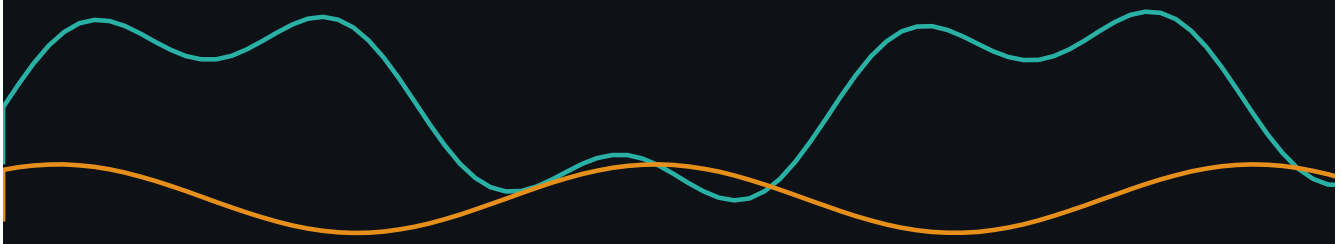
ByteMonitor

User Guide

Monitor, understand and control your PC's Internet usage.



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1 Overview

ByteMonitor measures, second by second, what your PC receives and sends over the Internet, application by application, and helps you stay within your data plan or top-ups.

What ByteMonitor does

- **Live rates**: a small, always-visible widget shows received ↓ and sent ↑ traffic, latency and the curves of the last minutes.
- **Usage per application**: who uses data, how much and when; history by hour, day and month.
- **Plans and top-ups**: daily and monthly quotas, prepaid top-up countdown, alerts and automatic actions.
- **Protection**: cut the Internet in one click, data saver mode, abnormal traffic alerts, application blocking.
- **Connection quality**: router and Internet latency, outages and their likely cause, speed test.
- **Log**: connections of each application (server, port, volumes) and exchanged files.
- **Whole network**: traffic of all devices read from the router (UPnP or SNMP).

Privacy

> **All data stays on your PC.**
> No account, no telemetry, nothing sent to ByteMonitor. Only the speed test, latency measurement and alert e-mails (if you set them up) use the network.

Requirements

Item	Requirement
System	Windows 10 (22H2 or later) or Windows 11, 64-bit (x64)
Rights	Administrator once, to install the measurement service
Resources	Less than 40 MB of memory, almost no CPU when idle

Two components

The measurement service (`bm-service.exe`) runs in the background, even with no window open, and records the history. **The interface** (`bm-app.exe`) shows the widget, the main window and the icon next to the clock.

2 Installation

1. Double-click the setup file `…ByteMonitor.Setup-v0.46.3-x64….exe`.
2. If Windows shows “Windows protected your PC” (trial version not yet signed): **More info** then **Run anyway**.
3. Accept the administrator permission request.
4. Choose the language, then the options: **Start ByteMonitor when I sign in to Windows** (recommended) and **Create a desktop shortcut**.
5. Click **Install**. The measurement service is installed and started.
6. Tick **Launch ByteMonitor** then **Finish**: the widget appears at the bottom right of the screen.

> **Updating**
> Simply run the installer of a newer version: the old version is stopped and replaced. History and settings are kept.

First launch: the plan assistant

Three questions adapt ByteMonitor to your subscription:

- **Unlimited**: monitoring only, no quota or countdown.
- **Monthly plan**: monthly volume and first day of the billing cycle; ByteMonitor computes a daily budget.
- **Prepaid top-ups**: volume, validity period and the Wi-Fi network that receives the top-up (for example your phone's hotspot).

The assistant can be run again at any time: widget menu > **Plan** > **Plan assistant…**

