



UNITED STATES SPACE FORCE

FEBRUARY 2019

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EXECUTIVE SUMMARY

Space is fundamental to U.S. prosperity and national security. The United States harnesses the benefits of space for communications, financial networks, public safety, weather monitoring, transportation, scientific exploration, and more. The use of space has also greatly expanded the capability and capacity of the U.S. military to anticipate threats, to respond rapidly to crises, and to project power globally, at substantially less cost in lives and treasure than in the past. Because these advantages are vital to our modern way of life and modern way of war, unfettered access to and freedom to operate in space is a vital national interest.

As outlined in the National Defense Strategy, long-term strategic competition is the central challenge to U.S. prosperity and national security. Space is a key arena of this competition. Potential adversaries have recognized the U.S. military's dependence on space for modern military operations and the advantages space provides to joint and coalition forces. China, Russia and other potential adversaries are developing strategies, organizations, and capabilities to exploit possible U.S. vulnerabilities in space. As a result, space is now a warfighting domain.

At the same time, commercial entities, led by the United States, are developing and delivering new space technologies and capabilities at a speed never seen before. This rapid innovation is lowering the cost of access to space and enabling new services. U.S. interests in space are expanding.

This new environment highlights the role of space in changing the character of warfare and presents new challenges and opportunities to military space forces. No longer do space systems simply enable terrestrial forces to fight and win wars; actions in space also will directly contribute to the outcome of future crises or conflicts. In order to preserve peace and deter aggression, the Department of Defense (DoD) must adapt. The DoD must be prepared to assure freedom of operation in space, to deter attacks, and, when necessary, to defeat space and counterspace threats to the national security interests of the United States and its allies and partners.

No branch of the Armed Forces has been created since the United States Air Force was established in 1947 – over 70 years ago. The world has changed significantly in that time. If authorized by Congress, a sixth branch of the Armed Forces dedicated to space will catalyze a fundamental transformation of our approach to space from a support function to a warfighting domain. Establishing a sixth branch with dedicated military leadership will unify, focus, and accelerate the development of space doctrine, capabilities, and expertise to outpace future threats; institutionalize advocacy of space priorities to provide for the common defense in all domains; and further build space warfighting culture.

The DoD proposes to establish, in Fiscal Year (FY) 2020, a United States Space Force as a separate branch of the Armed Forces within the Department of the Air Force. If authorized, the Secretary of the Air Force will be responsible for organizing, training, and equipping two separate and distinct Military Services: the United States Space Force and the United States Air Force. A uniformed 4-star Chief of Staff of the Space Force would serve as a member of the Joint Chiefs of Staff. A new Under Secretary for Space would provide dedicated civilian supervision of the Space Force.

The vast majority of initial Space Force resources – personnel and budget authority – would be transferred from the existing Military Services. The stand-up of the Space Force would be phased over five years – FY 2020 to FY 2024 – and would require \$72 million in FY 2020 to establish the headquarters.

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PART I – STRATEGIC CONTEXT

Strategic Environment

Space underpins the U.S. way of life and U.S. way of war. Space provides an unparalleled vantage point and medium for rapid, global information collection and dissemination. Space-based capabilities facilitate the flow of people and goods worldwide, while guiding military forces to their positions and weapons to their targets. Satellites enable individuals worldwide to communicate from remote corners of the globe and allow national authorities to command and control forces in multiple theaters simultaneously. Small businesses and multinational corporations alike rely on space-based imagery and other sensing to plan their daily operations, while military commanders understand the security environment through information gathered by intelligence, surveillance, and reconnaissance satellites. Additionally, new investments and new technology are fueling opportunities for an expanding ecosystem of space systems and services.

Although U.S. space systems have historically been technologically superior, China and Russia have embarked on major efforts to develop counter-space capabilities in order to destroy or disrupt U.S. and allied space capabilities in a crisis or conflict. They are also rapidly developing advanced space capabilities to enhance the lethality of their military operations, increasing the likelihood that U.S. and coalition forces will need to defeat the space capabilities of adversary forces in order to prevail in a potential conflict, to protect lives, and to secure the interests of the United States and its allies and partners. In short, space has become a warfighting domain.

