MEMORANDUM FOR: The Director of Central Intelligence

SUBJECT : MILITARY THOUGHT (USSR): Features of the Rear Support of Troops in an Offensive Operation of a Front Conducted Without the Use of Nuclear Weapons

1. The enclosed Intelligence Information Special Report is part of a series now in preparation based on the SECRET USSR Ministry of Defense publication Collection of Articles of the Journal "Military Thought". This article describes the changes in the rear to make it more appropriate to present-day conventional operations. These involve organization of the rear to allow for rapid reorganization in the event of nuclear actions, and deployment in two echelons. The author also deals with the use of transportation lines, traffic control, materiel and medical support, and the operations of motor transport as these relate to offensive operations without the use of nuclear weapons. This article appeared in Issue No. 3 (76) for 1965.

2. Because the source of this report is extremely sensitive, this document should be handled on a strict need-to-know basis within recipient agencies. For ease of reference, reports from this publication have been assigned

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MILITARY THOUGHT (USSR): Features of the Rear Support of Troops in an Offensive Operation of a Front Conducted Without the Use of Nuclear Weapons

Summary:

The following report is a translation from Russian of an article which appeared in Issue No. 3 (76) for 1965 of the SECRET USSR Ministry of Defense publication Collection of Articles of the Journal 'Military Thought'. The author of this article is Colonel General F. Malykhin. This article describes the changes in the rear to make it more appropriate to present-day conventional operations. These involve organization of the rear to allow for rapid reorganization in the event of nuclear actions, and deployment in two echelons. The author also deals with the use of transportation lines, traffic control, materiel and medical support, and the operations of motor transport as these relate to offensive operations without the use of nuclear weapons.

Comment:

Colonel General Fedor Mefodyevich Malykhin was identified in Red Star, 20 June 1968, as the First Deputy Chief of Rear Services. He died 28 July 1970. The SECRET version of Military Thought was published three times annually and was distributed down to the level of division commander. It reportedly ceased publication at the end of 1970.
Features of the Rear Support of Troops in an Offensive Operation of a Front Conducted Without the Use of Nuclear Weapons

by

Colonel General F. Malykhin

Offensive operations in which the sides do not use nuclear weapons but are always ready to use them differ significantly from the typical operations of a missile/nuclear war in their nature, methods of conducting the operations, scope, rates of advance of the troops and duration. This creates totally new conditions for the activities of the operational and tactical rear and makes it necessary to introduce broad changes in its organization and methods of operation.

First of all it should be kept in mind that offensive operations in which nuclear weapons are not used are carried out basically by the same large units and formations to be used in operations with nuclear weapons. Therefore, the complement, organizational structure and technical equipment of rear units and facilities of the tactical, army and front rear must support, in regard to logistics, the combat activities of troops under the most complex conditions, that is, when weapons of mass destruction are used.

In this connection it would not be correct to say that operations conducted without the use of nuclear weapons can be supported by approximately the same complement of rear services that we had up until 1953. This cannot be done not only for the reason that a conventional war may possibly escalate into a missile/nuclear war, but also in view of the sharp change in the nature and means of conducting offensive operations without the use of nuclear weapons. The fact is that in the past years there have been significant changes in the organization of the troops, in their armament and combat equipment, and the combat capabilities of front aviation and other means of destruction have increased. For example, a salvo of conventional types of weapons of a modern motorized rifle division is more than six times greater than a salvo by a rifle division at the end of World War II; a modern fighter-bomber has powerful missile weapons and uses bombs weighing five times more than a World War II ground-attack aircraft.
Thus, under the conditions that we have described it is possible to talk about changes in the organization and operating methods of the rear as they apply to the features of troop combat operations under the new conditions.

As is known, the rates of advance of the troops, the width of the zone of advance, the number of strike groupings established, the depth of the operation and its duration all have a direct influence on the organization of the rear in an offensive operation by a front. We can assume that an offensive operation by a front using only conventional weapons will be carried out in a zone with a width up to 400 to 500 kilometers, to a depth of 600 to 800 kilometers, at an average rate of advance of up to 50 kilometers per day (25 to 30 kilometers when there is a breach in a prepared defense and 50 to 60 kilometers during the development of the offensive); the total duration of a front operation may reach 15 days.

