FORMULARUL OFERTEI

Agentia Servicii Publice

mun. Chişinău, str. Puskin, 42, 2012

Data depunerii ofertei: 19.03.2025

Procedura de achiziție Nr.: ocds-b3wdp1-MD-1740577309675 din **19.03.2025**

Anunț/ Invitația de participare Nr.:

„BTS Pro" S.R.L. declară că:

a) Au fost examinate și nu există rezervări fată de documentele de atribuire, inclusiv modificările nr. _____.

b) „BTS Pro" S.R.L. se angajează să presteze, în conformitate cu documentele de atribuire și condițiile stipulate în specificațiile tehnice și preț, următoarele bunuri/ servicii: **Denumirea licitatiei publice, pentru lot.: 1-4** .

c) Suma totală a ofertei fără TVA constituie:

47 308 070,00 MDL, fără TVA.

d) Suma totală a ofertei cu TVA constituie:

56 769 684,00 MDL, cu TVA.

e) Prezenta ofertă va rămâne valabilă pentru perioada de timp specificată în Anunțul de participare, începând cu data-limită pentru depunerea ofertei, în conformitate cu Anunțul de participare., va rămâne obligatorie și va putea fi acceptată în orice moment până la expirarea acestei perioade;

f) În cazul acceptării prezentei oferte, „BTS Pro" S.R.L. se angajează să obțină o Garanție de bună execuție în conformitate cu Anunțul de participare, pentru executarea corespunzătoare a contractului de achiziție publică.

g) Nu suntem în nici un conflict de interese, în conformitate cu art. 74 din Legea nr. 131 din 03.07.2015 privind achizițiile publice.

h) Compania semnatară, afiliații sau sucursalele sale, inclusiv fiecare partener sau subcontractor ce fac parte din contract, nu au fost declarate neeligibile în baza prevederilor legislației în vigoare sau a regulamentelor cu incidență în domeniul achizițiilor publice.

Prenume Nume: Bogdan Gnidaș

Funcția în cadrul firmei: Administrator

Denumirea firmei și sigiliu: „BTS Pro" S.R.L.

Digitally signed by Abramov Ivan
Date: 2025.03.19 09:48:53 EET
Reason: MoldSign Signature
Location: Moldova
MOLDOVA EUROPEANĂ

str. Ion Creangă 6V
MD-2069, Chișinău, Republica Moldova
Tel.: +373 22 870 140
Fax.: +373 22 595 858

Cod TVA: 0505766
Cod BIC: MOLDMD2X336
Cod fiscal: 1008600061565
IBAN: MD22ML000000022515361542

"BTS Pro" SRL
office@bts.md
www.bts.md

APROBAT prin Ordinul Ministrului Finanțelor
nr. 145 din 24 noiembrie 2020

Agentia Servicii Publice

mun. Chişinău, str. Puskin, 42, 2012

Data: 19.03.2025

Numărul licitației: ocds-b3wdp1-MD-1740577309675 din **19.03.2025**

DECLARATIE

privind confirmarea identității beneficiarilor efectivi și neîncadrarea acestora în situația condamnării pentru participarea la activităţi ale unei organizaţii sau grupări criminale, pentru corupţie, fraudă şi/sau spălare de bani

Subsemnatul, Bogdan GNIDAȘ reprezentant împuternicit al „BTS Pro” S.R.L. în calitate de ofertant/ofertant asociat desemnat câștigător în cadrul procedurii de achiziție publică **nr. ocds-b3wdp1-MD-1740577309675** din data **19.03.2025**, declar pe propria răspundere, sub sancţiunile aplicabile faptei de fals în acte publice, că beneficiarul/beneficiarii efectivi ai operatorului economic în ultimii 5 ani nu au fost condamnați prin hotărâre judecătorească definitivă pentru participarea la activităţi ale unei organizaţii sau grupări criminale, pentru corupţie, fraudă şi/sau spălare de bani.

Numele și prenumele beneficiarului efectiv	Cota parte, %	IDNP al beneficiarului efectiv
Loboda Alexei	100 %	2000005025431

Prenume Nume: Bogdan Gnidaș

Funcția în cadrul firmei: Administrator

Denumirea firmei și sigiliu: „BTS Pro” S.R.L.

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Data: 19.03.2025

Numărul licitației: ocds-b3wdp1-MD-1740577309675 din **19.03.2025**

A. Ofertanți individuali

1.	*Informaţii generale*	
1.1.	Numele juridic al ofertantului	*„BTS Pro" S.R.L.*
1.2.	Adresa juridică a ofertantului în țara înregistrării	*Republica Moldova, mun. Chișinău, str. Ion Creangă, 6V*
1.3.	Statutul juridic al ofertantului	
	Proprietate	*Privată*
	Formă de organizare juridică	*Societate cu răspundere limitată*
	Altele	-
1.4.	Anul înregistrării ofertantului	*2008*
1.5.	Statutul de afaceri al ofertantului	
	• Agent local/Distribuitor al producătorului străin	*Distribuitor al producătorului străin*
	• Intermediar	-
	• Companie de antrepozit	-
	• Altele	*Comerț*
1.6.	Informația despre reprezentantul autorizat al ofertantului	
	Numele	*Bogdan Gnidaș*
	Locul de muncă și funcția	*Administrator*
	Adresa	*mun. Chișinău, str. Ion Creangă, 6V*
	Telefon / Fax	*+373 22 870 140/ +373 22 595 858*
	E-mail	*bg@bts.md*
1.7.	Numărul de înregistrare pentru TVA	*0505766*
1.8.	Numărul de identitate al ofertantului pentru impozitul pe venit (pentru ofertanții străini)	-
1.9.	Ofertantul va anexa copiile următoarelor documente:	Conform anunțului de participare
2.	*Informaţii de calificare*	
2.1.	Numărul de ani de experiență generală a ofertantului în livrări de bunuri și servicii	*15 ani*
2.2.	Numărul de ani de experiență specifică a ofertantului în livrarea bunurilor și/sau serviciilor similare	*15 ani*
2.3.	Valoarea monetară a livrărilor de bunuri/ prestarea serviciilor similare	*Anul 2023: 389 284 016 lei* *Anul 2022: 349 157 010 lei* *Anul 2021: 288 274 089 lei* *Anul 2020: 210 613 056 lei* *Anul 2019: 148 380 426 lei*
2.4	Disponibilitate de resurse financiare (bani lichizi sau capital circulant, sau de resurse creditare, extras din cont bancar etc.). Enumerați și anexați copiile documentelor justificative	*"Nu se aplică"*
2.5	Detalii privind capacitatea de producere/ echipamente disponibile	*"Nu se aplică"*

3.	*Informaţii financiare*	
3.1.	Rapoarte financiare sau extrase din bilanțul financiar, sau declarații de profit /pierderi, sau rapoartele auditorilor pentru ultimul an de activitate. Enumerați mai jos și anexați copii *1. Raport financiar anul 2022 (copia anexată)*	
3.2.	Denumirea, adresa, numerele de telefon, telex şi fax ale băncilor care pot oferi caracteristici despre ofertant în cazul contactării de către autoritatea contractantă *1. B.C. "Moldindconbank" S.A., mun. Chișinău, str Kiev, 9/1, 022 321 999* *2. B.C. " Victoriabank" S.A., mun. Chișinău, bd. Stefan cel Mare și Sfânt, 77, 022 576 470* *3. B.C. „Energbank" S.A, mun. Chișinău, str. Tighina 23/3, 022 858 056*	
3.3.	Informație privind litigiile în care ofertantul este sau a fost implicat:	
	a) Orice proces pe parcursul ultimilor 3 ani:	
	Cauza litigiului	Rezultatul sau sentința și suma implicată
	-	-
	-	-
	b) Procese curente, pe parcursul anului fiscal curent:	
	Cauza litigiului	Situația curentă a procesului
	-	-
	-	-
Notă: Informația de mai sus reprezintă cerințele minime. Alte cerințe și detalii pot fi adăugate de către autoritatea contractantă, după caz.		

Prenume Nume: Bogdan Gnidaș

Funcția în cadrul firmei: Administrator

Denumirea firmei și sigiliu: „BTS Pro" S.R.L.

Agentia Servicii Publice

mun. Chişinău, str. Puskin, 42, 2012

Data: 19.03.2025

Numărul licitației: ocds-b3wdp1-MD-1740577309675 din **19.03.2025**

Prin prezenta, *„BTS Pro" S.R.L.* confirmă că:

1. Nici unul dintre angajații, companionii, agenții, acționarii, consultanții, partenerii noștri sau rudele sau asociați ai lor nu este în relații care ar fi putut considerate ca un conflict de interese, conform prevederilor din documentele de atribuire.
2. În cazul în care vom afla despre faptul unui conflict potențial, vom raporta imediat informația respectivă către autoritatea contractantă.
3. Nici unul dintre angajații, companionii, agenții, acționarii, consultanții, partenerii noștri sau rudele sau asociații ai lor nu a fost angajat în practici de corupere, escrocherie, complotare, constrângere sau alte practici anticoncurențiale în procesul pregătirii ofertei din cadrul prezentei licitații, conform prevederilor din documentele de atribuire, punctul IPO10.
4. În legătură cu procedura respectivă de licitație și cu orice contract care, eventual, ne va fi adjudecat ca rezultat al acesteia, nu au fost, nici nu vor fi efectuate nici un fel de plăti către angajații, companionii, agenții, acționarii, consultanții, partenerii noștri sau rudele lor, care sânt implicați în achiziția publică, implementarea contractului și aprobarea plăților contractuale în numele autorității contractante.

Prenume Nume: Bogdan Gnidaș

Funcția în cadrul firmei: Administrator

Denumirea firmei și sigiliu: „BTS Pro" S.R.L.

DECLARAȚIE PRIVIND SITUAȚIA PERSONALĂ A OPERATORULUI ECONOMIC

Agentia Servicii Publice

mun. Chişinău, str. Puskin, 42, 2012

Data: 19.03.2025

Numărul licitației: ocds-b3wdp1-MD-1740577309675 din **19.03.2025**

Subsemnatul, *Bogdan GNIDAȘ,* reprezentant împuternicit al "BTS Pro" S.R.L. în calitate de ofertant/ ofertant asociat, declar pe propria răspundere, sub sancţiunea excluderii din procedura de achiziţie publică şi sub sancţiunile aplicabile faptei de fals în acte publice, că nu mă aflu în situaţia prevăzută la art. 18 din Legea privind achizițiile publice nr. 131 din 03.07.2015. Respectiv, în ultimii 5 ani nu am fost condamnat prin hotărâre definitivă a unei instanţe judecătoreşti pentru participarea la activităţi ale unei organizaţii criminale, pentru corupţie, fraudă şi/sau spălare de bani.

Subsemnatul, declar că informaţiile furnizate sunt complete şi corecte în fiecare detaliu şi înţeleg că autoritatea contractantă are dreptul de a solicita, în scopul verificării şi confirmării declaraţiilor, orice documente doveditoare de care dispun.

Subsemnatul, *Bogdan GNIDAȘ* reprezentant împuternicit al «BTS Pro" S.R.L., în calitate de ofertant/ ofertant asociat, la **Denumirea licitatiei publice**, codul CPV **30200000-1**, la data de **19.03.2025**, organizată de **Agentia Servicii Publice** , declar pe propria răspundere că:

a) nu am intrat în faliment ca urmare a hotărârii judecătorești;

b) mi-am îndeplinit obligaţiile de plată a impozitelor, taxelor şi contribuţiilor de asigurări sociale;

c) nu am fost condamnat, în ultimii 3 ani, prin hotărârea definitivă a unei instanţe judecătoreşti, pentru o faptă care a adus atingere eticii profesionale sau pentru comiterea unei greşeli în materie profesională;

d) toate informațiile și documentele prezentate pentru procedura de achiziție menționată mai sus sunt veridice și autentice;

e) nu suntem incluși în Lista de interdicție a operatorilor economici.

Subsemnatul, declar că informaţiile furnizate în scopul demonstrării îndeplinirii criteriilor de calificare şi selecţie sunt complete şi corecte în fiecare detaliu şi înţeleg că autoritatea contractantă are dreptul de a solicita, în scopul verificării şi confirmării declaraţiilor, orice documente doveditoare de care dispun.

Înţeleg că în cazul în care această declaraţie nu este conformă cu realitatea sunt pasibil de încălcarea prevederilor legislaţiei penale privind falsul în declaraţii.

Prenume Nume: Bogdan Gnidaș

Funcția în cadrul firmei: Administrator

Denumirea firmei și sigiliu: „BTS Pro" S.R.L.

Agentia Servicii Publice

mun. Chişinău, str. Puskin, 42, 2012

Data: 19.03.2025

Numărul licitației: ocds-b3wdp1-MD-1740577309675 din **19.03.2025**

CERERE DE PARTICIPARE

Către **Agentia Servicii Publice**

Stimați Domni,

Ca urmare a anunțului/invitației de participare/de preselecție apărut în Buletinul achizițiilor publice și/sau Jurnalul Oficial al Uniunii Europene, nr. **ocds-b3wdp1-MD-1740577309675** din **19.03.2025**, privind aplicarea procedurii pentru atribuirea contractului **Denumirea licitatiei publice**, noi BTS Pro SRL , am luat cunoștință de condițiile și de cerințele expuse în documentația de atribuire și exprimăm prin prezenta interesul de a participa, în calitate de ofertant/candidat, neavând obiecții la documentația de atribuire.

Prenume Nume: Bogdan Gnidaș

Funcția în cadrul firmei: Administrator

Denumirea firmei și sigiliu: „BTS Pro” S.R.L.

Agentia Servicii Publice

mun. Chişinău, str. Puskin, 42, 2012

Data: 19.03.2025

Numărul licitației: ocds-b3wdp1-MD-1740577309675 din **19.03.2025**

DECLARAŢIE

privind valabilitatea ofertei

Către **Agentia Servicii Publice**

Stimați Domni,

Ne angajăm să menținem oferta valabilă, privind **Denumirea licitatiei publice** prin procedura de achiziție **nr. : ocds-b3wdp1-MD-1740577309675** din **19.03.2025** pentru o durată de **90 (nouăzeci) zile** calendaristice, respectiv până la data de **20.06.2025**, și ea va rămâne obligatorie pentru noi și poate fi acceptată oricând înainte de expirarea perioadei de valabilitate.

Prenume Nume: Bogdan Gnidaș

Funcția în cadrul firmei: Administrator

Denumirea firmei și sigiliu: „BTS Pro” S.R.L.

Agentia Servicii Publice

mun. Chişinău, str. Puskin, 42, 2012

Data: 19.03.2025

Numărul licitației: ocds-b3wdp1-MD-1740577309675 din **19.03.2025**

INFORMAŢII PRIVIND ASOCIEREA

BTS Pro SRL, mun. Chișinău, str. I. Creangă, 6V, cod fiscal: **1008600061565**, participă la Licitația electronică **nr. ocds-b3wdp1-MD-1740577309675** din **19.03.2025** în calitate de **CONTRACTANT UNIC.**

Prenume Nume: Bogdan Gnidaș

Funcția în cadrul firmei: Administrator

Denumirea firmei și sigiliu: „BTS Pro” S.R.L.

