Russian nuclear weapons capability

【Overview】

Compared with the U.S. French, and UK nuclear capabilities, Russian capabilities are quite vague. As for the data pertaining to the U.S.-Russia New START Treaty, Russia, unlike the U.S., has not disclosed any breakdown of the number of (deployed/non-deployed) launchers. On February 5, 2018, Russia announced that it attained the new START goals, claiming a total 527 strategic delivery vehicles and 1,444 deployed strategic nuclear warheads (**Russian Federation Foreign Affairs Ministry 2018**). This chart and the New START Treaty data can be reconciled by replacing the 200 warheads counted under "Strategic bomber payloads" with the estimated number of operational strategic bombers (50) to reduce the number of strategic delivery vehicles and deployed warheads to 502 and 1462, respectively. Given Russia's limited transparency and day-to-day fluctuations in deployments in reality, this is probably a reasonable estimate.

Also, Russia has approximately 160 ballistic missiles on high alert (capable of launch in 15 minutes), and most of them are estimated to be ICBMs (**Kristensen, Hans M. 2017**). After 2008, 96% of deployed ICBMs are said to be on high alert (**Podvig, Pavel 2014**).

Russia is in the process of systematically replacing Soviet-era SS-18, -19, and -25 systems with the latest SS-27M2 systems with complete replacement by 2020. SS-18s are likewise being replaced by SS-X-30 Sarmats under development (**Sputnik News 2014**). Strategic nuclear submarines and SLBMs will also be replaced by the latest Borei-class submarines and new SLBM Bulava. Elsewhere, Russia's bombers, cruise missiles and non-strategic nuclear weapons and their launchers are all being modernized.

As a matter of fact, maritime patrols by Russia's nuclear submarines have gained in frequency in the recent years. However, this Russian fleet comprises about a total 20 submarines per year. Given constraints on submarine patrols, they are believed to be attack nuclear submarines (**Kristensen, Hans M. & Norris, Robert S. 2017**). Last year Russia conducted the following ballistic tests: six ICBMs and four SLBMs (**Space Launch Report 2017**). Every October since 2013, Russia has conducted large-scale military maneuvers involving ICBM, SLBM and cruise missile launches.

In February 2018, the Trump administration released the Nuclear Posture Review (NPR), aimed at the maintenance and modernization of strategic nuclear weapons as well as the development of smaller and more agile warheads and cruise missiles to be launched from surface ships and submarines. In the following month, President Putin, in a State of Federation address, reacted in kind by disclosing the development, not only of SS-X-30 Sarmats, but of nuclear-propelled cruise missiles, bomber-borne supersonic missiles, and unmanned submersible weapons (**Kremlin 2018**). All this escalation is enough to raise concerns reminiscent of Cold War nuclear buildup.

Updated : June 1, 2018

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NATO designation	Missile/bomb	No. of warheads per weapon	No. of warheads	Yield (kt)	Year first deployed	Remarks
Deployed	652		1,612			
Intercontinental ballistic missile (ICBM)	308		804			1)
SS-18 Mod.6 Satan[a]	46	6	276	500 or 800	1988	
SS-19 Mod.3 Stiletto[b]	10	6	60	400	1980	
SS-25 Sickle[c]	72	1	72	800	1988	
SS-27 M1 (silos)[d]	60	1	60	800	1997	
SS-27 M1(mobile)[e]	18	1	18	800?	2006	
SS-27 M2(mobile)[f]	90	3	270	100?	2010	
SS-27 M2 (silos)[g]	12	4	48	100?	2014	
SS-X-30 (silos)[h]	–	10	–	500?	(2020)	
Submarine-launched ballistic missile (SLBM)	144		608			2)
SS-N-18 Mod.1 Stingray[i]	16	3	48	50	1978	Carried by the Delta III-class nuclear submarinel)
SS-N-23 Sineva[j]	80	4	320	100	2007	Carried by the Delta IV-class nuclear submarine m)
SS-N-32 Bulava[k]	48	5	240	100	2014	Carried by the Borey-class nuclear submarinen)
Strategic bomber payloads	200		200			3)
AS-15A Kent A[o]	200	1	200	200	1984	Carried by the Bear Hr)
AS-15B Kent B[p]		1		200	1987	Carried by the Blackjacks)
AS-16 Kickback[q]		1		350	1987	
Nuclear bomb		1				
Reserve / Nondeployed			2,735			4)
Ground-based (ICBM, etc.)			854			
ICBM			334			1)
Ground-based non-strategic nuclear weapons[t]	520	1	520			5)
Sea-based (SLBM, etc.)			980			
SS-N-18			48	50		2)
SS-N-23			64	100		2)

