiles

Service Tools User Profiles

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- Passwords are 128 characters **AND ARE CASE SENSITIVE!!!**
- Maximum of 96 profiles can be defined that can be used before storage management recovery (IBM ships 4).



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Service Tools User Profile Privileges

Service Tools User Profiles

- Each profile can have different privileges

The screenshot shows two overlapping windows from the DST Security application. The background window is titled 'Create Service Tools User Profile' and prompts for a user profile name and password. The foreground window is titled 'Change Service Tools User Privileges' and shows a list of functions with their status (Revoked or Grant). The functions listed include 'None', 'Disk units - operations', 'Disk units - administration', 'System partitions - operations', 'System partitions - administration', and several 'Partition remote panel key' entries with hexadecimal identifiers (000-007). Arrows from the text 'Each profile can have different privileges' point to the '1=Revoke' and '2=Grant' options in the foreground window.

Service Tools User Profiles Privileges

Service Tools User Profiles

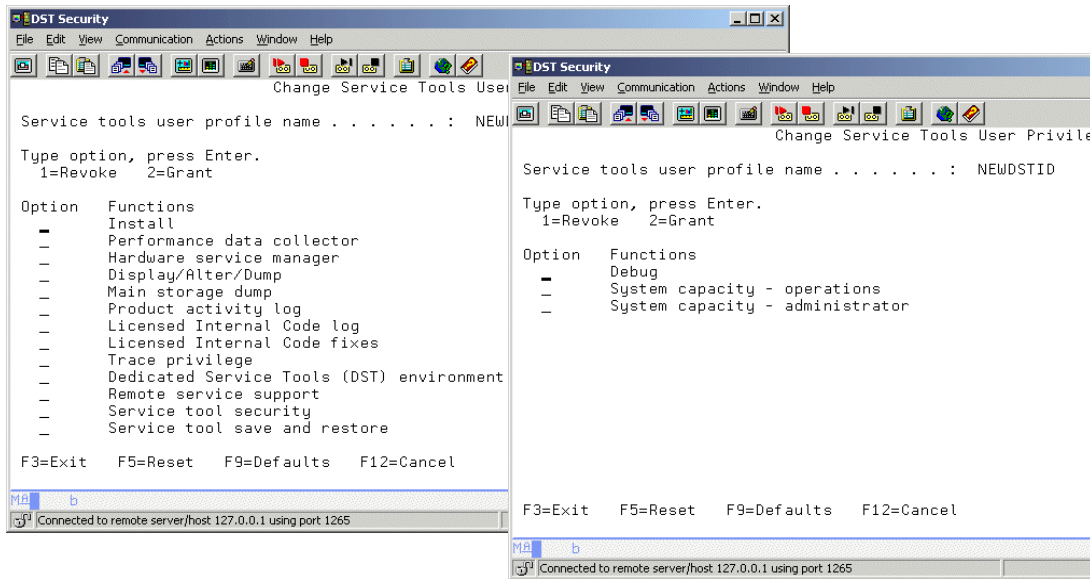
The screenshot displays two instances of the 'Change Service Tools User Privileges' window. The left window is for user profile 'NEWDS' and lists functions from 008 to 020. The right window is for user profile 'NEWSTDID' and lists functions from 021 to 031, plus 'Operator panel functions' and 'Operating system initial program load (IPL)'. This demonstrates that different user profiles can be assigned different sets of privileges.

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Service Tools User Profiles Privileges

Service Tools User Profiles

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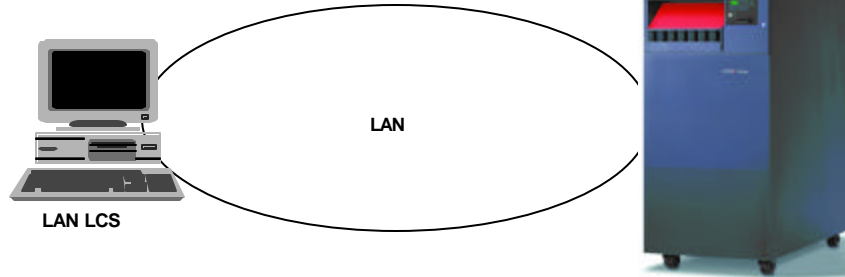
Operations Console - LAN Connectivity

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Operations Console LAN Connectivity

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LCS LAN Connection New in V5R1M0