Agentia Servicii Publice

mun. Chişinău, str. Puskin, 42, 2012

Data: 19.03.2025

Numărul licitației: ocds-b3wdp1-MD-1740577309675 din **19.03.2025**

Anul 2024

Nr.	Obiectul contractului	Denumirea/numele beneficiarului/Adresa	Calitatea Furnizorului	Perioada
1	BC ****Bank,	2 x NetApp AFF A150, for production environment virtualization cluster	contractant unic	(16.09.2024)
2	Mol*****	NetApp AFF A150 for Vmware virtualization cluster (16.12.2024)	contractant unic	(16.12.2024)
3	No***** MLD	NetApp AFF C400 + NetApp FAS2820, configured in FabricPool	contractant unic	(26.12.2024)
4	BC M***Bank	2 x NetApp ASA A800 ActiveSync Replication (Disaster Recovery Solution)	contractant unic	(15.03.2024)
5	Mic****	2 x NetApp ASA A250 ActiveSync Replication (Disaster Recovery Solution)	contractant unic	(10.02.2025)
6	BC ****Bank	NetApp AFF A220, for production virtual environment	contractant unic	(31.12.2023)
7	Inv****	NetApp AFF A150 for production virtualization cluster	contractant unic	(15.07.2024)
8	BC ****Bank	NetApp FAS 2750, for production virtual environment	contractant unic	(22.09.2022)
9	Banca Nationala a Moldovei	2 x NetApp ASA A400, ActiveSync Replication (Disaster Recovery Solution)	contractant unic	(14.06.2022)

Anul 2024

Nr.	Obiectul contractului	Denumirea/numele beneficiarului/Adresa	Calitatea Furnizorului	Suma	Valuta	Perioada de livrare (luni/zile)
1	SA MOLDOVAGAZ	Componente PC	contractant unic	26 246,3	MDL	5 zile
2	Inspectoratul Național de Probațiune	Tehnica de birou	contractant unic	2 490,00	MDL	45 zile
3	ÎS Aeroportul Internațional Chișinău	Echipament de tip server	contractant unic	539 466,00	MDL	30 zile
4	Academia de Studii Economice din Moldova(ASEM)	Echipament informational, Licente, Programe software	contractant unic	214 274,00	MDL	60 zile
5	ÎS Institutul de Geodezie, Prospecțiuni Tehnice și Cadastru INGEOCAD	Interactive Display	contractant unic	76 300,00	MDL	60 zile
6	Sudzucker-Moldova SRL	Certificat cadou(card)	contractant unic	97 000,00	MDL	60 zile
7	IMSP SCM de Copii Nr. 1	Aparate de uz casnic	contractant unic	40 000,00	MDL	3 zile
8	IMSP SCM de Copii Nr. 1	Tehnica de calcul	contractant unic	60 000,00	MDL	3 zile
9	IMSP Insstitutul de Medicină Urgentă	Detalii pentru tehnica de calcul	contractant unic	180 000,00	MDL	5 zile
10	ÎS Direcția pentru Exploatarea Imobilului	PC și periferice	contractant unic	54 810,00	MDL	45 zile
11	FinComBank SA	Kaspersky si SLA	contractant unic	47 712,00	EUR	15 zile
12	Ministerul Educației și Cercetării a RM	Printer, scaner, Laptop	contractant unic	267 990,00	MDL	45 zile

13	Academia de Studii Economice din Moldova(ASEM)	Echipament informational, Licente, Programe software	contractant unic	214 274,00	USD	60 zile
14	"Chișinău-Gaz SRL"	Computere si Tehnica de birou	contractant unic	2 747 988,00	MDL	90 zile
15	Ministerul Afacerilor Externe al Republicii Moldova	Licențe Microoft 365	contractant unic	2 039 999,40	MDL	90 zile
16	Fibernet SRL	Lucrari de instalatie electrica si amenajarea terenurilor, s. Congaz	contractant unic	190 706,00	MDL	60 zile
17	IP Biblioteca Nationala a RM	Computer de birou	contractant unic	139 932,00	MDL	30 luni
18	IMSP Centrul Republican de Diagnosticare Medicală	Monitoare	contractant unic	53 699,90	MDL	30 zile
19	IMSP Centrul Republican de Diagnosticare Medicală	Piese de schimb si consumabile IT	contractant unic	180 000,00	MDL	30 zile
20	Servociul Hidrometeorologic de Stat	Calculatoare	contractant unic	69 888,00	MDL	20 zile
21	Apă-Canal Chișinău SA	Licențe Microsoft 365	contractant unic	13 834,80	USD	7 zile
22	ÎM EFES VITANTA MOLDOVA BREWERY SA	Inprimanta, Smart TV	contractant unic	25 597,00	MDL	30 zile
23	BC EuroCreditBank SA	Software	contractant unic	29 455,00	USD	15 zile
24	IP Centrul Cultural Evreesc KEDEM	Tonere CANON	contractant unic	63 000,00	MDL	3 zile
25	IMSP Institutul de Neurologie și Neurochirurgie „Diomid Gherman„	Tehnica de calcul	contractant unic	103 705,20	MDL	20 zile
26	BC Moldincombank SA	Apple iPhone	contractant unic	243 243,00	MDL	5 zile
27	Direcția Generală Arhitectură, Urbanism și Relații Funciare	Consumabile pentru imprimantă	contractant unic	80 634,00	MDL	20 zile
28	Agenția Servicii Publice	Licențe CorelDRAW	contractant unic	125 852,00	MDL	15 zile
29	Casa Națională de Asigurări Sociale	Battery Module pentru Symmetra PX	contractant unic	270 000,00	MDL	60 zile
30	Î.C.S. “Premier Energy Distribution”	Baterii	contractant unic	1 541,40	MDL	5 zile
31	IMSP Institutul de Medicină Urgentă	Echipament TIC	contractant unic	724 047,60	USD	30 zile
32	Inspectoratul General al Poliției (IGP)	Unități stocare date	contractant unic	216 000,00	MDL	30 zile
33	Invitro Diagnostics SRL	Server, Storage System	contractant unic	85 455,00	EUR	60 zile
34	I.P. Compania „Teleradio-Moldova„	Laptop	contractant unic	57 654,00	MDL	40 zile
35	AO "Centul de Resurse Juridice"(CRJM)	Laptop	contractant unic	2 718,00	USD	30 zile
36	Agenția Resurse Informaționale Juridice	Tehnica de calcul	contractant unic	276 084,00	MDL	15 zile
37	CET Nord SA Mun. Bălți	Tehnica de calciul, echipamente periferice, piese și accesorii	contractant unic	236 160,00	MDL	15 zile
38	Primăria Comrat	MFD All-in-One Functions, NB, Smart TV, PC	contractant unic	127 578,00	MDL	30 zile
39	ÎCS Premier Energy SRL	Echipament IT	contractant unic	3 162,50	USD	90 zile
40	S.A. „MOLDTELECOM„	Connectrix	contractant unic	7 800,00	USD	30 zile
41	FinComBank SA	Catalyst, Cisco	contractant unic	21 460,00	USD	30 zile
42	Vitasanmax SRL	Server si servicii montarea	contractant unic	7 287,00	USD	15 zile
43	ÎCS Premier Energy SRL	Echipament informatic	contractant unic	28 500,00	USD	45 zile
44	I.P. Universitatea Tehnică a Moldova(UTM)	Echipament IT(Videoproiector)	contractant unic	1 188 000,00	MDL	90 zile
45	FinComBank SA	Echipament de rețea	contractant unic	67 200,00	USD	60 zile
46	ÎCS Premier Energy SRL	Pachete software Endpoint Protection	contractant unic	142 279,20	USD	10 zile

47	TELEMEDICINE S.R.L	Server	contractant unic	20 900,00	USD	60 zile
48	Colegiul Pedagogic Ion Creanga din cadrul IP Universitatii de Stat Alecu Russo din Balti	Echipament Informational	contractant unic	144 360,00	MDL	30 zile
49	NOVO Investment MLD SRL	Produse Software	contractant unic	363 359,04	USD	30 zile
50	ÎCS Premier Energy SRL	Pachete Software de securitate	contractant unic	309 146,52	USD	30 zile
51	NOVO Investment MLD SRL	Cisco server UCS	contractant unic	9 391,00	USD	30 zile
52	Serviciul de Informații si Securitate al RM	calculatoare, imprimante, cartușe	contractant unic	2051831,40	MDL	30 zile
53	IP Compania Teleradio-Moldova	Echipament tehnic pentru productie TV		1576141,2	MDL	60 zile
54	EFES Vitanta Moldova Brewery	Wi-Fi outdoor AP, AIR-DNA-E..., Power Injector		8808,00	USD	30 zile
55	IP Cadastrul Bunurilor Imobile	ICT Equipment		4252850,0	MDL	60zile

Anul 2023

Nr.	Obiectul contractului	Denumirea/numele beneficiarului/Adresa	Calitatea Furnizorului	Suma	Valuta	Perioada de livrare (luni/zile)
1	Echipament și accesorii pentru computer, server, computere, imprimante, climatizoare	I.P. "Academia de Muzică, Teatru şi Arte Plastice"	contractant unic	335 374,80	MDL	60 zile
2	Pachete sofiware pentru gestionarea licentelor"	Administrația Națională a Penitenciarelor	contractant unic	94 387,14	MDL	30 zile
3	Calculatoare staționare de tip desktop	Academia Ștefan cel Mare	contractant unic	239 986,80	MDL	30 zile
4	Tehnică de calcul	Academia Ștefan cel Mare	contractant unic	173 002,80	MDL	30 zile
5	Prestarea serviciilor soft	Administrația de Stat a Drumurilor	contractant unic	95 285,00	MDL	3 zile
6	Echipament și accesorii pentru computer	Administrația Națională a Penitenciarelor	contractant unic	127 694,40	MDL	60 zile
7	Echipament de tip notebook	Î.S. Aeroportul Internațional Chișinău	contractant unic	234 846,00	MDL	10 zile
8	Echipamente multifuncționale	Î.S. Aeroportul Internațional Chișinău	contractant unic	121 550,00	MDL	3 zile
9	Reînnoirea aplicației antivirus	Î.S. Aeroportul Internațional Chișinău	contractant unic	199 953,60	MDL	5 zile
10	Achiziționarea pieselor de schimb și componentelor PC	Î.S. Aeroportul Internațional Chișinău	contractant unic	166 429,20	MDL	60 zile
11	Tehnică de calcul PC	Î.S. Aeroportul Internațional Chișinău	contractant unic	363 384,00	MDL	60 zile
12	Notebook, Docking Station, Keyboard&Mouse, Monitor	AGEPI	contractant unic	509 871,00	MDL	20 zile
13	Consumabile și piese pentru echipamentul IT	Agenția Națională pentru Sănătate Publică ANSP	contractant unic	47 881,20	MDL	15 zile
14	Tehnică de calcul	Agenția Națională pentru Siguranța Alimentelor ANSA	contractant unic	450 567,60	MDL	60 zile
15	Computere de birou, piese și accesorii pentru computere și fotocopiatoare	Agenția Națională pentru Soluționarea Contestațiilor	contractant unic	86 358,00	MDL	1 zi
16	Tehnică de calcul	Agentia Proprietatii Publice	contractant unic	140 580,00	MDL	30 zile
17	"VMware"	Agenția Servicii Publice ASP	contractant unic	716 256,00	MDL	12 luni

18	Surse de alimentare electrică continuă UPS	Agenția Servicii Publice ASP	contractant unic	149 108,40	MDL	120 zile
19	Licențe "CorelIDRAW"	Agenția Servicii Publice ASP	contractant unic	88 638,00	MDL	15 zile
20	Echipament de digitalizare-scanere	Agenția Servicii Publice ASP	contractant unic	375 323,80	MDL	120 zile
21	Licențe și mentenanță produs "Oracle"	Agenția Servicii Publice ASP	contractant unic	2 309 280,00	MDL	12 luni
22	Serviciilor de mentenanță a Complexului protecție criptografică producere	Agenția Servicii Publice ASP	contractant unic	1 139 988,00	MDL	12 luni
23	Licențe "Microsoft Office 365"	Agenția Servicii Publice ASP	contractant unic	219 276,00	MDL	12 luni
24	Echipamente și accesorii TI	Agenția Servicii Publice ASP	contractant unic	3 101 388,60	MDL	120 zile
25	Piese de schimb pu PC	Agenția Servicii Publice ASP	contractant unic	614 632,32		120 zile
26	Achiziţionarea Echipamentului de comunicații electronice (echipament telefonic)	Agenția Servicii Publice ASP	contractant unic	423 227,58	MDL	20 zile
27	Climatizatoare	Agenția Servicii Publice ASP	contractant unic	129 117,60	MDL	30 zile
28	Imprimante	Agenția Servicii Publice ASP	contractant unic	65 580,00	MDL	15 zile
29	NetApp	Agenția Servicii Publice ASP	contractant unic	549 480,00	MDL	60 zile
30	Calculatoare, servere	Aparatul Presedintelui RM	contractant unic	693 866,40	MDL	60 zile
31	Software	Banca Moldindconbank (MICB)	contractant unic	3 793,92	USD	15 zile
32	Echipament IT	Banca Moldindconbank (MICB)	contractant unic	435 438,00	MDL	60 zile
33	Servere Lenovo	Banca Moldova AgroindBank (MAIB)	contractant unic	126 000,00	EURO	50 zile
34	Licențe SonarQube	Banca Moldova AgroindBank (MAIB)	contractant unic	28 456,00	USD	60 zile
35	Nexus Repository	Banca Moldova AgroindBank (MAIB)	contractant unic	27 237,00	USD	60 zile
36	Citrix ADC, Web Application Delivery Controllers Veeam Backup & Replication	Banca Nationala a Moldovei (BNM)	contractant unic	530 587,80	MDL	90 zile
37	Achiziţionarea calculatoarelor portabile, AiO, echipamente periferice	Banca Nationala a Moldovei (BNM)	contractant unic	3 687 484,38	MDL	90 zile
38	Imprimante	Biroul National de Statistica (BNS)	contractant unic	415 200,00	MDL	90 zile
39	Tehnică de calcul	Biroul National de Statistica (BNS)	contractant unic	2 999 040,00	MDL	90 zile
40	Laptopuri	Biroul National de Statistica (BNS)	contractant unic	4 103 982,00	MDL	90 zile
41	Tehnica de calcul	Cancelaria de Stat	contractant unic	105 478,80	MDL	20 zile
42	Smart TV	Cancelaria de Stat	contractant unic	115 893,00	MDL	30 zile
43	Table interactive	Casa Nationala de Asigurari Sociale (CNAS)	contractant unic	169 900,00	MDL	10 zile
44	Calculatoare	Casa Nationala de Asigurari Sociale (CNAS)	contractant unic	2 146 800,00	MDL	90 zile
45	Scanere	Casa Nationala de Asigurari Sociale (CNAS)	contractant unic	171 000,00	MDL	15 zile
46	Software	Termoelectrica SA	contractant unic	263 988,00	MDL	30 zile
47	Echipament IT	IP Universitatea Tehnică a Moldovei	contractant unic	1 039 191,48	MDL	10 zile
48	Tehnica de calcul	IP USMF "Nicolae Testemițanu"	contractant unic	1 223 987,88	MDL	20 zile
49	Tehnica de calcul	IP Universitatea de Stat din Moldova	contractant unic	161 715,66	MDL	30 zile
50	Echipament IT	ÎM "Regia Transport Electric"	contractant unic	623 987,94	MDL	30 zile
51	Tehnica de calcul	IP Universitatea de Stat din Moldova	contractant unic	1 371 819,66	MDL	30 zile
52	Televizoare	SA "Moldtelecom"	contractant unic	407 070,00	MDL	90 zile

