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رِدْرُسْ سَرُسُونَ مِنْدُ: (IUL)22-PU/22/2023/360

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# ائور سور المورد مورور سوره

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- مَرْمُرُوْ مُرَامُ مُرامِ مُرْمُرُونُ مِرْمُ مِرْمُ مِرْمُ مُرَامِرُ مِرْمُ مُرَامُ مُرَامُ مُرَامُ مُرَامُ مُرَامُ مُرَامُ مُرَامُ مُر ويماموس ويموم المروم المروم
- وَوَدُنَ نَهِ وَمِوْوَسُ 2. (ر) هُوَسُ رُدُوَّوُ وِ وَرِدِوَسِ، وِ مَرَّتِهِ مَنِي سُفَيْدٍ مَنْ فَيْ الْهُ وَ وَرَدُوْسُ الْهُ اللَّهُ اللَّالِي اللَّهُ الللَّهُ اللَّهُ الللَّهُ اللَّهُ اللَّهُ اللَّالِ الللَّهُ اللَّهُ اللَّهُ اللّه
- (ת) פְפֿרמנצת פּתמעץ צָאמפּמצ תְפּצְת תְרֵת צָאמפּמער פּתְּכֹּר (מ) בְצֹמפּמער פּתְּכֹּר (ת) בְצֹמפּמער פּתְכֹר (ת) בּצִמפּמער פּתְכֹר (ת) בּמבּמער בּתְבַּר פֿתר בּתְבּת בּתְפּתר בּתִית בּתְנִים בּתְים בּתְ בּתְּבּת פּתָת בּתְבּת בּתְנִים בּתְים בּתְנִים בּים בּתְנִים בּיתְנִים בּיתְּים בּיתְנִים בּיתְי

- (ת) פּתְלֵבֵּל רָבְיִ בְּיִבְּרְאָרְאָרְ פְּתָּע רְיִרְעֵּ בְּאָבָּל שׁנְפְּבּ רְבָּאָבּעׁת (תְיִעְ בְּאַבָּל שׁנְפְּבּ רְבָּאָבּעׁת (תִינְע בְּאַבָּל שׁנְפָּב רִבְּאַבּעִּת בּּיִבְּעָּה רְיִנְיִי בְּיִבְּבְּ רְיִנְיִי בְּיִבְּעָּה בְּיִבְּעָּה בְּיִבְּבְּּבְּעִרְ בִּיּבְּעָּב בּיִבְּבְּרְ רְשִׁתְשׁת פּשְׁתְבּפּ.

- (ع) بُرُ عَرَبِ مِنْ وَرَدُ وَ مِنْ عِرْدُ وَرَدُ وَ مِنْ مِرْدُ وَرَدُ وَ مِنْ وَرَدُو مِنْ وَرَدُو مِنْ وَرَدُ وَرَدُ وَرَدُ وَرَدُ وَرَدُ وَرَدُو مُنْ مُنْ وَرَدُو وَرَدُو مُنْ مُنْ وَرَدُو وَرَدُو مُنْ مُنْ وَرَدُو وَرَدُو مُنْ مُنْ وَرَدُو وَرَدُو وَرَدُو مُنْ مُنْ وَمُرْدُو وَرَدُو مُنْ مُنْ وَمُرْدُو وَرَدُو وَرَدُو مُنْ مُنْ وَمُرْدُو وَرَدُو وَرُدُو وَرَدُو وَرَ

" از و مرد مرد مرد مرد مرد مرد و مردو.

- رُمْرَوْمُ وَوَدُو مُمْرَدُ وَمُرَّوْمُ وَمُرُو وَمُرُّومُ وَمُرَدُومُ وَمُرَدُومُ وَمُرَدُومِ الْمُرَدُ وَمُر مُرُدُ صِوْدَوْمُ وَمِنْ مُرْدُومُ وَمُرَدُومُ وَمُرَّوَمُ وَمُرَّدُ مُرَدُومُ وَمُرَّمُومُ وَمُرَّدُومُ وَمُر رُمْرَدُومُ وَمُرَدُومُ وَمُرْدُومُ وَمُرَدُومُ وَمُرَدُومُ وَمُرَدُومُ وَمُرَدُومُ وَمُرْدُومُ وَمُرَدُومُ وَمُرَدُومُ وَمُرَدُومُ وَمُرْدُومُ وَمُرْدُومُ وَمُرَدُومُ وَمُرْدُومُ وَمُومُ وَمُؤْمُومُ وَمُومُ وَمُومُ وَمُومُ وَمُؤْمُومُ وَمُومُ وَمُؤْمُومُ وَمُومُ وَمُ
- $\frac{\partial^2 u}{\partial x^2} \frac{\partial^2 u}{\partial$
- مُرْسِرْسُ مُصْوَهُمُهُ (ر) چوش (رزرو وَرَوْ وَرَوْ وَرَدُو وَرَوْ وَرَ

- - 1. ۾ توسر ڪوڪ
  - 2. ﴿ وَمُرْدُدُ وَمُرْدُدُ وَمُرْدُونُ وَمِدْ مُورِدُ وَمُرْدُونُ وَمِرْدُونُ وَمِنْ وَمُونُ وَمِنْ وَمُونُ وَمِنْ وَمِنْ وَمِنْ وَمِنْ وَالْمُونُ وَمِنْ وَمِنْ وَمُونُ وَمِنْ وَمُونُ وَمِنْ وَمِنْ وَمُؤْنِ وَمِنْ وَمِنْ وَمُونُ وَمِنْ وَمُونُ وَمِنْ وَمُونُ وَمُونُ وَمُؤْنِ وَمِنْ وَمُونُ وَمِنْ وَمُونُ وَمِنْ وَمِنْ وَمُونُ ومِنْ وَمِنْ وَمُؤْنِ وَمِنْ وَمِنْ وَمِنْ وَمِنْ وَمِنْ وَمِنْ وَالْمُونُ وَمِنْ وَمِنْ وَمِنْ وَمِنْ وَمِنْ وَمُؤْنِ وَمِنْ وَمُؤْنِ وَالْمُونُ ولِنَا لِمُعْمُونُ وَالْمُونُ ولِي مُعِلِي وَالْمُونُ وَالْمُونُ وَالْمُونُ وَالْمُونُ وَالْمُون

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# 3. مُرْسُور المُرْسُورُ الْمُرْدُورُورُ وَ وَالْمِرْدُورُ

### 4. ئۇقۇرۇر

- وَوْدُورِ عَرْشُ نَهُو اللهِ اللهِ
- مَوْدُورُ مُنْ مُنْ اللَّهُ 13. و مَوْدُورُ دُوْ لَيْرُورُدُ لِيْرُورُ لِيْرُورُ لِيْرُورُ لِيْرُورُ لِيْرُورُ