It is easy to note that the scope of offensive operations carried out without nuclear weapons is reduced somewhat while their duration is increased; the average daily rates of advance of the troops are also reduced. If we add to this the fact that the amount of pressure exerted by the enemy against the operational rear will be less and the number of troop casualties will also be less, then we can say that the operating conditions of the rear will be more favorable in the given operation even though great effort will be required at all levels of the rear.

In fact, the relatively slow rates of advance of the troops (almost half that of troops in operations using nuclear weapons) make it much easier to move rear units and facilities to new areas, to organize, if necessary, mobile army bases, missile technical units and troop depots on the ground, to build up reserves of materiel, and make it possible for the rear to operate for longer periods of time without having to move. All of this significantly increases the capabilities of rear units and facilities, and facilitates the operation of motor transport.

In organizing the rear in an offensive operation conducted with conventional means of destruction, it is necessary to take into consideration such a matter as the need for a rapid reorganization of the rear in the event that the sides employ missile/nuclear weapons. This means that the rear units and facilities must be dispersed, must have reliable cover and must be ready to function under conditions of vast destruction and extensive zones of radioactive contamination.
If we consider the fact that in an offensive operation a front and an army may conduct several strikes each, one of which will be the main one, then it will also be necessary to create the appropriate groupings of the operational rear -- on one or two axes in armies and two or three axes in a front -- and have strong reserves at the front level.

Generalizing the experience of war games, exercises and military science conferences held in 1964-1965, it is possible to recommend the following procedure for deployment of the rear in an offensive operation conducted with conventional means of destruction.

The tactical rear should be deployed in two echelons behind, respectively, the first and second echelons (combined-arms reserve) of the troops. In the event that the troops go over to the offensive from close contact with the enemy, a part of the reserves of materiel (especially ammunition) may be retained on the ground. In the course of an offensive the division depots will be moved, as a rule, once each day as the mission of the day is completed. The rear of the motorized rifle and tank divisions will more frequently have the opportunity of deploying and supporting the troops from one area for a more or less extended period of time. This will facilitate the organization of deliveries of materiel, the evacuation of wounded and the repair of damaged equipment.

In the departure position for an offensive, the army rear should also consist of two echelons or groups deployed along the axes of the troop operations.

The first group may include medical and evacuation units and facilities and, if necessary, a part of the army transport with reserves of materiel and road-traffic control subunits. This group should be placed behind the first operational echelon of the army ready to be used for the rear support of troops in the course of the operation.

The second group of the army rear should comprise a mobile army base with reserves of materiel, an army mobile missile technical base, and their servicing subunits. This group should be deployed behind the large units of the second echelon of the army on the axis of the main strike.

In mountainous and wooded terrain where a troop offensive develops primarily along separate isolated axes, a branch may be detailed from the mobile army base to support the large units operating on another axis.
The division of an army rear into two groups (echelons) does not at all mean the establishment of some type of intermediate level. Such echeloning of the rear is based upon the necessity for bringing a part of the forces, first of all the medical and evacuation facilities, closer to the first-echelon divisions for the purpose of the army rendering them assistance in the shortest possible time.

The relocation of an army rear in the course of an operation will differ depending upon the rates of advance of the troops and the function of the rear units and facilities. If the troops advance at a rate of 25 to 30 kilometers per day, the deployed rear units and facilities can operate in one place for a period up to three days, and if the rate of advance is 50 kilometers per day, they can operate in one place for two days. However, in each case a part of the separate medical detachment and evacuation subunits must move closer to the advancing troops each day; their separation from the forward large units should never be greater than 15 to 20 kilometers. Only when this is done will it be possible to count upon their rapid deployment to areas where there are serious losses of personnel and equipment in the event of nuclear strikes by the enemy.

Some comrades have suggested that, under the conditions of offensive operations examined above, armies should be assigned rear zones with a depth of at least 50 kilometers during preparations for an operation and up to 150 kilometers during an operation, that is, the same depths that were considered previously before the use of weapons of mass destruction.

