- A list of the actions performed by the wizard. The page displays a row for the successful actions. If the configuration failed, a row is displayed for each failed action. For example, if the wizard expects to assign a specific alert to five devices, but the operation only succeeds for the three of the devices, this page displays one row for the successful actions and two rows each failed actions.
- Error messages for any failed actions.

Configure storage subsystem connections page

Use this page in the Configure Devices wizard to enter or update connection properties for the storage systems and CIMOMs that you are configuring. Tivoli Storage Productivity Center uses this information to collect data about the storage systems.

Use the Configure storage system connections page to enter or update connection properties for the following storage entities. Depending on the type of storage system that you want to configure for monitoring, you must define connection information for the native interface or associated CIMOM for the storage system.

- System Storage DS8000 (native interface)
- SAN Volume Controller (native interface)
- XIV system (native interface)
- Storwize V7000 (native interface)
- Storwize V7000 Unified (native interface)
- Other (CIMOM)

The entity that is selected from the **Device Type** list determines the information that Tivoli Storage Productivity Center requires to connect to that entity. The following sections describe the fields for each entity.

Requirement: If you are adding or updating connection properties for a SAN Volume Controller or Storwize V7000 storage system, select **IBM SAN Volume Controller / IBM Storwize V7000** in the **Device Type** list. If you are adding or updating connection properties for a Storwize V7000 Unified storage system, select **IBM Storwize V7000 Unified**.

IBM DS8000

Enter or update the following information to have Tivoli Storage Productivity Center connect to a System Storage DS8000 storage system.

HMC Address
> Enter the IP address or host name for the Hardware Management Console (HMC) that is used to manage the System Storage DS8000 storage system.

HMC2 Address (Optional)
> Enter the IP address or host name for a second HMC that is used to manage the storage system.

Username
> Enter the user name for logging in to the System Storage DS8000 element manager. The default user name is admin.

> **Note:** This user name is the same as the ESSNI user name.

Password
> Enter the password for the user name.

Storwize V7000 Unified

Enter or update the following information to have Tivoli Storage Productivity Center connect to a Storwize V7000 Unified storage system.

Storwize V7000 Unified is composed of Storwize V7000 and Storwize V7000 File Module. You can connect to only Storwize V7000 or to both Storwize V7000 and Storwize V7000 File Module. Storwize V7000 provides block-level data and Storwize V7000 File Module provides file-level data.

Storwize V7000
> Use the information in this section to connect Storwize V7000.

> **IP Address**
>> Enter the IP address or host name of the Storwize V7000 storage system. You can enter an IPv4 or IPv6 address, for example:
>> - 127.0.0.1
>> - [2001:DB8:0:0:0:0:0:0/32]

> **Select Key**
>> An SSH key is required to access Storwize V7000. Select one of the following actions for the SSH key:
>> - **Upload new key:** Select this option to upload a new key. Public key content is extracted from the private key that is provided in the **Private SSH Key** field and is uploaded to the Storwize V7000 cluster. If you select this action, the **Administrator User Name** and **Administrator Password** fields are required.
>> - **Use existing uploaded key:** Select this option if you want to use a public key that was already uploaded by using a method other than through Tivoli Storage Productivity Center, such as the Storwize V7000 web interface. Enter the location of the private key file that corresponds to the public key in the **Private SSH Key** field. The **Administrator User Name** and **Administrator Password** fields are not required if you select this option.

> **Administrator User Name**
>> If you selected **Upload new key** in the **Select Key** list, enter the name of a user that has the Security Administrator role for the Storwize V7000 cluster that contains the storage system. Tivoli Storage Productivity Center uses this value during the setup process to contact the cluster and configure the SSH keys for the user. This user name must belong to the Security Administrator role, which has privileges to modify other user accounts. Otherwise, Tivoli Storage Productivity Center cannot configure the SSH keys.

>> If you selected **Use existing uploaded key**, this field is optional.

> **Administrator Password**
>> Enter the password for the user name that you entered in the **Administrator User Name** field.

> **User Name**
>> Enter an authorized user name for the storage system. Tivoli Storage Productivity Center uses this value to monitor and configure the storage system. If the user name does not exist, it is created. This user name must belong to the Administrator role.