The National Defense Strategy (NDS) recognizes great power competition with China and Russia as the central challenge to U.S. national security and highlights space as a critical domain in which this competition will occur. In the words of the NDS, “the reemergence of long-term strategic competition, rapid dispersion of technologies, and new concepts of warfare and competition that span the entire spectrum of conflict require a Joint Force structure to match this reality.”

The United States faces serious and growing challenges to its freedom to operate in space. While the United States would prefer that the space domain remain free of conflict, we will prepare to meet and overcome any challenge that arises. Left unchecked, these challenges will erode U.S. military advantages gained over the past several decades. It is no longer a question of *whether* the character of warfare is changing, but rather *how* the United States should strategically re-orient itself to deter aggression and be prepared to fight and win future wars.

Problem Statement

The United States is at risk of losing its comparative advantage in space. A loss of freedom to operate in space would undermine our Nation’s prosperity and would erode the ability of the joint force to deter aggression, to defend the homeland from attack, and to project power abroad.

The U.S. military must posture itself to assure freedom of operation in space, to deter attacks, and, when necessary, to defeat adversary space and counterspace threats to the national security interests of the United States and its allies and partners.

A New Approach

Consistent with the President's National Security Strategy and the National Strategy for Space, the Department of Defense (DoD) is taking steps to secure our vital interest of unfettered access to and freedom to operate in space. In implementing the National Defense Strategy, DoD aims to strengthen deterrence and to enhance power projection through a rapidly innovating force that develops and fields new capabilities and strengthens cooperation with allies and partners. U.S. space forces will be postured to compete, deter, and win in great power competition.

Reforming the organization of the military space enterprise is a fundamental step in transforming our approach to the space domain. The current organization of space within the DoD has enabled the United States to maintain its position as the most lethal force in the world. These structures, however, must evolve with the changing environment.

No branch of the Armed Forces has been created since the U.S. Air Force was established in 1947 – over 70 years ago. The world has changed significantly in that time. A new Armed Force dedicated to space will, if authorized by Congress, develop space forces prepared to meet emerging security challenges.

Establishing a Space Force is a strategic priority to facilitate the DoD's preparation for the character of warfare in the twenty-first century. A sixth branch of the Armed Forces dedicated to space will catalyze a fundamental transformation of our approach to space from a combat support function to a domain of competition and potential conflict. If authorized by Congress, establishing a Military Service with dedicated military leadership will unify, focus, and accelerate the development of space doctrine, capabilities, and expertise to outpace future threats; institutionalize advocacy of space priorities to provide for the common defense in all domains; and further build space warfighting culture.

PART II – UNITED STATES SPACE FORCE

The long-term vision of the DoD is to create a new Military Department for space. The DoD first proposes establishing a new Military Service – a new branch of the Armed Forces – within the Department of the Air Force (DAF). Allowing the Space Force to mature before proposing a new Department of the Space Force would set the conditions for a smooth transition in the future.

In this construct, the U.S. Space Force (USSF) and the U.S. Air Force (USAF) would exist within one Military Department while organizing, training, and equipping their forces for two distinct warfighting domains and mission sets. The Secretary of the Air Force would be responsible for organizing, training, and equipping two separate Military Services: the USSF and USAF, each with a uniformed Military Service Chief with equal membership on the Joint Chiefs of Staff (JCS). This model is similar to how the U.S. Navy and U.S. Marine Corps exist within the Department of the Navy.

The Space Force overview that follows describes, in general terms, the roles, missions, authorities, and organizational structures for the Space Force that would enable joint and coalition forces to deter conflict, win wars, and secure the interests of the United States and its allies and partners. The Space Force will be constructed in a way that maximizes warfighting capacity and advocacy for space while minimizing bureaucracy. The headquarters of the Space Force, if authorized by Congress, will conduct detailed planning to refine these concepts and the associated personnel and budget authorizations for the future force. The proposed authorizing legislation would provide the Secretary of Defense with authorities to develop and to execute the vision outlined here.

The United States Space Force will be responsible for organizing, training, and equipping military space forces of the United States: to provide for freedom of operation in, from, and to the space domain; to provide independent military options for joint and national leadership; and to enable the lethality and effectiveness of the joint force. The Space Force will include both combat and combat-support functions to enable prompt and sustained offensive and defensive space operations and joint operations in all domains.