	SS-N-32			48	100	2)
	Sea-based non-strategic nuclear weapons u)	820	1	820		6)
Air-launched systems (Bombers, etc.)				900		
	Missile , nuclear bomb	400	1	400		3)
	Non-strategic air-launched nuclear weapons v)	500	1	500		7)
Retired warheads awaiting dismantlement, etc.				~2,500		8)
Total inventory				~6,850		

【Notes】

1) This is in line with the latest estimates (**Kristensen, Hans M. & Norris, Robert S. 2018-1**). A change from a year ago consists of 10 SS-19s in reserve and an increment of 20 (mobile) SS-27M2s. Furthermore, Russia were conducting test launches of minimized SS-27M2s (**Podvig, Pavel 2016**) and railway-borne ICBMs (**Podvig, Pavel 2017-1**) but these projects are thought to be on hold or abandoned (**Podvig, Pavel 2017-4; Podvig, Pavel 2018-2**). Russia has also been testing supersonic SS-19-borne warheads allegedly capable of breaching the U.S. missile defense (**Tass 2018**). Some estimates maintain that SS-19s are free of nuclear warheads (**Podvig, Pavel 2017-2**).
With a view to complying with the New START Treaty, SS-18s' warheads are believed to have been reduced from ten to six and SS-27 Mod 2s' from four to three. These reductions are now in reserve.

2) Russian strategic nuclear submarines currently consists of ten submarines in operational deployment and one in maintenance. The Delta III class, with K-44 Ryazan's sole exception (**Navaltoday 2017**), is all thought to have been retired (**Podvig, Pavel 2018-1**). As for Delta IV, K-114 Tula has now been returned to service (**Podvig, Pavel 2017-5**), resulting in five ships in operational deployment and one, K-117 Bryansk, in overhaul (**Podvig, Pavel 2017-6**). SLBM Blavars on three Borei-class submarines have been reduced to five warheads from the standard six, in order to adhere to the New START. The total Russian count, as a result, is 608 deployed warheads (3 warheads/missile x 16 missiles/submarine x 1 submarine + 4 warheads/missile x 16 missiles/submarine x 5 submarines + 5 warheads/missile x 16 missiles/submarine x 3 submarines), leaving 160 in reserve (48 warheads per Delta III, 64 per Delta IV in overhaul, and 48 not deployed on Blavars.

3) The estimate (actual number of aircraft tasked for nuclear missions is around 70 aircrafts) for strategic bombers capable of carrying nuclear weapons is placed at 70 (**Kristensen, Hans M. & Norris, Robert S. 2018-1**), comprising 25 (actual 14) Bear H6, 30 (actual 25) Bear H16, and 13 (actual 11) Blackjack aircraft. These each carry 6, 16, and 12 cruise missiles, respectively (a total of 616), for a total of around 600 deployed or reserve. These nuclear weapons are not deployed to bombers in peacetime. Approximately 200 warheads have been allocated for the bombers and are in storage at Ukrainka Air (Amur Oblast) and Engels Air (Saratov Oblast) Bases for bombers. These are counted as being deployed. The remainder are stored at a central depository and are counted as reserve stockpiles. An estimate for strategic bombers tasked for nuclear assignments is 55 Bear H6s/H16s and 11 Blackjacks for an operational missile total of approximately 200 missiles (**Podvig, Pavel 2017-3**).

4) Russia's reserve stockpile consists of warheads not loaded on ICBMs, those stored temporarily out of submarines during overhaul or not allocated to bombers, and non-strategic weapons. These are said to be stored in 48 locations across the Federation (**Norris, Robert S. & Kristensen, Hans M. 2009**). Since the end of the Cold War, Russia's tactical warheads have been significantly reduced, with current estimates pegging them at some 1,840 (see 520 + 820 + 500 on table). Each warhead, while tagged to a specific launch pad, is not deployed operationally and centrally stored (**Kristensen, Hans M. 2012**). The Russian Foreign Ministry, during the 2014 NPT Preparatory Committee, affirmed that all non-strategic warheads are categorized as nondeployed and assembled at multiple central storage sites (**Uliyanov, M. I. 2014**). According to a new noteworthy research finding about Russian tactical weapons (**Sutyagin, Igor 2012**), such concepts as operational deployments, central storages and surpluses need to be redefined, in accordance with the Russian military's unique operational practices. Sutyagin's analysis says that, of about 2,000 tactical nuclear weapons, some 1,000 are "operationally allocated" to launch pads and, though not loaded onto delivery means, kept in alert readiness for immediate use. Some of these may be found aboard ships or with ordnance units under the direct command of strike forces. Although this table adheres to Kristensen's reserve category, large amounts, conceptually, resemble more closely with Kristensen's operational deployments.