- وَمِنْ وَرَدُونَ وَرَدُونَ وَرَدُونَ وَرَدُونَ وَرَدُونَ وَرَدُونَ وَرَدُونَ وَرَدُونَ وَرَدُونَ وَمِنْ وَمِوْ مِنْ فَيْ مُرْمِدُورُ وَمُونَا وَرَدُونَ وَمُونِدُونَ وَمُونَا وَرَدُونَ وَمُونَا وَرَدُونَ وَمُونَا وَرَدُونَ
- مَدُورِدُورُ وَمَ خَوْرَدُرُ وَمَ خَوْرَدُورُ وَمَ خَوْرَدُورُ وَمَ خَوْرَدُورُ وَمَرَدُورُ وَمِرْدُورُ وَمُرَدُورُ وَمِرْدُورُ وَالْمِرُورُ وَمِرْدُورُ وَالْمِرْدُورُ وَالْمِرَادُورُ وَالْمُ وَالْمِرَادُ وَمِ
- دُورُورُ الله عَامِرُ الله عَمْرُ الله عَمْرُولُ الله عَمْرُ الله عَمْرُ الله عَمْرُ الله عَمْرُ الله
- (سر) هُوُوَرُ رَبِرَرُو وَدُوَرَهُمْ دُوَ—اَدْرَاهُ دُوْرُهُ دُرَوْرُ دُرَارُو وَدُورُهُدُ مَاوْدُدُ وَسُرُوسُورُوْ.
  - (س) دُرُورُهُ مُسِرِءُ رُبُّ وُرِدُ صِوْسُرُهُمُ دُرُورُهُ دُرْرُوْمُ سِرَةً مِنْ سِرَةً مِسْرِدُو.
- وَوْدُهُ وَهُوْهُ وَهُوْهُ وَهُوَهُ وَهُوَهُ وَهُوَهُ هُمِرِدُ هُمُوسُوسٌ وَمِسْ رَمَرَءً مُمِرِدْسُ وَمِدُهُ وَهُوَهُ وَهُوَهُ وَهُو هُوهُ وَهُو هُوهُ وَهُو هُوهُ وَهُو هُوهُ وَهُوهُ وَهُوهُ وَهُوهُ وَهُوهُ وَ وَمِدُوسُ 60 (وَصَوْرُوسُ) وَوَدُو وَهُومُوسُوهُ.
- وَوَدُورِيْ الْوَرِيْ الْوَرِيْ الْوَرِيْ وَرَارَوْسُوعِ الْوَرِيْ الْوَرِيْ وَرَارَةُ وَيُورِيْ وَيُرْوَسُ مُورُورُونِيْ وِرْسُورُ اللهِ اللهُ اللهِ الله
- (ת) שְּלֵת ה'נ'לקה דְּרְתֵּשׁ בְתַּבֹּי עֹתְיֹ בְנְרְעָּ בּרְתָּבּּי בְּרְתָּשׁ בְּתְרָבּי בְרְתָּבּי בְּרְתָּ בְתַּבָּר הִבְ בְתִּתִּפִּר בִבָּ תַּבְּי עִבּי בְּרִתָּ

- (س) چۇش ئرىزىگەرى سوچ ئىگەرى چۇش ئىزى ئۇلاۋى سۆگەر ئەن ئەن ئىرى ئۇلارلارلى ئەن ئىرۇڭ ئۇلارلى ئ

- (١٠) رُرْزُدٌ صِوْشَهُ رُسْسِ مُرَوَّسِ صَنْ قَرْ لَهُ وَوَرِدُ اللهِ مَنْ رَدُر مَا مِنْ مَا وَرَدُ
  - و توکنر رْمَرْدُودْ وَ اللهِ مِنْ مُورُدُ رُمْرُرُورُ مِنْ مُورِدُ مُرْسُورُ مُرْسُورُ وَمِرْسُورُ وَمِنْسُورُ وَمِرْسُورُ وَمِرْسُورُ وَمِرْسُورُ وَمِرْسُورُ وَمِرْسُورُ وَمِنْسُورُ وَمِنْسُورُ
- شهرئ منوع دُروُ سوسرد ي دُرو.
- در شروع موش معهد ماسر مرزر وسراد.
- وَهُوَمُونُ وَرَسُو مُرَبُونُ مُرَادُونُ مُرَدُونُ مُرَدُونُ مُرَدُونُ مُرَدُونُ مُرَدُونُ مِوْسُونُهُ وَمُرْدُونُ مُرَدُونُ مُراتُونُ مُرَدُونُ مُونُ مُونُ مُونُ مُرَدُونُ مُرَدُونُ مُرَدُونُ مُرَدُونُ مُرَدُونُ مُرَدُونُ مُرَدُونُ مُ مُرَدُونُ مُونُونُ مُونُونُ مُرَدُونُ مُونُونُ مُونُ مُونُ مُونُ مُونُ مُونُ مُونُ مُونُ مُرّدُونُ مُونُ مُ مُرّدُونُ مُونُ مُ لِمُ مُونُ مُونُ مُ مُرّدُونُ مُ مُرّدُونُ مُ مُونُ مُونُ مُ لِمُ مُنْ مُونُ مُ لِنِ مُ مُنْ مُونُ مُ ل ورُسُر مُرْدُر وَثُرُ دُورُ מלמה מבית בית בית ה מלמה מבית בית הפית הפי 2 2 4 2 2 0 2 V
- 21. (ر) ھۇش ئۇقۇش ئۇغىرۇرۇس ھۇش ئىزىگ ئۇگۇھۇنى شۇھ ورس رؤوش יינים ניס ברבים יון ניין ניס ברני יון סיי מדי של האלים האלים האלים לאלים האלים לאלים באלים באלים האלים האלים האלים האלים האלים האלים האלים האלים האלים ה رُى بْرُور صُوسٌ مَصْوَعُ وَرُو وَ مُرْدُورُونَ
- (١) ھۇس رۇۋى كىرىرس ھۇس دۇۋۇر ھۇس ئىرھى كى ھەرىدۇردۇ . 6 6 7 5 0 C
- (س) ھۇش ئۆۋۈر ئۆۋەش ئۆرگە گىرىزى ئىتىلىش ھىرى قۇرىدى
- 22 (١) كَانْدُوْ وْبُرْدُوْ وْبُرْدُوْدُ وْبُرْدُوْدُ وْدُسْبُوْدُوْ دُوْسُرُوْ دُوْسُرُوْ دُوْسُرُوْ دُوْسُرُو رْمُرْرِدُ جِوْدُى دُوْ מת הל תשקל מת על
- (١) ﴿ وَوَ دُورُ وَ رُبِّ وَ مُورِ مِنْ وَمُرْدِ وَمُورٍ اللَّهِ وَمُورِ وَاللَّهِ وَمِنْ وَمُرْدُو وَرَبُّ وَمُرْدُو عُوْدُوْ وَرُوْرُ وَرُوْرُوْدُورُ عُوْسٍ عِوْرٍ عُرْسٌ وِمُوْرُو وَرُورُو وَرُورُو وَرُورُو وَرُورُو ر ر ، ، ، 1 فرقر و ·
- ور المرور المرام على عالى عالى و و وُسْرُورُد ئرىر بۇسرىسە ۋىترىپ بىرىر بۇسرىسە ۋىترىپ