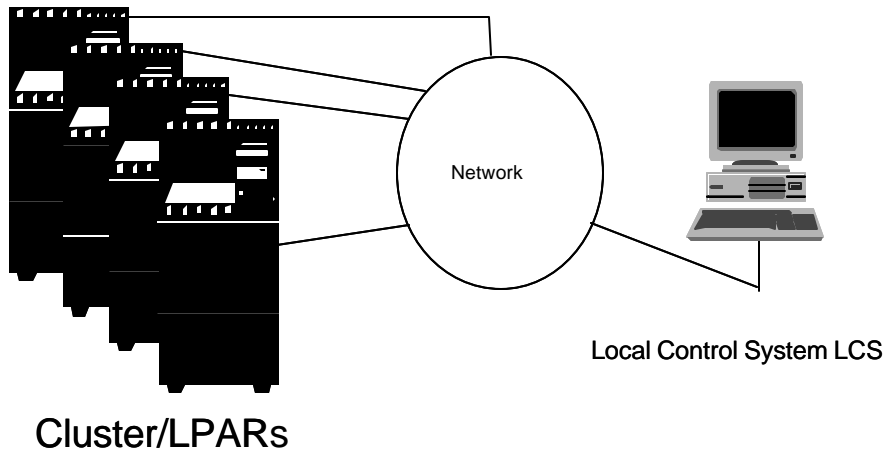
LAN LCS - PC that connects to an 8xx/270 server using a network.

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Operations Console LAN Connectivity

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The main objective of LAN support is to provide a way to centrally support multiple AS/400s with a single physical console device.



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Important Facts About Service Tools Device Profiles

Service Tools Device Profiles

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- Allows you to authorize specific PCs to act as the console (so not just any PC on your network can act as the console!).
- Each PC you want to act as a console must have a unique device profile
- Shipped profiles
 - QCONSOLE
- Passwords
 - QCONSOLE shipped password is QCONSOLE
 - Changes each time the device profile is used

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Service Tools Device Profiles

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Prior to V5R1, part of the security for Operations Console was the physical security (location) of the console. The client being used as the Operations Console had to be within 50 feet of the serial port on the server.

V5R1 now allows the use of any client connected to the LAN as the Operations Console. In order to help to protect against security risks, the Operations Console with LAN connectivity uses client authentication. The effect is that the server asks if it can trust the client. Both the authentication information, as well the information that is then exchanged between the server and the authorized client, are encrypted for additional security.

The authentication protocol that is used is called Encrypted Key Exchange (EKE). The AS/400 is shipped with a default service tools device profile of QCONSOLE with a default password of QCONSOLE. Operations Console with LAN connectivity will change the password during each successful connection.

When using Operations Console with LAN connectivity, the setup wizard adds the necessary information to the PC. The setup wizard asks for the service tools device profile, the service tools device profile password, and a password to protect the service tools device profile information.

Note: The service tools device profile information password is used to protect the service tools device profile information (service tools device profile and password) on the PC.

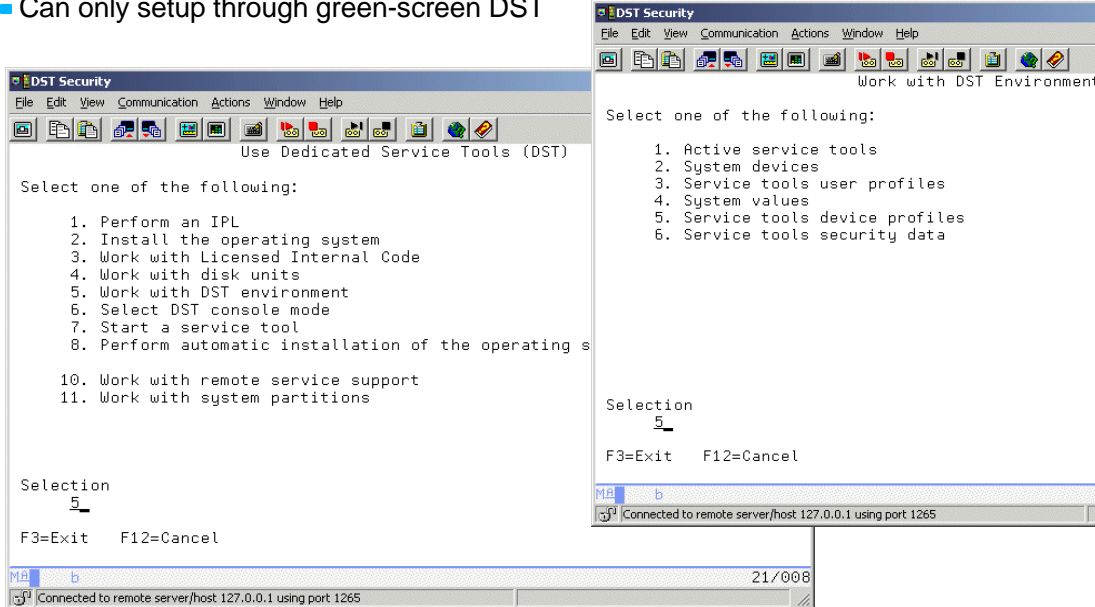
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Managing Service Tools Device Profiles