5) There are estimated to be 520 ground-launched tactical nuclear weapons. Of these, defensive missiles account for approximately 360 warheads, anti-air missiles 290 warheads, anti-ballistic missiles 68 warheads, and anti-ship missiles for coastal defense five. After the Cold War ended, the government publicly announced that it would scrap all its tactical nuclear weapons that were for ground combat, but even today it still retains around14 short-range attack missiles that are vehicle mobile. Furthermore, Russia has also deployed cruise missiles that may be in violation of the INF Treaty(**Reuters 2017**).

6) There are estimated to be approximately 820 sea-launched tactical nuclear weapons, allocated to approximately 190 warships, submarines, ship-based aircraft, and helicopters. They are made up of anti-ship cruise missiles, anti-submarine rockets, land-attack cruise missiles, torpedoes, and depth charges. Most of the missiles are for dual nuclear and non-nuclear use (**Kristensen, Hans M. 2012**).

7) Approximately 500 warheads are estimated to be allocated to aircraft in cruise missiles, short-range attack missiles, and gravity bombs. They are carried by the Tu-22M3 (NATO reporting name: Backfire C) intermediate-range bomber and the Su-24 (NATO reporting name: Fencer D) and Su-34 (NATO reporting name: Fullback) strategic bombers. Russia has been testing a new supersonic dual-purpose (nuclear/conventional) air-to-surface missile, Kh-47M2 Kinzhal, aboard the Mikoyan MiG-31 ("Foxhound") (**Sputnik News 2018**).

8) In the Megatons to Megawatts program carried out after the end of the Cold War, the high enriched uranium (HEU) from Russia's retired nuclear warheads was diluted and sold to the United States as fuel for nuclear power plants. This program was concluded at the end of 2013. Under this program, 20,000 nuclear warheads were disassembled over a 20-year period (**NNSA 2013**). In the coming years, Russia is expected to continue disassembling at a rate of 200-300 warheads per annum (**Kristensen, Hans M. & Norris, Robert S. 2018-2**).

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a)

ICBM R-36M2 Voevoda

Russian designation :	Р-36М2 “Воевода”
Alternate name :	RS-20V
NATO designation :	SS-18 Mod. 6 Satan
Propulsion :	Two-stage liquid propellant
Launch platform :	Silo
No. of warheads :	Maximum 10 warheads
Yield :	500kt/800kt per 1 warhead
Specifications :	Length 34.3 m, Diameter 3.0 m, Weight 211 ton
Range :	11,000 km
Circular error probability :	220 m
Where deployed :	Dombarovsky Air Base : 18 missiles Uzhur Air Base : 28 missiles
Remarks :	Voevoda means commander. In a large-scale exercise conducted by Russian Strategic Forces on October 30, 2013, a Voevoda was launched from Dombarovsky Air Base and successfully impacted on Kura Test Range in Kamchatka. This was probably also for the purpose of acquiring data on extension of service life. The previous test was on December 24, 2009. The Voevoda is expected to be retired by 2022. As a replacement, the liquid-fueled Sarmat is presently under development. It is planned to be deployed from 2020, but the plan has been delayed.

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→Return to Russian nuclear weapons

b)

Intercontinental ballistic missile UR-100N UTTH

Russian designation：	УР-100Н УТТХ
Alternate name：	RS-18
NATO designation：	SS-19 Mod. 3 Stiletto
Propulsion：	Two-stage liquid propellant
Launch platform：	Silo
No. of warheads：	Maximum 6 warheads
Yield：	400kt per 1 warheads
Specifications：	Length 24.3 m, Diameter 2.5 m, Weight 106 ton
Range：	10,000 km
Circular error probability：	350–430 m
Where deployed：	Tatishchevo Air Base
Remarks：	UR is the abbreviation for “Universal Rocket” and UTTH for “improved tactical and technical characteristics.” Replacement with the fixed silo-based Yars(SS-27 Mod2) began in 2014, and the UR-100N UTTH is expected to be retired by 2019. Meanwhile, Russia has been flight-testing “supersonic warheads” with SS-19s allegedly capable of breaching the U.S. missile defense. The latest test launch was conducted on October 25, 2016, launching a missile from the Dombarovsky Air Base and striking a test site in Kamchatka. The previous test was on April 19 of the same year. Some observers believe warheads have been removed from SS-19s.