In our opinion this would not be advantageous, since an army rear is now highly mobile and to separate it from the troops a distance of 150 kilometers during an offensive could lead to serious complications in the rear support of large units, particularly if the enemy suddenly decided to use nuclear weapons. The chief function of the army rear -- the uninterrupted support of forces in a zone immediately adjacent to the area of combat operations - remains unconditionally in effect even in offensive operations conducted only with conventional means of destruction.

Several words about the deployment and movement of an army mobile missile technical base. In our opinion the solution of this question should be based upon the necessity for the troops to be in constant readiness to conduct a first nuclear strike as well as on the preparation of missiles with conventional warheads, the expenditure of which may increase significantly. Therefore, the procedures and methods of operation of an army mobile missile technical base will most likely be the same as in an offensive operation conducted with means of mass destruction. Only the
procedure for preparing and storing nuclear and chemical warheads will change, and movements to new areas will be less frequent. However, an army mobile missile technical base must never be separated by more than 30 to 50 kilometers from the missile battalions of the motorized rifle and tank divisions in the course of an operation.

A front rear in the departure position for an offensive, under the conditions considered above, has the opportunity to deploy in a more stable manner, particularly the forward front and hospital bases. This is due to the longer period available to prepare for an operation, the relatively slow rates of advance of the troops in carrying out the immediate mission of the front and the possibility of making broad-scale use of rail transport for delivering materiel.

In establishing groupings of the front rear in the departure position for an offensive, an attempt should be made to see that the materiel base closest to the troops is capable of supporting their combat operations to the depth of the front's immediate mission without substantial restructuring of the rear. To achieve this, the forward front bases, having reserves of materiel for a period of six to seven days, should be deployed on the axes of the strike groupings of the troops in areas adjacent to rail lines (waterways), 80 to 100 kilometers from the forward edge and in some cases closer.

As in operations employing nuclear weapons, the front mobile missile technical bases should be deployed with consideration for the grouping of the missile units and large units, terrain conditions and the status of the roads. They may be 30 to 40 kilometers from the missile launching areas that are supporting the large units and units.

As far as the rear front bases are concerned, they should be 200 to 250 kilometers from the forward front bases and have reserves to support a minimum of eight to ten days of combat operations. If an offensive operation begins from the territory of a border military district (group of forces), the reserves of materiel at the rear front bases, including the stationary depots, should meet the needs for a 15 to 20-day operation.

Thus, the overall depth of the rear area of a front in a departure position for an offensive may be the same as in operations using missile/nuclear weapons, that is, 300 to 400 kilometers. In our opinion, there is no need to increase this depth since this would only complicate the operations of the front rear.
In preparing for an operation in which nuclear weapons will not be used, the forward hospital bases of a front should be deployed in a way that will support the reception of wounded in the first three to four days of an offensive through a breach in a prepared enemy defense, using the less mobile hospitals for this purpose. It is best to keep mobile hospitals in reserve ready to move along two or three axes behind the advancing troops and deploy in new areas to receive wounded from the armies or to render aid in areas of mass destruction in the event that the enemy uses nuclear weapons.

During a breakthrough in a prepared enemy defense, medical support may be provided by placing some forward hospital bases under the command of the armies conducting the main strike. It is also feasible that the armies could be strengthened with separate groups of hospitals and separate medical detachments.

In operations conducted without the use of missile/nuclear weapons there will be more frequent situations in which combined-arms and tank armies will be strengthened by front repair and rehabilitation battalions for the purpose of performing medium repair and some major repair on damaged equipment directly in the army area.

The movement of front bases and their branches also must be planned in a different way when an operation is in progress. In this case it must be remembered that the decrease in the rates of advance of the troops for the most part changes the periodicity with which bases are moved but not the distance they are moved, which depends upon the efficiency with which the different forms of transport of the front and army levels are used.

For this reason the forward front bases should be moved twice during an operation -- upon completion of the immediate mission and at the end of the operation -- in each case covering a distance of 200 to 250 kilometers. A forward front base may be 200 to 250 kilometers from the mobile army bases, that is, the distance of one day's travel by motor transport. But if it is possible for the forward and rear bases to perform a "leapfrog" maneuver, a single move may be made over a distance of 400 to 500 kilometers. This will permit both forward and rear front bases to move forward simultaneously with approximately the same expenditure of transport means.

