1 System requirements and compatibility

1.1 baramundi Management Server and baramundi PXE Relay

- Supported platforms: see 1.5.17 (column bMS)

- .NET Core 6.x, ASP.NET Core Framework 6.x and .NET Core Desktop 6.x in the same versions are required.

- Supported languages: German and English

- It is recommended to use a dedicated server for operating the baramundi Management Server.

- Certain ports must be available for the baramundi Management Server[1] .

- Integration into a Windows domain - Windows Active Directory - is recommended.

- Hardware requirements server/network:

  - Available RAM: at least 8 GB; 16 GB recommended
  - Processor: at least 4 cores
  - Storage space for installing the bMS: at least 5 GB
  - Network card: at least 1 Gigabit

1.2 Database connection

- Supported platforms:

  - SQL Server 2022
  - SQL Server 2019
  - SQL Server 2017
  - SQL Server 2016 SP3 (deprecated)
  - Oracle 19c (deprecated)
    Note: bMS versions from 2025 R2 will no longer compatible with Oracle databases. Switching to MS SQL or our cloud solution (bMSaaS) is recommended.

- at least 10 GB hard disk space for the baramundi database

- The baramundi Management Server is a database-oriented system. Sufficient database performance and a high-performance connection must be ensured.

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[1] A list of the ports used on the server is available at in our online help https://docs.baramundi.com under Documentation > Suite Handling > Extras > Port assignment.

- The SQL Express Edition can be used for environments with up to 250 clients.

- Operation of the database server and the baramundi Management Server on one system is permitted. For higher requirements and larger environments, an independent database server is recommended.

1.3 baramundi Management Center

- Supported platforms for the baramundi Management Center and the add-ons Automation Studio, License Management, Remote Control and ImageMount: see 1.5.17 (bMC column)

- Microsoft Edge WebView2 Runtime is required.

- Screen resolution:
  - Minimum screen resolution 1024 x 768 pixels
  - A resolution of 1280 x 800 pixels or higher is recommended.
  - All resolutions refer to a font size display of 100%.

1.4 baramundi OS Customization Tool

- This bMC add-on for customizing Windows 10 or Windows 11 images, which is provided via managed software, is supported on the platforms shown in MSW.

- The Microsoft ADK for Windows 11 is required to customize the Windows images.

1.5 baramundi DIP

- Supported platforms: see 1.5.17 (bDIP column)

- .NET Core 6.x, ASP.NET Core Framework 6.x and .NET Core Desktop 6.x in the same versions are required.

- Additional hard disk space is recommended:
  - 10 GB for applications
  - 90 GB for Managed Software (MSW)
  - 8 GB for each operating system to be distributed with the baramundi OS Install module

1.6 baramundi Gateway

- Supported platforms: see 1.5.17 (column bGW)

- It is recommended not to operate the baramundi Gateway together with other services on the same system.

- Integration into an Active Directory is not necessary.

- The baramundi Gateway should be operated in a DMZ environment to ensure strict separation from the bMS server. Operation of baramundi Gateway and bMS on one system is not supported.

- Hardware requirements server/network:

    o Available RAM: at least 4 GB; 8 GB recommended
    o Storage space for installing the baramundi Gateway: at least 1 GB
    o Network card: at least 1 Gigabit

1.7 baramundi OS Install

- The Microsoft ADK for Windows 11 is required to customize the Windows images.

- The ADK is available in Managed Software as ADK10, version 2209.

1.8 baramundi License Management

- Storing license documents in the database can significantly increase memory requirements on the database server.

- The MS-SQL Express database server is limited by Microsoft to a database size of 10 GB and is not recommended for use with baramundi License Management.

- baramundi License Management supports the following browsers, each in the current version:

    o Microsoft Edge
    o Google Chrome
    o Mozilla Firefox

1.9 baramundi interfaces

- bConnect is available in versions 1.1 and 2.0.

- Deprecated - The bMOL (baramundi Management Object Language) interface is no longer being developed. We recommend switching to and using our bConnect interface.
  Note: The bMOL interface will no longer be available from bMS version 2025 R1.

- Deprecated - The httpMOC interface is no longer being developed. We recommend switching to and using our bConnect interface.
  Note: The httpMOC interface will no longer be available from bMS version 2025 R1.

- Deprecated - Direct access to the database (SQL/Oracle) is not supported. We recommend switching to and using our bConnect interface. The DB documentation has not been supplied since 2023 R2.

*) Deprecated: Feature updates and bug fixes are no longer made. Critical security updates are made available for the current version.

1.10 baramundi Network Devices

- Supported platforms: see 1.5.17 (column bND)

- The Network Scanner is an add-on to Windows bMA. It is available to all customers via Managed Software .

- .NET 4.7.2 is required.

1.11 baramundi OT Devices

- Data is recorded via SNMP Version1, Version2c, Version3.