Role and Mission of the Space Force

Once established, the Space Force will serve as the lead Military Service for space, synchronizing space doctrine, organization, training, materiel, leadership and education, personnel, facilities, and policy (DOTMLPF-P) for DoD. The Space Force will build, sustain, and enhance the space warfighting capacity of DoD by developing and integrating space doctrine, capabilities, and personnel. The Space Force will cultivate domain-specific expertise and serve as the DoD proponent of and advocate for spacepower.

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The Space Force will be organized, trained, and equipped to meet the following priorities:

- Protecting the Nation's interests in space and the peaceful use of space for all responsible actors, consistent with applicable law, including international law;
- Ensuring unfettered use of space for U.S. national security purposes, the U.S. economy, and U.S. persons, partners, and allies;
- Deterring aggression and defending the Nation, U.S. allies, and U.S. interests from hostile acts in and from space;
- Ensuring that needed space capabilities are integrated and available to all U.S. Combatant Commands;
- Projecting military power in, from, and to space in support of our Nation's interests; and
- Developing, maintaining, and improving a community of professionals focused on the national security demands of the space domain.

The Space Force will develop forces for: space situational awareness; satellite operations and global, integrated, command and control of military space forces; global and theater military space operations to enable joint campaigns (to include missile warning); space support to land, air, naval, and cyber forces; spacelift and space range operations; space-based nuclear detonation detection; and prompt and sustained offensive and defensive space operations to achieve space superiority.

The DoD envisions consolidating the preponderance of existing military space missions, forces, and authorities under the Space Force. Space capabilities and units that do not uniquely and exclusively support a single Military Service's core domain-specific mission would transition to the Space Force. As necessary, DoD Components may retain organic space capabilities uniquely required to support the core mission of that Military Service or Defense Agency.

The DoD does not intend to transition to the Space Force those defense missions that are tangentially associated with space, such as land- and sea-based nuclear operations, cyberspace operations, and the overall missile defense mission. Additionally, the legislative proposal for the Space Force does not include the National Aeronautics and Space Administration, the National Oceanic and Atmospheric Administration, the National Reconnaissance Office, or non-military space organizations or missions of the U.S. government.

Functions and Authorities of the Space Force

As stated in the 2018 National Defense Strategy, DoD is reforming organizations and processes for greater performance and affordability. The creation of the Space Force offers a unique and important opportunity to leverage ongoing reform efforts. This will enable the Space Force to devote resources to accelerating delivery of next-generation military space capabilities.

Mission-Focused Model

If Congress enacts this proposal, the Secretary of the Air Force will have overall responsibility and accountability for organizing, training, and equipping both the USSF and the USAF in a manner that maximizes mission and cost effectiveness. Where appropriate, the USSF will leverage existing USAF infrastructure, except in performing those functions that are unique to the space domain or that are central to the independence of the new Military Service.

Acquisition and Resourcing Functions and Authorities

Once established, the Space Force will assume responsibilities for all major military space acquisition programs and will manage a distinct budget to ensure visibility into resourcing of space activities. As a Military Service within the DAF, acquisition authority for the USSF will reside with the existing DAF Service Acquisition Executive, who reports to the Defense Acquisition Executive.

The Space Force will prioritize accelerating DoD space acquisition efforts to enable the delivery of next-generation space capabilities faster than potential adversaries can evolve. Space Force acquisitions will leverage existing acquisition authorities that empower DoD to rapidly develop and field the capabilities needed by joint warfighters. DoD's adaptive acquisition framework provides program managers with flexibility to acquire systems based on technical maturity, operational need timelines, threats, and cost considerations. The framework also provides for increased focus on up-front science and technology and prototyping efforts to ensure advanced technology could be efficiently integrated into weapon systems. The Space Force will improve military space system acquisition timelines, capability development agility, and the ability to adjust to changing technology or threats.

Personnel Functions and Authorities

The Space Force will include uniformed and civilian personnel conducting and directly supporting space operations, centralizing management of military and civilian space personnel in DoD. The Space Force will create appropriate career tracks for military and civilian space personnel across all relevant specialties including operations, intelligence, engineering, science, acquisition, and cyber. The Space Force will establish partnerships with civilian academic institutions to facilitate building a workforce with the requisite expertise to be the best in the world.