l- פּרָכֹת בּיֹנְלָהָ בָּעִרְכֵּע בְּיִלְיִתְּיִיתִּיּ

مُسرعَ مُرَجُمُ

- چۇسىمى قىمۇلىنى 24 (ر) ھۇسىمى ھۇرى دۇرۇرۇپ ئىلى ئىلىلى ھۇسىمى ھۇسىمى ھۇسىمى ھۇسىمى ھۇسىمى ھۇسىمى ئىلىلى ھۇسىمى ئىلىلى ئىلى ئىلىلى ئىلى ئىلىلى ئىلى ئىلى ئىلىلى ئىلىلى ئىلى ئىلىلى ئىلى ئىلىلى ئىلى ئىلى ئىلى ئىلىلى ئىلى ئى
- وَرَسُمُورُ بِرِسْرُهُ 25. (ر) رَسْرَدً هِ وَسُرْمَنْ دُ مُدُرِسٌ بِرِسْرُهُ دُرُسْرُهُ وَرَسْرِ 23 وَسَرَ دُرْدُورُ وَ وَسُرْمَدُورُ وَ وَسُرَمْدُورُ وَسُرَمِيْرُورُ وَسُرْمَدُورُ وَسُرَمُورُ وَسُرُمُورُ وَسُرُمُ وَسُرُمُ وَسُرُمُ وَسُرُمُ وَسُرُمُ وَسُرُمُورُ وَسُرُمُ وَسُرْمُ وَسُرُمُ وسُرُمُ وَسُرُمُ وَسُرُمُ وَسُرُورُ وَسُرُمُ وَسُرُونُ وَسُرُمُ وسُرُمُ وَسُرُمُ وَسُرُورُ وَسُرُمُ وَسُرُونُ وَسُرُمُ وَسُرُونُ وَسُرُمُ وَسُورُ وَسُرُونُ وسُورُ وَسُرُونُ وَسُرُونُ وَسُورُ وَسُرُونُ وسُرُونُ وسُرُونُ وسُرُونُ وسُورُ وسُرُونُ وسُرُونُ وسُرُونُ وسُرُونُ وسُرُونُ وسُرُونُ وسُرَالِ وسُرِعُ مِنْ مُنْ مُنَالِمُ وسُرَالِ مُ لَمُنْمُ وسُرُونُ وسُرُونُ وسُرُونُ وسُرُونُ وسُرُونُ وسُرُونُ و

- مُرُونَ وَرُدُونَ مِرْدُونَ وَرُدُونَ مِرْدُونَ وَرُدُونَ وَمُرَدُونَ وَمُرَدُونَ وَرُدُونَ وَالْمُونَ وَرُدُونَ وَالْمُونَ وَرُدُونَ وَالْمُونَ وَالْمُونَ وَالْمُونَ وَالْمُونَ وَالْمُونَ وَالْمُؤْنِ وَالْمُؤْنِ وَالْمُونَ وَالْمُونَ وَالْمُونَ وَالْمُونَ وَالْمُونَ وَلِي وَالْمُونَ وَالْمُونَ وَالْمُونَ وَالْمُونَ وَالْمُونَ وَالْمُؤْنِ وَالْمُونَ وَالْمُونَ وَالْمُونَ وَالْمُونَ وَالْمُونَ وَالْمُونَ وَالْمُونَ وَالْمُونَ وَالْمُونِ وَالْمُونَ وَالْمُونَ وَالْمُونَ وَالْمُونَ وَلِي مُنْ وَالْمُونَ وَالْمُونَ وَالْمُونِ وَالْمُونِ وَالْمُونِ وَالْمُونِ وَلِي مُنْ وَلِي مُنْفُونِ وَلِي مُنْ وَالْمُونِ وَالْمُونِ وَالْمُونِ وَالْمُونِ وَالْمُونِ وَالْمُونِ وَلِي مُنْفُونِ وَالْمُونِ وَالْمُونِ وَلِي مُنْفُونُ وَالْمُونُ وَالِمُونُ وَالْمُونُ وَال

- (x) (x)
- وَ مَهِ مُرَمِعِ اللهِ مَهُ مُوْمَ صِوْمَ مَهُ مَا مُرَمِّرُ مَوْمَ مَهُ مَا مُرَمِّرُ مِنْ مَا مُرْمَرُ مِنْ مَهُ مُرْمِعِ عُرْمُورُ مِنْ مُرْمِعِ عُرْمُورُ مِنْ مُرْمُورُ مِنْ مُرْمُورُ مِنْ مُرْمُورُ مِنْ مُرْمُورُ مُ
- (ת) פיל ביער אים לרוצל ברוצל ברוצל
- - (١٠) عِنْ سُرِيعِ دُسْرَسُوسُ دُودَ سُرَدِسُرُدُ عَدُودُ 6 دُر وُسُرَدُو.
- (ع) چۇش (ئۇۋۇئۇز چۇش (ئرزىد ئۇنگۇنىش چۇۋش ۋىرۇشى بىرۇ ئىرۇنى چۇش ئورگەنىگ ئۇنگۇن چۇش ئادرگەۋۇ ئورشى بوقۇرۇز چۇش ئىشسۇ ئىروشۇ ئۇنگۇش (ئرزگۇرگ چۇ ئىرىدى ئىردىدۇ ئىرۇشۇر ئىردىدۇ ئۇنگۇس (ئرزگۇرگ چۇ
- (١٠) بُرْ مُرْوَرُسُ دُمْسُمْ وَ دُمْوَرُ رُمْرُرُسُونَ الْمُرْرُ صِوْسُ سَمْعُ وَرِ

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- (س) بُرِرُوْسَ دَرِرَهِ هُرَا اللهِ اللهِ
- (x) بُرِيرُونَهُ دُيرُسُوعِ دُيْرَدُ رَبُرَارَهُولِي سَهُونَ دُوْرُدِي وَرَبُرُسُولِي سَهُونَ دُوْرُدِي وَرِبُوسُهُو عُنْرِمَانِي شُرُومُ دِرَوْرِيْرُمْعُ دَرِ دُيرُونَيْ وَرَدُو وَرَدُو وَرَبُوسُهُو مِنْ وَرَبُوسُهُو مِنْ وَم رِسُرَامِعِ مِنْ مُنْ مُنْ مُنْ مُنْ وَ وَيُحْمَانِي وَ وَيُحْمَانِي دُرْدُو مُنْ وَرَدُو سَهِ مِنْ وَمُنْ وَرَبُولِي سَرَوْمُ مِنْ وَرَبُولِي سَرَوْمُ وَرَبُولِي سَرَوْمُ وَرَدُو وَرَبُولِي سَرَوْمُ وَرَدُو وَرَبُولِي سَرَوْمُ وَرَبُولِي سَرَوْمُ وَرَدُو وَرَبُولِي سَرَوْمُ وَرَبُولِي مِنْ وَرَبُولِي وَرَبُولِي مِنْ وَمُنْ وَرَبُولِي مِنْ وَرَبُولِي مِنْ وَالْمُولِي مِنْ وَالْمُولِي مِنْ وَرَبُولِي مِنْ وَرَبُولِي مِنْ وَرَبُولِي مِنْ وَرَبُولِي مِنْ وَالْمُولِي مِنْ وَالْمُولِي مِنْ وَالْمِنْ وَالْمُولِي مِنْ وَالْمُؤْلِي وَالْمُولِي وَالْمُولِي وَالْمُولِي وَالْمُولِي وَالْمُؤْلِي وَالْمُولِي وَالْمُؤْلِي وَالْمُؤْلِي وَالْمُؤْلِي وَالْمُؤْلِي وَالْمُولِي وَالْمُؤْلِي وَالْمُؤْلِي وَالْمُؤْلِي وَالْمُؤْلِي وَالْمُولِي وَالْمُؤْلِي وَلِي مِنْ وَالْمُؤْلِي وَلِي مِنْ وَالْمُؤْلِي وَلِمُولِي وَالْمُؤْلِي وَالْمُؤْلِي وَلِمُولِي وَلِمُولِي وَلِمُ وَالْمُؤْلِي وَلِمُ وَالْمُولِي وَلِمُولِي وَلِ
- (ع) بُرِيرُوس دَيْسَ مِ مُسْرَمُوسُ دَوْدَ سُرَدَسُّرَا مُ عَرَوْدُ 7 دَرِ وَسُرِدُو.
- مُوْوَمُونَ وَرِبُ مُرِدٍ اللهِ (ر) الْمُؤْوِّسُ وَرَبُ وَرَحُوْ رُوْعُ رِوْمُو وَرَبُوْ وَرَجُوْ مُؤْوِرُهُ و مُوْوَمُونَ وَرَبُوْ وَرَبُونُ وَرَبُورُورُ وَرَبُورُورُ وَرَبُورُورُ وَرَبُورُورُ وَرَبُرُورُورُ وَرَبُرُورُ وَمُرِيرُ اللهِ مُؤْمِرُ اللهِ وَرَبُ وَرَبُورُورُ وَرَبُورُورُ وَرَبُرُورُ وَرَبُرُورُ وَرَبُرُورُ وَرَبُرُور

