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Tashkent International University of Education
Turin Polytechnic University in Tashkent

PROCEEDINGS

of the MMIT'25 International Conference

TA'LIMNING ZAMONAVIY USULLARI VA
INNOVATSION TEXNOLOGIYALAR

MODERN METHODS AND INNOVATION
TECHNOLOGIES IN EDUCATION

СОВРЕМЕННЫЕ МЕТОДЫ И
ИННОВАЦИОННЫЕ ТЕХНОЛОГИИ
В ОБРАЗОВАНИИ

29 May 2025, Tashkent, Uzbekistan

MAQOLALAR TO'PLAMI
СБОРНИК СТАТЕЙ



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Modern methods and innovation technologies in education

**Современные методы и инновационные технологии в
образовании**

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TARMOQ XAVFSIZLIGINI TA'MINLASHDA MARSHRUTLASH ALGORITMLARI VA PROTOKOLLARI

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Annotatsiya. Ushbu maqolada marshrutlash algoritmlarini tasniflash, moslashuvchan va moslashuvchan bolmagan marshrutlash algoritmlar qo'llanilishiga e'tibor qaratiladi va beshta asosiy tarmoq xavfsizligini ta'minlovchi marshrutlash protokollari tahlil qilinadi. Oddiy va kichik tarmoqlar uchun mos, aniq va xavfsiz yo'nalish tanlash, butun internet darajasida ishlash, tez ishlash va kuchli natija berish, tarmoqning barqaror va samarali ishlashini ta'minlash xususiyatlarga ega bo'lgan tarmoq protokollari ko'rib chiqiladi.

Kalit so'zlar: marshrutlash, algoritim, protokol, tarmoq, tugun.

ROUTING ALGORITHMS AND PROTOCOLS FOR ENSURING NETWORK SECURITY

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Abstract. This article focuses on the classification of routing algorithms, the application of flexible and non-flexible routing algorithms, and analyzes routing protocols that ensure the security of the five main networks. Network protocols are considered, which have the characteristics of choosing a suitable, accurate, and secure route for simple and small networks, working at the entire Internet level, providing fast operation and strong results, and ensuring stable and efficient network operation.

Keywords: marshrutlash, algoritim, protokol, tarmoq, tugun.

Kirish

Kompyuter tarmoqlari tobora kengayib borayotgan davrda ma'lumotlarni samarali uzatish, uzluksiz aloqa, tarmoq xavfsizligini va axborot almashinuvini ta'minlash muhim ahamiyatga ega. Marshrutlash algoritmlari paketlarni yo'naltirishning optimal yo'llarini aniqlash orqali kompyuter tarmoqlari ichida ma'lumotlarni samarali uzatishda hal qiluvchi rol o'ynaydi. Marshrutlash protokol-lari tarmoq texnologiyalarida asosiy rol o'ynaydi va ma'lumotlarni uzatish hamda tarmoqning to'g'ri ishlashi uchun optimal yo'llarni ta'minlash imkonini beradi.

Natijalar va muhokama

Marshrutlash algoritmlari kompyuter tarmoqlarining asosiy komponentlari bo'lib, ma'lumotlar paketlari manbadan manzilga uzatiladigan yo'llarni aniqlash uchun javobgardir. Ushbu bo'limda biz marshrutlash algoritmlarni tasniflash, moslashuvchan va moslashuvchan bolmagan marshrutlash algoritmlariga e'tibor qaratamiz.

Algoritim tasnifi: Marshrutlash algoritmlaridagi dastlabki tadqiqotlar paketlarni yo'naltirish va marshrutni aniqlashning asosiy usullarini ishlab chiqishga qaratilgan. BellmanFord, Dijkstra algoritmi va Masofa vektor algoritmi kabi klassik algoritmlar marshrutlash protokoli dizaynidagi keyingi yutuqlar uchun asos yaratadi [3].