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→Return to Russian nuclear weapons

c)

ICBM RT-2PM Topol

Russian designation：	РТ-2ПМ “Тополь”
Alternate name：	RS-12M
NATO designation：	SS-25 Sickle
Propulsion：	Three-stage solid-propellant
Launch platform：	Transporter erector launcher
No. of warheads：	1 warheads
Yield：	800kt
Specifications：	Length 21.5 m, Diameter 1.8 m, Weight 45.1 ton
Range：	10,500 km
Circular error probability：	350–430 m
Where deployed：	Yoshkar-Ola Air Base : 9 missiles Novosibirsk Air Base : 18 missiles Irkutsk Air Base : 9 missiles Barnaul Air Base : 36 missiles
Remarks：	Topol means “poplar”. On October 26, 2017, Russian Strategic Missile Troops carried out a major exercise in which a missile was launched from the northwestern Plesetsk test range, which landed in the Kura test range on Kamchatka. This was thought to be for obtaining data for extending the service life of the missiles. Previously, the test was conducted on October 2, 2016. Currently, replacement by the mobile-launched Yars(SS-27 Mod2) is underway, and the Topol is expected to be retired by 2021. Using RT-2PM Topol, Russia is believed to be developing payload for the 4K51 Rubezh ICBM system. The latest test launch was conducted on December 26, 2017, with a missile launched from Kapustin Yar in southern Russia landing in Sary-Shagan in Kazakhstan. Currently, however, this program is either put on hold or abandoned.

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d)

ICBM RT-2PM2 Topol M

Russian designation :	РТ-2ПМ2 "Тополь-М"
Alternate name :	RS-12M1
NATO designation :	SS-27 Mod. 1 (silo)
Propulsion :	Three-stage solid-propellant
Launch platform :	Silo
No. of warheads :	1 warhead
Yield :	800kt
Specifications :	Length 21.5 m, Diameter 1.8 m, Weight 45.1 ton
Range :	10,500 km
Circular error probability :	350–430 m
Where deployed :	Tatishchevo Air Base : 60 missiles
Remarks :	Deployment of 60 silo-based Topol M missiles seemed to be completed at Tatishchevo Air Base. In 2015, however, a new plan surfaced in 2015 projecting further deployments with seven regiments including Tatishchevo. The latest test launch was conducted on January 16, 2017. A missile launched from the Plesetsk test range landed at the Kura test range on Kamchatka. It is assumed the objective was to validate ballistic stability and other technical characteristics.

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e)

Intercontinental ballistic missile RT-2PM2 Topol M

Russian designation :	РТ-2ПМ2 "Тополь-М"
Alternate name :	RS-12M2
NATO designation :	SS-27 Mod. 1 (mobile)
Propulsion :	Three-stage solid-propellant
Launch platform :	Transporter erector launcher
No. of	1 warhead

warheads：	
Yield：	800kt
Specifications：	Length 21.5 m, Diameter 1.8 m, Weight 45.1 ton
Range：	10,500 km
Circular error probability：	350–430 m
Where deployed：	Teykovo Air Base : 18 missiles
Remarks：	Deployment of 18 mobile-launched Topol M missiles has been completed at Teykovo Air Base. The latest test launch was conducted on November 1, 2014. A missile launched from the Plesetsk test range landed at the Kura test range on Kamchatka. It is assumed the objective was to gather relevant data for potential lifetime extensions.

【Source】

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IHS Jane's 2015: "RS-12M1/2 Topol-M (RT-2PM2)," *Jane's Weapons*, Strategic 2015-2016, pp.93-94.