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Nr.	Obiectul contractului	Denumirea/numele beneficiarului/Adresa	Calitatea Furnizorului	Suma	Valuta	Perioada de livrare (luni/zile)
1	Echipament IT	I.P. "Academia de Muzică, Teatru şi Arte Plastice"	contractant unic	88 971,84	MDL	60 zile
2	Tehnică de calcul	Administrația Națională a Penitenciarelor	contractant unic	328 224,00	MDL	30 zile
3	Echipament tehnic	Agenția de Dezvoltare Regională Centru	contractant unic	100 470,00	MDL	30 zile

4	Echipament tehnic	Agenția de Dezvoltare Regională UTA Găgăuzia	contractant unic	181 818,50	MDL	10 zile
5	Calculatoarelor de birou (în set), imprimante, laptop.	Agenția de Intervenție și Plăți pentru Agricultură	contractant unic	188 931,00	MDL	15 zile
6	Centrală solară prin conversia fotovoltaică cu capacitatea de 200 kw	Agenția pentru Dezvoltarea și Modernizarea Agriculturii	contractant unic	2 406 550,00	MDL	60 zile
7	Echipament IT	Agenția Medicamentului și Dispozitivelor Medicale	contractant unic	1 495 977,00	MDL	60 zile
8	Tehnică de calcul	Agenția Națională pentru Reglementare în Energetică	contractant unic	721 260,00	MDL	60 zile
9	Tehnică de uz casnic	Agenția Națională pentru Sănătate Publică	contractant unic	188 381,10	MDL	20 zile
10	Servicii SW&Vmware	I.P. ”Agenția Servicii Publice”	contractant unic	733 440,00	MDL	10 zile
11	Protecție criptografică	I.P. ”Agenția Servicii Publice”	contractant unic	837 890,85	MDL	12 luni
12	NetApp FAS8020	I.P. ”Agenția Servicii Publice”	contractant unic	480 228,00	MDL	12 luni
13	Licența, mentenanța pentru produsul program „ Oracle"	I.P. ”Agenția Servicii Publice”	contractant unic	4 011 819,36	MDL	12 luni
14	"Microsoft Office 365"	I.P. ”Agenția Servicii Publice”	contractant unic	471 384,30	MDL	12 luni
15	Laptopuri și accesorii	I.P. ”Agenția Servicii Publice”	contractant unic	86 497,50	USD	28 zile
16	Calculatoare	I.P. ”Agenția Servicii Publice”	contractant unic	6 352 830,00	MDL	80 zile
17	Scanere	I.P. ”Agenția Servicii Publice”	contractant unic	337 662,00	MDL	80 zile
18	Servicii montare cabluri	I.P. ”Agenția Servicii Publice”	contractant unic	540 000,00	MDL	20 zile
19	Calculatoare de birou	Î.M. " Asociația de Gospodărire a Spațiilor Verzi"	contractant unic	359 785,20	MDL	10 zile
20	Kaspersky (licență/cheie de acces)	"FinComBank"	contractant unic	40 302,50	Euro	12 luni
21	FortiGate	"FinComBank"	contractant unic	42 000,00	Euro	40 zile
22	SSD disc	"FinComBank"	contractant unic	43 920,00	Euro	40 zile
23	Licențe Microsoft Exchange Server	"FinComBank"	contractant unic	186 490,00	USD	15 zile
24	Licențe Cisco	"FinComBank"	contractant unic	88 900,00	USD	15 zile
25	Kaspersky (licență/cheie de acces)	MAIB	contractant unic	20 468,50	Euro	10 zile
26	Soluție de stocare de date NetApp	Banca Națională a Moldovei	contractant unic	5 252 572,16	MDL	30 zile
27	Servicii de asigurare a accesului la suport anual pentru licențele Veeam Backup	Banca Națională a Moldovei	contractant unic	915 249,00	MDL	30 zile
28	Lenovo Dessktop	B.C " Victoriabank" S.A.	contractant unic	153 700.00	USD	15 zile
29	Tehnică de calcul	Biroul Național de Statistică	contractant unic	2 481 114,96	MDL	60 zile
30	Soluție de Backup	Biroul Național de Statistică	contractant unic	357 630,00	MDL	45 zile
31	Tehnică de calcul	Biroul Național de Statistică	contractant unic	1 127 784,00	MDL	10 zile
32	Set-laptop,monitor, mouse și tastatură	Cancelaria de Stat	contractant unic	1 331 460,00	MDL	120 zile
33	Calculatoare de birou	Casa Națională de Asigurări Sociale	contractant unic	2 796 000,00	MDL	120 zile
34	Imrimante laser LAN	Casa Națională de Asigurări Sociale	contractant unic	1 115 904,00	MDL	60 zile
35	Licență Cisco	I.P. „Centrul de Tehnologii Informaționale în Finanțe”,	contractant unic	248 772,00	MDL	10 zile
36	Computere și tehnică de birou	" Chișinău-Gaz" SRL	contractant unic	3 559 488,00	MDL	90 zile
37	Computere și tehnică de birou	" Chișinău-Gaz" SRL	contractant unic	3 558 937,20	MDL	45 zile
38	Echipament informatic	Compania Națională de Asigurări în Medicină	contractant unic	884 307,00	MDL	30 zile
39	Computere, imprimante, scanere	Curtea Supremă de Justiție	contractant unic	419 508,00	MDL	30 zile
40	Tehnică de calcul	DETS Ciocana	contractant unic	417 535,38	MDL	30 zile
41	Calculator, Imprimante	DETS Ciocana	contractant unic	548 085,00	MDL	30 zile
42	Mașini și utilaje	DG Economie Comerț Turism CMC	contractant unic	445 624,56	MDL	30 zile
43	Tehnică de calcul	IMSP AMT Botanica	contractant unic	993 679,74	MDL	15 zile
44	Consumabile	IMSP AMT Râșcani	contractant unic	833 400,40	MDL	20 zile

Prenume Nume: Bogdan Gnidaș

Funcția în cadrul firmei: Administrator

Denumirea firmei și sigiliu: „BTS Pro” S.R.L.

Nr.	Denumirea bunurilor / serviciilor	Denumirea modelului bunului / serviciului	Țara de origine	Produ-catrorul	Specificarea tehnică deplină solicitată de către autoritatea contractantă	Specificarea tehnică deplină propusă de către ofertant	Garanție, luni	Standarde de referință
1	2	3	4	5	6	7		8
LOT 1	**Enterprise Server tip 1**	Dell PowerEdge R660 Server	PRC	Dell	Echipament nou și nerecondiționat, produs minim trim. I anul 2024, corespunzător tipului de dispozitive de nivel Enterprise, produs de producători renumiți (Brand name internațional). Configurația echipamentului trebuie să fie compusă din componente reciproc compatibile şi să asigure funcţionarea optimă a sistemului în ansamblu. Type: Enterprise Server; Form Factor: Rack mount EIA-310 compatibility, max 2U (rail-kit included); CPU Included: 2 x CPU; Min. 24 core per CPU with hyper-threading; Launch date not earlier than Q4'23; Min. 50MB Cache; min. 2.4 Ghz; Memory: Min. 24 ECC (error-correcting code) DDR5 slots; Memory installed: Min. 12 x 64GB ECC DDR5; Min. drive bays: Min. 8 bays 2.5 for data Support Hot-Swappable; Storage installed: Min. 2 x min. 240Gb SSD SAS RAID Controller: Support Pass-through mode; RAID 1,5,6,10,50,60; Cache min. 4GB; NICs included: Min. 1 x 1GE management; Min. 2 x 1GE; Min. 2 x 10G SFP+, with SFP+ SR MM modules included (Cisco Compatible); Min. 2 x 32G FC SFP28 850nm, with SFP28 SR MM modules included (Cisco Compatible). Supported operating environments: Microsoft Windows Server (Hyper V) min. 2019; Red Hat Enterprise Linux; VMware (VMware ESXi) min. ver. 8.0.x; Interfaces: Min. 2 port USB; Power supplies included: Min. 2 hot-plug PSU with support for 1+1 redundancy with power cables c13-c14(0.6 m); Front Indicator Status: Power Status, Health	Dell PowerEdge R660 Server - Echipament nou și nerecondiționat, produs in anul 2025, corespunzător tipului de dispozitive de nivel Enterprise, produs de producător renumit (Brand name internațional). Configurația echipamentului compusă din componente reciproc compatibile şi asigură funcţionarea optimă a sistemului în ansamblu. Type: Enterprise Server; Form Factor: Rack mount EIA-310 compatibility, 1U (rail-kit included); CPU Included: 2x CPU Intel Xeon Gold 6542Y; 24 core per CPU with hyper-threading; Launch date Q4'23; 60MB Cache; 2.9 Ghz; Memory: 32 ECC (error-correcting code) DDR5 slots; Memory installed: 12x 64GB ECC DDR5; Drive bays: 10 bays 2.5 for data Support Hot-Swappable; Storage installed: 2x 800GB SSD SAS, Mixed Use, up to 24Gbps 512e 2.5 Hot Plug, AG Drive, 3DWPD RAID Controller PERC H755 front SAS: Support Pass-through mode; RAID 0, 1, 5, 6, 10, 50, 60; Cache 8GB; NICs included: 1x 1GE management; 2x 1GE; 2x 10G SFP+, with SFP+ SR MM modules included (Cisco Compatible); 2x 32G FC SFP28 850nm, with SFP28 SR MM modules included (Cisco Compatible). Supported operating environments: Microsoft Windows Server (Hyper V) 2019; Red Hat Enterprise Linux; VMware (VMware ESXi) ver. 8.0.x; Interfaces: 3x port USB; Power supplies included: Dual, Redundant(1+1), Hot-Plug Power Supply,1100W MM(100-240Vac) Titanium with power cables c13-c14(0.6 m); Front Indicator Status: Power Status, Health System Status, Drive Status, NIC Status, UID Status Fan Modules: 4 Very High Performance Fans;	5 ani (60 luni integral) de tipul și nivelul – „Next Business Day"	SM, CE, ISO

Nr.	Denumirea bunurilor / serviciilor	Denumirea modelului bunului / serviciului	Țara de origine	Produ-catrorul	Specificarea tehnică deplină solicitată de către autoritatea contractantă	Specificarea tehnică deplină propusă de către ofertant	Garanție, luni	Standarde de referință
1	2	3	4	5	6	7		8
					System Status, Drive Status, NIC Status, UID Status Fan Modules: hot-swappable with N+1 redundancy; Management: A web-based solution for KVM must be included with full functionality for manage and monitoring, including at least following features: - View information about the state of the managed server; - Inventory and monitoring of network adapters and data storage subsystems without software agents in the OS; - View inventory information (CPU, RAM, Storages); - View information from sensors; - Monitoring and control of electricity consumption; - Turn on/off the server; - Remote update of BIOS, firmware of network and RAID controllers; - Working with RAID controllers without shutting down and restarting the servers; - Virtual console, virtual media devices; - Perform OS installations using virtual media interfaces and network-shared directories, with support for an integrated graphical user interface (GUI). - Support SNMP min.v2c - Provision of the Management Information Base (MIB) libraries, including detailed Object Identifier (OID) descriptions, either as a standalone document from the manufacturer or through a link to the server manufacturer's official website. Operating system: no OS pre-installed; Toate licențele necesare (dacă se aplică conform termenilor și condițiilor producătorului) pentru caracteristicile minime de management menționate mai sus și software-ul/firmware-ul specific	Management: A web-based solution for KVM included with full functionality for manage and monitoring, including following features: - View information about the state of the managed server; - Inventory and monitoring of network adapters and data storage subsystems without software agents in the OS; - View inventory information (CPU, RAM, Storages); - View information from sensors; - Monitoring and control of electricity consumption; - Turn on/off the server; - Remote update of BIOS, firmware of network and RAID controllers; - Working with RAID controllers without shutting down and restarting the servers; - Virtual console, virtual media devices; - Perform OS installations using virtual media interfaces and network-shared directories, with support for an integrated graphical user interface (GUI). - Support SNMP v2c - Provision of the Management Information Base (MIB) libraries, including detailed Object Identifier (OID) descriptions, either as a standalone document from the manufacturer or through a link to the server manufacturer's official website. Operating system: no OS pre-installed; Toate licențele necesare pentru caracteristicile minime de management menționate mai sus și software-ul/firmware-ul specific serverului, inclusiv actualizările/patch-urile periodice, incluse în ofertă și furnizate pe o bază perpetuă - valabile obligatoriu pentru durata integrală de viață a serverului. Prestarea serviciilor de punere în funcțiune, a garanției și a serviciilor de suport (deservire și mentenanță) a bunurilor - conform Anexei la Anunțul de participare. Termeni și condiții: Toate componentele actuale și		

