

# Astra Linux

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**Astra Linux** is a Russian [Linux](#)-based computer [operating system](#) (OS) that is being widely deployed in the [Russian Federation](#) to replace [Microsoft Windows](#).<sup>[2][3]</sup> Initially it was created and developed to meet the needs of the [Russian army](#), other armed forces and [intelligence agencies](#).<sup>[4]</sup> It provides [data protection](#) up to the level of "top secret" in Russian [classified information](#) grade by featuring [mandatory access control](#). It has been officially certified by [Russian Defense Ministry](#), [Federal Service for Technical and Export Control](#)<sup>[5]</sup> and [Federal Security Service](#).<sup>[6]</sup>


In the course of 2010s, as Russian authorities and industry were trying to lower dependence on Western products ("[import substitution industrialization](#)"). Aside from army and police, it is now being supplied to educational, healthcare and other state institutions, as well as to industry giants such as [RZD](#), [Gazprom](#), [Rosatom](#) and others.<sup>[2][3]</sup> Server versions of Astra Linux are certified to work with [Huawei](#) equipment.

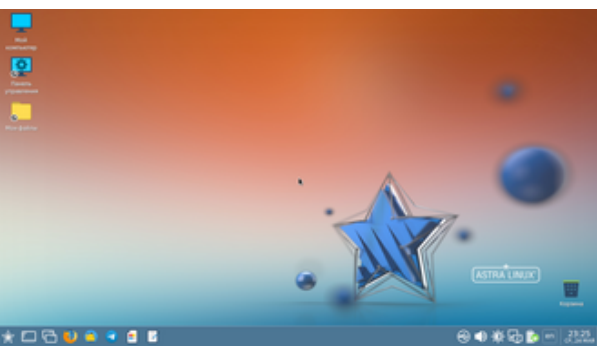
## Specifications [\[ edit \]](#)

The creator of the OS is the Scientific/Manufacturing Enterprise [Rusbitech](#) which is applying solutions according to [Russian Government](#) decree No. 2299-p of 17 October 2010 that orders federal authorities and budget institutions to implement [Free Software](#) use.<sup>[7]</sup>

There are two available editions of the OS: the main one is called "Special Edition" and the other one is called "Common Edition". The main differences between the two are the fact that the former is paid, while the latter is free; the former is available for x86-64 architecture, ARM architecture and Elbrus architecture, while the latter is only available for x86-64 architecture; the former has a security certification and

### Astra Linux





Astra Linux Operating System

<b>Developer</b>	Rusbitech-Astra
<b>OS family</b>	Linux (Unix-like)
<b>Working state</b>	Current
<b>Marketing target</b>	Russian Armed Forces; Intelligence agencies of Russia; Police of Russia; RZD; Gazprom; Rosatom; Tianwan Nuclear Power Plant; State Institutions; Health Institutions; Educational Institutions and others
<b>Available in</b>	Russian, English
<b>Update method</b>	APT
<b>Package manager</b>	dpkg
<b>Supported platforms</b>	x86-64, ARM, Elbrus
<b>Kernel type</b>	Monolithic
<b>Default user interface</b>	Fly
<b>License</b>	various <sup>[1]</sup>
<b>Official website</b>	<a href="http://astralinux.ru">astralinux.ru</a>

provides 3 levels of OS security (which are named after Russian cities and which from the lowest to the highest are: [Oryol](#), [Voronezh](#) and [Smolensk](#)), while the latter doesn't have the security certification and only provides the lowest level of OS security ([Oryol](#)).<sup>[8][9]</sup>

Rusbitech also manufactures a "soft/hardware trusted boot control module" MAKSIM-M1 ("M643M1") with [PCI bus](#). It prevents [unauthorized access](#) and offers some other raised [digital security](#) features. The module, besides Astra Linux, also supports OSes with [Linux kernel](#) 2.6.x up to 5.x.x, as well as several [Microsoft Windows](#) OSes.<sup>[10]</sup>

It is declared the Astra Linux licenses correspond with Russian and international laws and "don't contradict with the spirit and demands of [GPL license](#)".<sup>[11]</sup> The system uses [.deb](#) packages.<sup>[12]</sup>

Astra Linux is a recognized [Debian](#) derivative.<sup>[13]</sup> Rusbitech has partnership relations with [The Linux Foundation](#).<sup>[14]</sup> It was part of the advisory board of [The Document Foundation](#),<sup>[15]</sup> but was suspended on 26 February 2022 because of [the Russian invasion of Ukraine](#).<sup>[16]</sup>