- Supported platforms: Siemens SIMATIC S7 1200 and 1500

1.12 baramundi Kiosk

- Supported platforms: see 1.5.17 (column bMA)

- A Windows Active Directory including a configured baramundi AD Sync is required for user login and job assignment on a user basis.

- baramundi Kiosk supports the following browsers, each in the current version:
  - Microsoft Edge
  - Google Chrome
  - Mozilla Firefox

1.13 Support for Android

- Supported versions:

    - Android Enterprise 14
    - Android Enterprise 13
    - Android Enterprise 12
    - Android Enterprise 11
    - Android Enterprise 10
    - Android Enterprise 9
    - Android Enterprise 8 *)
    - Android Enterprise 7 *)

    *) Support is limited. New functions may not be available and existing functions may not work as before; no support for zero-touch.

1.14 Support for iOS

- Supported versions:

    - iOS version 17
    - iOS version 16
    - iOS version 15
    - iOS version 14
    - iOS version 13
    - iOS version 12

1.15 Linux support

- The standard template provided by baramundi for the SSH inventory supports the following distributions:

    - Debian: Version 11 and 12
    - OpenSuse: from version 15
    - Ubuntu Server: Version 21 and 22

- By customizing templates, the commands can be adapted accordingly by the user to achieve individual compatibility with other operating systems.

1.16 Support for macOS

- Supported versions:
  - macOS 14.x (Sonoma)
  - macOS 13.x (Ventura)
  - macOS 12.x (Monterey)
  - macOS 11.x (Big Sur)
  - macOS 10.15 (Catalina)

1.17 Windows support

- bMS/R: baramundi Management Server, baramundi PXE Relay
- bMC: baramundi Management Console,
          including bRemote, ImageMount and License Management AddOn
- bAS   baramundi Automation Studio
- bGW: baramundi Gateway
- bDIP: baramundi DIP, bBT and DipSync   service
- bMA: baramundi Agent for Windows
- bND: baramundi Network Scanner as an add-on for Windows bMA

- X: fully supported

Platform identifier	bMS/R	bMC	bAS	bGW	bDIP	bMA	bND
Windows Server 2022 Standard/Datacenter (desktop view)	X	X	X	X	X	X	X
Windows Server 2022 Standard/Datacenter (Core)						X	
Windows Server 2019 Standard/Datacenter (desktop view)	X	X	X	X	X	X	X
Windows Server 2019 Standard/Datacenter (Core)						X	
Windows Server 2016 Standard/Datacenter (desktop view)	X	X	X	X	X	X	X
Windows 11 Pro / Enterprise (N)		X	X		X	X	X
Windows 10 Pro / Enterprise 22H2 (N) (32 bit and 64 bit)		X	X		x64	X	X
Windows 10 Pro / Enterprise 21H2 (N) (32 bit and 64 bit)		X	X		x64	X	X

Platform identifier	bMS/R	bMC	bAS	bGW	bDIP	bMA	bND
Windows 10 Enterprise 2021 LTSC (32 bit and 64 bit)		X	X		x64	X	X
Windows 10 Enterprise 2019 LTSC (32 bit and 64 bit)		X	X		x64	X	X
Windows 10 Enterprise 2016 LTSB (32 bit and 64 bit)		X	X		x64	X	X
Windows 10 Enterprise 2015 LTSB (32 bit and 64 bit)		X	X		x64	X	X

1.18 Windows support with restrictions

The following operating systems are only supported by baramundi components to a limited extent. This may mean that new functions cannot be used or that existing functions may no longer work as before. Due to the complexity and large number of legacy systems, baramundi cannot guarantee functionality on these systems. We recommend the use of more modern operating systems. We can no longer provide support for baramundi server components (bMS/R, bMC, bAS, bGW, bDIP) on operating systems that are outside of Microsoft's mainstream support .

- (1): is only supported to a limited extent, as Microsoft has ended (basic) product support
- (2): A current bMA cannot be executed on Windows XP. These instructions must be observed when using, see 1.7.14 Windows Agent (bMA) note on Windows XP
- (3) No more support as of bMS 2024 R2

	bMS/R	bMC	bAS	bGW	bDIP	bMA	bND
Windows Server 2012 R2 Standard/Datacenter (Server with graphical user interface)						1	1
Windows Server 2012 Standard/Datacenter (Server with graphical user interface)						1	1
Windows Server 2008 R2 SP1 Standard/Enterprise/Datacenter						3	3
Windows Server 2008 SP2 Standard/Enterprise/Datacenter (32 Bit/64 Bit)						1	1
Windows 10 Pro/Enterprise 1703 to 21H1 (N) (32 bit and 64 bit)						1	1
Windows 8.1 Pro/Enterprise (32 bit/64 bit)						1	1

Windows 7 SP1 Professional/Enterprise/Ultimate (N) (32 bit and 64 bit)						1	1
Windows Vista SP2 (32 Bit/64 Bit)						1	1
Windows XP SP3 (32 bit)						2	

1.19 Languages

The baramundi Management Center, baramundi License Management and the Automation Studio are available in the following languages:

> German, English

The bMA for Windows clients supports user messages in the following languages:

> German, English, Bulgarian, Chinese, Danish, Finnish, French, Greek, Italian, Dutch, Norwegian, Polish, Portuguese, Romanian, Russian, Swedish, Slovakian, Spanish, Turkish, Czech, Hungarian

The baramundi Kiosk supports the following languages:

> German, English, Polish

> Further languages can be added by IT administrators.