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f)

ICBM Yars

Russian designation：	Ярс
Alternate name：	RS-24
NATO designation：	SS-27 Mod. 2 (mobile)
Propulsion：	Three-stage solid-propellant
Launch platform：	Transporter erector launcher
No. of warheads：	Maximum 4 warheads
Yield：	100kt? per 1 warhead
Specifications：	Length 20.9 m, Diameter 2.0 m, Weight 49.0 ton
Range：	10,500 km
Circular error probability：	250m
Where deployed：	Teykovo Air Base : 18 missiles Novosibirsk Air Base : 27 missiles Nizhniy Tagil Air Base : 27 missiles Irkutsk Air Base : 9 missiles Vypolzovo Air Base : 9 missiles
Remarks：	The latest test launch was conducted on September 20, 2017. The missile launched by Yoshkar-Ola unit from the Plesetsk test range landed at the Kura test range on Kamchatka. The previous test took place on December 26, 2014. The mobile-launched Yars is consecutively replacing the SS-25. Russia undertook to develop a railway-borne ICBM system, RS-24 Yars (Barguzin BZhRK), in reaction to the U.S. Prompt Global Strike (PGS) initiative. The program is now believed to have been postponed or abandoned.

【Source】

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g)

ICBM Yars

Russian designation :	Я р с
Alternate name :	RS-24
NATO designation :	SS-27 Mod. 2 (silo)
Propulsion :	Three-stage solid-propellant
Launch platform :	Silo
No. of warheads :	Maximum 4 warheads
Yield :	100kt? per 1 warhead
Specifications :	Length 20.9 m, Diameter 2.0 m, Weight 49.0 ton
Range :	10,500 km
Circular error probability :	250
Where deployed :	Kozelsk Air Base : 12 missiles
Remarks :	Fixed silo types have been deployed by replacing the SS-19s at Kozelsk Air Base from 2014. There is also a plan to replace some of the SS-18s at Dombarovsky Air Base with silo-based missiles. The latest test launch was conducted on September 12, 2017. A missile launched from the Plesetsk test range landed at the Kura test range on Kamchatka. While the objective was likely to validate ballistic stability and other technical characteristics, some reports claim that the test was also about "minibus" warheads targeting the U.S. missile defense.

【Source】

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h)

ICBM Sarmat

Russian designation :	Сармат
Alternate name :	RS-28
NATO designation :	SS-X-30 Satan 2
Propulsion :	Two-stage liquid propellant
Launch platform :	Silo
No. of warheads :	Maximum 10 warheads ?
Yield :	500kt per 1 warhead ?
Specifications :	Length 36.3 m, Diameter 3.0 m, Weight 200 ton
Range :	11,000 km
Circular error probability :	?
Where deployed :	Dombarovsky Air Base Uzhur Air Base
Remarks :	In development as a replacement for the SS-18. The new model was slated for deployments from 2020 but this program is seen experiencing delays. Reportedly, they are to comprise an ordnance of 46 missiles for the Dombarovsky and Uzhur Air Bases: six each for six regiments plus ten for another regiment. In October 2016, the Russian developer of Sarmat released the photographs. Sarmat's test launches commenced on December 27, 2017, and a second test, conducted either on March 28 or 29, 2018, had some public disclosure.

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28,2018)

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i)

Submarine-launched ballistic missile R-29R

Russian designation：	Р-29Р
Alternate name：	RSM-50
NATO designation：	SS-N-18 Mod. 1 Stingray
Propulsion：	Two-stage liquid propellant
Launch platform：	Project 667BDRM Strategic Nuclear Submarine Delfin
No. of warheads：	Maximum 3 warheads
Yield：	50kt per 1 warhead
Specifications：	Length 14.1 m, Diameter 1.8 m, Weight 35.3 ton
Range：	6,500 km
Circular error probability：	900 m
Remarks：	The latest test launch was conducted on October 26, 2017. Russian Strategic Missile Troops carried out a major exercise in which a Delta III nuclear submarine launched two Stingray missiles from the Sea of Okhotsk, which landed in the Chizha test range on the Kanin Peninsula.

【Source】

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j)

SLBM R-29RMU Sineva

Russian designation：	Р-29РМУ Синева
Alternate name：	RSM-54
NATO designation：	SS-N-23 Mod. 1
Propulsion：	Three-stage liquid propellant
Launch platform：	Project 667BDRM Strategic Nuclear Submarine Delfin
No. of warheads：	Maximum 10 warheads (Minimum seems to be 4 warheads)
Yield：	100kt per 1 warhead
Specifications：	Length 14.8 m, Diameter 1.9 m, Weight 40.3 ton
Range：	8,300 km
Circular error probability：	500 m
Remarks：	Sineva means “blue”. The latest test launch conducted on October 26, 2017. Russian Strategic Missile Troops carried

out a major exercise in which a Delta IV nuclear submarine K117 Bryansk launched a Sineva missile from the Barents Sea, which landed in the Kura test range on Kamchatka. Russia has developed the R-29RMU2 Liner, which is an improvement over the R-29RMU Sineva, and the Russian Navy reportedly began receiving Liner ICBMs in 2014.The latest test launch was conducted on September 29, 2011. In reality, the Liner is a Sineva with reduced (i.e., four) warheads.