## Use [[edit](#)]

The Special Edition version (paid) is used in many Russian state-related organizations. Particularly, it is used in the Russian National Center for Defence Control.<sup>[17]</sup>

There are talks to deploy mass use of Astra Linux in many state institutions of the [Republic of Crimea](#) – legitimate use of other popular OSes is questionable because of [international sanctions during the Russo-Ukrainian War](#).<sup>[18]</sup>

Also there were plans on cooperation of Rusbitech and [Huawei](#).<sup>[19][20]</sup>

In January 2018, it was announced that Astra Linux was going to be deployed to all Russian Army computers, and Microsoft Windows will be dropped.<sup>[21]</sup>

In February 2018, Rusbitech announced it has ported Astra Linux to [Russian-made Elbrus microprocessors](#).<sup>[22]</sup>

In February 2019, Astra Linux was announced to be implemented at [Tianwan Nuclear Power Plant](#) in China.<sup>[23]</sup>

Since 2019 "super-protected" [tablet computers](#) branded *MIG* are available with Astra Linux,<sup>[24]</sup> smartphones are expected.<sup>[25]</sup>

In 2019 [Gazprom](#) national gas/oil holding announced Astra Linux implementation, in 2020 nuclear corporation [Rosatom](#),<sup>[26]</sup> in early 2021 [Russian Railways](#) was reported to do so.<sup>[27]</sup>

In 2020, Astra Linux sold more than a million copies in licenses and generated 2 billion rubles in sales.<sup>[28]</sup>



Astra Linux Special Edition is being used in the [Russian National Center for Defence Control](#)

In 2021, several Russian [nuclear power plants](#) and subsidiaries of [Rosatom](#) are planned to switch to Astra Linux, with a total of 15000 users.<sup>[29]</sup>

In July 2022 after [Microsoft](#) had decided to exit the Russian market,<sup>[30]</sup> Astra Linux announced that it was planning to be [publicly listed](#) on the [Moscow Exchange](#), although it did not supply a date for the planned listing at the time.<sup>[31]</sup>

## Repository [[edit](#)]

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Starting with the x.7 update, the *Astra Linux Special Edition* operating system uses a nested package repository structure – and this structure comprises the main repository, the base repository, and the extended repository.<sup>[32][33][34]</sup> The main x.7 repository is generally identical to version 1.6 – and the base repository encompasses all core packages, as well as packages related to development tools.<sup>[32][34]</sup>

The extended repository houses versions of software packages that are not found in the primary and base repositories. Such software operates within the Astra Linux environment, remains unaltered to incorporate security features with CSS, may not be compatible with packages from the base and main repositories, and does not undergo certification tests.<sup>[32][34]</sup>

The extended repository offers more functionality than a basic and core repository, with extended repository packages capable of modifying basic packages but not core packages.<sup>[32][34]</sup>

Additionally, the extended repository includes a backport's component that supplies the latest versions of packages that might not be compatible with packages from the basic and extended repositories, and an "Astra-ce component" that furnishes packages to ensure maximum compatibility with third-party software.<sup>[32][34]</sup>

Using an extended repository enables users to install and run software originally designed for other Linux systems, develop their own software, and adapt Astra-Linux to various hardware platforms.<sup>[32][34]</sup>

The primary categories of extended repository software packages are packages not included in the base repository, packages that update the base repository (i.e., newer versions of the basic repository packages – if incompatible, they are integrated into the backports component), and packages that substitute packages from the main repository.<sup>[32][34]</sup> The latter are consolidated in the *Astra-ce* component, which includes: [PostgreSQL](#) DBMS, [Exim](#) (*Exim4*) email service, [MariaDB](#) DBMS packages, [Java OpenJDK](#) tools, and [LibreOffice](#) office suites.<sup>[32][34]</sup>

## Version history [[edit](#)]

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### Versions of Astra Linux Special Edition

Version	Release date	Linux kernel
1.2	28 October 2011	2.6.34
1.3	26 April 2013	3.2.0 <sup>[35]</sup>

1.4 <sup>[36]</sup>	19 December 2014	3.16.0
1.5 <sup>[37]</sup>	8 April 2016	4.2.0
1.6	12 October 2018	4.15.0
1.7	22 October 2021	5.4
1.7.3	29 November 2022	5.15
1.7.5	16 October 2023	6.1
1.8	1 August 2024	6.6 or 6.1 LTS
1.8.2	30 June 2025	6.12 LTS
1.8.4	13 November 2025	6.12 LTS