The Space Force will initially leverage DAF authorities and processes for military personnel, including accessions, promotions, career advancement, training and education, equipping, and organizing, as well as special authorities unique to the standup of a new Military Service. For civilian personnel, DoD proposes a personnel system similar to the system used by the Intelligence Community (IC) for the establishment and classification of Space Force positions and the appointment, compensation, and management of a highly skilled civilian workforce.

To build the Space Force, DoD will utilize inter-service transfers, initial lateral entry, direct commission authorities, career incentive pays and retention bonuses, and waivers to accession policy. The DoD does not propose establishing a dedicated Space Force service academy. A number of cadets from the existing service academies will be commissioned into the Space Force, as well as from other accession sources such as Officer Candidate School and Reserve Officer Training Corps programs.

Personnel may be transferred into the Space Force on both a voluntary and involuntary basis, as deemed necessary by the Secretary of Defense. Personnel would be transferred in the same status (grade, rank, duty, and pay status) that they had prior to transfer. There will be no penalty for transferring to the Space Force, and it will not affect time-in-grade or retirement eligibility.

Standup of the Space Force also requires additional authorizations for general officers in all grades. The DoD will conduct an in-depth analysis of the number and distribution of general officer authorizations required and provide the results to Congress in Fiscal Year (FY) 2020.

Organization of the Space Force

If enacted by Congress, the Space Force headquarters will be streamlined to maximize resources for building space warfighting capacity. There would be a uniformed 4-star Chief of Staff of the Space Force (CSSF) who would be granted full membership on the Joint Chiefs of Staff (JCS) and who would serve as the JCS expert on and advocate for spacepower. Like the other Military Service Chiefs, the CSSF will have an independent role in appropriate DoD corporate processes to give the Space Force equal footing with the other Military Services in advocating for domain-centric priorities. Additionally, a new Under Secretary of the Air Force for Space, to be known as the Under Secretary for Space, will provide dedicated civilian supervision of the USSF, under the authority, direction, and control of the Secretary of the Air Force.

Figure 1 illustrates the Space Force construct within the DAF and DoD.