- (x) دُهُ وَرَبُ وَرَبُ رَرَارُوْرَ دُهُ وَرَبُ دُهُ وَرَبُ وَرَبُورَ دُهُ وَمِرْتُ وَرَوْرُو وَرُونُو وَرَوْرُو وَرَوْرُونُ وَرُونُ وَرَوْرُونُ وَرَوْرُونُ وَرَوْرُونُ وَرَوْرُونُو وَرَوْرُونُ وَالِمُو وَرَوْرُونُ وَالْمُونُ وَالْمُونُ وَالِمُونُ وَالْمُونُ والْمُونُ وَالْمُونُ وَلِي وَلَامُ وَالْمُونُ وَلِمُ وَالْمُونُ وَلِي وَلِي وَلَامُ وَلِمُونُ وَلِمُ وَلِمُ وَلِمُ وَلِمُ وَلِمُ والْمُونُ وَلِي وَلِمُ وَلِمُ وَلِمُونُ وَلِي وَلِمُونُو وَلِي مُلِي وَلِمُ وَلِمُ وَلِي مُولِمُ وَلِي مُولِمُ وَلِمُ وَلِمُ وَلِي
- (ع) دُوْرُ وَ مِنْ الْمُرْمِ عِلَمْ مِنْ مِنْ مِنْ مَا مُنْ مِنْ مُنْ مَا مُنْ مُنْ مُنْ مُنْ مُنْ مُنْ مُنْ م کُرِ وَسُرُمُو.
- (٤) دُهُ وَ رُسُونَ وَرَسُونَ وَ رَمُونَ وَسُونَا مُودَ وَ وَرَادُو وَ رَدُو وَ وَ وَرَدُو وَ وَ وَرَدُو وَ وَرَدُو وَ وَرَدُو وَ وَ وَرَدُو وَ وَ وَرَدُو وَ وَرَدُ وَرَدُو وَ وَرَدُ وَرَدُو وَ وَرَدُو وَ وَرَدُو وَ وَرَدُو وَا وَرَدُو وَ وَرَدُو

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- وَرَوْرِهُ وَرَدُورِهُ وَرَدُورِهِ وَرَدُورِهِ وَرَدُورِهِ وَرَدُورِهِ اللهِ المَدَاوِهِ وَرَدُورِهِ اللهِ المَدَاوِهِ وَرَدُورِهِ اللهِ اللهِ

2023 گُوشِيْ 27

# ئى مۇرد كى دۇردى ئىدۇرى ئى

# Supply, Installation, Configuration and Migration of Core Switch, Distribution Switch, Central UPS and Environment Monitoring System

### 1. TECHNICAL REQUIREMENT AND SCOPE OF WORKS

LOT 1 and LOT 2 will be evaluated separately.

Bidders are required to fill the Bidder's specification form and if any information in the specification form are missing or does not meet the requirement specified by the Ministry of Education, the Bidder's proposed bid document will be disqualified.

#	Minimum Requirements	Quantity
LOT 1	Network Switches - Supply, Installation, Configuration, Migration, Documand Training	entation
1.1	Core Switch	02 Bundle
1.1.1	Brand (Switches should be of Fortinet brand)	
1.1.2	Model (Vendor MUST specify the switch model)	
1.1.3	Network Interfaces: 24 x 1 GE/10 GE SFP+ ports and 2x 100 GE QSFP28 ports	
1.1.4	The device shall support minimum 880Gbps switching capacity	
1.1.5	The device shall support minimum 1030Mpps throughput	
1.1.6	The device shall have minimum 64K MAC address storage	
1.1.7	The device shall support up to 24k routing table	
1.1.8	The device shall have minimum 8MB packet buffers	
1.1.9	The device shall have minimum 8GB DRAM	
1.1.10	The device shall support the following Layer 2 Features and Protocols:	
	IEEE 802.1AX LAG, IEEE802.1D STP, IEEE802.1Q VLAN, IEEE 802.1s MSTP, IEEE	
	802.1w RSTP, IEEE 802.3ad LACP, STP BPDU Guard, STP Root Guard, Jumbo frames	
1.1.11	The device shall have and include any required license for the following Layer 3 Features and	
	Protocols:	
	BFD, DHCP Relay, DHCP Server, OSPFv2, RIPv2, VRRP, BGP, ISIS, ECMP	
1.1.12	The device shall have the following Security and visibility Features:	
	ACL, Dynamic ARP inspection, IEEE 802.1ab LLDP, IEEE 802.1X Authentication,	
	RADIUS Accounting, sFlow	
1.1.13	The device shall support MCLAG high availability	
1.1.14	The device shall have the following management features:	
	Dual firmware, HTTP/HTTPS, IPv4 management, packet capture, RMON, SNMP v1/v2c/v3,	
	SNTP, TFTP, SPAN, CLI, Web GUI, Syslog, Telnet/SSH	_
1.1.15	The device shall have front to back air flow	_
1.1.16	The device shall have redundant hot swappable AC power supply unit	_
1.1.17	Form factor: 1 RU, rack mounting accessories should be included	
1.1.18	6 x 10GE SFP+ SR transceiver module shall be included. The transceiver shall be from the	
1.1.10	same OEM.	_
1.1.19	6 x Duplex LC-LC, 5m, MM, OM5 fiber optic patch cable shall be included.	
1.1.20	10 x 10GE copper SFP+ RJ45 transceiver module shall be included. The transceiver shall be from the same OEM.	
1.1.21	02 x 10GE SFP+ LR transceiver module. The transceiver shall be from the same OEM.	-
1.1.22	02 x 100GE QSFP28 SR transceivers module with 2m fiber optic cable shall be included.	-
1.1.22	The transceiver shall be from the same OEM.	
1.1.23	The proposed device shall support direct security and management integration with the	-

