

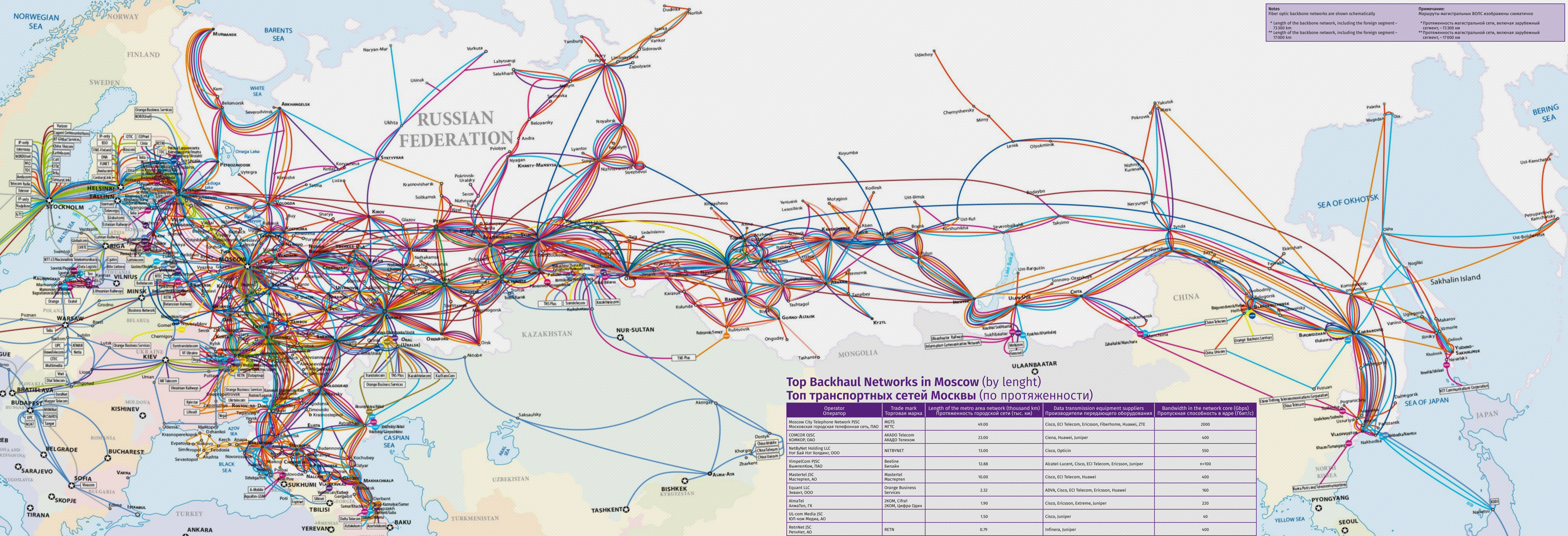
Strategic Partners

Стратегические партнеры

Backbone Networks in Russia

Магистральные сети связи в России

Legend Обозначения	Operator Оператор	Trade mark Торговая марка	Length of the backbone network (thousand km) Протяженность магистральной сети (тыс. км)	Data transmission equipment suppliers Производители передающего оборудования	Cross-border fiber optic links Зарубежные операторы, с сетями которых имеются физические стыки за пределами территории РФ	Internet Exchange Points (IXPs), the backbone connected to Точки обмена трафиком, к которым подключены сети оператора
	Rostelecom PJSC Ростелеком, ПАО	MTS МТС	500.00	Coriant, ECI Telecom, Huawei, Infinera, NEC, Nokia Networks, T8	Azerbaijan: Aztelecom; Belarus: Beltelecom; National Traffic Exchange Center (NTEC); China: China Telecom, China Unicom; Estonia: Tella; Finland: Tella; Georgia: Foptnet; Germany: CenturyLink, GTT, Tata Communications, Telecom Italia, Tella, Vodafone; Japan: KDDI; Kazakhstan: KazakhTelecom, KazTransCom; Latvia: Lattelecom; Lithuania: Teo; Mongolia: Gemnet; Poland: Exatel; Sweden: Tella, GTT, Vodafone; Ukraine: Eurotrans Telecom, Ukrtelecom, Vega (Farlep Invest)	Russian: DATAIX, MSK-IX Foreign: Germany: DE-CIX, NL-IX; Hong Kong: BBIX Hong Kong, Equinix Hong Kong, HKIX; Japan: BBIX Tokyo, Equinix Tokyo, JPNAP; Netherlands: AMS-IX; Sweden: NetNod; United Kingdom: LINX
	Mobile TeleSystems PJSC Мобильные ТелеСистемы, ПАО	Beeline Билайн	243.19	Alcatel-Lucent, Cisco, ECI Telecom, Juniper, Huawei	Belarus: Beltelecom; National Traffic Exchange Center (NTEC); China: China Unicom; Finland: Avaelcom, CenturyLink, CTC, DINA, Rascom, Tella; Germany: Avaelcom, CenturyLink, CTC, Exatel, Hibernia, Rascom, Tella, VF Ukraine (Vodafone); Netherlands: CenturyLink, CTC, Hibernia, Tella; Sweden: Avaelcom, CenturyLink, TDC; Ukraine: VF Ukraine (Vodafone); United Kingdom: CenturyLink, CTC, USA: CenturyLink, CTC, Tella	Russian: MSK-IX Foreign: Finland: FICX; Germany: DE-CIX; Hong Kong: HKIX; Netherlands: AMS-IX; Sweden: NetNod; United Kingdom: LINX; USA: Any2, DE-CIX NY, Equinix Ashburn, Equinix NY, NYIX
	VimpelCom PJSC ВымпелКом, ПАО	Beeline Билайн	183.37	Alcatel-Lucent, Ciena, Cisco, ECI Telecom, Huawei, Juniper	Azerbaijan: Delta Telecom; Germany: Telecom Italia, Vodafone; Kazakhstan: KazakhTelecom, KazTransCom, TNS Plus; Netherlands: CenturyLink; Sweden: CenturyLink; Telecom Italia, Telenor (Vodafone); Ukraine: Kyivstar, Lifecell, Vega (Farlep Invest)	Foreign: Austria: IX; Belgium: BPIX; Bulgaria: BIX; France: France-IX; Germany: B-CIX; DE-CIX; Hong Kong: Equinix Hong Kong, HKIX; Hungary: BIX; Italy: MIX; Netherlands: AMS-IX; Norway: NIX; Poland: PLIX; Romania: RoNIX; Spain: Espanix; Sweden: NetNod; Switzerland: SwissIX; United Kingdom: LINX; USA: Equinix Ashburn