Service Tools Device Profiles



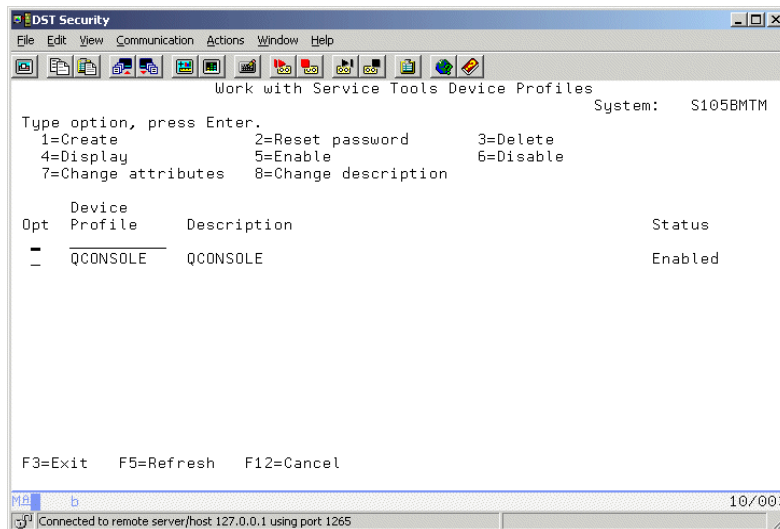
- Can only setup through green-screen DST



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Managing Service Tools Device Profiles

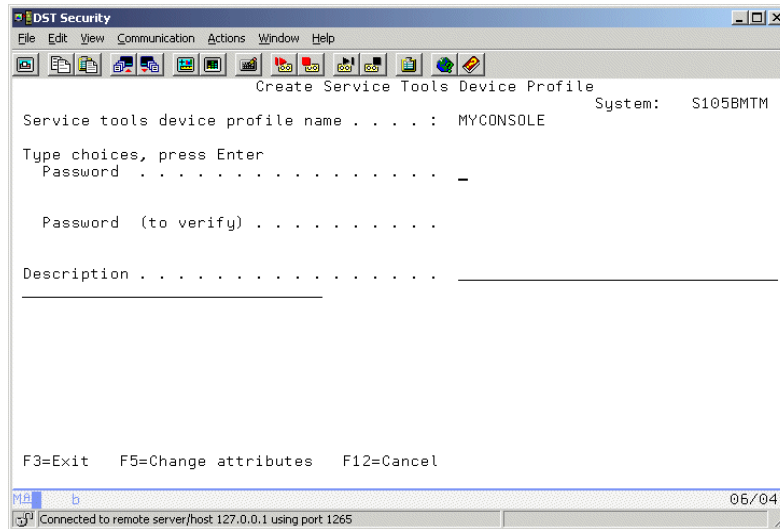
Service Tools Device Profiles



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Creating Service Tools Device Profiles

