What is a ServiceNow MID Server and how does it work?

A management, instrumentation, and discovery (MID) Server is a Java application that runs on a server on your local network. MID Servers facilitate communication and data movement between a single ServiceNow® instance and external applications, data sources, and services.

What is a MID Server used for?

MID Servers help you to control and secure how ServiceNow communicates with your organization’s systems, especially those behind a firewall. This supports four primary use cases:

1. **Integrations**
   - Supporting LDAP, JDBC, REST, and SOAP based integrations to systems on your intranet.

2. **Orchestration**
   - Enabling orchestration with other systems via either workflow activities or IntegrationHub spokes.

3. **Discovery**
   - Providing access to systems for traditional CI discovery and/or to support discovery needed for service mapping.

4. **Language processing**
   - Running other types of code (PHP, Perl, Ruby, etc.) as a script on the MID Server to interact with systems that require those languages.

What are best practices for using MID Servers?

- **Deploy on a Windows server** – A Windows MID Server can perform discovery and automation on both Windows and Unix, but a Linux MID Server can only perform operations on Unix.
- **Task each MID Server with only a single use** – For example, discovery, orchestration, etc.
- **Place MID Servers close (network-wise) to the internal resources they’re communicating with** – This improves performance.
- **Cluster-like MID Servers** – When set up in clustered groups, ServiceNow automatically balances the load on discovery across the different MID Servers and they act as a failover for each other if one MID Server goes down. When setting this up, also consider having a MID Server pair within the same cluster placed in different geographical locations to support disaster recovery.

If you have any questions on this topic or you would like to be a contributor to future ServiceNow best practice content, please contact us.
What is a ServiceNow MID Server and how does it work? (Cont.)

How does a MID Server work with ServiceNow?

The MID Server runs as a Windows service or UNIX daemon within your organization’s network (behind the firewall) and is completely controlled by your organization with local configuration files. It initiates communications with the ServiceNow instance via the MID Server External Communication Channel (ECC) Queue:

1. The MID Server subscribes to the Asynchronous Message Bus (AMB) which notifies the MID Server if there are jobs in the ECC queue.

   The MID Server also polls the ECC queue on a regular interval defined in the mid.poll.time.* The default is every 40 seconds (this is configurable). The ServiceNow instance never initiates communications with the MID Server.

   *This is in place in case the AMB connection gets disconnected.

2. If a job exists in the ECC Queue for that MID Server, it sets the status to "I'm working on it."

3. The MID Server does the work that’s requested.

4. The MID Server reports the findings of the job back to the ECC queue.

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Related resources

- Product Docs – MID Server
- Product Docs – Install a MID Server on Windows
- Product Docs – Install a MID Server on Linux
- Product Docs – MID Server configuration
- MID Server overview (video)
- How a MID Server can help you (video)
- Now Community – Best practices for MID Server setup and tuning
- ServiceNow security best practice guide: Key elements to consider when securing your instance