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	existing Fortinet Fortigate Firewall	
1.1.24	Installation and Configuration as per specification 4	
1.1.25	Warranty: 1-Year Parts and Service with 24x7 comprehensive Support, Hardware	
	Replacement, Firmware Upgrades	
1.1.26	Technical Support: 1-Year 24x7 on-site technical support services and labor	
1.2	48 Port Full PoE Distribution Switch	08 Bundle
1.2.1	Brand (Switches should be of Fortinet brand)	- oo Banare
1.2.2	Model (Vendor MUST specify the switch model)	
1.2.3	Network Interfaces: 48x GE RJ45 PoE (802.3af/at) and 4x 10GE SFP+	
1.2.4	The proposed device shall have minimum 740W PoE power budget	-
1.2.5	The proposed device shall support minimum 176Gbps switching capacity	
1.2.6	The proposed device shall support minimum 260Mpps throughput	_
1.2.7	The proposed device shall support upto 4K VLANs	_
1.2.8	The proposed device shall have minimum 2MB packet buffers	
1.2.9	The proposed device shall have minimum 512MB DRAM	
1.2.10	The device shall support the following Layer 2 Features and Protocols:	
	IEEE 802.1AX LAG, IEEE802.1D STP, IEEE802.1Q VLAN, IEEE 802.1s MSTP, IEEE	
	802.1w RSTP, IEEE 802.3ad LACP, STP BPDU Guard, STP Root Guard, Jumbo frames	
1.2.11	The device shall have and include any required license for the following Layer 3 Features and	1
	Protocols:	
	BFD, DHCP Relay, Static Routing	
1.2.12	The device shall have the following Security and visibility Features:	
	ACL, IEEE 802.1X Authentication, RADIUS Accounting, sFlow	
1.2.13	The device shall have the following management features:	
	Dual firmware, HTTP/HTTPS, IPv4 management, Web GUI, Telnet/SSH	
1.2.14	Form factor: 1 RU, rack mounting accessories should be included	
1.2.15	2 x 10GE SFP+ SR transceiver module shall be included. The transceiver shall be from the same OEM.	
1.2.16	2 x Duplex LC-LC, 5m, MM, OM5 fiber optic patch cable shall be included.	
1.2.17	The proposed device shall support direct security and management integration with the existing Fortinet Fortigate Firewall	
1.2.18	The device shall support integrating it directly into the existing Fortinet Security Fabric	
1.2.19	Installation and Configuration as per specification 4	
1.2.20	Warranty: 1-Year Parts and Service Advanced Hardware Replacement, Firmware and	
	General Upgrades	
1.2.21	Technical Support: 1-Year 24x7 on-site technical support services and labor	
1.3	24 Port Full PoE Distribution Switch	02 Bundle
1.3.1	Brand (Switches should be of Fortinet brand)	
1.3.2	Model (Vendor MUST specify the switch model)	
1.3.3	Network Interfaces: 24x GE RJ45 PoE (802.3af/at) and 4x 10GE SFP+	
1.3.4	The proposed device shall have minimum 370W PoE power budget	_
1.3.5	The proposed device shall support minimum 128Gbps switching capacity	_
1.3.6	The proposed device shall support minimum 190Mpps throughput  The proposed device shall support upto 4K VI ANs	-
1.3.7	The proposed device shall support upto 4K VLANs  The proposed device shall have minimum 2MB packet buffers	-
1.3.8	The proposed device shall have minimum 2MB packet buffers  The proposed device shall have minimum 512MB DRAM	_
1.3.10	he device shall support the following Layer 2 Features and Protocols:	-
1.5.10	IEEE 802.1AX LAG, IEEE802.1D STP, IEEE802.1Q VLAN, IEEE 802.1s MSTP, IEEE 802.1w RSTP, IEEE 802.3ad LACP, STP BPDU Guard, STP Root Guard, Jumbo frames	
1.3.11	The device shall have and include any required license for the following Layer 3 Features and Protocols: BFD, DHCP Relay, Static Routing	-
1.3.12	The device shall have the following Security and visibility Features: ACL, IEEE 802.1X Authentication, RADIUS Accounting, sFlow	1
1.3.13	The device shall have the following management features:	-
1.5.15	Dual firmware, HTTP/HTTPS, IPv4 management, Web GUI, Telnet/SSH	
1.3.14	Form factor: 1 RU, rack mounting accessories should be included	1
1.3.15	2 x 10GE SFP+ SR transceiver module shall be included. The transceiver shall be from the	
	same OEM.	
	Same OLIVI.	

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	Technical Support: 1-Year 24x7 on-site technical support services and labor	
1.3.21	Tarkainal Comparts 1 Warn 24-7 and site tarkainal compart compiles and labor	
	General Upgrades	
1.3.20	Warranty: 1-Year Parts and Service Advanced Hardware Replacement, Firmware and	
1.3.19	Installation and Configuration as per specification 3	
1.3.18	The device shall support integrating it directly into the existing Fortinet Security Fabric	
	existing Fortinet Fortigate Firewall	
1.3.17	The proposed device shall support direct security and management integration with the	
1.3.16	2 x Duplex LC-LC, 5m, MM, OM5 fiber optic patch cable shall be included.	

#### 1.4.1 Project Team

To ensure successful implementation, the project delivery team must consist of OEM certified personnel who will be onsite for the duration of the installation, configuration, and migration work. The team should include:

- Project Manager: responsible for overseeing the entire project and ensuring that all aspects of the project are completed within the timeline and budget.
- Network Professional: responsible for configuring the switches and integrating it with the existing FortiGate firewall, as well as verifying the proper functioning of the integrated solution.
- VMware Professional: responsible for configuring, integration and migration of VMware management networks, and VM networks.
- Security Specialist: responsible for ensuring the integrated solution meets the necessary security requirements, including configuring access control, implementing secure communication protocols, and ensuring that the solution adheres to industry best practices.

All members of the project delivery team must be OEM certified personnel and possess relevant industry certifications such as Fortinet NSE (Network Security Expert), and VMware Data Center Certification. They must have experience working with the proposed switch, FortiGate firewall, VMware Datacenter products. The onsite presence of the project delivery team is essential to ensure timely troubleshooting and problem resolution. They will be responsible for providing ongoing support and maintenance until the handover of the integrated solution to the Ministry of Education (MoE).

#### 1.4.2 Planning

- Review the existing network infrastructure and topology.
- Determine the required number of Switches and their placement in the network.
- Identify any potential issues or challenges that may arise during the integration.

#### Integration with FortiGate Firewall

- Integrate with the existing FortiGate firewall.
- Configure the FortiGate firewall to recognize and manage the core switches and edge switches
- Configure VLANs, port settings, and any other necessary configurations.

#### Configuration

- Configure the Switches to work seamlessly with the FortiGate firewall.
- Configure VLANs, port settings, and any other necessary configurations.

#### Integration with Existing Network Topology

- Integrate the new solution with the existing network infrastructure.
- Configure the new solution to support any necessary protocols or applications.

#### Testing and Verification

- Conduct testing to ensure that the integrated solution meets the performance and security requirements.
- Verify that the integrated solution is operating correctly and efficiently.
- Prepare test results and verification reports.

#### Documentation, Training and Handover

Provide training to minimum 3 IT staff of the MoE on the configuration and operation of the integrated solution.

Handover the integrated solution to the network team with all necessary documentation (documentation should include all switch related configurations such as VLANs, port filtering, etc).