Service Tools Device Profiles

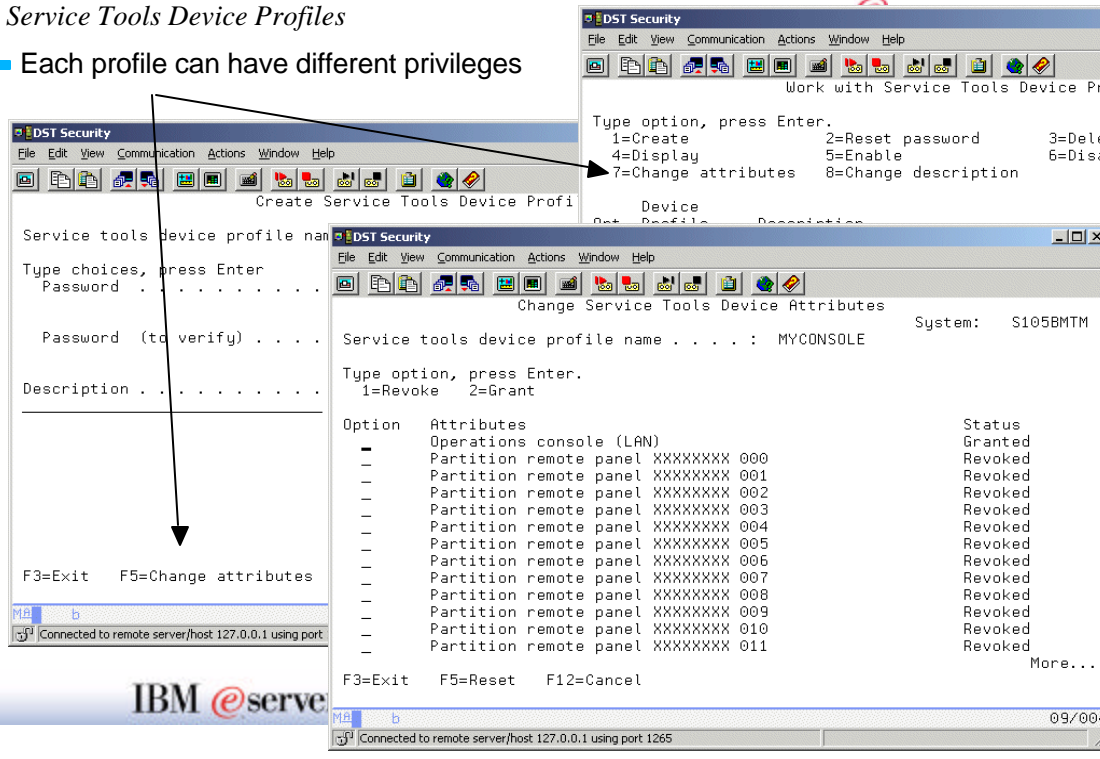


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Service Tools Device Profile Privileges

Service Tools Device Profiles

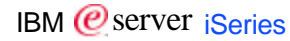
- Each profile can have different privileges



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Service Tools Device Profile Privileges

Service Tools Device Profiles



Change Service Tools Device Attributes

Service tools device profile name : MYCONSOLE

Type option, press Enter.
1=Revoke 2=Grant

Option	Attributes
-	Partition remote panel XXXXXXXX 012
-	Partition remote panel XXXXXXXX 013
-	Partition remote panel XXXXXXXX 014
-	Partition remote panel XXXXXXXX 015
-	Partition remote panel XXXXXXXX 016
-	Partition remote panel XXXXXXXX 017
-	Partition remote panel XXXXXXXX 018
-	Partition remote panel XXXXXXXX 019
-	Partition remote panel XXXXXXXX 020
-	Partition remote panel XXXXXXXX 021
-	Partition remote panel XXXXXXXX 022
-	Partition remote panel XXXXXXXX 023
-	Partition remote panel XXXXXXXX 024

F3=Exit F5=Reset F12=Cancel

Change Service Tools Device Attributes

Service tools device profile name : MYCONSOLE

Type option, press Enter.
1=Revoke 2=Grant

Option	Attributes
-	Partition remote console XXXXXXXX 000
-	Partition remote console XXXXXXXX 001
-	Partition remote console XXXXXXXX 002
-	Partition remote console XXXXXXXX 003
-	Partition remote console XXXXXXXX 004
-	Partition remote console XXXXXXXX 005

F3=Exit F5=Reset F12=Cancel

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Service Tools Device Profile Privileges

Service Tools Device Profiles



Change Service Tools Device Attributes

Service tools device profile name : MYCONSOLE

Type option, press Enter.
1=Revoke 2=Grant

Option	Attributes
-	Partition remote console XXXXXXXX 006
-	Partition remote console XXXXXXXX 007
-	Partition remote console XXXXXXXX 008
-	Partition remote console XXXXXXXX 009
-	Partition remote console XXXXXXXX 010
-	Partition remote console XXXXXXXX 011
-	Partition remote console XXXXXXXX 012
-	Partition remote console XXXXXXXX 013
-	Partition remote console XXXXXXXX 014
-	Partition remote console XXXXXXXX 015
-	Partition remote console XXXXXXXX 016
-	Partition remote console XXXXXXXX 017
-	Partition remote console XXXXXXXX 018