Nr.	Denumirea bunurilor / serviciilor	Denumirea modelului bunului / serviciului	Țara de origine	Produ-catrorul	Specificarea tehnică deplină solicitată de către autoritatea contractantă	Specificarea tehnică deplină propusă de către ofertant	Garanție, luni	Standarde de referință
1	2	3	4	5	6	7		8
					serverului, inclusiv actualizările/patch-urile periodice, trebuie să fie incluse în ofertă și furnizate pe o bază perpetuă - valabile obligatoriu pentru durata integrală de viață a serverului. Cerințe obligatorii pentru prestarea serviciilor de punere în funcțiune, a garanției și a serviciilor de suport (deservire și mentenanță) a bunurilor - conform Anexei la Anunțul de participare. Termeni și condiții: Toate cerințele sunt minime și obligatorii; O cerință nu trebuie să limiteze o altă cerință; Toate componentele trebuie să fie actuale și să nu fie promovate ca EOS (sfârșitul vânzării/suportului) / EOL (sfârșitul duratei de viață); Extinderea memoriei (ram) și a capacității de stocare nu trebuie să includă limitări hardware sau software.	să nu sunt promovate ca EOS (sfârșitul vânzării/suportului) / EOL (sfârșitul duratei de viață); Extinderea memoriei (ram) și a capacității de stocare nu include limitări hardware sau software.		
LOT 2	**Enterprise Server tip 2**	Dell PowerEdge R760 Server	PRC	Dell	Echipament nou și nerecondiționat, produs minim trim. I anul 2024, corespunzător tipului de dispozitive de nivel Enterprise, produs de producători renumiți (Brand name internațional). Configuraţia echipamentului trebuie să fie compusă din componente reciproc compatibile şi să asigure funcţionarea optimă a sistemului în ansamblu. Type: Enterprise Server; Form Factor: Rack mount EIA-310 compatibility, max. 2U (rail-kit included); CPU Included: 2 x CPU; Min. 24 core per CPU with hyper-threading; Launch date not earlier than Q4'23; min. 50MB Cache; min. 2.4 Ghz; Memory: Min. 24 ECC (error-correcting code) DDR5 slots; Memory installed: Min. 8 x 64 GB ECC DDR5; Min drive bays: Min. 24 bays 2.5 for data	Dell PowerEdge R760 Server - Echipament nou și nerecondiționat, produs in anul 2025, corespunzător tipului de dispozitive de nivel Enterprise, produs de producător renumit (Brand name internațional). Configuraţia echipamentului compusă din componente reciproc compatibile şi asigură funcţionarea optimă a sistemului în ansamblu. Type: Enterprise Server; Form Factor: Rack mount EIA-310 compatibility, 2U (rail-kit included); CPU Included: 2x CPU Intel Xeon Gold 6542Y; 24 core per CPU with hyper-threading; Launch date Q4'23; 60MB Cache; 2.9 Ghz; Memory: 32 ECC (error-correcting code) DDR5 slots; Memory installed: 8 x 64 GB ECC DDR5; Min drive bays: 24 bays 2.5 for data Support Hot-Swappable Storage installed: 18x 1,92TB SSD, SAS 12Gb/s; 2x	5 ani (60 luni integral) de tipul și nivelul – „Next Business Day”	SM, CE, ISO

Autoritatea contractanta: **Agentia Servicii Publice**	Data:	**19.03.2025**
Numărul licitației: **ocds-b3wdp1-MD-1740577309675** din **19.03.2025**	Lot:	**1-4**
Denumirea licitației: **Denumirea licitatiei publice**	Pagina.:	**19 din 52**

Anexa nr. 22
la Documentația standard
aprobată prin Ordinul
Ministrului Finanțelor
nr. 115 din 15.09.2021

Nr.	Denumirea bunurilor / serviciilor	Denumirea modelului bunului / serviciului	Țara de origine	Produ-catrorul	Specificarea tehnică deplină solicitată de către autoritatea contractantă	Specificarea tehnică deplină propusă de către ofertant	Garanție, luni	Standarde de referință
1	2	3	4	5	6	7		8
					Support Hot-Swappable Storage installed: Min. 18 x min.1,9 Tb SSD, SAS 12Gb/s; Min. 2 x min.240Gb SSD SAS RAID Controller: Support Pass-through mode; RAID 1,5,6,10,50,60; Cache min. 4GB NICs included: Min. 1 x 1GE management; Min. 2 x 1GE; Min. 2 x 10G SFP+, with SFP+ SR MM modules included(Cisco compatible); Supported operating environments: Microsoft Windows Server (Hyper V) min. 2019; Red Hat Enterprise Linux; VMware (VMware ESXi) min. ver. 8.0.x; Interfaces: Min. 2 port USB; Power supplies included: 2 hot-plug PSU with support for 1+1 redundancy with power cables c13-c14(0.6 m); Front Indicator Status: Power Status, Health System Status, Drive Status, NIC Status, UID Status Fan Modules: hot-swappable with N+1 redundancy; Management: A web-based solution for KVM must be included with full functionality for manage and monitoring, including minimum following features: - View information about the state of the managed server; - Inventory and monitoring of network adapters and data storage subsystems without software agents in the OS; - View inventory information (CPU, RAM. Storages); - View information from sensors; - Monitoring and control of electricity consumption; - Turn on/off the server; - Remote update of BIOS, firmware of network and RAID controllers; - Working with RAID controllers without shutting down and restarting the servers; - Virtual console, virtual media devices;	800GB SSD SAS RAID Controller PERC H755 front SAS: Support Pass-through mode; RAID 0, 1, 5, 6, 10, 50, 60; Cache 8GB; NICs included: 1x 1GE management; 2x 1GE; 2x 10G SFP+, with SFP+ SR MM modules included(Cisco compatible); Supported operating environments: Microsoft Windows Server (Hyper V) 2019; Red Hat Enterprise Linux; VMware (VMware ESXi) ver. 8.0.x; Interfaces: 3 port USB; Power supplies included: Dual, Hot-Plug, Power Supply, 1100W MM (100-240Vac) Titanium, Redundant (1+1) with power cables c13-c14(0.6 m); Front Indicator Status: Power Status, Health System Status, Drive Status, NIC Status, UID Status Fan Modules: High Performance Fan x6; Management: A web-based solution for KVM must be included with full functionality for manage and monitoring, including following features: - View information about the state of the managed server; - Inventory and monitoring of network adapters and data storage subsystems without software agents in the OS; - View inventory information (CPU, RAM. Storages); - View information from sensors; - Monitoring and control of electricity consumption; - Turn on/off the server; - Remote update of BIOS, firmware of network and RAID controllers; - Working with RAID controllers without shutting down and restarting the servers; - Virtual console, virtual media devices; - Perform OS installations using virtual media interfaces and network-shared directories, with support for an integrated graphical user interface		

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Nr.	Denumirea bunurilor / serviciilor	Denumirea modelului bunului / serviciului	Țara de origine	Produ-catrorul	Specificarea tehnică deplină solicitată de către autoritatea contractantă	Specificarea tehnică deplină propusă de către ofertant	Garanție, luni	Standarde de referință
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					- Perform OS installations using virtual media interfaces and network-shared directories, with support for an integrated graphical user interface (GUI). - Support SNMP min.v2c - Provision of the Management Information Base (MIB) libraries, including detailed Object Identifier (OID) descriptions, either as a standalone document from the manufacturer or through a link to the server manufacturer's official website. Operating system: no OS pre-installed; Toate licențele necesare (dacă se aplică conform termenilor și condițiilor producătorului) pentru caracteristicile minime de management menționate mai sus și software-ul/firmware-ul specific serverului, inclusiv actualizările/patch-urile periodice, trebuie să fie incluse în ofertă și furnizate pe o bază perpetuă - valabile obligatoriu pentru durata integrală de viață a serverului. Cerințe obligatorii pentru prestarea serviciilor de punere în funcțiune, a garanției și a serviciilor de suport (deservire și mentenanță) a bunurilor - conform Anexei la Anunțul de participare. Termeni și condiții: Toate cerințele sunt minime și obligatorii; O cerință nu trebuie să limiteze o altă cerință; Toate componentele trebuie să fie actuale și să nu fie promovate ca EOS (sfârșitul vânzării/suportului) / EOL (sfârșitul duratei de viață); Extinderea memoriei (ram) și a capacității de stocare nu trebuie să includă limitări hardware sau software.	(GUI). - Support SNMP v2c - Provision of the Management Information Base (MIB) libraries, including detailed Object Identifier (OID) descriptions, either as a standalone document from the manufacturer or through a link to the server manufacturer's official website. Operating system: no OS pre-installed; Toate licențele necesare pentru caracteristicile minime de management menționate mai sus și software-ul/firmware-ul specific serverului, inclusiv actualizările/patch-urile periodice, incluse în ofertă și furnizate pe o bază perpetuă - valabile obligatoriu pentru durata integrală de viață a serverului. Prestarea serviciilor de punere în funcțiune, a garanției și a serviciilor de suport (deservire și mentenanță) a bunurilor - conform Anexei la Anunțul de participare. Termeni și condiții: Toate componentele actuale și să nu sunt promovate ca EOS (sfârșitul vânzării/suportului) / EOL (sfârșitul duratei de viață); Extinderea memoriei (ram) și a capacității de stocare nu include limitări hardware sau software.		
LOT 3	Enterprise Storage (Sisteme de	NetApp ASA A90	PRC	NetAPP	Echipament nou și nerecondiționat, produs minim trim. I anul 2024, corespunzător tipului de dispozitive de nivel Enterprise,	Echipament este nou și nerecondiționat, produs trimestrul III anul 2024, corespunzător tipului de dispozitive de nivel Enterprise, produs de	5 ani (60 luni integral) de tipul și nivelul	SM, CE, ISO

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	stocare) tip 1(SAS SSD)				produs de producători renumiți (Brand name internațional). Configurația echipamentului trebuie să fie compusă din componente reciproc compatibile şi să asigure funcţionarea optimă a sistemului în ansamblu. **Type**: Enterprise-grade Storage with SAS SSDs. **Form Factor:** min. 2U rack-mountable chassis, fully compatible with the EIA-310 standard for rack mounting. The solution must include all necessary components (e.g., rails, mounting brackets). **Availability requirements:** The equipment must be working in Symmetric Active-Active mode, which means that in the case of 100% utilization, ensures following: - The storage system architecture must ensure that, in the event of a controller failure, the write cache of the surviving controller(s) remains fully operational and protected. The equipment must utilize mechanisms such as cache mirroring or equivalent protection to guarantee data integrity. Under no circumstances should the write cache be deactivated, operated without mirroring, or left without an alternative protection mechanism to prevent data loss or corruption. - The system must ensure a high availability rate of at least 99.9999%, minimizing downtime and guaranteeing continuous operation, - The system's efficiency must remain unaffected in the event of a failure of up to 50% of the controllers, maintaining consistent operational capability - alive with a single active controller, - The system must sustain its required	producător renumi (Brand name internațional) NetApp. Configuraţia echipamentului este compusă din componente reciproc compatibile şi asigură funcţionarea optimă a sistemului în ansamblu. **Type**: Enterprise-grade Storage with NVMe SSDs. **Form Factor:** 4U rack-mountable chassis, fully compatible with the EIA-310 standard for rack mounting. The solution include all necessary components (e.g., rails, mounting brackets). **Availability requirements:** The equipment is working in Symmetric Active-Active mode, which means that in the case of 100% utilization, ensures following: - The storage system architecture ensure that, in the event of a controller failure, the write cache of the surviving controller(s) remains fully operational and protected. The equipment utilize mechanisms such as cache mirroring or equivalent protection to guarantee data integrity. Under no circumstances should the write cache be deactivated, operated without mirroring, or left without an alternative protection mechanism to prevent data loss or corruption. - The system ensure a high availability rate of at least 99.9999%, minimizing downtime and guaranteeing continuous operation, - The system's efficiency remain unaffected in the event of a failure of up to 50% of the controllers, maintaining consistent operational capability - alive with a single active controller, - The system must sustain its required performance levels without degradation in the event of a failure affecting half of the controllers, - The system include robust, built-in mechanisms for non-disruptive software updates, ensuring no compromise in availability or loss of access to stored data during version upgrades. The storage system ensure uninterrupted data availability and full operational continuity in the	– „Next Business Day”	

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					performance levels without degradation in the event of a failure affecting half of the controllers, - The system must include robust, built-in mechanisms for non-disruptive software updates, ensuring no compromise in availability or loss of access to stored data during version upgrades. The storage system must ensure uninterrupted data availability and full operational continuity in the following failure scenarios: - failure of a single power supply line, ensuring redundancy in power management, - failure of any individual controller, with automatic failover mechanisms to maintain functionality - alive with a single active controller, - simultaneous failures of up to two user data storage drives, with no loss of data integrity or accessibility, - failures of any Fibre Channel (FC) or iSCSI port, with seamless rerouting of traffic to alternate pathways. The equipment must support hot-swappable replacement of critical components without interrupting access to data or degrading system performance. These components include, but are not limited to: controllers, power supplies, cooling fans, front-end and back-end ports, and storage drives. The hot replacement process must ensure seamless operation and maintain data availability throughout. The system must be designed to withstand the simultaneous failure of at least two storage devices (e.g., drives, NVMe, or flash modules), regardless of the system's scale or configuration. In such scenarios, the equipment must ensure uninterrupted data	following failure scenarios: - failure of a single power supply line, ensuring redundancy in power management, - failure of any individual controller, with automatic failover mechanisms to maintain functionality - alive with a single active controller, - simultaneous failures of up to two user data storage drives, with no loss of data integrity or accessibility, - failures of any Fibre Channel (FC) or iSCSI port, with seamless rerouting of traffic to alternate pathways. The equipment support hot-swappable replacement of critical components without interrupting access to data or degrading system performance. These components include, but are not limited to: controllers, power supplies, cooling fans, front-end and back-end ports, and storage drives. The hot replacement process ensure seamless operation and maintain data availability throughout. The system is designed to withstand the simultaneous failure of at least two storage devices (e.g., drives, NVMe, or flash modules), regardless of the system's scale or configuration. In such scenarios, the equipment ensure uninterrupted data access and maintain full data integrity. The system include functionality to safely disable the storage drives without causing any loss or corruption of user data, ensuring seamless operational continuity during maintenance or decommissioning. **Type Drives: Enterprise-grade NVMe SSD**s optimized for high-performance, high-reliability applications in enterprise environments. **Capacity:** The system provide a marked usable storage capacity (before data reduction) of 210 TB (34x7.68TB NVMe SSD SED), with RAID6 (RAID-DP) configuration, ensuring sufficient space for high-demand enterprise applications, and		

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					access and maintain full data integrity. The system must include functionality to safely disable the storage drives without causing any loss or corruption of user data, ensuring seamless operational continuity during maintenance or decommissioning. **Type Drives: Enterprise-grade SAS SSD**s utilizing TLC (Triple-Level Cell) or eTLC (Enhanced Triple-Level Cell) technology, optimized for high-performance, high-reliability applications in enterprise environments. **Capacity:** The system must provide a marked usable storage capacity (before data reduction) of minimum 200 TB, ensuring sufficient space for high-demand enterprise applications. Hot Spare Configuration(optional): The solution must optionally support Hot Spare components, including spare controllers or disks, to enhance system redundancy. These spare components must remain inactive during regular operations but should automatically activate to maintain full system functionality in case of hardware failure. RAID (if the equipment involves the use of RAID): - The system must support advanced RAID levels, including minimum: RAID 6: Ensuring double parity protection, allowing the system to tolerate simultaneous failure of two drives without data loss. Cache requirement(if the equipment involves the use of memory cache for data): If the storage system includes a cache mechanism, the system must provide a minimum of 512 GB of dedicated cache memory per node, ensuring high-speed data processing and optimal system performance.	tolerates two drive failure. Hot Spare Configuration(optional): The solution support Hot Spare components, including spare controllers or disks, to enhance system redundancy. These spare components remain inactive during regular operations but automatically activate to maintain full system functionality in case of hardware failure. RAID (if the equipment involves the use of RAID): - The system support advanced RAID levels, including minimum: RAID 6 (RAID-DP): Ensuring double parity protection, allowing the system to tolerate simultaneous failure of two drives without data loss. RAID-TEC: Ensuring triple parity protection, allowing the system to tolerate simultaneous failure of three drives without data loss. Cache requirement(if the equipment involves the use of memory cache for data): Storage system includes a cache mechanism, the system provide a minimum of 1024 GB of dedicated cache memory per node Total of 2048GB per system, ensuring high-speed data processing and optimal system performance. The cache support advanced features such as: - Cache mirroring - to ensure data integrity and protection in the event of a node failure. - Dynamic allocation - enabling efficient use of cache resources based on real-time workload demands. - Non-volatile cache - to prevent data loss during power failures or unexpected shutdowns, ensuring all cached data is retained. The cache is optimized for handling high IOPS workloads and ensuring low-latency operations, particularly for enterprise-grade applications. Controllers requirement: The storage system include one node equipped with of two fully redundant controllers configured in High Availability (HA) mode.		