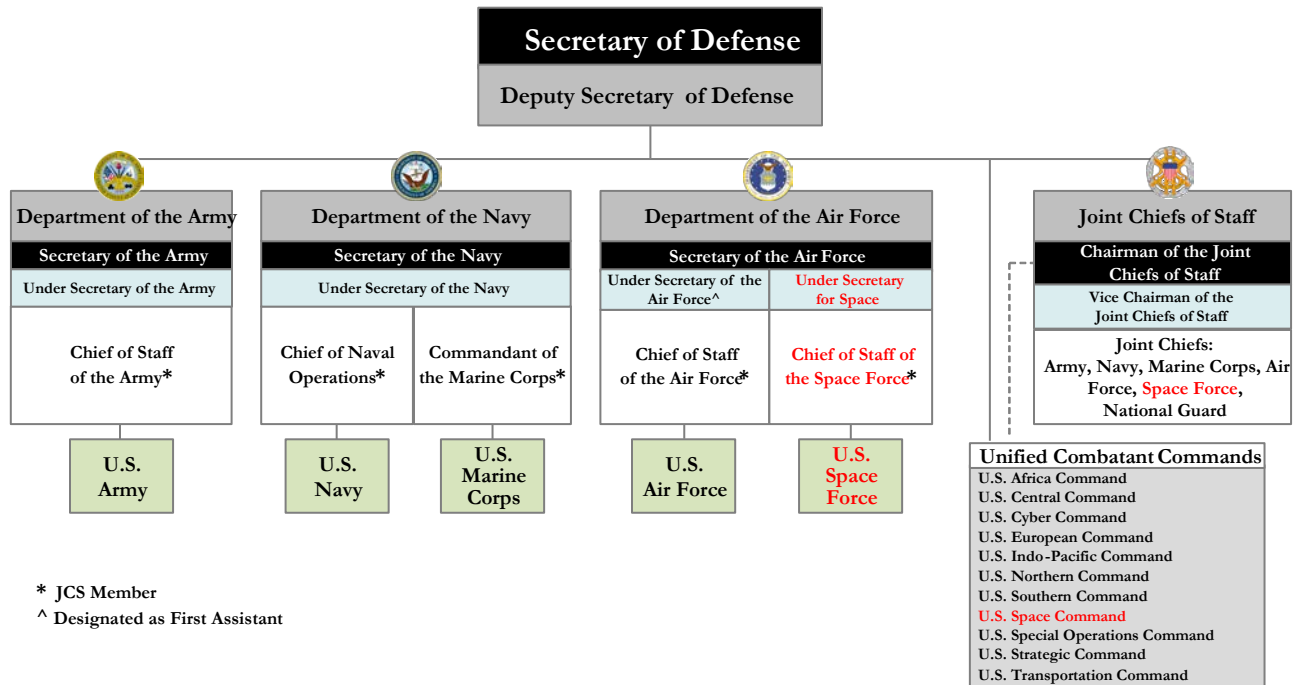


Figure 1: U.S. Space Force Within DoD

In addition to its Service headquarters, the USSF may include elements for operations, acquisition and systems development, training and education, and other functions, as appropriate. The Secretary of Defense, with advice from the Secretary of the Air Force and Chief of Staff of the Space Force, will determine the internal organizational structure of the Space Force in FY 2020.

Reserve Components

Today, both Reserve and National Guard units provide strategic depth for U.S. space operations. They also recruit and retain personnel with unique civilian experience across the space enterprise. The Reserve and National Guard role in space will continue.

The Space Force Reserve Components will be shaped around the Active Component of the Space Force. The Secretary of Defense, with advice from the Chairman of the Joint Chiefs of Staff, Secretary of the Air Force, Chief of Staff of the Space Force, and Chief, National Guard Bureau, will determine in FY 2020 the best organizational structure for the Space Total Force and provide a legislative proposal for consideration with the FY 2021 National Defense Authorization Act.

Key Relationships

Once established, the Space Force will maintain important and unique relationships with the other Military Departments and Services, combatant commands (CCMDs), and the IC to ensure interoperability and effective joint operations.

Military Departments and Services

The Space Force will interact with other Military Departments and Military Services by ensuring space capabilities, doctrine, training, and expertise are available to support the respective missions of each of the Military Services. Each Military Service may retain a cadre of space experts to promote and to integrate space-related capabilities tailored for its respective domain, as well as to integrate space capabilities into the planning and operations of its forces.

Combatant Commands

The Space Force will provide appropriately organized, trained, and equipped forces to the CCMDs. Consistent with U.S. law, DoD is taking steps to establish United States Space Command (USSPACECOM) as a unified combatant command focused on planning and executing space warfighting operations to protect U.S. national interests, and those of our allies and partners. With forces provided by the U.S. Space Force and other U.S. Armed Forces, USSPACECOM will ensure unfettered access to and freedom to operate in space and provide vital space effects to joint and coalition forces during peacetime and across the spectrum of conflict. Establishing USSPACECOM will bring full-time operational focus to securing the space domain.

The Space Force will provide the preponderance of its forces to USSPACECOM and also provide forces to all CCMDs in order to integrate space capabilities and doctrine into all CCMD planning and operations. Combatant commands will communicate their space capability needs for both joint force enhancement and domain superiority to the Space Force and would coordinate with the Space Force to satisfy emerging and urgent operational needs in an expeditious manner.

Space Development Agency

The DoD has undertaken a series of space acquisition reforms to ensure the joint force has the capabilities necessary to deter and defeat threats. These acquisition reforms will continue with the establishment of a joint Space Development Agency (SDA) dedicated to rapidly developing, acquiring, and fielding next-generation military space capabilities. The SDA will transition into the Space Force, when established, to strengthen the foundation for space acquisition.

Intelligence Community

The Secretary of Defense and Director of National Intelligence (DNI) will create and enhance mechanisms for collaboration between DoD and the IC to increase unity of effort and the effectiveness of space operations. While there is already deep cooperation across DoD and IC space research and development, acquisition, and operations, the Space Force presents an opportunity to strengthen these linkages, develop complementary strategies, drive greater architectural integration, optimize investments, and broaden the experience of Space Force professionals.