### Versions of Astra Linux Common Edition

Version	Release date	Linux kernel
1.5	ending of 2009	2.6.31
1.6	23 November 2010	—
1.7 <sup>[38]</sup>	3 February 2012	2.6.34
1.9	12 February 2013	3.2.0
1.10 <sup>[39]</sup>	14 November 2014	3.16.0
1.11 <sup>[40]</sup>	17 March 2016	4.2.0
2.12	21 August 2018	4.15
2.12.29	14 May 2020	4.15.3-2
2.12.40	29 December 2020	5.4
2.12.43	8 September 2021	5.10
2.12.45	4 August 2022	5.15
2.12.46	18 April 2023	5.15

See also  [ [edit](#) ]

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- [Unity Operating System](#), a Linux distribution used on [Chinese government](#) computers
  - [List of Debian-based Linux distributions](#)
  - [Debian GNU/Linux](#)
  - [Ubuntu Kylin](#)
  - [Linux adoption](#)
  - [Red Flag Linux](#)
  - [Canaima \(operating system\)](#) – a similar project by the Venezuelan computer manufacturer [VIT, C.A.](#) and Chinese information technology company [Inspur](#)

- [GendBuntu](#) – a similar project used by Gendarmerie in France
- [LiMux](#) – a similar project of the city council of Munich
- [Nova \(operating system\)](#) – a similar project by the Cuban government
- [Red Star OS](#) – a similar project by the North Korean government

## References [[edit](#)]

- ↑ "[Лицензионные соглашения](#)" . astralinux.ru. [Archived](#) from the original on 2 June 2021. Retrieved 2 June 2021.
- ↑  <sup>*a*</sup>  <sup>*b*</sup> "[Госорганы России массово меняют Windows на Astra Linux – CNews](#)" . *CNews.ru* (in Russian). [Archived](#) from the original on 7 April 2022. Retrieved 14 December 2023.
- ↑  <sup>*a*</sup>  <sup>*b*</sup> "[Какие российские альтернативы есть у зарубежного программного обеспечения](#)" . *Российская газета* (in Russian). 23 March 2022. [Archived](#) from the original on 26 April 2022. Retrieved 14 December 2023.
- ↑ "[Звезда по имени Linux: почему "военные" ОС прочнее](#)" . *old.computerra.ru* (in Russian). [Archived](#) from the original on 12 January 2017. Retrieved 14 December 2023.
- ↑ (in Russian) <http://fstec.ru/en/> [Archived](#) 6 May 2022 at the [Wayback Machine](#)
- ↑ (in Russian) <http://www.astra-linux.com/sertifikat.html> [Archived](#) 4 March 2018 at the [Wayback Machine](#)
- ↑ (in Russian) <http://www.computerra.ru/vision/609608/> [Archived](#) 28 November 2012 at the [Wayback Machine](#)
- ↑ (in Russian) <https://astralinux.ru/products/> [Archived](#) 31 March 2023 at the [Wayback Machine](#)
- ↑ (in Russian) <https://astralinux.ru/products/astra-linux-special-edition/> [Archived](#) 2 June 2021 at the [Wayback Machine](#)
- ↑ "[АПМДЗ "Максим-М1"](#)" (in Russian). [Archived](#) from [the original](#) on 14 July 2014. Retrieved 6 July 2014.
- ↑ "[Часто задаваемые вопросы](#)" (in Russian). [Archived](#) from [the original](#) on 14 July 2014. Retrieved 6 July 2014.
- ↑ "[Настройка apt](#)" (in Russian). [Archived](#) from [the original](#) on 14 July 2014. Retrieved 6 July 2014.
- ↑ "[Derivatives/Census/AstraLinux – Debian Wiki](#)" . [Archived](#) from the original on 4 December 2019. Retrieved 12 November 2019.
- ↑ (in Russian) [http://www.cnews.ru/news/line/2019-02-19\\_gk\\_astra\\_linux\\_rasshiryet\\_sotrudnichestvo\\_s\\_the](http://www.cnews.ru/news/line/2019-02-19_gk_astra_linux_rasshiryet_sotrudnichestvo_s_the) [Archived](#) 28 July 2020 at the [Wayback Machine](#)
- ↑ "[The Document Foundation welcomes RusBITech in the project Advisory Board](#)" . 6 October 2015. [Archived](#) from the original on 8 November 2020. Retrieved 8 March 2019.



Wikimedia Commons has media related to ***Astra Linux***.