Moslashuvchan marshrutlash algoritmlari

Markazlashtirilgan adaptiv marshrutlash - Markazlashtirilgan adaptiv marshrutlashda markaziy boshqaruvchi yoki tashkilot marshrutlash qarorlarini tarmoqdagi barcha tugunlarga hisoblash va tarqatish uchun javobgardir. Markaziy boshqaruvchining global tarmoq

ma'lumotlarini to'plash va optimal marshrutlarni hisoblash, keyinchalik ular alohida tugunlarga taqsimlanishida Dijkstra, Floyd-Warshall, CSPF algoritmlaridan foydalaniladi [1].

Izolyatsiya qilingan adaptiv marshrutlashda - Backpressure Routing, Threshold-based Routing algoritmlari yordamida har bir tugun faqat mahalliy ma'lumotlarga asoslangan holda paketlarni yo'naltirishning eng yaxshi yo'lini mustaqil ravishda belgilaydi. Tugunlar global tarmoq sharoitlarini hisobga olmasdan yoki qo'shni tugunlar bilan hamkorlik qilmasdan marshrutlash qarorlarini qabul qiladi [1].

Tarqalgan adaptiv marshrutlash - optimal marshrutlarni birgalikda aniqlash uchun tarmoq tugunlari o'rtasida hamkorlikda qaror qabul qilishni o'z ichiga oladi. Tugunlar qo'shnilari bilan marshrutlash ma'lumotlarini almashadilar va izchil marshrutlash jadvalarida birlashish uchun taqsimlangan algoritmlardan foydalanadi, bunga Bellman-Ford, Link-State Routing, DSR algoritmlari misol boladi [1].

Moslashuvchan bo'lmagan marshrutlash algoritmlari

Gibrid marshrutlash algoritmlari cheklovlarni yumshatish bilan birga ularning afzalliklaridan foydalanish uchun ham bog'lanish holati, ham masofa-vektor yondashuvlari elementlarini birlashtiradi. Ushbu DUAL, Path Vector Algorithm, Partial Link-State algoritmlari keng qamrovli tarmoq muhitlari uchun mos bo'lgan miqyoslilik, konvergentsiya tezligi va resurslar samaradorligi o'rtasidagi muvozanatni saqlash imkoniyatiga ega [2].

Tarmoq xavfsizligin ta'minlovchi marshrutlash protokollari:

Marshrutlash jadvali avtomatik tarzda qurish uchun marshrutizatorlar maxsus xizmat protokoliga muvofiq tarkibiy tarmoq topologiyasi to'g'risida axborot almashib turishadi. Bunday turdagi protokollar marshrutlash protokollari (yoki marshrutlovchi protokollar) deyiladi [2].

Marshrutlash protokollaring turlari:

OSPF

Open Shortest Path First (OSPF) IP-tarmoqlaridagi marshrutizatorlar o'rtasida ma'lumotlarni uzatish uchun eng yaxshi yo'llarni tanlaydigan havola holatidagi marshrutlash protokoli. Ushbu protokol OSI modelining tarmoq qatlamida ishlaydi va tarmoqdagi eng qisqa yo'llarni topish imkonini beruvchi Dijkstra algoritmi tufayli dinamik marshrutlash uchun eng ishonchli va aniq echimlardan biridir [3].

BGP

Border Gateway Protocol (BGP) - bu global Internetdagi avtonom tizimlar o'rtasidagi trafikni boshqarish uchun mo'ljallangan marshrutlash protokoli. BGP yo'l vektorini marshrutlash protokoli bo'lib, boshqa marshrutizatorlardan olingan yo'l ma'lumotlari asosida marshrutlarni belgilaydi. Bu uni optimal marshrutlarni tanlashda moslashuvchanlik va ishonchlilik talab qilinadigan uzoq masofali marshrutlash uchun mos qiladi [3].