	MegaFon PJSC МегаФон, ПАО	Dom.ru Дом.ру	136.10	Cisco, Huawei, Juniper	Azerbaijan: Azertelecom; Belarus: Beltelecom; National Traffic Exchange Center (NTEC); Estonia: Tella; Georgia: Silknet; Kazakhstan: KazakhTelecom, KazTransCom, TNS Plus, TransTelecom; Latvia: Lattelecom; Lithuania: DLT, Teo; Mongolia: Gemnet, Mobicom; Poland: Orange; Ukraine: MF Telecom	Russian: MSK-IX Foreign: Germany: DE-CIX; Hong Kong: HKIX; Netherlands: AMS-IX; Sweden: NetNod; United Kingdom: LINX; USA: DE-CIX NY
	Company TransTeleCom JSC Компания ТрансТелеКом, АО	TKK	78.00	Alcatel-Lucent, Ciena, Cisco, ECI Telecom, Huawei, NEC	Abkhazian: A-Mobile; Aquafon-GSM; Azerbaijan: Delta Telecom; National Traffic Exchange Center (NTEC); China: China Telecom, China Unicom, CTC, Cogent Communications, NewTelco, PCW, Tata Communications, Telecom Italia, Telekom Srbija; Netherlands: CenturyLink, China Unicom, Euronetworks, GTT, KPN, Zayo; Sweden: BT Global Services, CenturyLink, CTC, Cogent Communications, CofC, China Unicom, GTT, IP-Only, Lattelecom, Tella; Ukraine: Datagroup, Eurotrans Telecom, Turk Telekom International	Russian: MSK-IX Foreign: France: France-IX; Germany: DE-CIX; Hong Kong: Equinix Hong Kong, HKIX; Japan: Equinix Tokyo; Netherlands: AMS-IX; Poland: PLIX; Sweden: NetNod; United Kingdom: LINX; USA: Equinix Ashburn
	ER-Telecom Holding JSC ЭР-Телеком Холдинг, АО	Dom.ru Дом.ру	58.18	Ciena, Ekinops, Huawei, Juniper	Belarus: RETN; Finland: RETN; Tella; Germany: CenturyLink, Cogent Communications, Veripon; Poland: Tella; Sweden: CenturyLink, Cogent Communications, Veripon; Ukraine: RETN	Russian: DATAIX, MSK-IX Ekaterinburg, MSK-IX Moscow, MSK-IX Novosibirsk, MSK-IX Rostov-on-Don, MSK-IX Saint-Petersburg, MSK-IX Samara, OMSK-IX, PIRIX, RED-IX, SIBIR-IX, W-IX
	Milcom LLC Милком, ООО	no	30.00	Extreme Networks, Hewlett Packard Enterprise, Huawei, Infinera, Juniper, Nokia Networks, PacketLight Networks	Kazakhstan: KazakhTelecom	Russian: MSK-IX Foreign: Germany: DE-CIX; Netherlands: AMS-IX; Sweden: NetNod; United Kingdom: LINX; USA: DE-CIX NY
	RetNet JSC Ретнет, АО	RETN	28.24*	Infinera, Juniper	Belarus: Beltelecom; National Traffic Exchange Center (NTEC); Finland: Ciena; Kazakhstan: KazakhTelecom, KazTransCom, TNS Plus, TransTelecom	Russian: MSK-IX Foreign: Austria: IX; Belgium: BPIX; Canada: TorIX; France: France-IX; Germany: BCIX, DE-CIX; Hong Kong: BBIX Tokyo, JPNAP; Netherlands: AMS-IX, NL-IX; Singapore: BBIX, Equinix, SGIX; South Korea: KIX; Spain: Espanix; Sweden: NetNod; Switzerland: SwissIX; United Kingdom: LINX; USA: Any2, DE-CIX NY, Equinix Ashburn, NYIX
	Transnet Telecom LLC Транснет Телеком, ООО	Zummer	17.63	Ciena, Coriant, Huawei, Juniper	Belarus: Beltelecom; National Traffic Exchange Center (NTEC); Finland: Ciena; Kazakhstan: KazakhTelecom, KazTransCom, TNS Plus, TransTelecom	Russian: MSK-IX, MSK-IX Novosibirsk, MSK-IX Samara, Piter-IX, RB-IX, W-IX
	Zummer LLC Зуммер, ООО	Zummer	15.87	Ciena, PacketLight Networks	Kazakhstan: TransTelecom	Russian: MSK-IX Foreign: Germany: DE-CIX; Netherlands: AMS-IX; United Kingdom: LINX