【Source】

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k)

SLBM R-30 Bulava

Russian designation :	Р-30 Булава
Alternate name :	RSM-56
NATO designation :	SS-N-32
Propulsion :	Three-stage solid-propellant
Launch platform :	955 class submarine (Borey)
No. of warheads :	Maximum 10 warheads (6 warheads seem to be carried.)
Yield :	100kt? per 1 warhead
Specifications :	Length 12.1 m, Diameter 2.0 m, Weight 36.8 ton
Range :	8,300 km
Circular error probability :	250–300 m
Remarks :	Bulava means "cudgel". Currently deployed on three Borei-class submarines. The last test launch was conducted on May 22, 2018, with the first vessel of this class, K-535 Yuriy Dolgorukiy, firing four Bulavas from the White Sea and striking the Kura test range on Kamchatka. To date, while there had been three consecutive launches of two missiles each, a quadruple salvo was unprecedented. 29-32 Bulavas are known to have been test-launched. The last test was conducted on June 26, 2017.

【Source】

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l)

667BDR Strategic nuclear submarine Kalmar

Russian designation：	667БДР “Кальмар”
NATO designation：	Delta III
No. of tubes：	16
SLBM：	Stingray (RSM-50)
Specifications：	Length 155 m, Width 12 m, Displacement underwater 13,000 ton
Submerged speed：	25knot（km/h46 km）
Where deployed：	Pacific Fleet base (Vilyuchinsk)
In service：	K-44 Ryazan
Remarks：	Deployment began in 1976, and 14 submarines were commissioned. Today the K-44 Ryazan, returned to service from long-term overhaul in February 2017, remains the only active submarine of this class. It was understood that Russia’s plan was to begin replacing three Delta III submarines in active commission with the new 955 Borei I class. Recently, the K-223 Podolsk and K-433 Svyatoy Georgiy Pobedonosets were retired.

【Source】

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→Return to Russian nuclear weapons

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m)

667BDRM Strategic Nuclear Submarine Delfin

Russian designation：	667БДРМ “Дельфин”
NATO designation：	Delta IV
Propulsion：	Three-stage solid-propellant
No. of tubes：	16
SLBM：	Sineva (RSM-54)
Specifications：	Length 167 m, Width 12 m, Displacement underwater 13,600 ton
Submerged speed：	22–23knot（km/h41–43 km）
Where	Northern Fleet base (Gadzhiyevo)

deployed：	
In service：	K-51 Verkhoturie K-84 Ekaterinburg K-114 Tula K-117 Bryansk K-18 Karelia K-407 Novomoskovsk
Remarks：	Deployments began in 1985, with seven constructed to date but the six listed above in service today. Four and five are regularly kept in operational deployment, with the remainder in overhaul. As of June 1, 2018, only K-117 Bryansk is believed to be in overhaul. Since 2013, the 667BDRM Kal'mar has participated in each annual maneuver and test-fired missiles. Currently, five 955A (Borei II) submarines, an improvement over the 955 Borei I class, are under construction, to replace the 667BDRM.

【Source】

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→Return to Russian nuclear weapons

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n)