This field is active if you selected **Upload new key** in the **Select Key** list and entered a user name and password in the **Administrator User Name** and **Administrator Password** fields. **Important:** If you upload a new key for the existing Storwize V7000 user by using Tivoli Storage Productivity Center, that new key overrides the existing key for the user name. If you have another application that is using that user name (for example Tivoli Storage Productivity Center for Replication), the application cannot log on to Storwize V7000 because the key associated with the user is overwritten.

Select User
Select a user name from the list. The names are defined on Storwize V7000.

Private SSH Key
By default, the private key entry includes `${device.conf}\`
`tpc_svc.pem`, which represents the Tivoli Storage Productivity Center default key `tpc_svc.pem`. The `tpc_svc.pem` key is in the `conf` directory where the Device server is installed. If you want to use your own key, the key must exist on the system where you are running the Tivoli Storage Productivity Center user interface. The key is uploaded to the Tivoli Storage Productivity Center server system. To identify a new key, click **Browse**.

The private SSH key must be in OpenSSH format or in PuTTY (`.ppk`) format that is not password protected. If you have a password protected PuTTY .ppk key, use the puttygen utility on a Windows operating system to convert that key to OpenSSH format by following these steps:

1. Start the puttygen utility.
2. Load the `.ppk` file. Click **File > Load private key**.
3. From the menu bar, click **Conversion > Export OpenSSH key conversion**.

This action saves the key in OpenSSH format.

Passphrase (Optional)
Enter the passphrase for the private SSH key. The passphrase protects your private SSH key file. If you do not have a passphrase, leave this field blank.

Storwize V7000 File Module (Optional)
To connect to the Storwize V7000 Unified system, select this check box.

Depending on the configuration of Storwize V7000 Unified, the information that is required to connect to this system can be the same as or different from the information for Storwize V7000. The fields and field descriptions are the same as the fields in the Storwize V7000 pane with the following exceptions:

- The **IP Address** field is not displayed because the IP address is retrieved automatically.
- The **User Name** field is always required.
- The private SSH key must be in OpenSSH format. The PuTTY format is not supported. You can use the puttygen utility to convert the key to the OpenSSH format.
- The **Select Key** list contains the option **Use user password** in addition to the **Upload new key** and **Use existing uploaded key** options. If you

select **Use user password**, the **User Password** field is enabled and you can use a user name and password to connect to the file module.

If you select **Use user password**, the **Administrator User Name** and **Administrator Password** fields are optional.

Other (CIMOM)

Enter or update connection properties for a CIMOM. Tivoli Storage Productivity Center uses this information to discover the storage systems that are managed by a CIMOM. You can then configure those storage systems as part of the wizard session.

The connection information that you enter for a CIMOM is similar to the information that you enter when adding a CIMOM on the Add CIMOM page. See "Adding a CIM agent connection" on page 244 for descriptions of the fields on this page.

Discovered Storage Systems

After you run a discovery job, a table is displayed at the bottom of the "Configure storage subsystem connections" page. This table provides information about the storage systems that were discovered for the selected storage system type.

You can remove the connection to a storage system by clicking the row for the system in the table, and then clicking **Remove**.

Configure fabrics and switches

Use the Configure Devices wizard to set up fabrics and switches for monitoring by Tivoli Storage Productivity Center. Fabrics and switches that you configure in the wizard are automatically included in probe schedules and associated with alert conditions.

You can use the wizard to configure the following fabric and switch types for monitoring:
- Brocade
- McData
- Cisco
- QLogic
- Brocade/McData (heterogeneous fabric)

You can configure one or more fabrics using a single session of the Configure Devices wizard. All the fabrics and switches that you configure in a single pass through the wizard share the same probe schedule and alert conditions.

To configure fabrics and switches using the wizard, complete the following steps:
1. Access the wizard based on the task you want to perform:
   - If you want to add new or configure existing fabrics and switches, click the configure devices icon in the toolbar or select the **Configure Devices** node in the navigation tree. If you use this method, you must also complete the following steps:
     a. Select **Fabrics/Switches** on the Select Device Type page.
     b. Determine whether to add new fabrics or configure existing fabrics that are known to Tivoli Storage Productivity Center.