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					The cache must support advanced features such as: - Cache mirroring - to ensure data integrity and protection in the event of a node failure. - Dynamic allocation - enabling efficient use of cache resources based on real-time workload demands. - Non-volatile cache - to prevent data loss during power failures or unexpected shutdowns, ensuring all cached data is retained. The cache must be optimized for handling high IOPS workloads and ensuring low-latency operations, particularly for enterprise-grade applications. Controllers requirement: The storage system must include minimum one node equipped with a minimum of two fully redundant controllers configured in High Availability (HA) mode. The controllers must: - Operate in an Active-Active configuration, ensuring balanced workload distribution and seamless failover capabilities without performance degradation. - Support advanced fault-tolerant mechanisms to maintain uninterrupted access to data during hardware failures or maintenance. - Be hot-swappable, allowing replacement or upgrade without disrupting system operations or data availability. - Include built-in synchronization mechanisms to maintain consistency between controllers, including mirroring of critical operational data such as cache contents and configuration settings. The system must ensure that the failure of one controller does not impact the performance, availability, or operational integrity of the other controller.	The controllers: - Operate in an Active-Active configuration, ensuring balanced workload distribution and seamless failover capabilities without performance degradation. - Support advanced fault-tolerant mechanisms to maintain uninterrupted access to data during hardware failures or maintenance. - Be hot-swappable, allowing replacement or upgrade without disrupting system operations or data availability. - Include built-in synchronization mechanisms to maintain consistency between controllers, including mirroring of critical operational data such as cache contents and configuration settings. The system ensure that the failure of one controller does not impact the performance, availability, or operational integrity of the other controller. Cluster and replication requirements: 1. Synchronous replication capability: - The storage solution support synchronous replication to enable the creation of an Active-Active cluster between two physically separated server rooms (located in separate buildings). This feature is included in ONTAP ONE Bundle, SnapMirror ActiveSync. License is perpetual and have included support for 5 years, does not require any additional licensing when storage space is upgraded or added. - The system ensure zero Recovery Point Objective (RPO) by maintaining data consistency across the cluster in real time. 2. Comprehensive hardware inclusion: - The solution include all necessary hardware components to fully implement synchronous replication functionality, utilizing Fibre Channel (FC) protocols for high-speed, low-latency data transmission. Host access LUN-s over high-speed FiberChannel Fabric, with low-lattency data		

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					Cluster and replication requirements: 1. Synchronous replication capability: - The storage solution must support synchronous replication to enable the creation of an Active-Active cluster between two physically separated server rooms (located in separate buildings). - The system must ensure zero Recovery Point Objective (RPO) by maintaining data consistency across the cluster in real time. 2. Comprehensive hardware inclusion: - The solution must include all necessary hardware components to fully implement synchronous replication functionality, utilizing Fibre Channel (FC) protocols for high-speed, low-latency data transmission. 3. Flexible volume replication: - The system must support synchronous replication for a minimum of one Logical Unit Number (LUN) and scale seamlessly to replicate multiple LUNs simultaneously. - Changes to the number of replicated volumes must not require modifications to the physical hardware configuration of the storage system. 4. Data consistency and synchronization: - The contents of all cluster volumes must remain identical across both systems in the cluster at all times, ensuring data consistency and integrity. - The system must include mechanisms to handle data synchronization efficiently during recovery scenarios, ensuring minimal impact on performance and availability. 5. Resiliency and high availability: - The cluster must provide continuous operation in the event of a hardware failure, network disruption, or planned maintenance at one site, without compromising data integrity or availability. - The system must be designed to support	transmission. Fiber ports on controllers also are used to connect between sites and connection with Mediator 3. Flexible volume replication: - The system support synchronous replication for a minimum of one Logical Unit Number (LUN) and scale seamlessly to replicate multiple LUNs simultaneously. - Changes to the number of replicated volumes not require modifications to the physical hardware configuration of the storage system. 4. Data consistency and synchronization: - The contents of all cluster volumes remain identical across both systems in the cluster at all times, ensuring data consistency and integrity. - The system include mechanisms to handle data synchronization efficiently during recovery scenarios, ensuring minimal impact on performance and availability. 5. Resiliency and high availability: - The cluster provide continuous operation in the event of a hardware failure, network disruption, or planned maintenance at one site, without compromising data integrity or availability. - The system is designed to support failover and failback between the two sites automatically and transparently. Performance requirements: 1. Minimum performance metrics: - the storage solution deliver a combined performance of 721,000 Input/Output Operations Per Second (IOPS) with inline data reduction (deduplication and compression), on Random workload, 70Read 30Write 16k block size. 2. Performance calculation parameters: IOPS performance are evaluated based on the following metrics: - read/write ratio: 70% read / 30% write. - block sizes: support for operations with block sizes of 16 KB, 32 KB (558 941 IOPS), and 64 KB to accommodate varying workload requirements.		

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					failover and failback between the two sites automatically and transparently. Performance requirements: 1. Minimum performance metrics: - the storage solution must deliver a combined performance of minimum 300,000 Input/Output Operations Per Second (IOPS) with inline data reduction (deduplication and compression). 2. Performance calculation parameters: IOPS performance must be evaluated based on the following metrics: - read/write ratio: 70% read / 30% write. - block sizes: support for operations with block sizes of 16 KB, 32 KB, and 64 KB to accommodate varying workload requirements. - I/O patterns: include both sequential and random I/O workloads. - latency: ensure a maximum delay of 1 millisecond (0.001 s) under full load conditions. 3. Consistency of performance: - the system must maintain the required performance levels even under high concurrency and mixed workload conditions. - performance must remain unaffected during maintenance operations, including firmware updates, drive rebuilds, or component failures. 4. Performance verification: - vendors must provide detailed benchmark test results to validate the stated performance – for operations with block sizes 16 KB(mandatory), 32 KB and 64 KB(optionall), using industry-standard tools such as IOmeter or FIO, under the specified conditions. - results must demonstrate compliance with all stated parameters, including latency and	- I/O patterns: include both sequential and random I/O workloads. - latency: ensure a maximum delay of 1 millisecond (0.001 s) under full load conditions. 3. Consistency of performance: - the system maintain the required performance levels even under high concurrency and mixed workload conditions. - performance remain unaffected during maintenance operations, including firmware updates, drive rebuilds, or component failures. 4. Performance verification: - vendor provided detailed benchmark test results to validate the stated performance – for operations with block sizes 16 KB(mandatory), 32 KB and 64 KB(optionall), using industry-standard tools in NetApp testing laboratory, under the specified conditions. - results demonstrate compliance with all stated parameters, including latency and I/O patterns. 5. Monitoring and optimization: - the system include tools to monitor and optimize performance dynamically, offering real-time insights into throughput, latency, and IOPS for proactive performance tuning. Supported protocols: - FC, - iSCSI, NVMe/TCP, NVMe/FC, Features: Dedicated system management interfaces: 1. The system include dedicated physical and/or virtual interfaces specifically for system management. 2. These interfaces allow out-of-band management, ensuring that administrative tasks can be performed without impacting data traffic. 3. Management interfaces support the following functionalities: - Web-based GUI for ease of access. - Command-line interface (CLI) for advanced configuration. - Support for industry-standard protocols such as		

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					6. Compliance and Interoperability: The system must be compliant with industry standards for both FC and iSCSI protocols. It must ensure interoperability with third-party devices, including servers, switches, and network adapters. Deduplication and compression requirements: 1. Functional capabilities: The storage system must provide deduplication functionality for data stored at the block level (iSCSI/FC LUN) and file level, with the following specifics: - Deduplication must operate both at the volume level and globally across the system, ensuring optimal storage efficiency. The system must also include compression functionality for: - Block-level volumes (iSCSI/FC LUN). 2. Interoperability and unrestricted functionality: Deduplication and compression features must operate seamlessly without introducing limitations or restrictions on simultaneous use of other critical functionalities, including but not limited to: - Data replication. - Thin provisioning. - Backups. - Volume cloning. 3. Inline deduplication and compression: - Both deduplication and compression mechanisms must function in in-line mode, ensuring real-time data optimization without requiring post-processing. - Deduplication must remain continuously active and cannot be disabled or bypassed by system administrators or any other means, ensuring consistent storage efficiency and data integrity. - Storage solutions that rely on scheduled or	- Volume cloning. 3. Inline deduplication and compression: - Both deduplication and compression mechanisms function in in-line mode, ensuring real-time data optimization without requiring post-processing. - Deduplication remain continuously active and cannot be disabled or bypassed by system administrators or any other means, ensuring consistent storage efficiency and data integrity. - Storage solutions that rely on scheduled or job-based data reduction processes are not acceptable. 4. Licensing and support: All features related to deduplication and compression are: - Fully licensed (if required by vendor provisions) and included in the offer, eliminating additional licensing costs for essential functionality. - Supported by the storage system in its maximum configuration, ensuring scalability and compatibility across all deployment scenarios. 5. Performance and reliability considerations: - The deduplication and compression mechanisms not introduce significant latency or impact the system's performance metrics, such as IOPS or throughput. - Mechanisms include built-in error detection and correction to maintain data integrity during deduplication and compression processes. 6. Management and monitoring: The system provide a dedicated interface or tools for monitoring deduplication and compression efficiency, including: - Space savings metrics. - Real-time and historical performance impacts. - Detailed logs of deduplication and compression activities. Snapshot requirements: 1. General functionality: - The system support snapshot functionality at a		

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					job-based data reduction processes are not acceptable. 4. Licensing and support: All features related to deduplication and compression must be: - Fully licensed (if required by vendor provisions) and included in the offer, eliminating additional licensing costs for essential functionality. - Supported by the storage system in its maximum configuration, ensuring scalability and compatibility across all deployment scenarios. 5. Performance and reliability considerations: - The deduplication and compression mechanisms must not introduce significant latency or impact the system's performance metrics, such as IOPS or throughput. - Mechanisms should include built-in error detection and correction to maintain data integrity during deduplication and compression processes. 6. Management and monitoring: The system must provide a dedicated interface or tools for monitoring deduplication and compression efficiency, including: - Space savings metrics. - Real-time and historical performance impacts. - Detailed logs of deduplication and compression activities. Snapshot requirements: 1. General functionality: - The system must support snapshot functionality at a minimum for block-level volumes (LUNs), ensuring operational flexibility. - The snapshot functionality must be applicable to both LUNs and other supported volumes without imposing	minimum for block-level volumes (LUNs), ensuring operational flexibility. - The snapshot functionality can be applicable to both LUNs and other supported volumes without imposing restrictions on the simultaneous use of other critical system functions, including replication, backups, and cloning. 2. Snapshot quantity and retention: - The system provide the ability to create and manage a minimum of 365 snapshots per shared volume, supporting long-term operational and recovery needs. - Snapshots can be configurable with retention policies to optimize storage space and align with data governance requirements. 3. Performance efficiency: - The implementation of snapshots not degrade overall system performance, regardless of the number of active snapshots or system workload. - The system include optimization mechanisms, such as metadata indexing and intelligent snapshot scheduling, to minimize latency and maintain high performance. 4. Space efficiency: - Snapshot functionality employ a cost-effective approach by storing only the delta (changes) from the original data. This ensures minimal storage consumption while preserving full data access and recovery capabilities. 5. Integration with storage QoS: - The system support performance monitoring and prioritization mechanisms for snapshots, enabling administrators to enforce Storage QoS (Quality of Service) policies at both the volume and LUN levels. - These QoS policies should dynamically allocate resources to prioritize performance-critical snapshots, ensuring minimal impact on other operations. 6. Advanced features: Snapshots support:		

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					restrictions on the simultaneous use of other critical system functions, including replication, backups, and cloning. 2. Snapshot quantity and retention: - The system must provide the ability to create and manage a minimum of 365 snapshots per shared volume, supporting long-term operational and recovery needs. - Snapshots must be configurable with retention policies to optimize storage space and align with data governance requirements. 3. Performance efficiency: - The implementation of snapshots must not degrade overall system performance, regardless of the number of active snapshots or system workload. - The system must include optimization mechanisms, such as metadata indexing and intelligent snapshot scheduling, to minimize latency and maintain high performance. 4. Space efficiency: - Snapshot functionality must employ a cost-effective approach by storing only the delta (changes) from the original data. This ensures minimal storage consumption while preserving full data access and recovery capabilities. 5. Integration with storage QoS: - The system must support performance monitoring and prioritization mechanisms for snapshots, enabling administrators to enforce Storage QoS (Quality of Service) policies at both the volume and LUN levels. - These QoS policies should dynamically allocate resources to prioritize performance-critical snapshots, ensuring minimal impact on other operations. 6. Advanced features: Snapshots must support:	- Application-consistent snapshots, ensuring data integrity for workloads such as databases MS SQL, Oracle and virtualized environments VMware, Hyper-V. - Writable snapshots, allowing clones to be created for development, testing, or analytics without affecting the production environment. Snapshots are compatible with data replication workflows, ensuring consistent replication of both primary data and snapshot states across systems. 7. Monitoring and reporting: - The system include a dedicated interface or tools for managing, monitoring, and reporting on snapshot performance, space utilization, and recovery operations. - Real-time alerts and historical logs must be available for visibility into snapshot performance and potential bottlenecks. Encryption requirements: 1. Encryption standard: - The solution support encryption of all stored data using a minimum of the AES-256 algorithm or a stronger industry-standard encryption algorithm, ensuring compliance with modern security and regulatory standards. 2. Scope of encryption: - Encryption are applied to all drives, NVMe, and flash storage within the device, covering the entire data storage ecosystem. - Encryption extend to data at rest across all volumes, snapshots, backups, and metadata associated with the system. 3. Performance integrity: - Encryption functionality operate with no measurable impact on system performance, ensuring IOPS, throughput, and latency metrics remain consistent with non-encrypted operations. - The system leverage hardware-accelerated encryption or equivalent technologies to maintain optimal performance during data encryption and decryption processes.		