Language

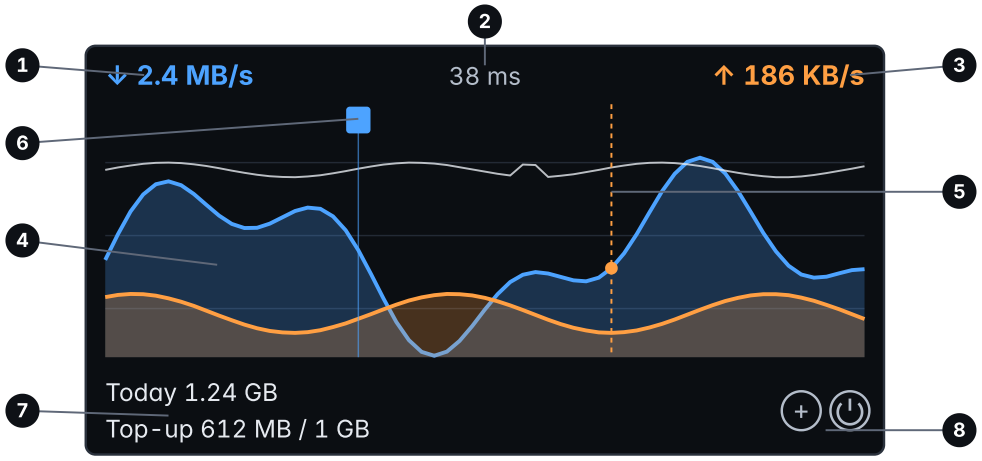
French or English, following the Windows language. Can be changed in **Settings** > **Language**.

Uninstalling

Windows Settings > **Apps** > **ByteMonitor** > **Uninstall**. The service and the firewall rules created by ByteMonitor are removed. At the end, ByteMonitor asks whether to delete the history and settings too; by default they are kept and found again on reinstallation.

3 The widget

The widget is the compact window that stays on screen. Drag it to move it and drag its edges to resize it.



Widget diagram (dark theme). Displayed items are chosen in the **Show** menu.

1. Received rate ↓ (click: hide / show its curve)
2. Latency (click: hide / show its curve)
3. Sent rate ↑ (click: hide / show its curve)
4. Curves: received (blue), sent (orange), latency (thin line)
5. Clicked instant: marker that scrolls with the curve
6. Detected file: blue (received) or orange (sent) badge
7. Total, top-up, daily budget
8. Buttons: new top-up (+), cut Internet

Gestures

Gesture	Effect
Double-click	Opens the main window
Right-click	Widget menu (settings, plan, protection...)
Click ↓, ↑ or latency	Hides the matching curve; a second click shows it again. The figure is dimmed while its curve is hidden.
Hovering the curves	Curves frozen (“pause” marker); time, rates and applications of that instant. Live curves keep moving as ghosts (thin lines).
Click on the curve	Pinned probe: applications of that instant, Cut / Restore buttons per application, exchanged files. The clicked instant stays marked and scrolls with the curve; several instants can be marked.
Click on a file	Opens the Log on that file and File Explorer with the file selected.
+ button	New top-up (last template used), can be cancelled for 5 seconds
Shift + click in the menu	Applies a setting without closing the menu

4 Widget menu

Right-click the widget. Tip: `Shift` + click changes an option without closing the menu.

Item	Purpose
Open ByteMonitor..., History..., Protection..., Settings...	Opens the main window on that page
Plan	Unlimited, monthly plan, prepaid top-up (one item per template); stop or cancel a top-up; quotas; templates; assistant
Cut / Restore Internet	Blocks all Internet access of this PC with Windows Firewall (the local network stays reachable)
Test speed	Runs a throughput and latency test
Data saver mode	Blocks the applications included in data saver mode (Protection page)
Theme	System (follows Windows), Light, Dark, Graphite, Ocean, Sand, High contrast
Opacity	Widget transparency; **Background opacity**: only the background becomes transparent, curves and text stay sharp
Position	Normal, Always on top, Pinned to the desktop; lock position and size; click-through
Show	Rates, graph, total, border, top-up, daily budget, live rate bars, latency, latency curve; **Traffic curves:** this PC, whole network (router) or both; **Latency curve: target**: Internet, router or both
Graph style	Line, filled area, bars
Time scale	Fixed duration stretched (1 min to 1 h) or more history when the widget is widened; smooth mode
Refresh rate	500 ms, 1 s or 2 s
Total shown	Today, month (billing cycle) or session
Quiet during full screen	No notification during a game, a video or a presentation
Connection loss alert	Notification when the connection is lost, then restored

> **Click-through**
> The widget stays visible but lets the mouse through. To restore it: keyboard shortcut (default `Ctrl` + `Alt` + `M`) or right-click the icon next to the clock.

Icon next to the clock

Click: show or hide the widget. Right-click: menu (open, speed test, restore the widget after “Click-through”, quit...).