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#	Minimum Requirements	Quantity
LOT 2	UPS and Server Room Environment Monitoring System - Supply, Installation Configuration, Migration, Documentation and Training	n,
1.1	Primary Site Redundant UPS	01
	01 Nos x APC Symmetra LX 16kVA Scalable to 16kVA N+1 Rack-mount, 220/230/240V	Bundle
	04 Nos x APC Symmetra LS Battery Module SYBT5	
	04 Nos x APC Symmetra LX 4kVA Power Module	
1.1.1	01 Nos x Intelligence module	
	01 Nos x Network management card 2 with environmental monitoring	
	01 Nos x APC Symmetra LX Communications Card	
	• 01 Nos x APC Symmetra LX 4-post rack-mounting rails	
1.1.2	02 Nos x APC Easy PDU, Metered, ZeroU, 16A, 230V, (18) C13 & (3) C19	-
1.1.3	40 Nos x APC 1U 19" Black Modular Toolless Blanking Panel	-
1.1.4	Installation and Configuration as per specification 7	-
1.1.5	Warranty: 1-Year hardware repair or replacement warranty including on-site support	-
1.1.6	Technical Support: 1-Year 8x5 on-site technical support services and labor	-
1.2	Server Room Environment Monitoring System	01
1.2.1	Brand (Vendor MUST specify the brand)	Bundle
1.2.2	Model (Vendor MUST specify the model)	Dunaic
1.2.3	01 x Large Enterprise Environment Monitoring System with Redundant AC Power	-
1.2.4	01 x Integrated Temp/Humidity Sensor, PoE	
1.2.5	02 x Temperature/Humidity/Dew Point Sensor	-
1.2.6	01 x Smoke Detector with Built-In Fixed-Temperature Heat Sensor	
1.2.7	01 x Adaptive Dual Microwave/PIR Motion Detector	-
1.2.8	01 x Ultra-HD Wired Day/Night Outdoor Bullet IP Camera with PoE	
1.2.9	01 x Liquid Detection Sensor, Plenum Rope-Style (10x10ft)	
1.2.10	01 x USB 4G Modem (compatible with local Telecom providers)	
1.2.11	1 x AC Voltage Detector with Relay & IEC C14 Socket	
1.2.12	1 x AC Voltage Detector with Relay & IEC C14 Socket	
1.2.13	Warranty: 1-Year Parts and Service with on-site support	
1.2.14	Technical Support: 1-Year 24x7 on-site technical support services and labor	
4.0	APC UPS and Environment Monitoring System- Installation, Configuration, Migration,	
1.3	Documentation and Training	
	Project Team	
	To ensure successful implementation, the project delivery team must consist of OEM certified	
	personnel who will be onsite for the duration of the installation, configuration, and migration	
	work. The team should include:	
	Project Manager - responsible for overall project management and coordination.	
	2. Site Surveyor - responsible for site survey, electrical and civil works.	
1 2 1	3. Installation Professional - responsible for unpacking, assembling, and installing the APC	
1.3.1	Symmetra and Environment Monitoring System.	
	01 Nos x APC Symmetra LX 4-post rack-mounting rails	
	All members of the project delivery team must be OEM certified Personnel and possess relevant	
	industry certifications. The onsite presence of the project delivery team is essential to ensure	
	timely troubleshooting and problem resolution. They will be responsible for providing ongoing	
	support and maintenance until the handover of the system to the MoE.	-
	Install and configure on ADC Cymretical V 16-VA LIDC 1 E	
	Install and configure an APC Symmetra LX 16kVA UPS system and Environment monitoring	
	system, including all the electrical work required for a successful installation. It also includes the	
132	system, including all the electrical work required for a successful installation. It also includes the rack mounting of the UPS and the recabling of all existing data center equipment and PDUs.	
1.3.2	system, including all the electrical work required for a successful installation. It also includes the rack mounting of the UPS and the recabling of all existing data center equipment and PDUs.  Additionally, the project will involve configuring, alerting and monitoring to ensure the system is	
1.3.2	system, including all the electrical work required for a successful installation. It also includes the rack mounting of the UPS and the recabling of all existing data center equipment and PDUs.	

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#### Project Deliverables:

The following are the deliverables of this project:

- 1. A fully installed and configured APC Symmetra UPS system, rack mounted and connected to all necessary equipment and PDUs.
- 2. Move and install existing APC Symmetra LX UPS to DR Site
- 3. Move and install existing 2 x APC UPSs at DR Site to Primary Site
- 4. Move and install existing APC Environment Monitoring System at Primary Site to DR Site
- 5. A fully installed and configured Environment Monitoring System at the Primary Site
- 6. A complete set of documentation, including installation, configuration and operation manuals
- 7. Provide training to minimum 3 IT staff of the MoE on how to operate and maintain the system

#### **Project Tasks:**

The project tasks shall include, but not limited to:

- 1. Site Survey: Conduct a site survey to determine the best location for the APC Symmetra LX 16kVA installation and ensure proper rack space for the unit.
- 2. DR Site Electrical Work: Install and connect a dedicated circuit breaker, ELCB, and an isolation switch for the system.

(Note: Primary Site server room already has dedicated breakers installed)

- 3. Unpacking and Assembling: Unpack the APC Symmetra LX 16kVA and assemble it as per the manufacturer's guidelines.
- 4. Rack Mounting and re-cabling: Mount the APC Symmetra LX 16kVA in the appropriate rack space and re-cable all existing data center equipment and PDUs as necessary
- 5. Configuration: Configure the APC Symmetra LX 16kVA system according to the MoE's requirement
- 6. Move and install existing APC Symmetra LX UPS at the Primary Site to DR Site
- 7. Rack mounting and re-cabling for APC Symmetra LX UPS in DR Site
- 8. DR Site Electrical Work: Install and connect a dedicated circuit breaker, ELCB, and an isolation switch for the system
- 9. Alerting and Monitoring: Configure alerting and monitoring systems to ensure optimal system performance. Alerting and monitoring shall be configured for both sites
- 10. Testing: Conduct comprehensive testing of the APC Symmetra and Environment Monitoring System to ensure its functionality
- 11. Documentation: Provide a complete set of documentation, including installation, configuration and operation manuals.
- 12. Training and Handover: Provide training to minimum 3 IT staff of the MoE on how to operate and maintain the system

### **#** General Technical Requirements

### **Minimum Service Level requirements:**

- a) The support service vendor should provide the contact number of a single point of contact to facilitate immediate contact from the MoE and he or she shall be responsible to liaise with all vendors for rectification of faults within the Next Business Day.
- b) Defective equipment shall be replaced by the bidder at his own cost including the cost of transport if any;
- c) The support service vendor shall provide all normal toolkit and test equipment needed for the maintenance of the hardware to their engineers.
- d) System maintenance and support services will include the following activities.
  - ✓ 24 x 7 on-line Support.
  - ✓ Patch updating and major / minor software version upgrading support.
  - ✓ Phone/ Email support must be provided during the support period.
  - ✓ Issue resolution / Onsite Visits within 1 hour of hardware failures reported.
  - ✓ Local support plan must be maintained by the Bidder for the maintenance period.
- e) After installation and deployment of each component, the support service vendor is required to provide

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written confirmation to the MoE that the part/ component installation and configuration have been completed.

### **Maintenance Support Services including on-site Technical Support:**

- On-site hardware repair/replace and maintenance support service should be delivered by an experienced OEM Certified person/ personnel
- On-site diagnostics and repair service should be delivered by an experienced OEM Certified person/personnel
- Service summary report shall be provided after each work performed including recommendations for optimal performance
- Maintenance Support Person should check and ensure the systems are with the most recent firmware version
- During each maintenance visit, field service professionals should run tests to verify the systems are functioning correctly in all operational modes
- Replacements of parts; labour; travels & accommodation and components should be included as per applicable warranty of the relevant system
- The support service vendor shall maintain critical parts locally in Male' to provide after sale support
- It is mandatory that the support service vendor should maintain the required support technical team as deemed as suited based on the requirements and milestones. The support service vendor MUST have full time Certified Professional(s)/ Person(s) under its payroll.