	Communications for innovations CSC Коммуникации для инноваций, ЗАО	Orange Business Services	13.00	ADVA Networks, Nokia Networks, T8	China: Orange Business Services; Finland: Orange Business Services, TDC; Germany: Ancotel, Orange Business Services; Kazakhstan: Transtelecom, Orange Business Services; Ukraine: Orange Business Services	Russian: DATAIX, Eurasia-IX, MSK-IX, MSK-IX Ekaterinburg, MSK-IX Kazan, MSK-IX Novosibirsk, MSK-IX Saint-Petersburg, MSK-IX Samara, MSK-IX Stavropol, MSK-IX Vladivostok, NN-IX, RND-IX, SEA-IX, ULN-IX
	Equant LLC Эквант, ООО	Orange Business Services	10.10	Cisco, ECI Telecom, Huawei, Juniper, NEC	Azerbaijan: Azertelecom, Delta Telecom; China: China Mobile, China Tietong Telecommunications Corporation, China Tietong, China Unicom; Germany: NewTelco, Telecom Italia, Tella; Kazakhstan: KazakhTelecom, KazTransCom, TNS Plus, TransTelecom; Kyrgyzstan: Eikat, IP NET, Kyrgyztelecom; Netherlands: CenturyLink; Ukraine: Datagroup, Eurotrans Telecom, Turk Telekom International	Russian: MSK-IX, MSK-IX Saint-Petersburg Foreign: Belgium: BPIX; Netherlands: AMS-IX; United Kingdom: LINX
	Kvant-Telecom JSC Квант-Телеком, АО	no	7.60	BTI Systems, Ciena, Cisco, Ekinops, Juniper, Nokia Networks	no	Russian: DATAIX, Global-IX, MSK-IX Foreign: Germany: DE-CIX; Hong Kong: Equinix Hong Kong, MEGA-IX; Netherlands: AMS-IX; Sweden: Equinix Stockholm; Ukraine: DTEL-IX, GigaNET
	AlmaTel АлмаТел, ПК	no	4.80	Cisco, Ericsson, Extreme, Juniper	no	Russian: Cloud-IX, DATAIX, DataLine-IX, MSK-IX
	Rascom CSC Раском, ЗАО	no	4.40**	Ciena	Azerbaijan: Delta Telecom; Finland: BSO, Ciena, DINA, Elisa, IP-Only; Germany: CenturyLink, China Telecom, China Unicom, CTC, Cogent Communications, NewTelco, PCW, Tata Communications, Telecom Italia, Telekom Srbija; Netherlands: CenturyLink, China Unicom, Euronetworks, GTT, KPN, Zayo; Sweden: BT Global Services, CenturyLink, CTC, Cogent Communications, CofC, China Unicom, GTT, IP-Only, Lattelecom, Tella; Ukraine: Datagroup, Vega (Farlep Invest)	Russian: DATAIX, MSK-IX Foreign: Czech Republic: MIX.CZ, Peering.CZ; Finland: FICIX; France: France-IX; Germany: DE-CIX; Netherlands: AMS-IX, NL-IX; Sweden: NetNod; Ukraine: DTEL-IX, GigaNET; United Kingdom: LINX; USA: DE-CIX NY
	EDPnet LLC Эдпнет, ООО	no	4.16	Cisco	Finland: EDPnet	Russian: MSK-IX, MSK-IX Saint-Petersburg Foreign: Belgium: BPIX; Netherlands: AMS-IX; United Kingdom: LINX
	GlobalNet LLC ГлобалНет, ООО	GlobalNet	3.17	Ciena	Sweden: CenturyLink, Telecom Italia, Vodafone	Russian: DATAIX, Global-IX, MSK-IX Foreign: Germany: DE-CIX; Netherlands: AMS-IX; Sweden: NetNod, SOLIX; United Kingdom: LINX
	UL-com Media JSC ЮЛ-ком Медиа, АО	no	2.50	Ciena	Belarus: Beltelecom; Latvia: Lattelecom, LVRTC; Sweden: IP-Only; United Kingdom: CenturyLink	Russian: MSK-IX Foreign: Germany: DE-CIX; Netherlands: AMS-IX; Sweden: NetNod
	Miranda-media LLC Миранда-медиа, ООО	no	2.11	Huawei, Juniper, T8	no	Russian: DATAIX, MSK-IX, Piter-IX
	Telia Carrier Russia JSC Телла Карриер Раша, АО	Telia Carrier	2.00	Coriant Networks	Estonia: Tella; Finland: Tella; Sweden: Tella	no
	Edinство LLC Единство, ООО	Normicket Нормикет	1.00	Nokia Networks	no	no