955 Strategic nuclear submarine Borey

Russian designation：	Б о р е й
NATO designation：	Borey
No. of tubes：	16
SLBM：	Bulava (RSM-56)
Specifications：	Length 170 m, Width 13.5 m, Displacement underwater 19,400 ton
Submerged speed：	25 knot （km/h 46 km）
Where deployed：	Northern Fleet base (Gadzhiyevo) (1st and 3rd vessels) Pacific Fleet base (Vilyuchinsk) (2nd vessel)
In service：	K-535 Yuriy Dolgorukiy K-550 Alexsandr Nevskiy K-551 Vladimir Monomakh
Remarks：	Three 955 vessels are being built as the successor to the 667BDR type. The first vessel, the Yury Dolgorukiy was commissioned in January 2013, and the second, the Alexander Nevsky in December 2013. The third vessel, the Vladimir Monomakh was also commissioned in December 2014. All three vessels have successfully launched SLBM Bulavas. On the other hand, five 955A vessels are being built as substitutes for the 667BDRM type. Previously each vessel was reported to have 20 missiles, but now the general view is that there are 16. The first vessel, Knyaz Vladimir, was launched in November 2017 and expected to be commissioned in 2018. The second vessel, Knyaz Oleg and the third Generalissimus Suvorov, will be completed in 2018-19. The fourth vessel, Imperator Aleksandr III, is expected to be commissioned in 2019. The construction of the fifth vessel, Knyaz Pozharskiy, started on December 23, 2016. It is due for commission in 2020. All these plans will likely be delayed. In addition, Russia, in reaction to the U.S. building twelve new nuclear submarines, is planning to launch four more Borei-class nuclear submarines.

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→Return to Russian nuclear weapons

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o)

Cruise missile Kh-55

Russian designation：	X-55
NATO designation：	AS-15A Kent A
Carried by：	Tu-95MS （NATO reporting name：Bear H）
Yield：	200kt
Specifications：	Length 8.09 m, Diameter 0.51 m, Weight 1.7 ton
Range：	2,500 km
Remarks：	The Tu-95MS6 carries six missiles internally, and the 95MS16 can carry a further 10 missiles underneath the wings. The sea-launched variant of these missiles is the non-strategic nuclear RK-55 (SS-N-21). The much stealthier (250 kT) Kh-102 is in development to replace the Kh-55. The conventional Kh-101 warhead is already in deployment and saw action for the first time on November 17, 2015, when Tupolev Tu-160 and Tu-95MS strategic bombers in Syria fired the missile in an air raid.

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→Return to Russian nuclear weapons

p)

Cruise missile Kh-55SM

Russian designation：	X-55CM
NATO designation：	AS-15B Kent B
Carried by：	Tu-160（NATO designation：Blackjack）
Yield：	200kt
Specifications：	Length 8.09 m, Diameter 0.77 m, Weight 1.7 ton
Range：	3,000 km
Remarks：	The Tu-160 carries 12 missiles.

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→Return to Russian nuclear weapons

q)

Short range attack missile Kh-15

Russian designation：	X-15
NATO designation：	AS-16 Kickback
Carried by：	Tu-160（NATO designation：Blackjack）
Yield：	350kt
Specifications：	Length 4.78 m, Diameter 0.46 m, Weight 1.2 ton
Range：	150 km
Remarks：	The Tu-160 can carry 24 missiles, but the Kh-15 is reported to have been retired. Podvig does not count it as part of strategic nuclear forces.

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→Return to Russian nuclear weapons

r)

Strategic bomber Tu-95 MS6/-16

Russian designation：	Туполев Ту–95MC6/-16
NATO designation：	Bear H6/16
Nuclear weapon：	Air launch cruise missile Kh-55. The Tu-95 MS6 can carry six missiles internally. In addition, the 95 MS16 can carry a further 10 missiles underneath the wings for a total of 16 (however, its flight range drops commensurately)。
Specifications：	Length 49.5 m, Span 51.1 m (Propeller aircraft)
Max. speed：	830 km/h
Range：	10,500 m
Where deployed：	Ukrainka Air Base and Engels Air Base
Remarks：	On May 8, 2014 and October 30, 2013, Russian Strategic Missile Troops carried out a major exercise in which a Bear H launched six cruise missiles at land-based targets representing military facilities in enemy territory. Russia is planning to deploy a new aircraft to replace the current strategic bomber from 2020. At the same time, the Tu-

95MS is being modernized. In November 2015, the Russian Air Force began to receive Tu-95MSMs, with improved combat and radar and target-acquiring/radionavigation capabilities. The new Tupolev bomber is capable of carrying up to eight of the newest long-range cruise missiles, Kh-101 (conventional) or Kh-102 (250 kT nuclear, still in development). The bomber will remain in service until 2025. On November 17, 2016, the Tu-95MSM saw its first combat in Syria, launching Kh-101s in an air strike.