#### <u>Primary required certificates of the professional(s) – LOT 1:</u>

- Fortinet NSE (Network Security Expert)
- VMware Certified

### Primary required certificates of the professional(s) – LOT 2:

APC Certified

### The vendor shall submit the following documents:

• Certifications copy of the relevant training

48 Port Full PoE Distribution Switch

• ID card or Passport Copy of the certified person/ personnel

#### 2. Price Form

1.2

# LOT 1: Network Switches - Supply, Installation, Configuration, Migration, Documentation and Training # Item Description Quantity Unit Price (MVR) Extended Price (MVR) 1.1 Core Switch 2 Bundle

8 Bundle

.3 24 Port Full PoE Distribution Switch 2 Bundle

Sub Total GST 8% Net Total

LOT 2: UPS and Server Room Environment Monitoring System - Supply, Installation, Configuration, Migration, Documentation and Training					
#	Item Description	Quantity	Unit Price (MVR)	Extended Price (MVR)	
1.1	Primary Site Redundant UPS	01 Bundle			
1.2	Server Room Environment Monitoring System	01 Bundle			
			Sub Total		
			GST 8%		
			Net Total		

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## 2023 گُوشِيْ 27

# عَ قُرُورُ - 4

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# يرع:

- 1. ﴿ وَمُورُ رُمُرَارُومِ فَا فَرُولُو 3 وَمِرَدُ لَا فَرُورُورُ رُمُرَارُ مُرَوَّ مُرْمُوْ.
- 2. هُوْلُ رَمْرَكُوْرُ مُرْفُ عُرُورُورُ وَ الْمُورُورُ وَ الْمُورُورُ وَ الْمُرْفُورُورُ وَ الْمُرْفُورُ وَ الْمُرْفُورُ وَ الْمُرْفُورُ وَالْمُرُورُ وَالْمُرُورُ وَالْمُورُ وَالْمُرُورُورُ وَ الْمُرْفُورُ وَالْمُورُ وَالْمُرُورُورُ وَالْمُورُ وَالْمُورُورُورُ وَالْمُورُ وَالْمُورُ وَالْمُورُورُورُ وَالْمُورُورُ وَالْمُورُورُ وَالْمُورُورُورُ وَالْمُورُورُ وَلِمُورُالِ وَالْمُؤْمِرُ وَالْمُورُورُ وَالْمُورُورُ وَالْمُورُورُ وَالْمُورُورُ وَلِمُورُالِكُورُ وَالْمُورُورُ وَالْمُورُالِمُ وَالْمُورُالِمُورُولُ وَالْمُورُالِمُورُالِورُ وَالْمُورُولُ ولِمُورُالِورُ وَلَالِمُولِمُ وَالْمُولِمُ وَلِمُ لِلْمُولِمُولُولُ وَلَالِمُ وَلِمُ لِلْمُؤْمِلُونُ وَلِمُولِمُولِمُ وَلِمُ وَلِمُورُالِهُ وَلِمُولِمُ وَلِمُولِمُولِمُ وَلِمُولِمُ وَلِمُولِمُ وَلِمُولِمُ وَلِمُولِمُ وَلِمُ وَلِمُولِمُ وَلِمُولِمُ وَلِمُ وَلِمُولِمُ وَلِمُ لِمُولِمُ وَلِمُ وَلِمُ وَلِمُ وَلِمُ وَلِمُ لِلْمُ وَلِمُ لِلْمُولِمُ وَلِمُ وَلِمُولِمُ وَلِمُولِمُ وَلِمُولِمُ وَلِمُولِمُ وَلِمُولِمُ وَلِمُ وَلِمُولِمُ وَلِمُ وَلِمُولِمُ وَلِمُ وَلِمُولِمُ وَلِمُ وَلِمُ وَلِمُ وَلِمُ وَلِمُ وَلِمُ وَلِمُ وَلِمُ وَلِمُولِمُ وَلِمُ وَلِمُولِمُ ولِمُولِمُ وَلِمُ وَلِمُولِمُ وَلِمُ وَلِمُولِمُ وَلِمُولِمُ وَلِمُ وَلِمُولِمُ وَلِمُولِمُ وَلِمُولِمُولِمُ لِمُلْمُ لِمُلْمُ ولِمُولِمُ لِمُلْمُلِمُ لِمُلِمُ لِمُعِلِمُ لِمُولِمُ ولِمُولِمُ لِ
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10	رُرُرُدِ وُجِرُدُ رُرُرُدِ دُمِرُوْ وَمِ وَجِرُدُ رُرُرُدِ دُمِرُوْ وَمِ وَجِرُدُ	2 6 6 9 9 9 9 9 9 9 9 9 9 9 9 9
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# ئے فر*و*گو – 6

# פיל היעראקש איננית

Form of Bid Security						
WHEREAS,						
KNOW ALL PEOPLE by these presents that We						
Purchaser, the Bank binds itself, its successors, and assigns by these presents.						
SEALED with the Common Seal of the said Bank thisday of						
THE CONDITIONS of this obligation are:						
(1) If, after Bid opening, the Bidder withdraws his Bid during the period of Bid validity specified in the Form of Bid; or						
<ul> <li>If the Bidder having been notified of the acceptance of his Bid by the Purchaser during the period of Bid validity:         <ul> <li>(a) fails or refuses to execute the Form of Agreement in accordance with the Instructions to Bidders, if required; or</li> <li>(b) fails or refuses to furnish the Performance Security, in accordance with the Instruction to Bidders; or</li> </ul> </li> </ul>						
(c) does not accept the correction of the Bid Price pursuant to Clause 27,						
* The Bidder should insert the amount of the Guarantee in words and figures denominated in Maldivian Rufiyaa. This figure should be the same as shown in Clause 16.1 of the Instructions to Bidders.  we undertake to pay to the Purchaser up to the above amount upon receipt of his first written demand, without the Purchaser's having to substantiate his demand, provided that in his demand the Purchaser will note that the amount claimed by him is due to him owing to the occurrence of one or any of the three conditions, specifying the occurred condition or conditions.						
This Guarantee will remain in force up to and including the date						
DATE SIGNATURE OF THE BANK						
WITNESS SEAL						
[signature, name, and address]						

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# ئے فرونو - 7

#### 43) LOLL 00/0 4 12) LOLL 00/0 4 12) LOLL 00/0 4

Form of Performance Guarantee
To:
[name &address of Purchaser]
WHEREAS
AND WHEREAS it has been stipulated by you in the said Contract that the Supplier shall furnish you with a Bank Guarantee by a recognized bank for the sum specified therein as security for compliance with his obligations in accordance with the Contract;
AND WHEREAS we have agreed to give the Supplier such a Bank Guarantee;
Now therefore we hereby affirm that we are the Guarantor and responsible to you, on behalf of the Supplier, up to a total of *
*An amount is to be inserted by the Guarantor, representing the percentage of the Contract Price specified in the Contract, in Maldivian Rufiyaa.
We hereby waive the necessity of your demanding the said debt from the Supplier before presenting us with the demand.
We further agree that no change or addition to or other modification of the terms of the Contract or of the Works to be performed there under or of any of the Contract documents which may be made between you and the Supplier shall in any way release us from any liability under this Guarantee, and we hereby waive notice of any such change, addition, or modification.
This Guarantee shall be valid until the date of issue of the Defects Correction Certificate.
SIGNATURE AND SEAL OF THE GUARANTOR
Name of Bank
Address
Date