Branches of forward front bases can operate for three or four days in one area in the course of an operation; they may be required to move only half as often as in an offensive operation using nuclear weapons.
The suggested procedure for moving front bases and their branches creates more favorable conditions for the operation of the front rear and reduces their need for transport required to carry rear units and facilities and reserves of materiel.

Taking into consideration the constant threat of the enemy's use of weapons of mass destruction, the chief of the rear of a front must have a reserve of mobile rear units and facilities with reserves of materiel as well as control organs -- administrations of front and hospital bases or their branches. The presence of such a reserve will make it possible to restructure the rear rapidly and render assistance to the armies in the event of the sudden use of weapons of mass destruction by the enemy.

In organizing the rear, special attention must be given to the protection of troops and rear installations against weapons of mass destruction. The results of an operational rear war game conducted in 1965 at the Military Academy of Rear Services and Transportation show that measures required for the defense of the rear against weapons of mass destruction must be developed in advance and carried out on a scale which will guarantee stable operations in the event of the unexpected use of weapons of mass destruction by the enemy. For this purpose rear units and facilities with reserves of materiel must be dispersed and deployed in small garrisons. It will be necessary to provide for reliable technical support for lines of transportation, determine the manpower and equipment that will be needed if temporary transshipment areas must be organized, prepare wide bypasses of large cities and road junctions in advance, build the simplest shelters for personnel and materiel reserves, set up clothing exchange pools, organize radiation, chemical and bacteriological reconnaissance in areas where rear units and facilities are located and along their lines of transportation, assign men and equipment to eliminate the aftereffects of an enemy attack, and provide reliable cover for the main installations in the rear within the front air defense system.

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The preparation and use of lines of transportation and transport means will have certain important features in the course of an operation. When weapons of mass destruction are not used, lines of transportation and installations important to them (bridges, road junctions, large railroad stations and others) located in the operational depth will be relatively safe. This will permit a wider use of rail transport in the rear area of a front, even including the allocation of railheads in the tactical rear. This situation will be characteristic of operations in the initial period.
of a war when the troops have occupied the departure position for an offensive, when the entire road network up to the state border is in operating condition.

The lesser degree of pressure by the enemy on the lines of transportation in the operational rear will also make it possible to take a different approach to the distribution of the men and equipment of the railroad troops and road troops for technical support and the restoration of roads in the course of an operation. It is rather obvious that under these conditions fewer men and equipment may be available for technical support of lines of transportation in comparison with operations using missile/nuclear weapons, since their main efforts will be concentrated on the restoration of roads immediately behind the advancing forces.

On the other hand, the relatively slow rates of advance of the troops will permit the retreating enemy to carry out the continuous (rather than localized) destruction of rail lines, which will sharply reduce their rate of restoration. Calculations show that when rail lines have been heavily damaged, the average rate of restoration of one line by the forces of two railroad brigades may be 25 to 30 kilometers per day, that is, half as fast as in operations where the rate of advance is 80 to 100 kilometers per day.

The possibility of capturing and using undamaged, isolated sections of axial roads is significantly limited. Thus, the distance between the troops and the railroads toward the end of an offensive operation may reach 350 to 400 kilometers, that is, it may be approximately the same as in operations in a missile/nuclear war.

From this there follows the very important conclusion that, if the main form of transportation in the rear area of a front up to the state border is the railroad, then the main means of transporting troops into the operational depth of the enemy's defense will be motor transport and rail transport (on restored segments); other forms of transportation will play an auxiliary role at their present level of development.

The question of the use of road-traffic control large units and units of a front and armies must be resolved on the basis of the need to ensure the dispersed movement of troops, rear units and facilities and organization of the combined delivery of materiel. In this connection, as in operations in a missile/nuclear war, attempts must be made to make maximum use of the entire network of roads, concentrating the main efforts of the road troops on the most important axes. This can be done by assigning zones to road-traffic control brigades, in which they will
prepare one or two main roads and several secondary roads.