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→Return to Russian nuclear weapons

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s)

Strategic bomber Tu-160/M

Russian designation :	Туполев Ту-160 'Белый лебедь'
NATO designation :	Blackjack
Nuclear weapon :	It carries 12 air-launched Kh-55SM cruise missiles, or 24 short-range Kh-15 attack missile gravity bombs.
Specifications :	Length 54.1 m, Span 55.7–35.6 m
Max. speed :	2,200 km/h
Range :	14,000 km
Where deployed :	Ukrainka Air Base
Remarks :	The Russian nickname is the White Swan (Belyy Lebed). In the mid-2000s, Russia began to modernize about a dozen Tu-160s in its bomber fleet. Phase one modifications upgraded the bomber's fire power by enabling it to carry two new long-range cruise missiles, the Kh-101 (conventional warhead) and the Kh-102 (nuclear warhead). Currently, phase two modifications are under way, swapping most of its electronics and improving its radionavigation system, and due for completion by 2019. The modified Tu-160M had its first test flight in November 2014. From 2023, Russia is set to produce the Tu-160M2, a variant equivalent to the Tu-160M modification. This series is reported to number 50 planes at a minimum. The new Tupolev's maiden flight was on January 25, 2018. On the same date, the Russian Air Force placed its purchase order for the first ten Tu-160M2s. PSC Tupolev is set to manufacture Russia's proposed next-generation stealth strategic bomber: Perspektivnyi Aviatsionnyi Kompleks Dal'ney Aviatsii (PAK DA) or ""prospective aviation complex for long-range aviation."" This first flight is projected for 2021. This new product is expected to replace Tu-160s, Tu-95MSs and Tu-22M3s.

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→Return to Russian nuclear weapons

t)

Ground-based non-strategic nuclear weapons

Russian designation (NATO designation)	Yield (kt)	Range (km)	Launch platform
Anti-ballistic missile			
53T6 (Gazelle)	10	80	Silo
Air defense missile			
S-300P (SA-10/20)	?	200/400	Transporter erector launcher
S-300V (SA-12)	?	100	Transporter erector launcher
Coastal defense missile			
Redut (SSC-1B)	350	500	Transporter erector launcher
Short-range ballistic missile			
Tochka/-U (SS-21)	10 or 100	70/120	Transporter erector launcher
Iskander (SS-26)	?	300	Transporter erector launcher

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→Return to Russian nuclear weapons

u)

Sea-based non-strategic nuclear weapons

Russian designation (NATO designation)	Yield (kt)	Range (km)	Launch platform
Anti-ship cruise missile			
P-120 Malakhit (SS-N-9)	200	110	Corvette
P-500 Bazalt (SS-N-12)	350	550	Cruiser
P-700 Granit (SS-N-19)	500	625	Nuclear submarine、Aircraft carrier、Cruiser
Kh-41 Moskit (SS-N-22)	200	250	Destroyer、Corvette
Land-attack cruise missile			
RK-55 Granat (SS-N-21)	200	2,400	Nuclear submarine
Anti-submarine rocket			
RPK-2 Vyuga (SS-N-15)	200	35	Nuclear submarine、Cruiser、Destroyer, etc.
RPK-6 Vodopad (SS-N-	200	50	Nuclear submarine、Cruiser、

16)	Destroyer, etc.
Torpedo	Nuclear submarine
Depth charge	Aircraft carrier、Cruiser、Destroyer, etc.

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v) **Air-carried non-strategic nuclear weapons**

Russian designation (NATO designation)	Yield (kt)	Range (km)	Launch platform
Cruise missile			
Kh-22 Burya (AS-4)	200	310	Medium-range bomber
Short range attack missile			
Kh-15 (AS-16)	350	150	Medium-range bomber
Unguided bomb	20–1,000		Medium-range bomber、Fighter-bomber

【Source】

IHS Jane's 2015-1: "Kh-15 (As-16 'Kickback'/RKV-15)," *IHS Jane's Weapons*: Strategic 2015–2016, pp.177–178.

IHS Jane's 2015-2: "Kh-22 (AS-4 'Kitchen'/Burya)," *IHS Jane's Weapons*: Strategic 2015–2016, pp.178–179.

IHS Jane's 2015-3: "Russian Federation/Nuclear bombs," *IHS Jane's Weapons*: Strategic 2015–2016, pp.225–226.

Kristensen, Hans M. 2012: "Non-Strategic Nuclear Weapons," Federation of American Scientists, Special Report No. 3, May, 2012. https://fas.org/_docs/Non_Strategic_Nuclear_Weapons.pdf (accessed June 11,2018)

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