Standard Operating Procedure (SOP) for using the Dedicated Administrator Connection (DAC) in SQL Server, aligned to versions **2016–2025** and following current best practices:

SOP: Dedicated Administrator Connection (DAC) – SQL Server 2016–2025

1. Purpose

The purpose of this SOP is to provide administrators with a structured procedure for accessing SQL Server using the **Dedicated Administrator Connection (DAC)** during critical situations where standard connections fail. DAC ensures that administrators can perform diagnostic and emergency operations safely and efficiently.

2. Scope

This SOP applies to all SQL Server instances **2016 through 2025**, including on-premises, cloud-hosted, or hybrid environments. It is intended exclusively for members of the **sysadmin** role.

3. Responsibilities

- **SQL Server Administrators**: Only authorized personnel with sysadmin privileges can initiate a DAC session.
- **Operations Team**: Monitor server health and ensure that DAC is used strictly in emergencies.
- **Database Owner / Compliance Officer**: Ensure DAC usage is documented for audit and review purposes.

4. Overview of DAC

- **Definition**: DAC is a reserved, single-use connection that allows administrators to troubleshoot a SQL Server instance that is unresponsive to standard connections.
- **Purpose**: Emergency diagnostics, troubleshooting blocking or resource-intensive issues, recovering from critical failures.
- **Access Limitations**:
  - Only **sysadmin** users.
  - Only **one DAC session per server**.
  - Intended for emergency use; **not for routine administration**.

5. Pre-Requisites

1. **Administrator Privileges**: User must be in the sysadmin role.
2. **Local Access**: By default, DAC is enabled for **local connections only**.
3. **Remote DAC (Optional)**: To enable remote DAC connections:
4. sp_configure 'remote admin connections', 1;
5. RECONFIGURE;
6. **Client Tools**: SQL Server Management Studio (SSMS), sqlcmd, or other supported tools.

6. Procedure

6.1 Establishing DAC Locally

1. Open **Command Prompt** or **SSMS** locally on the server.
2. Use ADMIN: prefix to connect via DAC:
   - **SQLCMD**:
   - sqlcmd -S ADMIN:ServerName -E
   - **SSMS**:
     - In **Server Name**, enter: ADMIN:ServerName
     - Authenticate as **sysadmin**.

6.2 Establishing DAC Remotely *(if enabled)*

1. Ensure **remote DAC** is enabled (sp_configure 'remote admin connections', 1).
2. Use the **ADMIN:** prefix with server network name or IP:
3. sqlcmd -S ADMIN:ServerName.domain.com -U sysadmin_user -P Password

6.3 Common Operations via DAC

- Identify and terminate blocking sessions:
- SELECT * FROM sys.dm_exec_requests;
- KILL <session_id>;
- Check resource usage and wait stats:
- DBCC SQLPERF(LOGSPACE);
- SELECT * FROM sys.dm_exec_query_stats;
- Review error logs:
- EXEC sp_readerrorlog;

6.4 Disconnecting DAC

- Close the session immediately after the emergency task is completed.
- **Do not leave DAC connected unnecessarily**, as it prevents additional DAC connections.

7. Best Practices

1. **Emergency Only**: Do not use DAC for regular monitoring or routine operations.
2. **Documentation**: Log all DAC activities for audit and troubleshooting purposes.
3. **Single Session**: Respect the one-DAC-session limit; coordinate with team members if multiple administrators are involved.
4. **Monitor SQL Server**: Post-emergency, verify that the server is stable and all standard connections are functioning.
5. **Keep Updated Tools**: Ensure SSMS and sqlcmd are up-to-date to support DAC in SQL Server 2016–2025.

8. Revision History

Version	Date	Description	Author
1.0	2025-12-26	Initial SOP for SQL Server DAC	SQL Admin Team

SOP for Dedicated Administrator Connection (DAC) in SQL Server 2016–2025

DAC provides admins a **reserved** diagnostic access channel when **SQL Server** is unresponsive. For sysadmins only; **1 session at a time.**

Pre-Requisites

Sysadmin Role: User must be a **sysadmin** to use DAC.

Enable Remote DAC (Optional): sp_configure "remote admin connections", 1; RECONFIGURE;

USE ACCESS

Accessing DAC

USE ADMIN: PREFIX

Locally

```
sqlcmd -S
admiN::ServerName - E"
```

SQLCMD -S admiN:Server.domain.com - –U **sysadmin_user** -P Password

NOTE: By default, DAC is local only; allow remote using sp_configure.

DAC Best Practices

Locally

```
sqlcmd -S ADMIN:ServerName - E
```

SSMS:
Enter ADMIN:ServerName"
Authenticate as **sysadmin**

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SQLCMD:
sqlcmd –S ADMIN:Server.domain.com –U **sysadmin_user** -P Password

NOTE: By default, DAC is local only; allow remote using sp_configure.

DAC Best Practices

Emergency Only
Use DAC strictly for emergencies. **NOT** for routine use.

Log All Activities:
Document DAC usage for auditing.

Single Session Limit
Coordinate with team; DAC is used by only one session.

Emergency Operations

KILL <session_id>;
Find Blocking Sessions

DBCC SQLPERF(LOGSPACE);
SELECT ... FROM **sys.dm_exec query_stats;**

EXEC sp_readerrorlog;

DISCONNECT DAC
further emergencies.

After use, disconnect **DAC** to **make it available** for any further emergencies. Only one DAC session is allowed!