The Space Force and USSPACECOM will place greater demand on the IC to better understand space threats and to provide intelligence support to planning, operations, and acquisition. The Space Force, in collaboration with the IC, will identify, prioritize, and advocate for the intelligence capabilities, personnel, training, and organizational constructs necessary to provide intelligence support to DoD and IC space missions. Such intelligence support could include staffing a joint intelligence operations center; improving foundational military intelligence, including scientific and technical intelligence; and developing tasking, collection, processing, exploitation, and dissemination processes and capabilities.

To ensure mission continuity and seamless integration with the National Reconnaissance Office (NRO), the Space Force will assume those functions currently executed by Air Force Space Command elements within the NRO.

Transition Plan

The standup of the Space Force will be phased over five years – FY 2020 to FY 2024. The Space Force headquarters will be established in FY 2020 to prepare for mission transfer in FY 2021 and FY 2022. Additional build out of the force will occur in FY 2023 and FY 2024.

The Secretary of Defense, in consultation with each Military Department Secretary and Military Service Chief, will determine which existing space forces would transfer into the Space Force after its creation. Units, personnel, capabilities, and budgets will be transferred in a manner that avoids disrupting current missions and acquisition programs or adversely impacting military and civilian personnel.

Forces will transition into the Space Force organizational structure developed by the Secretary of the Air Force and Chief of Staff of the Space Force in FY 2020. Transferring units may be realigned, established, and/or re-designated, as required, to ensure existing and future forces are effectively arranged to execute assigned missions.

Fiscal Year 2020

If Congress enacts this legislative proposal, DoD will establish the initial Space Force headquarters in FY2020 to posture the Space Force to receive and execute its missions as efficiently and effectively as possible. In a method similar to the establishment of the Air Force in 1947, DoD will use a deliberate process to transfer units, people, and budgets into the Space Force over time.

During the initial headquarters standup, staff expertise in policy, planning, personnel management, financial management, legal, and other service support functions will be critical to augment space operations experience. Staffing for the FY 2020 Space Force headquarters (i.e. the Space Staff and the Under Secretary for Space staff) will consist of a mix of military and civilian personnel with key military leadership positions filled by individuals from each Military Department. Some personnel will be transferred from the existing Military Services, some new personnel would be hired, and some personnel would be temporarily detailed to the Space Force to provide surge capacity and expertise during stand-up. The Space Force headquarters will grow to approximately 200 personnel in FY20.

Additionally, in FY 2020, after the enactment of the legislative proposal, an Under Secretary for Space and a Chief of Staff of the Space Force will be nominated.

Fiscal Years 2021 and 2022

Mission transfer to the Space Force will occur between FY 2021 and FY 2022. Appropriate existing space units, billets, capabilities, and budgets will transfer from the Military Services. This will include relevant space operational elements, acquisition elements, training and education elements, and other identified space-specific entities.

Fiscal Years 2023 and 2024

Over time, the Space Force will continue building out and developing its force structure and warfighting capacity to deter conflict and be prepared to fight and win future wars. This could include activating additional operational, acquisition, and/or training units, as necessary to meet new mission demands and to establish organic space-specific capacity for doctrine development, intelligence analysis, education, etc.

Personnel and Budget Summary

The stand-up of the Space Force will be phased over five years – FY 2020 to FY 2024. The President’s Budget for FY 2020 requests the initial resources necessary to establish a USSF headquarters with approximately 200 personnel.

Over the following years, as missions are transferred to the Space Force, existing personnel and budget authority will transfer into the Space Force from the existing Military Services. By the end of the transition period, more than 95% of the Space Force annual budget is estimated to consist of resources that will have been transferred from existing DoD budget accounts, along with an estimated 15,000 transferred personnel.

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Additional resources will be dedicated to building out the Space Force headquarters and establishing and maintaining new support elements such as education, training, doctrine, and personnel management centers. Once the Space Force is fully established, these additive costs are estimated to be \$500 million annually, which would represent approximately 0.07% of the annual DoD budget.

Over the next five years the DoD will methodically grow the U.S. Space Force. The total additional cost growth over those five years is estimated to be less than \$2 billion, or approximately 0.05% of the DoD budget for the same period. Because of the lean implementation and modest total costs, the Future Years Defense Program topline is sufficient to fully fund the U.S. Space Force.

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