The following languages are supported for all server-side services (i.e. baramundi Management Server, baramundi Gateway, DIP):

> German, English

2 Product improvements in detail

2.1 Removed discontinuations / removed properties

- Patch updates via the `Deploy Microsoft Patches (Classic)` job step are discontinued. The provision of the patch data `bpmdata3_reduced_signed.zip/bpmdata3_signed.zip` is discontinued as of April 2024.

- Windows Vista and Windows Server 2008 SP2 are no longer supported.

- MS-SQL Server 2014 is no longer supported.

- Android version 4.0.4. up to version 9 is no longer supported.

- Samsung KNOX on Android version 4.0.4 up to version 9 is no longer supported.

2.2 General, when creating a new baramundi database

- The default server settings for new databases are now:

```
 Client identification        Host name, UUID, MAC
IP validity period           192
Connection mode              IP address if available
ICMP                         yes
```

- Under Settings-Job execution, the `maximum number of simultaneously active clients` is now `250`.

- When creating new baramundi databases, it is now possible to set the currency used for energy management.

- No `DIP` is now written in the `logical group`.

2.3 Windows Agent (bMA)

- The password length for the automatically generated password for the local installation user (baraInstLocal) has been increased from 14 to 64 characters.

- Bugfix: In rare cases, the info window of the baramundi Traynotifier remains permanently visible after unlocking the keyboard and mouse and may block a logout.

2.4 Management Center (bMC)

- Under `Configuration - Variables`, the new field `Usage` shows how this variable can be referenced. Copying is also possible here.

- The menu for the PXE configuration has been changed to `bMC – Configuration - Server - PXE support`. There, the client identification can now be changed from MAC to UUID. See note

- Under `bMC - Configuration - Server - Settings - Basic settings`, UUID is now also possible for client identification.

- Under `bMC - Job - Properties - User interaction`, the option `Automatic job delay without info window for active full screen/presentation applications` is now available. This means that no job info window appears on the client if, for example, a PowerPoint presentation has been recognized. If the presentation is ended, the info window appears after a few minutes.

- Under `bMC - Configuration - Server - Settings - Job execution`, the option Clean up job targets with invalid status at module start has been removed.

- The condition `Software` is now available in a `Dynamic Group (Universal)` and thus enables detailed queries on installed (`exists`) or missing (`does not exist`) applications.

- In a `Dynamic Group (Universal)`, the `Job` condition is now available and thus enables queries on successful/unsuccessful job executions including the specification of times.

- If a new application is created, only the client operating systems Windows 10/11 and the server operating systems from 2016 are selected by default as `Supported operating systems`.

- If a new application is created, the option `bBT supported` is now active by default.

- The sub-nodes under `bMC – Configuration` are now collapsed.

- Bugfix: A `Dynamic Group (Universal)` cannot be saved if variables of type Date are used in a condition. An exception "Could not cast..." appears.

- Bugfix: Under `Client - Inventory – Inventories` the action Back to overview does not work. It has been removed.

- Bugfix: The action `Client - Management Agent - Activate Dynamic Mode` fails if the bMC user has no rights for `Configuration - Server - Settings`.

- Bugfix: If the folder specified under `Personal settings - Default job folder` is deleted, an error message "The node with the ID was not found" appears when using the Create installation job action, for example.

2.5 bRemote

- To use bRemote to connect to Windows PE, the `Connect to PE` command is now available in the Client `Custom menu`.

- Note: Support for Windows XP has been removed.

2.6 Remote Desk (AnyDesk)

- The bMA setup contains the AnyDesk*.exe files, these are now installed quickly and without disturbing the user in the bMA folder when the first connection is made with Remote Desk.

- The bMC Setup contains the AnyDesk*.exe files, these are now installed subsequently when using `Client - Remote access` for the first time. To perform this action, the bMC user requires administrative rights. With the setup parameter `ManagementCenter_setup.exe /qn ADDLOCAL=ALL` AnyDesk*.exe can be installed automatically.

- Bugfix: If special characters (e.g. from the Extended ASCII table) are used under `bMC personal settings - display name`, this user cannot perform remote maintenance. If a connection is triggered, no message is displayed for the user of the terminal device. The connection is terminated after some time on the BMC side with the error "Connection error".