F3=Exit F5=Reset F12=Cancel

Change Service Tools Device Attributes

Service tools device profile name : MYCONSOLE

Type option, press Enter.
1=Revoke 2=Grant

Option	Attributes
-	Partition remote console XXXXXXXX 019
-	Partition remote console XXXXXXXX 020
-	Partition remote console XXXXXXXX 021
-	Partition remote console XXXXXXXX 022
-	Partition remote console XXXXXXXX 023
-	Partition remote console XXXXXXXX 024
-	Partition remote console XXXXXXXX 025
-	Partition remote console XXXXXXXX 026
-	Partition remote console XXXXXXXX 027
-	Partition remote console XXXXXXXX 028
-	Partition remote console XXXXXXXX 029
-	Partition remote console XXXXXXXX 030
-	Partition remote console XXXXXXXX 031

F3=Exit F5=Reset F12=Cancel

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Operations Console LAN Setup

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- Enter the device profile, device profile password, and device profile information password

Default is
QCONSOLE/QCONSOLE

Type a password you want to use to protect the Service Tools Device profile information stored on the PC.

remember this password as it will be used during the connection process

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Operations Console LAN Setup

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- The device profile information password is used to protect the device profile password on the PC.
- The device profile password is used for device access control.
 - Only authorized PCs are allowed access as the console or remote control panel
- CAUTION: If you manually change the device profile password it must be changed on both the PC and the system.

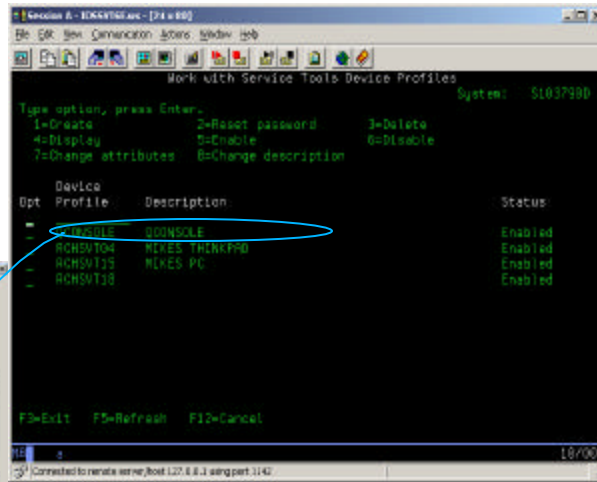
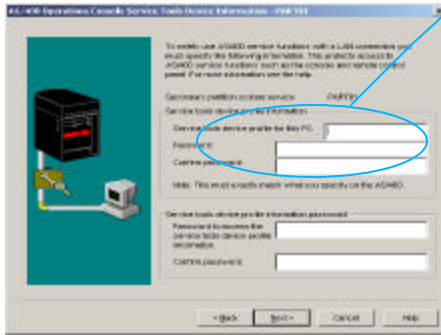
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Operations Console LAN Setup

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The service tools device profile information must be the same on the PC and the system.

You must create a new profile for each PC.



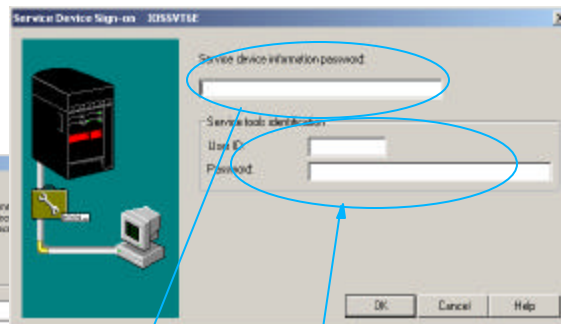
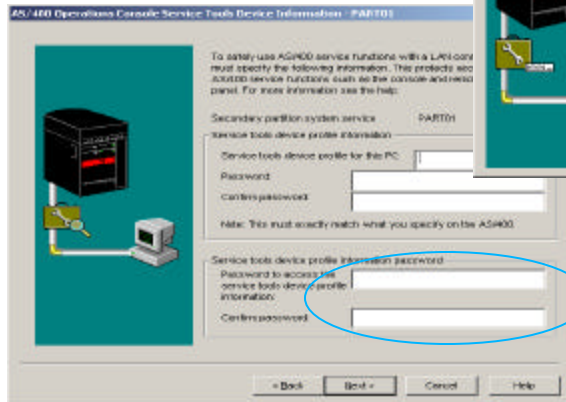
Reset password sets the password to the profile name in uppercase.