5 The main window

Double-click the widget. Nine pages, reached from the left bar; hovering a button or setting shows an explanation.

Page	Content
Real time	Live rates, graph of the last minutes (same gestures as the widget: hover, click, marked instants), daily budget, current top-up
Applications	Usage of each application, live or over a period; sorting, name filter; curve of the selected application
History	Volumes by hour, day or month; preset or custom periods; CSV, HTML and Excel export
Quotas & alerts	Daily and monthly quotas, alert thresholds, sound, billing cycle, automatic actions, e-mail alerts
Top-ups	Start a top-up, adjust to the real balance, templates, Wi-Fi network or interface concerned
Protection	Cut the Internet, data saver mode, abnormal traffic alerts, trust, blocking, per-application thresholds
Connection	Router and Internet latency, losses, outages and likely cause, speed test, whole-network traffic (router)
Log	Connections of each application (server, address, port, volumes) and exchanged files
Settings	Appearance, units, monitored interface, language, startup, shortcuts, settings import / export, uninstall

Applications

Choose **Real time**, **Today**, the last 7 or 30 days or the current month (cycle). The **(unattributed)** line groups headers, TCP acknowledgements and system traffic that no application claims. Blocking, trust and thresholds of an application: Protection page.

History

Periods: today, yesterday, last 7 and 30 days, current and previous month (aligned with the billing cycle), last 12 months or custom period (click a date: calendar). Hovering the graph shows the period and volumes. If the PC ran without ByteMonitor, missing hours are filled in from the Windows usage record.

6 Plans, quotas and top-ups

Quotas and alerts

- **Daily quota** and **monthly quota** in GB (“500 MB” accepted; empty or 0 = none).
- **First day of the billing cycle** (1 to 31): the “month” follows your provider.
- **Alert thresholds** (for example 70, 85, 95 and 100 %): Windows notification, and optional sound.
- **Turn off quotas**: monitoring only.

Automatic actions at 100 %

When a quota is reached, ByteMonitor can **cut the Internet** and/or **turn on data saver mode**. They lift by themselves on the next day or cycle, or if the quota is raised. If you lift them yourself, they do not come back before the next period.

E-mail alerts

Your mail provider's SMTP server (Gmail and Yahoo preset), port 587 or 465, address and **app password** (not your usual password). Sent for: quota thresholds, automatic actions, outages of at least 5 minutes. **Send a test e-mail** button.

> **Gmail**
> App passwords are only available when 2-Step Verification is turned on for the Google account.

Prepaid top-ups

1. Create a **template** (Top-ups page): name, volume, validity, optional envelopes (day, night...) with their time slot.
2. Choose what is counted: a **Wi-Fi network** (counted only while this PC is connected to it), an interface, all adapters, or the **router (whole network)** to count all devices.
3. On each top-up: the widget's **+** button or **Start the top-up**. Can be cancelled for 5 seconds.
4. To correct a gap with the provider: **Adjust** to the real remaining volume (in MB).

The widget shows the remaining volume and the **daily budget**: what can be used today to last until the end of the validity.

7 Protection

Feature	Description
Cut Internet	Blocks all Internet access of the PC with Windows Firewall; the local network stays reachable. Click again: restore.
Data saver mode	Blocks the applications ticked **Include in data saver** (updates, sync…). **Exit data saver** restores them.
Abnormal traffic alerts	Notification when an application uses clearly more than usual (habit computed over 7, 14 or 30 days). From the notification: I trust it, see its transfers, set its thresholds, block.
Trusted	No alert for this application
Block / Unblock	Denies network access to an application (Windows Firewall)
Per-application thresholds	Own thresholds with the usual consumption and suggested thresholds

> **Firewall rules**
> Rules created by ByteMonitor carry its name and are removed on uninstallation.

8 Connection and router

Connection quality

With **Measure the connection continuously**, ByteMonitor measures the latency to the **router** (gateway) and to the **Internet** (1.1.1.1 by default, configurable) every second. About 5 MB per day towards the Internet.

- Average latency graph, packet loss, outage bands; periods 1 h, 24 h, 7 d, 30 d.
- Minimum, average, maximum and loss statistics.
- Outage list with likely cause: **local** (the router no longer answers) or **Internet** (the router answers, the Internet does not). CSV export.
- Widget: “Router unreachable” or “Internet unreachable” in red during an outage.