- Bugfix: When using client `Remote access`, an error message "Value can not be null" appears if the bMC user has not stored a profile picture. Only occurs when using an Oracle database.

2.7 Defense Control

- The feature "Local administrative user accounts" can be configured under `bmc - Defense Control - Local administrative user accounts`.

- In the bMC, the automatically generated password can be managed on the client under `Endpoint security - Local administrative account`. Provided the bMC user has the new right `Special - Local administrative account` for this client and the feature is activated globally.

- Bugfix: In rare cases, the `bMC - Client - Microsoft Defender Antivirus` - Threats view displays an error message "Not all required server modules are running", although all server modules are running correctly.

2.8 Update Management

- Bugfix: In some cases, a `Personal notification` stored in the job is not sent in the event of an error in a job with Microsoft Update Management steps.

- Bugfix: The configured `Standard update profile` for new devices is not assigned to a new client if it is recorded via the client recording under PE.

2.9 OS install

- The baramundi server is now automatically stored as the FQDN in the `Boot Media Wizard`.

- When creating a new operating system, `Recreate before installation` is now preset for `Computer account`.

- A job created via the bMC action `Client - Extra - Reinstall` now contains the action Finally restart client at the OS step.

- The size of the WindowsRecovery (WinRE) partition is now 1024 MB.

- Bugfix: If a client is detected via the automatic MAC detection during PXE boot via a PXE relay, this client may only be visible in the bMC after restarting the QueryService.

2.10 baraDIP

- In order to support multi-domain authentication more conveniently with bBT, additional client domains can now be specified for bBT download under `bMC - Configuration - DIP - DIP management` on the individual DIP server.

- baraDIP no longer uses an Apache web server.

- Note: baraDIP now locks files while they are being transferred from DipSync or downloaded from Clients via bBT.

- Bugfix: If a proxy is entered under `bMC - Configuration - Server - Settings - Downloader - Use proxy`, the TLS configuration for DIP servers may not be possible.

- Bugfix: If faults occur during network communication on DIP servers, it has been observed that the baraDIP service may switch to a state where the service is still running but no longer synchronizing.

2.11 Mobile devices

- Apple's newly introduced "Rapid Security Responses" are available as `Patch Level`, and can be used under `Compliance - Mobile and macOS Devices - Rules`.

- WPA3 Personal/Enterprise is now supported for iOS/iPadOS from version 16.

- WPA3 Personal is now supported for Android Enterprise from version 11.

- WPA3 Enterprise is now supported for Android Enterprise from version 12.

- The EAP method `TTLS with PAP` is supported in WiFi profiles for iOS/iPadOS and Android Enterprise.

- For MDM profiles, the option `Prohibit installation of alternative marketplace apps` is available under `Restrictions - iOS/iPadOS - Use specific settings for device enrollment`. Usable from iOS 17.4.

- A template for setting the time zone is available for iOS under `Job - Execute command`.

- New profile restriction `Prohibit activation or access to debugging functions` available for Android Enterprise devices.

- The push to Android devices now works via the baramundi cloud service. Therefore, the configuration of the `Google Sender ID` and `server key` under `Configuration - Mobile Devices - General - Google Android` is no longer necessary and has been removed.

- Bugfix: If the number of licensed devices is reached when enrolling an iOS device, the enrollment fails when logging on to the baramundi bMD Agent and the device is removed from the administration.

- Bugfix: A bMC user without read rights on `Configuration - Mobile Devices - General` cannot see any apps on mobile devices under `Inventory - Installed Apps` and under `Software - Apps`.

- Bugfix: Jobs with the option `Assign to new devices` are not assigned to newly enrolled devices if they were enrolled via Android Zero-Touch.

- Bugfix: When adding an Android app via the google store, a message "At least one error has occurred" or the message "The value must not be NULL" appeared in rare cases.

2.12 Network devices

- A new template for identifying network devices SSH inventory (standard) is available under `Inventory - Templates`.

- You can create your own inventory template via `Inventory - Templates - New - Template for SSH inventory`. This makes it possible to adapt the default inventory commands or add your own.

- Bugfix: The Inventory via SSH job step is not available if a Network Device license is available but no OT Inventory license.

2.13 macOS

- WPA3 is now supported for macOS from version 13.

- The EAP method `TTLS with PAP` is supported in WiFi profiles on macOS.

- Bugfix: With macOS 14.0, the baramundi Agent icon is not displayed in the menu bar. Note: Reassigning a job with step `Enroll SSH interface` fixes the missing icon in the menu bar.

2.14 bConnect

- It is now possible to create and delete asset types.

- Creating, modifying and deleting assets is now possible.

- The value `Client - Properties - General - Language` can now also be changed via bConnect.