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Operations Console LAN Setup

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Service Device information password is used to access the service device information during signon



Service tools identification is what used to be called DST userID and password

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Notes: Passwords For Operations Console

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Two passwords need to be entered at the client when configuring for Operations Console which will be connected over a LAN.

The first password is associated with a service device profile. The default values for the device profile name and password is:

- QCONSOLE for the service device ID and QCONSOLE for the password.

The second password is the Service tools device profile information password. This password is used to protect access to the information that you assign in Service device information. The information here is used with the data provided in Service device information to encrypt the resulting device information data.

The LAN Operations Console code changes the second password in the client at each successful connection to the server. Thus the encryption key, for each connection over a LAN, is unique.

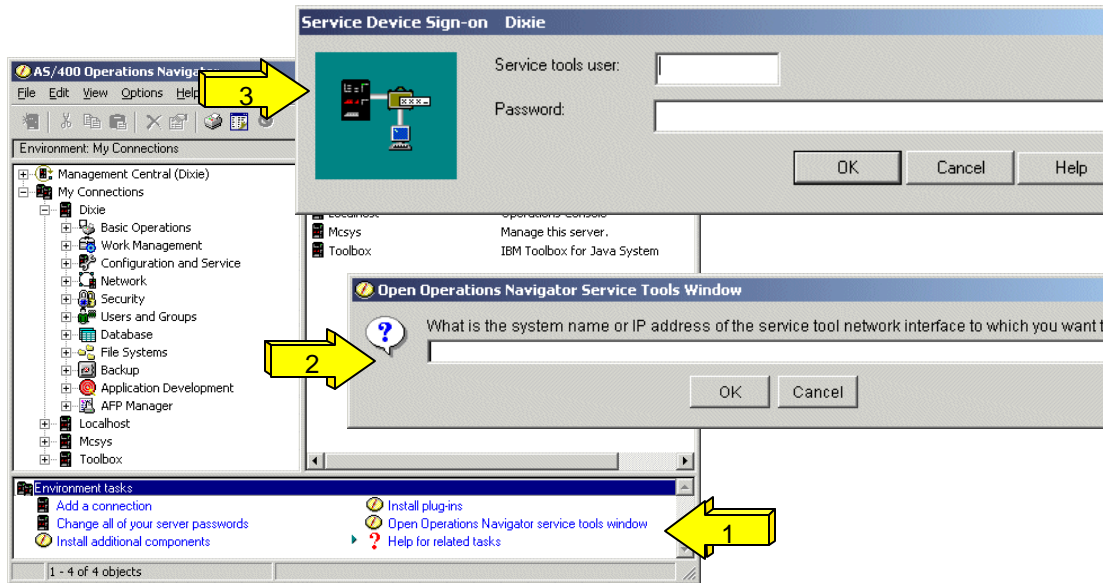
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Operations Navigator Service Tools Window DST GUI!

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Operations Navigator Service Tools Window

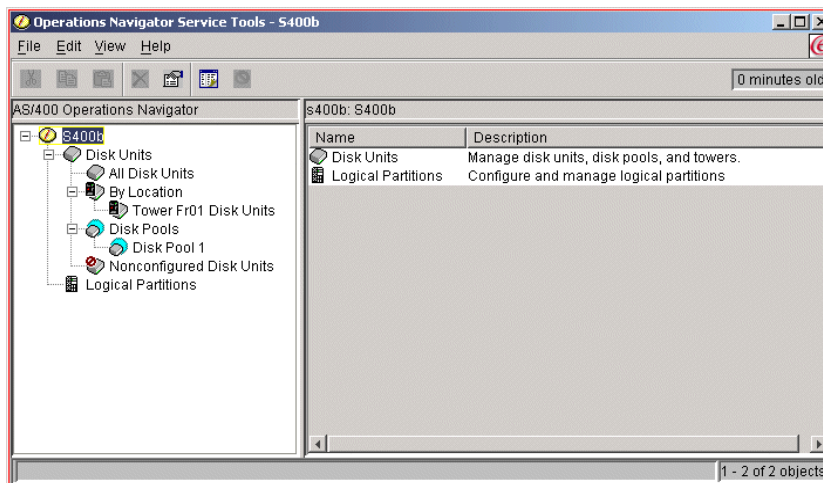
- IPL to DST and you can still use Operations Navigator for Disk IBM @server iSeries Management and Logical Partition functions



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Operations Navigator Service Tools Window

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- **Where to get more information**

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