Taking into consideration the relative stability of the rear and the longer time during which front and army bases will remain in the same areas, it will be possible to prepare a larger number of secondary roads in the zones of the road-traffic control brigades and to prepare main and secondary roads in the army areas. The necessity of preparing main roads in the armies is dictated by the fact that they will be subjected to the intensive movement of motor transport for a period of several days, that is, until the forward army base moves to a new area. However, we cannot agree with those comrades who would assign individual zones to the army road-traffic control battalions. In our opinion this would complicate rather than simplify the organization of road support for an army whose operations will be extremely mobile even without nuclear weapons.

The grouping of road troops in a front and in armies must be such as to ensure a rapid rate of road restoration immediately behind the advancing troops and the elimination of aftereffects in the event of an enemy strike using weapons of mass destruction. For this purpose a minimum number of road units should be used on the road network from the rear front bases to the divisional supply depots in the departure position, and the main forces should be kept in reserve ready to restore roads in the course of an operation. The roads in a front should be prepared along the axes of the main army roads, which will reduce the amount of restoration work required.

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The materiel support of the troops will be characterized as follows. In connection with the fact that only conventional weapons will be used in an operation, there arises the need for heavier and more sustained preparatory fire for an offensive and an increase in the expenditure of all types of ammunition, aerial bombs and, in a number of cases, missiles with conventional warheads and missile propellant.

Research has shown that in operations not employing nuclear weapons the expenditure of ammunition may increase by a factor of 1.5 to two and, for a front, may comprise: two to three units of fire for small arms; up to five units of fire for artillery and mortars; 15 units of fire for aerial bombs.

On the whole there is an insignificant decrease in the amount of fuel expended, while for aviation it actually increases since the number of aircraft missions, and the intensity and the duration of the operation are
greater.

There is a particular increase in the expenditure of ammunition during a breakthrough of a prepared enemy defense. Calculations show that divisions breaking through an enemy defense may require more than two units of fire of artillery shells per day.

The table below, compiled on the basis of operational rear exercises conducted in 1964-1965, gives a comparison of the expenditure of materiel by a front in offensive operations conducted with and without the use of nuclear weapons.

Thus, while there is a slight increase in the total requirements for materiel (due primarily to the expenditure of ammunition) in operations conducted without nuclear weapons, the total daily average expenditure is somewhat less, which creates more favorable conditions for bringing up supplies. This is also aided by the shorter distances involved in the daily delivery of supplies by motor transport in the course of an operation, which is directly proportional to the rate of advance of the troops.

Operations of the motor transport system will be under the greatest strain when a front is carrying out its subsequent mission, when the distance of the troops from the previously established base of supply as well as from the restored rail lines may reach 350 to 400 kilometers.

Taking these factors into consideration, it will be necessary to make maximum use of the capabilities of all forms of transportation and all levels of the rear during the completion of the immediate mission in order to establish a base of supply in the approximate area of the troops which will fully meet their requirements for the subsequent mission. If such an opportunity is lost, a very serious situation may result toward the end of the operation with respect to the delivery of materiel.

The possibility that combat operations will move at any moment to the use of nuclear weapons makes it necessary to have continuous precise information on the amount of reserves of ammunition and fuel that have been established in new areas where bases and their branches have been deployed, and to make the appropriate redistribution of the transport for their delivery. Convincing evidence of this may be seen by comparing the average daily expenditures of ammunition and fuel, the values of which are mutually related in accordance with the nature of the operations. Thus, in an operation conducted with conventional weapons the average daily expenditure
of ammunition is 1.5 to two times greater and the expenditure of fuel is 1.5 times less than in an operation using nuclear weapons.

Deliveries of ammunition by army and, if possible, front motor transport both during the preparation for and in the course of an operation should be made right up to the artillery fire positions, thus avoiding the labor-consuming loading and unloading operations of intermediate levels of transport.

Serious scientific research and practical work must be carried out on questions of supplying the troops with missiles, nuclear and chemical warheads and missile propellant, keeping in mind that the procedure for storing nuclear and chemical warheads as well as the degree of combat readiness of operational-tactical and tactical missiles must be such as to ensure the possibility of conducting nuclear strikes against the enemy in the shortest possible time.