RIP

Marshrutlash haqida ma'lumot protokoli (RIP) - mahalliy va o'rta o'lchamdagi tarmoqlarda marshrutlash ma'lumotlarini almashish uchun mo'ljallangan birinchi marshrutlash protokollaridan biri. RIP masofaviy vektor asosida ishlaydi, ya'ni marshrutizatorlar maqsad tuguniga hops (oraliq qurilmalar) soniga qarab marshrutlarni tanlaydi. RIP maksimal chegarasi 15 sakrashga ega va ko'rsatkichi 15 dan yuqori bo'lgan marshrutlarga etib bo'lmaydi [3].

IGRP

IGRP - bu avtonom tizimlar ichida joylashgan marshrutlarni aniqlash uchun mo'ljallangan protokol va shuning uchun Interior Gateway Protocol protokollari sinfiga kiradi. Avtonom tizimdagi marshrutlar haqida ma'lumot to'plash usuliga asoslanib, ushbu protokol uzoq vektor turiga tegishli.

Ushbu protokol 1980-yillarning o'rtalarida Cisco mutaxassislari tomonidan ishlab chiqilgan [4].

EIGRP

Kengaytirilgan IGRP marshrutlash protokoli Cisco tomonidan ishlab chiqilgan va IGRPda o'rnatilgan tamoyillarning keyingi rivojlanishi hisoblanadi. Xususan, IGRP protokoliga nisbatan quyidagi qo'shimcha imkoniyatlar taqdim etiladi:

- Siftsiz IP tarmoqlarni qo'llab-quvvatlash
- Qisman marshrut jadvali yangilanishlarini uzatish
- Tarmoq sathining turli protokollarini qo'llab-quvvatlash

Rasmiy ravishda, EIGRP protokoli marshrutlash algoritmlarining distant-vektorli turiga tegishli, ammo bu protokol bog'lanish holati tipidagi protokolning eng yaxshi sifatlarini birlashtiradi va shuning uchun marshrutlash protokolining maxsus turi - gibrid protokollar sifatida tasniflanishi mumkin [4].

Xulosa

Ushbu maqolada marshrutlash algoritmlarini tasniflash, moslashuvchan va moslashuvchan bolmagan marshrutlash algoritmlar qo'llanilishi, global tarmoq ma'lumotlarini to'plash va optimal marshrutlarni hisoblash, paketlarni yo'naltirishning eng yaxshi yo'lini mustaqil ravishda belgilaydigan algoritmlar va beshta asosiy protokol tahlil qilindi. Oddiy va kichik tarmoqlar uchun mos, aniq va xavfsiz yo'nalish tanlash, butun internet darajasida ishlash, tez ishlash va kuchli natija berish, tarmoqning barqaror va samarali ishlashini ta'minlash xususiyatlarga ega bo'lgan tarmoq protokollari ko'rib chiqildi.

Adabiyotlar ro'yxati

1. Ujjwal Sinha. & Vikas Kumar. Routing Algorithms: A Review. International Research Journal of Modernization in Engineering Technology and Science (Peer-Reviewed, Open Access, Fully Refereed International Journal)/ 2024 b 4601-4605. <https://arxiv.org/pdf/2403.11228>.
2. Dilmurodov.Z.D. Kompyuter tarmoqlarida marshrutlash protokollari va ularning qo'llanilishi. Информационные и коммуникативные технологии, "Экономика и социум" №5(120)-2 2024, b 1680-1686.
3. Mr. R. M. Pethe, Miss S. R. Burnase. Technical era language of the networking - EIGRP. International Journal of Engineering Science and Technology (IJEST). ISSN: 0975-5462/ 2011, b 1-5.
4. G. Tsochev, K. Popova, I. Stankov. A comparative study by simulation of ospf and eigrp routing protocols. Информатика и автоматизация. 2022. Том 21 № 6.



An abstract graphic featuring a complex network of interconnected nodes and lines, resembling a molecular structure or a digital network, set against a dark blue background. The nodes are represented by circles of varying sizes, and the lines are thin, light blue, creating a web-like pattern that fills the upper two-thirds of the page.

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