Notes:
* Length of the backbone network, including the foreign segment - 23300 km
** Length of the backbone network, including the foreign segment - 17000 km

Примечание:
* Протяженность магистральной сети, включая зарубежный сегмент - 23300 км
** Протяженность магистральной сети, включая зарубежный сегмент - 17000 км

Top Backhaul Networks in Moscow (by length) Топ транспортных сетей Москвы (по протяженности)

Operator Оператор	Trade mark Торговая марка	Length of the metro area network (thousand km) Протяженность городской сети (тыс. км)	Data transmission equipment suppliers Производители передающего оборудования	Bandwidth in the network core (Gbps) Пропускная способность в ядре (Гбит/с)
Moscow City Telephone Network PJSC Московская городская телефонная сеть, ПАО	MTS МТС	49.00	Cisco, ECI Telecom, Ericsson, Fiberhome, Huawei, ZTE	2000
AKADO PJSC КОМКОР, ОАО	AKADO Telecom	23.00	Ciena, Huawei, Juniper	400
NetByNet Holding LLC Нэт Бай Нэт Холдинг, ООО	NETBYNET	13.00	Cisco, Opticin	550
VimpelCom PJSC ВымпелКом, ПАО	Beeline Билайн	12.88	Alcatel-Lucent, Cisco, ECI Telecom, Ericsson, Juniper	n=100
Mashtel JSC Масстел, АО	no	10.00	Cisco, ECI Telecom, Huawei	400
Equant LLC Эквант, ООО	Orange Business Services	2.32	ADVA, Cisco, ECI Telecom, Ericsson, Huawei	160
AlmaTel АлмаТел, ПК	no	1.90	Cisco, Ericsson, Extreme, Juniper	220
UL-com Media JSC ЮЛ-ком Медиа, АО	no	1.50	Cisco, Juniper	40
RetNet JSC Ретнет, АО	RETN	0.79	Infinera, Juniper	400