On the basis of this fundamental requirement, the command of the troops of a front, depending upon the specific conditions of the situation, must continuously update the order of the echeloning and the degree of readiness of missiles and warheads for the initial and subsequent nuclear strikes and intensify the readiness of the rocket troops and missile technical units for the timely execution of these strikes. The missile propellant for liquid-propellant operational-tactical missiles must be located in storage areas in amounts sufficient for 1.1 fuelings per missile, and there must be enough in front missile propellant depots and their branches for all further needs.

In all probability there will be fewer losses of combat equipment and personnel in offensive operations conducted without nuclear weapons. However, they will increase in comparison with losses in World War II, since the combatants now have more powerful conventional means of destruction. The nature, structure and time of occurrence of losses will change. The most losses will be borne by large units of the first echelons during breakthroughs of defensive lines and when crossing water obstacles. All of this must be taken into consideration in planning the rear support of troops in an operation.

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It should be pointed out that there is still no unified view on the procedure for planning the rear support of troops in an operation when it will be carried out only with conventional means of destruction. Three
different approaches to the solution of this problem have appeared, according to the results of operational rear war games. For example, some have developed a rear support plan which does not differ from that which would be used in an operation with nuclear weapons, the plan of others calls for troop support in operations conducted only with conventional weapons without considering the threat of the use of nuclear weapons by the enemy, while still others have chosen a combined plan: some matters were worked out with consideration for the use of nuclear weapons and others, without them.

In our opinion, under the given conditions the plan for rear support must be developed in conformity with that variant which is adopted for the plan of an operation by combined-arms staffs. This is completely logical, since the plan for rear support is a component part of the plan of an operation.

Therefore, even if the combat operations of the opposing sides begin with conventional weapons alone, the plan for rear support must nevertheless foresee all the necessary measures which must be adopted in the event of the employment of nuclear weapons and the rapid restructuring of the work of the rear.

It is obvious that the transition to combat operations using nuclear weapons will call for new decisions and the placing of new tasks on the rear support of the troops. Experience has shown that this can be accomplished most easily if the chief of the rear of a front has strong reserves of rear units and facilities and reserves of materiel located on the main axes of the advancing strike groupings of troops.

The legitimate question then arises: what can be done with the levels of reserves on hand when their consumption (particularly of ammunition and fuel) is different (in nuclear and non-nuclear operations)? In our opinion the following propositions can serve as a basis for the solution of this question:

-- in divisions -- as is known, the reserves are mobile and their levels are determined strictly according to the capabilities of the means of transport; there is no need for their redistribution, and additional reserves of ammunition may be maintained on the ground for the purpose of preparatory fire (if this is to be carried out);

-- in combined-arms tank armies -- reserves are also mobile and are calculated for the support of forces for a period of two days of combat
operations in which nuclear weapons are used. But if combat operations begin with conventional weapons and the troops advance at a relatively slow rate, the army reserves (primarily ammunition) may be increased by drawing on those stored on the ground. This is fully possible since the mobile army bases will be located in one area for a longer period of time and the short distances involved will permit the broader allocation of unit means of transport to deliver supplies from the mobile army base to the troops. But if the mobile army base is required to move rapidly behind the advancing troops, surplus reserves may be left in place under guard and transferred to the front. They will be like forward reserves of the front. There is nothing wrong with this arrangement -- the reserves are thus, in advance, brought closer to the troops.

As far as front reserves are concerned, in all cases during an offensive they must be moved forward as far as possible, creating conditions for the wide-scale use of army and unit means of transport for delivery at the front level.

In our view, such are the features of the rear support of troops in an offensive operation by a front conducted only with the use of conventional means of destruction. There is still very little experience in this area. Therefore, the study and development of means of rear support under the conditions considered above is one of the most important tasks in the operational rear training of generals, officers, staffs and services of the rear.
### Front Material Expenditures

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<th>Expenditure in operations</th>
<th>Ammunition (units of fire)</th>
<th>Fuel (fuelings)</th>
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<td>Small arms</td>
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<td>With nuclear weapons</td>
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<td>Without nuclear weapons</td>
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#### Average daily expenditure

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