Speed test

Test speed button (Connection page or menu): latency, jitter, download and upload, in 8 seconds at most (25 MB at most). Can be scheduled every 1, 3, 6, 12 or 24 h; skipped during an outage or in data saver mode.

Whole network (router)

ByteMonitor reads the router's counters to know the traffic of **all devices** on the network.

1. Turn on **UPnP** in the router's administration page (often on by default).
2. Connection page: tick **Read router traffic (UPnP)**. The **Whole network** line shows the router's name, its rates, other devices and today's total.
3. Without UPnP: ByteMonitor tries **SNMP v2c** with the given community (“public” by default).

The whole network can then be shown on the curves (this PC, whole network dotted, or both) and counted by a top-up.

> **Phone hotspot**
> A phone does not provide these counters: only this PC's traffic is measured.

9 Log and exchanged files

Connections

Active connections (refreshed every 3 s) or those of the last 1 h, 24 h or 7 days: application, protocol, server (name read from the Windows DNS cache, no network query), address, named port (HTTPS, QUIC, DNS…), volumes, duration. Filter, sort by column, CSV export. The selection is kept across refreshes.

Exchanged files

The content of encrypted (HTTPS) exchanges cannot be read; ByteMonitor therefore links to the exchanges the **files on the PC** written or read by the application that exchanges:

- **Received**: file created or replaced (browser download, download manager…).
- **Sent (probable)**: existing file opened, then at least half its size sent within a minute.

A connection that exchanged a file carries a ● ↓, ● ↑ or ● ↕ marker in the **File** column. The always-visible bottom list details all files of the period: time, application, direction, size, name, full path. Selecting a connection selects its files; double-click: folder opened.

Files also appear on the curves (widget and Real time) as badges; a click opens the Log and File Explorer on the file.

> **Enabling**
> **Detect exchanged files** box on the Log page. System, temporary and development folders are excluded; data kept for 7 days.

10 Settings and shortcuts

Settings

- **Appearance**: theme, received, sent and widget background colours (**Theme colors** button to go back); contrasts are corrected automatically to stay readable.
- **Units**: bytes per second (KB/s, MB/s) or bits per second (kbit/s, Mbit/s).
- **Monitored interface**: all adapters or a single one (Wi-Fi, Ethernet, VPN...).
- **Startup**: start when signing in to Windows; fill in missing history.
- **Settings import / export**: a text file `YYYYMMDD-ByteMonitor.Reglages.ini` to back up your settings or copy them to another PC.

Global keyboard shortcuts

Action	Default
Show / hide the widget	`Ctrl` + `Alt` + `B`
Click-through	`Ctrl` + `Alt` + `M`
Cut / restore Internet	none
Open the main window	none
Data saver mode	none

To change: click in the box and type the combination (`Ctrl` and/or `Alt` required). `Backspace` = no shortcut. A shortcut already taken by another application is reported.

Where data is stored

Data	Location
History (SQLite database)	`C:\ProgramData\ByteMonitor\bytemonitor.db`
Service log	`C:\ProgramData\ByteMonitor\logs\bm-service.log`
Interface settings and log	`%AppData%\ByteMonitor\` (**Open the settings and log folder** button)

11 Frequently asked questions

The widget has disappeared

Click the ByteMonitor icon next to the clock (possibly under the ^ arrow), or `Ctrl` + `Alt` + `B`. If it no longer reacts to the mouse: “Click-through” is on, see `Ctrl` + `Alt` + `M`.

“Service stopped” is shown

The measurement service is not running. Restart Windows; if the message persists, run the installer again.

Figures differ from the provider's

Providers sometimes count differently (rounding, phone traffic, other devices). Adjust the top-up to the real balance (Top-ups page) or count the whole network through the router.

“Router unreachable” while the Internet works

Some routers do not answer measurements; ByteMonitor then tries a TCP connection. If the alert persists wrongly, choose the **Internet** target for the latency curve and report it with the service log.

No file in the Log

Check the **Detect exchanged files** box (Log page). Files saved in system or temporary folders are not reported.

Demo

Widget menu > **Offline demo**: a 3-minute scenario is replayed, nothing is recorded.

Reporting a problem

Write to **falce.info@gmail.com** attaching `%AppData%\ByteMonitor\bm-app.log` and `C:\ProgramData\ByteMonitor\logs\bm-service.log`.