

**Feature available starting with TSM/ISP 8.1.9**

Following you will find an example **showing the activation / enablement** of the **command approval** function as well as a **workflow scenario** of a simple approval workflow with the help of the restricted command **"DELETE VOLUME"**.  
M. Malitz.

**1.) enable command approval:** set commandapproval on/off

```
Protect: SERVER_BLACK>set commandapproval on
ANR2744I Administrator ADMIN1 changed a command approval configuration setting by issuing
the SET COMMANDAPPROVAL ON command.
ANR3489I SET COMMANDAPPROVAL completed successfully.
```

**2.) check with q status**

```
Command Approval: On
Approver administrators require approval: Off
```

**3.) register / update admin** - authorization of example administrator **"APPROVER"** as a command approver → CMDapprover=yes

```
Protect: SERVER_BLACK>reg admin APPROVER xxxxxxxx CMDapprover=yes
ANR2068I Administrator APPROVER registered.
ANR2744I Administrator ADMIN1 changed a command approval configuration setting by issuing
the REGISTER ADMIN APPROVER CMDAPPROVER=YES command.
```

**4.) Try a "restricted command"** (list of "restricted commands" can be found in ISP Reference Guide description of **"SET COMMANDAPPROVAL"**).

```
Protect: SERVER_BLACK>del vol c:\b1
ANR2742W The del vol c:\b1 command was submitted by administrator TEST_ADMIN and is pending approval. Request ID:323.
```

**5.) query pendingcmd**

```
Protect: SERVER_BLACK>q pendingcmd
```

Server Name	Date Became Pending	Pending request id	Outcome	Command	Administrator Name
SERVER_BLACK	12/08/2019 13:56:18	323	Pending	del vol c:\b1	TEST_ADMIN

**Important:** The history of command approval requests is stored in the TSM/ISP DB2. The length of time that the history is stored is dependent on the value that is specified in the **SET SUMMARYRETENTION** command. After the specified retention period expires, command approval history is **no longer stored** in the database.

Pending commands that are **not approved within 72 hours** are automatically rejected.

**Approval administrators** cannot approve or reject commands that **they issued themselves**.

## 6.) approve, / reject / withdraw (cmd will not run) pendingcmd

"Approve pendingcmd" - example done by administrator "APPROVER": - approve pendingcmd

```
Protect: SERVER_BLACK>approve pendingcmd 323 reason="ich bin einverstanden"
ANR2743I The request to process the command issued by administrator TEST_ADMIN was approved. Request ID:323.
ANR2208I Volume C:\B1 deleted from storage pool BACKUPPOOL.
```

**Attention:** the approval-process **does not check the validity** of the command **parameters** themselves. In our case, it is not checked, **if** the DISK device type **volume "C:\B1" does exist or not**.

**Example of an approval of a DELETE VOLUME command including a "non-valid" volume name:**

```
Protect: SERVER_BLACK>approve pendingcmd 322 reason="ich bin einverstanden"
ANR2743I The request to process the command issued by administrator TEST_ADMIN was approved. Request ID:322.
ANR2401E DELETE VOLUME: Volume C:\B1B is not defined in a storage pool.
```

**Withdraw pendingcmd / Reject pendingcmd:** Use this command to withdraw/reject a command that is pending approval by an approval administrator. Specify the request ID for the pending command.

**Withdraw:** Only the TSM/ISP administrator that issued the command request can withdraw the command. After a request is withdrawn, the command will not

**Reject:** Only approval administrators who are specified by using the CMDAPPROVER parameter on the UPDATE ADMIN & REGISTER ADMIN commands can approve or reject a pending command request.

To view a list of commands that are pending approval and the associated request IDs,

→ issue the **QUERY PENDINGCMD** command.

## 7.) If Approver-Admin should ALSO be approved --> set approversrequireapproval on/OFF

**Remarks:** By default, commands issued by the **Approver-Admin** have not to be approved by the Approver-Admin if **approversrequireapproval** is set to **OFF** (=default).

If **"on"**: the approval administrator requires **also** approval from a **different** administrator where CMDapprover parameter is set to **"yes"** (in order to execute "restricted commands").

```
Protect: SERVER_BLACK>set approversrequireapproval on
ANR2744I Administrator ADMIN1 changed a command approval configuration setting by issuing the SET APPROVERSREQUIREAPPROVAL ON command.
ANR3489I SET APPROVERSREQUIREAPPROVAL completed successfully.
```

→ check with "q status":

```
Command Approval: On
Approver administrators require approval: On
```

→ Test a "DELETE VOLUME" with approval administrator "APPROVER" --> need of a second approver admin.

```
Protect: SERVER_BLACK>del vol c:\b2
ANR2742W The del vol c:\b2 command was submitted by administrator APPROVER and is pending
approval. Request ID:324.

Protect: SERVER_BLACK>approve pendingcmd 324 reason="i'm an approver"
ANR2892E Administrator APPROVER issued the del vol c:\b2 command and cannot also approve
the command. Request ID:324.
```

### List of Restricted commands for command "Set COMMANDAPproval"

- ACTIVATE POLICYSET
- AUDIT CONTAINER
- AUDIT VOLUME
- DEACTIVATE DATA
- DECOMMISSION NODE
- DECOMMISSION VM
- DELETE BACKUPSET
- DELETE FILESPACE
- DELETE MGMTCLASS
- DELETE RETSET
- DELETE VOLUME
- RELEASE RETSET
- SET ACTLOGRETENTION
- SET APPROVERSREQUIREAPPROVAL (only for the OFF parameter value)
- SET COMMANDAPPROVAL (only for the OFF parameter value)
- SET SUMMARYRETENTION
- UPDATE ADMIN (new with **8.1.14**)

The **UPDATE ADMIN** command is placed in the approval queue only if the **MFAREQUIRED=NO** parameter is specified and multifactor authentication (MFA) is enabled for the administrator account.

- UPDATE BACKUPSET
- UPDATE RETSET

The **UPDATE RETSET** command is held for command approval **only** if the retention period that is specified in the RETENTION parameter is **reduced**. If the retention period is **increased**, the command is **not held for approval**.

- UPDATE STGPOOL (new with **8.1.13**)

++++ end of approval command docu +++++