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					- Application-consistent snapshots, ensuring data integrity for workloads such as databases and virtualized environments. - Writable snapshots, allowing clones to be created for development, testing, or analytics without affecting the production environment. Snapshots must be compatible with data replication workflows, ensuring consistent replication of both primary data and snapshot states across systems. 7. Monitoring and reporting: - The system must include a dedicated interface or tools for managing, monitoring, and reporting on snapshot performance, space utilization, and recovery operations. - Real-time alerts and historical logs must be available for visibility into snapshot performance and potential bottlenecks. Encryption requirements: 1. Encryption standard: - The solution must support encryption of all stored data using a minimum of the AES-256 algorithm or a stronger industry-standard encryption algorithm, ensuring compliance with modern security and regulatory standards. 2. Scope of encryption: - Encryption must be applied to all drives, NVMe, and flash storage within the device, covering the entire data storage ecosystem. - Encryption must extend to data at rest across all volumes, snapshots, backups, and metadata associated with the system. 3. Performance integrity: - Encryption functionality must operate with no measurable impact on system performance, ensuring IOPS, throughput, and latency metrics remain consistent with non-encrypted operations. - The system must leverage hardware-	4. Key management: - The solution generate encryption keys using a secure hardware-based random number generator, ensuring keys are robust and resistant to attacks. - Encryption keys securely stored on the equipment, leveraging a dedicated hardware security module (HSM) or equivalent secure enclave to isolate keys from unauthorized access. - The system ensure that data stored on drives/NVMe/flash cannot be accessed if the storage media is removed from the device or if the device itself is compromised. 5. Key backup and recovery: - The system include mechanisms for secure backup and recovery of encryption keys, supporting integration with external key management systems (KMS) compliant with KMIP (Key Management Interoperability Protocol) standards. - Key rotation and lifecycle management can be automated and configurable to align with organizational policies and compliance requirements. 6. Encryption for replication and snapshots: - The encryption functionality extend to replicated data and snapshots, ensuring consistency in encryption across all replicated sites or volumes. - Encryption not disrupt or degrade replication workflows, including synchronous and asynchronous modes. Monitoring requirements: 1. Analytical platform or portal: - The system include a robust analytical platform or virtual machine (VM) accessible via a web browser-based portal. - The platform provide an intuitive, user-friendly interface with interactive dashboards for data visualization and management. 2. Log collection and reporting: The platform automatically collect and analyze		

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					accelerated encryption or equivalent technologies to maintain optimal performance during data encryption and decryption processes. 4. Key management: - The solution must generate encryption keys using a secure hardware-based random number generator, ensuring keys are robust and resistant to attacks. - Encryption keys must be securely stored on the equipment, leveraging a dedicated hardware security module (HSM) or equivalent secure enclave to isolate keys from unauthorized access. - The system must ensure that data stored on drives/NVMe/flash cannot be accessed if the storage media is removed from the device or if the device itself is compromised. 5. Key backup and recovery: - The system must include mechanisms for secure backup and recovery of encryption keys, supporting integration with external key management systems (KMS) compliant with KMIP (Key Management Interoperability Protocol) standards. - Key rotation and lifecycle management should be automated and configurable to align with organizational policies and compliance requirements. 6. Encryption for replication and snapshots: - The encryption functionality must extend to replicated data and snapshots, ensuring consistency in encryption across all replicated sites or volumes. - Encryption must not disrupt or degrade replication workflows, including synchronous and asynchronous modes. Monitoring requirements: 1. Analytical platform or portal: - The system must include a robust analytical platform or virtual machine (VM)	logs from the device and present them as customizable graphs, reports, and alerts, covering the following: 2.1. Storage utilization: - Real-time and historical monitoring of used space. - Display of the data reduction indicator, accounting for deduplication and compression (excluding thin provisioning, if applicable). - Granular visibility at both the global device level and the local LUN level. 2.2. Space growth prediction: - Advanced forecasting tools for predicting space growth, factoring in deduplication, compression, and provisioning trends. - Tools for future expansion analysis, including recommendations for scaling. 3. Component monitoring: The system include an application or hardware-based monitoring solution to oversee and report detailed events for the following physical and logical components: - Physical components: controllers, drives, ports, power supplies, and network interfaces. - Logical components: volumes, LUNs, replication processes, deduplication, and compression algorithms. 4. Performance monitoring: The portal provide minimum: - Real-time and historical performance metrics for individual resources. - Key parameters to monitor: Latency, Read and Write IOPS, Bandwidth. Performance data are available at both the global system level and the LUN level. 5. Storage QoS and prioritization: - The system include a performance monitoring and prioritization mechanism for Storage QoS, configurable at both the volume and LUN levels. - QoS metrics should be adjustable in real-time to meet dynamic workload demands.		

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					accessible via a web browser-based portal. - The platform must provide an intuitive, user-friendly interface with interactive dashboards for data visualization and management. 2. Log collection and reporting: The platform must automatically collect and analyze logs from the device and present them as customizable graphs, reports, and alerts, covering the following: 2.1. Storage utilization: - Real-time and historical monitoring of used space. - Display of the data reduction indicator, accounting for deduplication and compression (excluding thin provisioning, if applicable). - Granular visibility at both the global device level and the local LUN level. 2.2. Space growth prediction: - Advanced forecasting tools for predicting space growth, factoring in deduplication, compression, and provisioning trends. - Tools for future expansion analysis, including recommendations for scaling. 3. Component monitoring: The system must include an application or hardware-based monitoring solution to oversee and report detailed events for the following physical and logical components: - Physical components: controllers, drives, ports, power supplies, and network interfaces. - Logical components: volumes, LUNs, replication processes, deduplication, and compression algorithms. 4. Performance monitoring: The portal must provide minimum: - Real-time and historical performance metrics for individual resources. - Key parameters to monitor: Latency, Read	6. Reporting and alerting: The portal provide comprehensive reporting capabilities, including at least: - Capacity reports: current usage, available space, and forecasted capacity needs. - Performance reports: historical trends and real-time analytics of system performance. - Future space predictions: automated simulations for capacity increases based on application type and workload. - Event logs: authorization attempts, executed commands, and system alerts for security and operational events. - Technical support logs: level of support received, resolution times, and incident history. 7. Operational monitoring: - Snapshot and replication status: display the real-time status of operations such as snapshots, synchronous/asynchronous replication, and recovery tasks. - Threat alerts: warnings related to system integrity, user activity, or misconfigurations. - Optimization insights: recommendations for system performance improvement, resource reallocation, or energy efficiency. 8. Configuration verification and upgrades: - The platform include an algorithm for verifying configuration correctness and compatibility with potential device or cluster upgrades. 9. Simulation and optimization: - The platform enable capacity simulation tools to project storage needs based on application types and expected workloads. - Display real-time system consumption metrics with actionable optimization guidelines for improving performance and efficiency. NICs included per controller: 1 x 1GE for management; 4 x 64G FC SFP28(850nm SFP+ SR MM module included) for data transfer; 4 x 25G Ethernet over FC dedicated for replication (metro cluster).		

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					and Write IOPS, Bandwidth. Performance data must be available at both the global system level and the LUN level. 5. Storage QoS and prioritization: - The system must include a performance monitoring and prioritization mechanism for Storage QoS, configurable at both the volume and LUN levels. - QoS metrics should be adjustable in real-time to meet dynamic workload demands. 6. Reporting and alerting: The portal must provide comprehensive reporting capabilities, including at least: - Capacity reports: current usage, available space, and forecasted capacity needs. - Performance reports: historical trends and real-time analytics of system performance. - Future space predictions: automated simulations for capacity increases based on application type and workload. - Event logs: authorization attempts, executed commands, and system alerts for security and operational events. - Technical support logs: level of support received, resolution times, and incident history. 7. Operational monitoring: - Snapshot and replication status: display the real-time status of operations such as snapshots, synchronous/asynchronous replication, and recovery tasks. - Threat alerts: warnings related to system integrity, user activity, or misconfigurations. - Optimization insights: recommendations for system performance improvement, resource reallocation, or energy efficiency. 8. Configuration verification and upgrades: - The platform must include an algorithm for verifying configuration correctness and compatibility with potential device or cluster upgrades.	Supported operating environments: Microsoft Windows Server; Red Hat Enterprise Linux; VMware (VMware ESXi); Power supplies included: The system include a minimum of two (2) hot-swappable (hot-plug) Power Supply Units (PSUs). The PSUs support at least 1+1 redundancy, ensuring continuous operation in case of failure of one PSU. Power cables included meet the following specifications: - Type: IEC C13 to C14. - Minimum length: 0.6 meters (24 inches). Cerințe obligatorii pentru prestarea serviciilor de punere în funcțiune, a garanției și a serviciilor de suport (deservire și mentenanță) a bunurilor - conform Anexei la Anunțul de participare. Toate licențele necesare (dacă se aplică conform termenilor și condițiilor producătorului) pentru caracteristicile platformei/portalului de monitorizare (analitică) și software-ului/firmware-ului specific sistemului de stocare, inclusiv actualizările/patch-urile periodice, sunt incluse în ofertă și furnizate pe o bază perpetuă - valabile obligatoriu pentru durata integrală de viață a sistemului de stocare. Termeni și condiții: Toate cerințele sunt minime și obligatorii; O cerință nu limitează o altă cerință; Toate componentele sunt actuale și nu sint promovate ca EOS (sfârșitul vânzării/suportului) / EOL (sfârșitul duratei de viață); Extinderea memoriei (ram) și a capacității de stocare nu trebuie să includă limitări hardware sau software. Software include, perpetual, no volume limitation: **ONTAP One** encompasses all the core ONTAP multiprotocol features of NetApp unified storage. It includes all protocols (SAN/NAS/Object) and		

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					9. Simulation and optimization: - The platform must enable capacity simulation tools to project storage needs based on application types and expected workloads. - Display real-time system consumption metrics with actionable optimization guidelines for improving performance and efficiency. NICs included per controller: Min. 1 x 1GE for management; Min 2 x 32G FC SFP28(850nm SFP+ SR MM module included) for data transfer; Min. 2 x 32G FC dedicated for replication (metro cluster). Supported operating environments: Microsoft Windows Server; Red Hat Enterprise Linux; VMware (VMware ESXi); Power supplies included: The system must include a minimum of two (2) hot-swappable (hot-plug) Power Supply Units (PSUs). The PSUs must support at least 1+1 redundancy, ensuring continuous operation in case of failure of one PSU. Power cables included must meet the following specifications: - Type: IEC C13 to C14. - Minimum length: 0.6 meters (24 inches). Cerințe obligatorii pentru prestarea serviciilor de punere în funcțiune, a garanției și a serviciilor de suport (deservire și mentenanță) a bunurilor - conform Anexei la Anunțul de participare. Toate licențele necesare (dacă se aplică conform termenilor și condițiilor producătorului) pentru caracteristicile platformei/portalului de monitorizare (analitică) și software-ului/firmware-ului specific sistemului de stocare, inclusiv actualizările/patch-urile periodice, trebuie să fie incluse în ofertă și furnizate pe o bază	ONTAP technologies such as SnapRestore, SnapMirror, SnapCenter, FabricPool (to ONTAP-S3 and StorageGRID), FlexClone, FlexCache, FPolicy, Encryption, autonomous ransomware protection, SnapLock, and multi-tenant key management. It also includes leading solutions for data protection, anti-ransomware, and hybrid cloud. With ONTAP One, you can:· Simplify the buying and operational experience with all-in-one software license · Easily replicate and backup your data · Defend against ransomware and cyber-attacks Warranty: 5 years, according to requested SLA for hardware and software.		

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					perpetuă - valabile obligatoriu pentru durata integrală de viață a sistemului de stocare. Termeni și condiții: Toate cerințele sunt minime și obligatorii; O cerință nu trebuie să limiteze o altă cerință; Toate componentele trebuie să fie actuale și să nu fie promovate ca EOS (sfârșitul vânzării/suportului) / EOL (sfârșitul duratei de viață); Extinderea memoriei (ram) și a capacității de stocare nu trebuie să includă limitări hardware sau software.			
LOT 4	**Enterprise Storage (Sisteme de stocare) tip 2 (Full flash)**	**NetApp ASA A90**	**PRC**	**NetAPP**	Echipament nou și nerecondiționat, produs minim trim. I anul 2024, corespunzător tipului de dispozitive de nivel Enterprise, produs de producători renumiți (Brand name internațional). Configurația echipamentului trebuie să fie compusă din componente reciproc compatibile şi să asigure funcţionarea optimă a sistemului în ansamblu. Type: Enterprise-grade Storage with Full Flash Form Factor: min. 2U rack-mountable chassis, fully compatible with the EIA-310 standard for rack mounting. The solution must include all necessary components (e.g., rails, mounting brackets). Availability requirements: The equipment must be working in Symmetric Active-Active mode, which means that in the case of 100% utilization, ensures following: - The storage system architecture must ensure that, in the event of a controller failure, the write cache of the surviving controller(s) remains fully operational and protected. The equipment must utilize mechanisms such as cache mirroring or equivalent protection to guarantee data	Echipament este nou și nerecondiționat, produs trimestrul III anul 2024, corespunzător tipului de dispozitive de nivel Enterprise, produs de producător renumi (Brand name internațional) NetApp. Configuraţia echipamentului este compusă din componente reciproc compatibile şi asigură funcţionarea optimă a sistemului în ansamblu. **Type**: Enterprise-grade Storage with NVMe SSDs. **Form Factor:** 4U rack-mountable chassis, fully compatible with the EIA-310 standard for rack mounting. The solution include all necessary components (e.g., rails, mounting brackets). **Availability requirements:** The equipment is working in Symmetric Active-Active mode, which means that in the case of 100% utilization, ensures following: - The storage system architecture ensure that, in the event of a controller failure, the write cache of the surviving controller(s) remains fully operational and protected. The equipment utilize mechanisms such as cache mirroring or equivalent protection to guarantee data integrity. Under no circumstances should the write cache be deactivated, operated without mirroring, or left without an alternative protection mechanism to prevent data loss or corruption.	5 ani (60 luni integral) de tipul și nivelul – „Next Business Day”	SM, CE, ISO

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					integrity. Under no circumstances should the write cache be deactivated, operated without mirroring, or left without an alternative protection mechanism to prevent data loss or corruption. - The system must ensure a high availability rate of at least 99.9999%, minimizing downtime and guaranteeing continuous operation; - The system's efficiency must remain unaffected in the event of a failure of up to 50% of the controllers, maintaining consistent operational capability - alive with a single active controller; - The system must sustain its required performance levels without degradation in the event of a failure affecting half of the controllers; - The system must include robust, built-in mechanisms for non-disruptive software updates, ensuring no compromise in availability or loss of access to stored data during version upgrades. The storage system must ensure uninterrupted data availability and full operational continuity in the following failure scenarios: - failure of a single power supply line, ensuring redundancy in power management, - failure of any individual controller, with automatic failover mechanisms to maintain functionality - alive with a single active controller, - failures simultaneous failures of up to two user data storage drives, with no loss of data integrity or accessibility, - failures of any Fibre Channel (FC) or iSCSI port, with seamless rerouting of traffic to alternate pathways. The equipment must support hot-	- The system ensure a high availability rate of at least 99.9999%, minimizing downtime and guaranteeing continuous operation, - The system's efficiency remain unaffected in the event of a failure of up to 50% of the controllers, maintaining consistent operational capability - alive with a single active controller, - The system must sustain its required performance levels without degradation in the event of a failure affecting half of the controllers, - The system include robust, built-in mechanisms for non-disruptive software updates, ensuring no compromise in availability or loss of access to stored data during version upgrades. The storage system ensure uninterrupted data availability and full operational continuity in the following failure scenarios: - failure of a single power supply line, ensuring redundancy in power management, - failure of any individual controller, with automatic failover mechanisms to maintain functionality - alive with a single active controller, - simultaneous failures of up to two user data storage drives, with no loss of data integrity or accessibility, - failures of any Fibre Channel (FC) or iSCSI port, with seamless rerouting of traffic to alternate pathways. The equipment support hot-swappable replacement of critical components without interrupting access to data or degrading system performance. These components include, but are not limited to: controllers, power supplies, cooling fans, front-end and back-end ports, and storage drives. The hot replacement process ensure seamless operation and maintain data availability throughout. The system is designed to withstand the simultaneous failure of at least two storage devices (e.g., drives, NVMe, or flash modules), regardless of the system's scale or configuration.		