16. <sup>^</sup> ["The Document Foundation suspends RusBITech from its Advisory Board"](#) . 28 February 2022. Archived from the original on 23 February 2023. Retrieved 23 February 2023.
17. <sup>^</sup> (in Russian) <http://spbit.ru/news/n119990/> Archived 2 September 2017 at the Wayback Machine
18. <sup>^</sup> (in Russian) [n:ru:Власти Крыма планируют переход на Linux из-за санкций](#) – Russian Wikinews, 22 July 2015
19. <sup>^</sup> ["Huawei, RusBITex to design information protection systems"](#) . Archived from the original on 28 February 2022. Retrieved 21 November 2015.
20. <sup>^</sup> ["Huawei Enterprise: New Value Together"](#) . Huawei Enterprise. Archived from the original on 14 December 2023. Retrieved 14 December 2023.
21. <sup>^</sup> ["Russian military moves closer to replacing Windows with Astra Linux"](#) . ZDNet. Archived from the original on 31 May 2019. Retrieved 11 March 2021.
22. <sup>^</sup> (in Russian) <http://www.astralinux.com/home/novosti/469-rbt-elbrus.html> Archived 27 February 2018 at the Wayback Machine
23. <sup>^</sup> (in Russian) [http://corp.cnews.ru/news/line/2019-02-05\\_rossijskaya\\_os\\_astra\\_linux\\_vnedrena\\_na\\_tyanvanskoj](http://corp.cnews.ru/news/line/2019-02-05_rossijskaya_os_astra_linux_vnedrena_na_tyanvanskoj) Archived 28 July 2020 at the Wayback Machine
24. <sup>^</sup> ["Начались продажи российского суперзащищенного планшета на отечественной ОС – CNews"](#) . CNews.ru (in Russian). Archived from the original on 29 April 2021. Retrieved 14 December 2023.
25. <sup>^</sup> (in Russian) <https://www.kommersant.ru/doc/3999021> Archived 27 October 2020 at the Wayback Machine
26. <sup>^</sup> ["«Росатом» потратит до 800 млн рублей на российскую ОС Astra Linux"](#) . iXBT.com (in Russian). Archived from the original on 31 March 2021. Retrieved 14 December 2023.
27. <sup>^</sup> (in Russian) [1]
28. <sup>^</sup> ["The Russian distribution of Astra Linux has passed the milestone of 1 million licenses"](#) . Archived from the original on 28 February 2022. Retrieved 25 March 2021.
29. <sup>^</sup> (in Russian) <https://bankstoday.net/last-news/pervye-9-rossijskih-aes-pereveli-na-sistemu-astra-linux-a-skoro-pomenyayut-i-sami-kompyutery-na-baikal-ili-elbrus> Archived 16 July 2021 at the Wayback Machine
30. <sup>^</sup> Warren, Tom (8 June 2022). "Microsoft winds down its business in Russia, lays off more than 400 people" . The Verge. Retrieved 7 October 2022.
31. <sup>^</sup> ["Russian OS producer Astra Linux plans Moscow IPO, Vedomosti reports"](#) . Reuters. 8 July 2022. Archived from the original on 7 October 2022. Retrieved 7 October 2022.
32. <sup>^</sup> [a b c d e f g h "Astra Linux"](#) , Википедия (in Russian), 14 May 2024, retrieved 26 May 2024<sup>[user-generated source?]</sup>
33. <sup>^</sup> ["Derivatives/Census/AstraLinux – Debian Wiki"](#) . wiki.debian.org. Archived from the original on 4 December 2019. Retrieved 26 May 2024.
34. <sup>^</sup> [a b c d e f g h "Репозитории Astra Linux Special Edition x.7: структура, особенности подключения и использования – Справочный центр – Справочный центр Astra Linux"](#) . wiki.astralinux.ru. Archived from the original on 16 February 2024. Retrieved 26 May 2024.
35. <sup>^</sup> [Основные компоненты](#) Archived 27 January 2015 at the Wayback Machine (in Russian)
36. <sup>^</sup> [Операционная система "Astra Linux Special Edition" релиз "Смоленск" \(версия 1.4\)](#) Archived 22 May 2018 at the Wayback Machine (in Russian)
37. <sup>^</sup> [Завершен инспекционный контроль версии 1.5 релиза "Смоленск" операционной системы специального назначения "Astra Linux Special Edition"](#) Archived 8 May 2016 at the Wayback Machine (in Russian)
38. <sup>^</sup> [Вышла версия 1.7 релиза Astra Linux Common Edition \(Orel\)](#) Archived 19 April 2018 at the Wayback Machine (in Russian)

39. ^ Вышла новая версия "Astra Linux Common Edition" 1.10 – релиз "Орёл" Archived 11 August 2015 at the Wayback Machine (in Russian)
40. ^ "Вышла фиксированная версия 1.11 релиза "Орёл" " . Archived from the original on 21 April 2016. Retrieved 19 April 2018.

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