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					swappable replacement of critical components without interrupting access to data or degrading system performance. These components include, but are not limited to: controllers, power supplies, cooling fans, front-end and back-end ports, and storage drives. The hot replacement process must ensure seamless operation and maintain data availability throughout. The system must be designed to withstand the simultaneous failure of at least two storage devices (e.g., drives, NVMe, or flash modules), regardless of the system's scale or configuration. In such scenarios, the equipment must ensure uninterrupted data access and maintain full data integrity. The system must include functionality to safely disable the storage drives without causing any loss or corruption of user data, during maintenance or relocation of the device.. Type Drives: Enterprise-grade NVMe/Flash utilizing TLC (Triple-Level Cell) or eTLC (Enhanced Triple-Level Cell) technology, optimized for high-performance, high-reliability applications in enterprise environments. Capacity: The system must provide a marked usable storage capacity (before data reduction) of minimum 600 TB, ensuring sufficient space and maximum performance for high-demand enterprise applications. Hot Spare Configuration(optional): The solution must optionally support Hot Spare components, including spare controllers or disks, to enhance system redundancy. These spare components must remain inactive during regular operations but should automatically activate to maintain full system functionality in case of hardware failure.	In such scenarios, the equipment ensure uninterrupted data access and maintain full data integrity. The system include functionality to safely disable the storage drives without causing any loss or corruption of user data, ensuring seamless operational continuity during maintenance or decommissioning. **Type Drives: Enterprise-grade NVMe SSD**s optimized for high-performance, high-reliability applications in enterprise environments. **Capacity:** The system provide a marked usable storage capacity (before data reduction) of **623 TB** (48x15.3TB NVMe SSD SED), with RAID6 (RAID-DP) configuration, ensuring sufficient space for high-demand enterprise applications, and tolerates two drive failure. Hot Spare Configuration(optional): The solution support Hot Spare components, including spare controllers or disks, to enhance system redundancy. These spare components remain inactive during regular operations but automatically activate to maintain full system functionality in case of hardware failure. RAID (if the equipment involves the use of RAID): - The system support advanced RAID levels, including minimum: RAID 6 (RAID-DP): Ensuring double parity protection, allowing the system to tolerate simultaneous failure of two drives without data loss. RAID-TEC: Ensuring triple parity protection, allowing the system to tolerate simultaneous failure of three drives without data loss. Cache requirement(if the equipment involves the use of memory cache for data): Storage system includes a cache mechanism, the system provide a minimum of 1024 GB of dedicated cache memory per node Total of 2048GB per system, ensuring high-speed data processing and optimal system performance.		

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					RAID (if the equipment involves the use of RAID): - The system must support advanced RAID levels, including minimum: RAID 6: Ensuring double parity protection, allowing the system to tolerate simultaneous failure of two drives without data loss. Cache requirement(if the equipment involves the use of memory cache for data): The storage must provide a minimum of 512 GB of dedicated cache memory per node, ensuring high-speed data processing and optimal system performance. The cache must support advanced features such as: - Cache mirroring - to ensure data integrity and protection in the event of a node failure. - Dynamic allocation - enabling efficient use of cache resources based on real-time workload demands. - Non-volatile cache - to prevent data loss during power failures or unexpected shutdowns, ensuring all cached data is preserved and immediately available after hardware recovery from power failures or unexpected shutdowns. The cache must be optimized for handling high IOPS workloads and ensuring low-latency operations, particularly for enterprise-grade applications. Controllers requirements: The storage system must include minimum one node equipped with a minimum of two fully redundant controllers configured in High Availability (HA) mode. The controllers must: - Operate in an Active-Active configuration, ensuring balanced workload distribution and seamless failover capabilities without performance degradation and data loss.	The cache support advanced features such as: - Cache mirroring - to ensure data integrity and protection in the event of a node failure. - Dynamic allocation - enabling efficient use of cache resources based on real-time workload demands. - Non-volatile cache - to prevent data loss during power failures or unexpected shutdowns, ensuring all cached data is retained. The cache is optimized for handling high IOPS workloads and ensuring low-latency operations, particularly for enterprise-grade applications. Controllers requirement: The storage system include one node equipped with of two fully redundant controllers configured in High Availability (HA) mode. The controllers: - Operate in an Active-Active configuration, ensuring balanced workload distribution and seamless failover capabilities without performance degradation. - Support advanced fault-tolerant mechanisms to maintain uninterrupted access to data during hardware failures or maintenance. - Be hot-swappable, allowing replacement or upgrade without disrupting system operations or data availability. - Include built-in synchronization mechanisms to maintain consistency between controllers, including mirroring of critical operational data such as cache contents and configuration settings. The system ensure that the failure of one controller does not impact the performance, availability, or operational integrity of the other controller. Cluster and replication requirements: 1. Synchronous replication capability: - The storage solution support synchronous replication to enable the creation of an Active-Active cluster between two physically separated		

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					- Support advanced fault-tolerant mechanisms to maintain uninterrupted access to data during hardware failures or maintenance (until the technical interventions are provided). - Be hot-swappable, allowing replacement or upgrade without disrupting system operations, performance or data availability. - Include built-in synchronization mechanisms to maintain consistency between controllers, including mirroring of critical operational data such as cache contents and configuration settings. The system must ensure that the failure of one controller does not impact the performance, availability, or operational integrity of the other controller. Cluster and replication requirements: 1. Synchronous replication capability: - The storage solution must support synchronous replication to enable the creation of an Active-Active cluster between two physically separated server rooms (located in separate buildings). - The system must ensure zero Recovery Point Objective (RPO=0) by maintaining data consistency across the cluster in real time. 2. Comprehensive hardware inclusion: - The solution must include all necessary hardware components to fully implement synchronous replication functionality, utilizing Fibre Channel (FC) protocols for high-speed, low-latency data transmission. 3. Flexible volume replication: - The system must support synchronous replication for a minimum of one Logical Unit Number (LUN) and scale seamlessly to replicate multiple LUNs simultaneously. - Changes to the number of replicated volumes must not require modifications to	server rooms (located in separate buildings). This feature is included in ONTAP ONE Bundle, SnapMirror ActiveSync. License is perpetual and have included support for 5 years, does not require any additional licensing when storage space is upgraded or added. - The system ensure zero Recovery Point Objective (RPO) by maintaining data consistency across the cluster in real time. 2. Comprehensive hardware inclusion: - The solution include all necessary hardware components to fully implement synchronous replication functionality, utilizing Fibre Channel (FC) protocols for high-speed, low-latency data transmission. Host access LUN-s over high-speed FiberChannel Fabric, with low-lattency data transmission. Fiber ports on controllers also are used to connect between sites and connection with Mediator 3. Flexible volume replication: - The system support synchronous replication for a minimum of one Logical Unit Number (LUN) and scale seamlessly to replicate multiple LUNs simultaneously. - Changes to the number of replicated volumes not require modifications to the physical hardware configuration of the storage system. 4. Data consistency and synchronization: - The contents of all cluster volumes remain identical across both systems in the cluster at all times, ensuring data consistency and integrity. - The system include mechanisms to handle data synchronization efficiently during recovery scenarios, ensuring minimal impact on performance and availability. 5. Resiliency and high availability: - The cluster provide continuous operation in the event of a hardware failure, network disruption, or planned maintenance at one site, without compromising data integrity or availability. - The system is designed to support failover and		

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					the physical hardware configuration of the storage system. 4. Data consistency and synchronization: - The contents of all cluster volumes must remain identical across both systems in the cluster at all times, ensuring data consistency and integrity. - The system must include mechanisms to handle data synchronization efficiently during recovery scenarios, ensuring minimal impact on performance, availability and corrupted/degraded data. 5. Resiliency and high availability: - The cluster must provide continuous operation in the event of a hardware failure, network disruption, or planned maintenance at one site, without compromising data integrity or availability. - The system must be designed to support failover and failback between the two sites automatically and transparently. Performance requirements: 1. Minimum performance metrics: - the storage solution must deliver a combined performance of minimum 500,000 Input/Output Operations Per Second (IOPS) with inline data reduction (deduplication and compression). 2. Performance calculation parameters: IOPS performance must be evaluated based on the following metrics: - read/write ratio: 70% read / 30% write. - block sizes: support for operations with block sizes of 16 KB, 32 KB, and 64 KB to accommodate varying workload requirements. - I/O patterns: include both sequential and random I/O workloads. - latency: ensure a maximum delay of 1 millisecond (0.001 s) under full load conditions.	failback between the two sites automatically and transparently. Performance requirements: 1. Minimum performance metrics: - the storage solution deliver a combined performance of 774,000 Input/Output Operations Per Second (IOPS) with inline data reduction (deduplication and compression), on Random workload, 70Read 30Write 16k block size. 2. Performance calculation parameters: IOPS performance are evaluated based on the following metrics: - read/write ratio: 70% read / 30% write. - block sizes: support for operations with block sizes of 16 KB, 32 KB (558 941 IOPS), and 64 KB to accommodate varying workload requirements. - I/O patterns: include both sequential and random I/O workloads. - latency: ensure a maximum delay of 1 millisecond (0.001 s) under full load conditions. 3. Consistency of performance: - the system maintain the required performance levels even under high concurrency and mixed workload conditions. - performance remain unaffected during maintenance operations, including firmware updates, drive rebuilds, or component failures. 4. Performance verification: - vendor provided detailed benchmark test results to validate the stated performance – for operations with block sizes 16 KB(mandatory), 32 KB and 64 KB(optionall), using industry-standard tools in NetApp testing laboratory, under the specified conditions. - results demonstrate compliance with all stated parameters, including latency and I/O patterns. 5. Monitoring and optimization: - the system include tools to monitor and optimize performance dynamically, offering real-time insights into throughput, latency, and IOPS for proactive performance tuning.		

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					3. Consistency of performance: - the system must maintain the required performance levels even under high concurrency and mixed workload conditions. - performance must remain unaffected during maintenance operations, including firmware updates, drive rebuilds, or component failures. 4. Performance verification: - vendors must provide detailed benchmark test results to validate the stated performance – for operations with block sizes 16 KB(mandatory), 32 KB and 64 KB(optionall), using industry-standard tools such as IOmeter or FIO, under the specified conditions. - results must demonstrate compliance with all stated parameters, including latency and I/O patterns. 5. Monitoring and optimization: - the system must include tools to monitor and optimize performance dynamically, offering real-time insights into throughput, latency, and IOPS for proactive performance tuning. Supported protocols: - FC, - iSCSI; Features: Dedicated system management interfaces: 1. The system must include dedicated physical and/or virtual interfaces specifically for system management. 2. These interfaces should allow out-of-band management, ensuring that administrative tasks can be performed without impacting data traffic. 3. Management interfaces must support the following functionalities: - Web-based GUI for ease of access. - Command-line interface (CLI) for advanced configuration.	Supported protocols: - FC, - iSCSI, NVMe/TCP, NVMe/FC, Features: Dedicated system management interfaces: 1. The system include dedicated physical and/or virtual interfaces specifically for system management. 2. These interfaces allow out-of-band management, ensuring that administrative tasks can be performed without impacting data traffic. 3. Management interfaces support the following functionalities: - Web-based GUI for ease of access. - Command-line interface (CLI) for advanced configuration. - Support for industry-standard protocols such as SSH, SNMP, and REST API for integration with monitoring and orchestration tools. - Role-based access control (RBAC) to ensure secure system administration. 4. Redundancy for management interfaces: - to ensure availability, the management interfaces support redundancy, allowing continuous system management even in the event of a single interface failure. 5. Protocol optimization: The system include protocol-specific optimizations such as: - Multipath I/O (MPIO) for FC and iSCSI to ensure high availability and load balancing. - Support for jumbo frames in iSCSI for improved performance in high-throughput environments. 6. Compliance and Interoperability: The system is compliant with industry standards for both FC and iSCSI protocols. It must ensure interoperability with third-party devices, including servers, switches, and network adapters. Deduplication and compression requirements: 1. Functional capabilities: The storage system provide deduplication functionality for data stored at the block level		

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					The system must provide a dedicated interface or tools for monitoring deduplication and compression efficiency, including: - Space savings metrics. - Real-time and historical performance impacts. - Detailed logs of deduplication and compression activities. Snapshot requirements: 1. General functionality: - The system must support snapshot functionality at a minimum for block-level volumes (LUNs), ensuring operational flexibility. - The snapshot functionality must be applicable to both LUNs and other supported volumes without imposing restrictions on the simultaneous use of other critical system functions, including replication, backups, and cloning. 2. Snapshot quantity and retention: - The system must provide the ability to create and manage a minimum of 365 snapshots per shared volume, supporting long-term operational and recovery needs. - Snapshots must be configurable with retention policies to optimize storage space and align with data governance requirements. 3. Performance efficiency: - The implementation of snapshots must not degrade overall system performance, regardless of the number of active snapshots or system workload. - The system must include optimization mechanisms, such as metadata indexing and intelligent snapshot scheduling, to minimize latency and maintain high performance. 4. Space efficiency:	approach by storing only the delta (changes) from the original data. This ensures minimal storage consumption while preserving full data access and recovery capabilities. 5. Integration with storage QoS: - The system support performance monitoring and prioritization mechanisms for snapshots, enabling administrators to enforce Storage QoS (Quality of Service) policies at both the volume and LUN levels. - These QoS policies should dynamically allocate resources to prioritize performance-critical snapshots, ensuring minimal impact on other operations. 6. Advanced features: Snapshots support: - Application-consistent snapshots, ensuring data integrity for workloads such as databases MS SQL, Oracle and virtualized environments VMware, Hyper-V. - Writable snapshots, allowing clones to be created for development, testing, or analytics without affecting the production environment. Snapshots are compatible with data replication workflows, ensuring consistent replication of both primary data and snapshot states across systems. 7. Monitoring and reporting: - The system include a dedicated interface or tools for managing, monitoring, and reporting on snapshot performance, space utilization, and recovery operations. - Real-time alerts and historical logs must be available for visibility into snapshot performance and potential bottlenecks. Encryption requirements: 1. Encryption standard: - The solution support encryption of all stored data using a minimum of the AES-256 algorithm or a stronger industry-standard encryption algorithm, ensuring compliance with modern security and regulatory standards.		

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					- Snapshot functionality must employ a cost-effective approach by storing only the delta (changes) from the original data. This ensures minimal storage consumption while preserving full data access and recovery capabilities. 5. Integration with storage QoS: - The system must support performance monitoring and prioritization mechanisms for snapshots, enabling administrators to enforce Storage QoS (Quality of Service) policies at both the volume and LUN levels. - These QoS policies should dynamically allocate resources to prioritize performance-critical snapshots, ensuring minimal impact on other operations. 6. Advanced features: Snapshots must support: - Application-consistent snapshots, ensuring data integrity for workloads such as databases and virtualized environments. - Writable snapshots, allowing clones to be created for development, testing, or analytics without affecting the production environment. Snapshots must be compatible with data replication workflows, ensuring consistent replication of both primary data and snapshot states across systems. Encryption requirements: 1. Encryption standard: - The solution must support encryption of all stored data using a minimum of the AES-256 algorithm or a stronger industry-standard encryption algorithm, ensuring compliance with modern security and regulatory standards. 2. Scope of encryption: - Encryption must be applied to all drives, NVMe, and flash storage within the device, covering the entire data storage ecosystem.	2. Scope of encryption: - Encryption are applied to all drives, NVMe, and flash storage within the device, covering the entire data storage ecosystem. - Encryption extend to data at rest across all volumes, snapshots, backups, and metadata associated with the system. 3. Performance integrity: - Encryption functionality operate with no measurable impact on system performance, ensuring IOPS, throughput, and latency metrics remain consistent with non-encrypted operations. - The system leverage hardware-accelerated encryption or equivalent technologies to maintain optimal performance during data encryption and decryption processes. 4. Key management: - The solution generate encryption keys using a secure hardware-based random number generator, ensuring keys are robust and resistant to attacks. - Encryption keys securely stored on the equipment, leveraging a dedicated hardware security module (HSM) or equivalent secure enclave to isolate keys from unauthorized access. - The system ensure that data stored on drives/NVMe/flash cannot be accessed if the storage media is removed from the device or if the device itself is compromised. 5. Key backup and recovery: - The system include mechanisms for secure backup and recovery of encryption keys, supporting integration with external key management systems (KMS) compliant with KMIP (Key Management Interoperability Protocol) standards. - Key rotation and lifecycle management can be automated and configurable to align with organizational policies and compliance requirements. 6. Encryption for replication and snapshots:		

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					- Encryption must extend to data at rest across all volumes, snapshots, backups, and metadata associated with the system. 3. Performance integrity: - Encryption functionality must operate with no measurable impact on system performance, ensuring IOPS, throughput, and latency metrics remain consistent with non-encrypted operations. - The system must leverage hardware-accelerated encryption or equivalent technologies to maintain optimal performance during data encryption and decryption processes. 4. Key management: - The solution must generate encryption keys using a secure hardware-based random number generator, ensuring keys are robust and resistant to attacks. - Encryption keys must be securely stored on the equipment, leveraging a dedicated hardware security module (HSM) or equivalent secure enclave to isolate keys from unauthorized access. - The system must ensure that data stored on drives/NVMe/flash cannot be accessed if the storage media is removed from the device or if the device itself is compromised. 5. Key backup and recovery: - The system must include mechanisms for secure backup and recovery of encryption keys, supporting integration with external key management systems (KMS) compliant with KMIP (Key Management Interoperability Protocol) standards. - Key rotation and lifecycle management should be automated and configurable to align with organizational policies and compliance requirements. 6. Encryption for replication and snapshots: - The encryption functionality must extend	- The encryption functionality extend to replicated data and snapshots, ensuring consistency in encryption across all replicated sites or volumes. - Encryption not disrupt or degrade replication workflows, including synchronous and asynchronous modes. Monitoring requirements: 1. Analytical platform or portal: - The system include a robust analytical platform or virtual machine (VM) accessible via a web browser-based portal. - The platform provide an intuitive, user-friendly interface with interactive dashboards for data visualization and management. 2. Log collection and reporting: The platform automatically collect and analyze logs from the device and present them as customizable graphs, reports, and alerts, covering the following: 2.1. Storage utilization: - Real-time and historical monitoring of used space. - Display of the data reduction indicator, accounting for deduplication and compression (excluding thin provisioning, if applicable). - Granular visibility at both the global device level and the local LUN level. 2.2. Space growth prediction: - Advanced forecasting tools for predicting space growth, factoring in deduplication, compression, and provisioning trends. - Tools for future expansion analysis, including recommendations for scaling. 3. Component monitoring: The system include an application or hardware-based monitoring solution to oversee and report detailed events for the following physical and logical components: - Physical components: controllers, drives, ports, power supplies, and network interfaces. - Logical components: volumes, LUNs, replication		

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					to replicated data and snapshots, ensuring consistency in encryption across all replicated sites or volumes. - Encryption must not disrupt or degrade replication workflows, including synchronous and asynchronous modes. 7. Audit and compliance: - The system must provide audit logs and reports detailing encryption operations, key management activities, and access attempts, ensuring transparency and regulatory compliance. - Logs should be exportable and compatible with industry-standard security information and event management (SIEM) systems. Monitoring requirements: 1. Analytical platform or portal: - The system must include a robust analytical platform or virtual machine (VM) accessible via a web browser-based portal. - The platform must provide an intuitive, user-friendly interface with interactive dashboards for data visualization and management. 2. Log collection and reporting: The platform must automatically collect and analyze logs from the device and present them as customizable graphs, reports, and alerts, covering the following: 2.1. Storage utilization: - Real-time and historical monitoring of used space. - Display of the data reduction indicator, accounting for deduplication and compression (excluding thin provisioning, if applicable). - Granular visibility at both the global device level and the local LUN level. 2.2. Space growth prediction: - Advanced forecasting tools for predicting space growth, factoring in deduplication,	processes, deduplication, and compression algorithms. 4. Performance monitoring: The portal provide minimum: - Real-time and historical performance metrics for individual resources. - Key parameters to monitor: Latency, Read and Write IOPS, Bandwidth. Performance data are available at both the global system level and the LUN level. 5. Storage QoS and prioritization: - The system include a performance monitoring and prioritization mechanism for Storage QoS, configurable at both the volume and LUN levels. - QoS metrics should be adjustable in real-time to meet dynamic workload demands. 6. Reporting and alerting: The portal provide comprehensive reporting capabilities, including at least: - Capacity reports: current usage, available space, and forecasted capacity needs. - Performance reports: historical trends and real-time analytics of system performance. - Future space predictions: automated simulations for capacity increases based on application type and workload. - Event logs: authorization attempts, executed commands, and system alerts for security and operational events. - Technical support logs: level of support received, resolution times, and incident history. 7. Operational monitoring: - Snapshot and replication status: display the real-time status of operations such as snapshots, synchronous/asynchronous replication, and recovery tasks. - Threat alerts: warnings related to system integrity, user activity, or misconfigurations. - Optimization insights: recommendations for system performance improvement, resource reallocation, or energy efficiency.		

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					compression, and provisioning trends. - Tools for future expansion analysis, including recommendations for scaling. 3. Component monitoring: The system must include an application or hardware-based monitoring solution to oversee and report detailed events for the following physical and logical components: - Physical components: controllers, drives, ports, power supplies, and network interfaces. - Logical components: volumes, LUNs, replication processes, deduplication, and compression algorithms. 4. Performance monitoring: The portal must provide minimum: - Real-time and historical performance metrics for individual resources. - Key parameters to monitor: Latency, Read and Write IOPS, Bandwidth. Performance data must be available at both the global system level and the LUN level. 5. Storage QoS and prioritization: - The system must include a performance monitoring and prioritization mechanism for Storage QoS, configurable at both the volume and LUN levels. - QoS metrics should be adjustable in real-time to meet dynamic workload demands. 6. Reporting and alerting: The portal must provide comprehensive reporting capabilities, including at least: - Capacity reports: current usage, available space, and forecasted capacity needs. - Performance reports: historical trends and real-time analytics of system performance. - Future space predictions: automated simulations for capacity increases based on application type and workload. - Event logs: authorization attempts, executed commands, and system alerts for	8. Configuration verification and upgrades: - The platform include an algorithm for verifying configuration correctness and compatibility with potential device or cluster upgrades. 9. Simulation and optimization: - The platform enable capacity simulation tools to project storage needs based on application types and expected workloads. - Display real-time system consumption metrics with actionable optimization guidelines for improving performance and efficiency. NICs included per controller: 1 x 1GE for management; 4 x 64G FC SFP28(850nm SFP+ SR MM module included) for data transfer; 4 x 25G Ethernet over FC dedicated for replication (metro cluster). Supported operating environments: Microsoft Windows Server; Red Hat Enterprise Linux; VMware (VMware ESXi); Power supplies included: The system include a minimum of two (2) hot-swappable (hot-plug) Power Supply Units (PSUs). The PSUs support at least 1+1 redundancy, ensuring continuous operation in case of failure of one PSU. Power cables included meet the following specifications: - Type: IEC C13 to C14. - Minimum length: 0.6 meters (24 inches). Cerințe obligatorii pentru prestarea serviciilor de punere în funcțiune, a garanției și a serviciilor de suport (deservire și mentenanță) a bunurilor - conform Anexei la Anunțul de participare. Toate licențele necesare (dacă se aplică conform termenilor și condițiilor producătorului) pentru caracteristicile platformei/portalului de monitorizare (analitică) și software-ului/firmware-ului specific sistemului de stocare, inclusiv actualizările/patch-urile periodice, sunt incluse în ofertă și furnizate pe o bază perpetuă - valabile obligatoriu pentru durata integrală de viață a		

Nr.	Denumirea bunurilor / serviciilor	Denumirea modelului bunului / serviciului	Țara de origine	Produ-catrorul	Specificarea tehnică deplină solicitată de către autoritatea contractantă	Specificarea tehnică deplină propusă de către ofertant	Garanție, luni	Standarde de referință
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					security and operational events. - Technical support logs: level of support received, resolution times, and incident history. 7. Operational monitoring: - Snapshot and replication status: display the real-time status of operations such as snapshots, synchronous/asynchronous replication, and recovery tasks. - Threat alerts: warnings related to system integrity, user activity, or misconfigurations. - Optimization insights: recommendations for system performance improvement, resource reallocation, or energy efficiency. 8. Configuration verification and upgrades: - The platform must include an algorithm for verifying configuration correctness and compatibility with potential device or cluster upgrades. 9. Simulation and optimization: - The platform must enable capacity simulation tools to project storage needs based on application types and expected workloads. - Display real-time system consumption metrics with actionable optimization guidelines for improving performance and efficiency. NICs included per controller: Min. x 1GE for management; Min. 2 x 32G FC SFP28(850nm SFP+ SR MM module included) for data transfer; Min. 2 x 32G FC dedicated for replication (metro cluster). Supported operating environments: Microsoft Windows Server; Red Hat Enterprise Linux; VMware (VMware ESXi); Power supplies included: The system must include a minimum of two (2) hot-swappable (hot-plug) power supply units (PSUs). The PSUs must support at least 1+1	sistemului de stocare. Termeni și condiții: Toate cerințele sunt minime și obligatorii; O cerință nu limitează o altă cerință; Toate componentele sunt actuale și nu sint promovate ca EOS (sfârșitul vânzării/suportului) / EOL (sfârșitul duratei de viață); Extinderea memoriei (ram) și a capacității de stocare nu trebuie să includă limitări hardware sau software. Software include, perpetual, no volume limitation: **ONTAP One** encompasses all the core ONTAP multiprotocol features of NetApp unified storage. It includes all protocols (SAN/NAS/Object) and ONTAP technologies such as SnapRestore, SnapMirror, SnapCenter, FabricPool (to ONTAP-S3 and StorageGRID), FlexClone, FlexCache, FPolicy, Encryption, autonomous ransomware protection, SnapLock, and multi-tenant key management. It also includes leading solutions for data protection, anti-ransomware, and hybrid cloud. With ONTAP One, you can:· Simplify the buying and operational experience with all-in-one software license · Easily replicate and backup your data · Defend against ransomware and cyber-attacks Warranty: 5 years, according to requested SLA for hardware and software.		

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Numele, Prenumele: Bogdan Gnidas **În calitate de:** Administrator

Ofertantul: „BTS Pro” SRL **Adresa**: mun. Chisinau, str Ion Creanga, 6 V

Nr.	Cod CPV	Denumirea bunurilor / serviciilor	Unitatea de măsură	Canti-tatea	Preț unitar (fără TVA), MDL	Preț unitar (cu TVA), MDL	Suma (fără TVA), MDL	Suma (cu TVA), MDL	Termenul de livrare / prestare	Clasificație bugetară (IBAN)	Disco unt %
1		2	3	4	5	6	7	8	9	10	11
LOT 1	48820000-2	**Enterprise Server tip 1**	Buc.	14	263085,00	315702,00	3683190,00	4419828,00	Bunurile vor fi livrate în termen de până la 120 (una sută douăzeci) de zile calendaristice din data semnării contractului, precum și prestarea serviciilor de despachetare din ambalajul original de la producător, instalare, configurare, punere în funcțiune și instruirea personalului Cumpărătorului se va efectua de către Furnizor în termen de până la 20 (douăzeci) de zile calendaristice din data livrării bunurilor, conform cerințelor tehnice și cantității specificate în Anunțul de participare și în Anexa la Anunțul de participare.	MD97VI000002224212555MDL	-
LOT 2	48820000-2	**Enterprise Server tip 2**	Buc.	1	483310,00	579972,00	483310,00	579972,00		MD97VI000002224212555MDL	-
LOT 3	48820000-2	**Enterprise Storage (Sisteme de stocare) tip 1(SAS SSD)**	Buc.	4	4791825,00	5750190,00	19167300,00	23000760,00		MD97VI000002224212555MDL	-
LOT 4	48820000-2	**Enterprise Storage (Sisteme de stocare) tip 2 (Full flash)**	Buc.	2	11987135,00	14384562,00	23974270,00	28769124,00		MD97VI000002224212555MDL	-
						TOTAL:	**47308070,00**	**56769684,00**			

Valabilitatea ofertei: **90 zile**

Numele, Prenumele: Bogdan Gnidaș **În calitate de:** Administrator

Ofertantul: „BTS Pro” SRL **Adresa**: mun. Chisinau, str Ion Creanga, 6 V