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# ئے قرونو - 8

	يُرِدُعُ وَسِّ يَرْوَسُ وَيُرْضِ وَيُرْضِ وَيُرْضِ
To:	Form of Bank Guarantee for Advance Payment
10.	[name & address of Purchaser]
	[name of Contract]
Gentler	men:
In acco	ordance with the provisions of the Conditions of Contract, of the above-mentioned Contract,
	r] (hereinafter called "the Supplier") shall deposit with
	[amount in words].
We, the	>
[Bank	or Financial Institution], as instructed by the Supplier, agree unconditionally and irrevocably to
guarant	
	ing * [amount of Guarantee]
	[amount in words].
Works	ther agree that no change or addition to or other modification of the terms of the Contract or of to be performed there under or of any of the Contract documents which may be made between
any wa	y release us from any liability under this Guarantee, and we hereby waive notice of any such addition, or modification.
	An amount is to be inserted by the Bank or Financial Institution representing the amount of the dvance Payment, in Maldivian Rufiyaa.
	uarantee shall remain valid and in full effect from the date of the advance payment under the et until
	the amount from the Supplier.
Yours t	ruly,
	URE AND SEAL:
N.	AME & ADDRESS OF BANK/INSTITUTION

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# ئى ئۇنۇ - 9 ھۇرسۇر ئاسىمىر دۇد

#	Minimum Requirements	Quantity	Meets? Yes/No/Better	Specification of the proposed item and relevant parts number	
LOT 1	Network Switches - Supply, Installation Training	, Configu	ıration, Migra	tion, Documentation and	
1.1	Core Switch	02			
1.1.1	Brand (Switches should be of Fortinet brand)	Bundle			
1.1.2	Model (Vendor MUST specify the switch model)				
1.1.3	Network Interfaces: 24 x 1 GE/10 GE SFP+ ports and 2x 100 GE QSFP28 ports				
1.1.4	The device shall support minimum 880Gbps switching capacity	-			
1.1.5	The device shall support minimum 1030Mpps throughput				
1.1.6	The device shall have minimum 64K MAC address storage				
1.1.7	The device shall support up to 24k routing table				
1.1.8	The device shall have minimum 8MB packet buffers				
1.1.9	The device shall have minimum 8GB DRAM				
1.1.10	The device shall support the following Layer 2 Features and Protocols: IEEE 802.1AX LAG, IEEE802.1D STP, IEEE802.1Q VLAN, IEEE 802.1s MSTP, IEEE 802.1w RSTP, IEEE 802.3ad LACP, STP BPDU Guard, STP Root Guard, Jumbo frames				
1.1.11	The device shall have and include any required license for the following Layer 3 Features and Protocols: BFD, DHCP Relay, DHCP Server, OSPFv2, RIPv2, VRRP, BGP, ISIS, ECMP				
1.1.12	The device shall have the following Security and visibility Features: ACL, Dynamic ARP inspection, IEEE 802.1ab LLDP, IEEE 802.1X Authentication, RADIUS Accounting, sFlow				
1.1.13	The device shall support MCLAG high availability				
1.1.14	The device shall have the following management features: Dual firmware, HTTP/HTTPS, IPv4 management, packet capture, RMON, SNMP v1/v2c/v3, SNTP, TFTP, SPAN, CLI, Web GUI, Syslog, Telnet/SSH				
1.1.15	The device shall have front to back air flow				
1.1.16	The device shall have redundant hot swappable AC power supply unit				
1.1.17	Form factor: 1 RU, rack mounting accessories should be included				

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1.1.18	6 x 10GE SFP+ SR transceiver module shall be included. The transceiver shall be from the same OEM.				
1.1.19	6 x Duplex LC-LC, 5m, MM, OM5 fiber optic patch cable shall be included.	-			
1.1.20	10 x 10GE copper SFP+ RJ45 transceiver module shall be included. The transceiver shall be from the same OEM.				
1.1.21	02 x 10GE SFP+ LR transceiver module. The transceiver shall be from the same OEM.	-			
1.1.22	02 x 100GE QSFP28 SR transceivers module with 2m fiber optic cable shall be included. The transceiver shall be from the same OEM.				
1.1.23	The proposed device shall support direct security and management integration with the existing Fortinet Fortigate Firewall				
1.1.24	Installation and Configuration as per specification 4				
1.1.25	Warranty: 1-Year Parts and Service with 24x7 comprehensive Support, Hardware Replacement, Firmware Upgrades				
1.1.26	Technical Support: 1-Year 24x7 on-site technical support services and labor				
1.2	48 Port Full PoE Distribution Switch	08			
1.2.1	Brand (Switches should be of Fortinet brand)	Bundle			
1.2.2	Model (Vendor MUST specify the switch model)				
1.2.3	Network Interfaces: 48x GE RJ45 PoE (802.3af/at) and 4x 10GE SFP+				
1.2.4	The proposed device shall have minimum 740W PoE power budget				
1.2.5	The proposed device shall support minimum 176Gbps switching capacity				
1.2.6	The proposed device shall support minimum 260Mpps throughput				
1.2.7	The proposed device shall support upto 4K VLANs				
1.2.8	The proposed device shall have minimum 2MB packet buffers				
1.2.9	The proposed device shall have minimum 512MB DRAM				
1.2.10	The device shall support the following Layer 2 Features and Protocols: IEEE 802.1AX LAG, IEEE802.1D STP, IEEE802.1Q VLAN, IEEE 802.1s MSTP, IEEE				
	802.1w RSTP, IEEE 802.3ad LACP, STP BPDU Guard, STP Root Guard, Jumbo frames				
1.2.11	The device shall have and include any required license for the following Layer 3 Features and Protocols:				
1015	BFD, DHCP Relay, Static Routing	_			
1.2.12	The device shall have the following Security and visibility Features: ACL, IEEE 802.1X Authentication, RADIUS				
1.2.13	Accounting, sFlow  The device shall have the following management	-			
1.2.13	features:				
	Dual firmware, HTTP/HTTPS, IPv4				
	management, Web GUI, Telnet/SSH				

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1.2.14 Form factor: 1 RU, rack mounting accessories should be included.  1.2.15 2 x 10CR SFP; SR transeciver module shall be included. The transeciver shall be from the same OEM.  1.2.16 2 x Duplex LC-LC, 5m, MM, OM5 fiber optic patch cable shall be included.  1.2.17 The proposed device shall support direct security and management integration with the existing Fortine Fortigate Firewall  1.2.18 The device shall support integrating it directly into the existing Fortinet Security Pabric installation and Configuration as per specification 4  1.2.20 Warranty: 1-Year Parts and Service Advanced Hardware Replacement, Firmware and General Upgraded.  1.2.21 Technical Support is Year 24x7 on-site technical support services and labor technical support services and labor devices shall support minimum 128Ghps switching capacity 1  1.3. The proposed device shall support minimum 190Mpps throughput 1  1.3. The proposed device shall support minimum 190Mpps throughput 1  1.3. The proposed device shall have minimum 2MB packet buffers device shall support minimum 190Mpps throughput 1  1.3. The proposed device shall have minimum 2MB packet buffers device shall have minimum 2MB packet buffers device shall support minimum 190Mpps throughput 1  1.3. The proposed device shall have minimum 2MB packet buffers device shall support minimum 2MB packet buffers device shall support minimum 2MB packet buffers device shall support devices devices sh					
1.2.15 2 x 10GE SPF + SR transceiver module shall be included. The transceiver shall be from the same OFM.  1.2.16 2 x Duplex LC-LC, 5m, MM, OM5 fiber optic patch cable shall be included.  1.2.17 The proposed device shall support direct security and management integration with the existing Fortinet Fortigate Firewall  1.2.18 The device shall support integrating it directly into the cashing Fortinet Security Fabric  1.2.19 Insullation and Configuration as per specification 4  1.2.20 Warrany: 1-Year Parts and Service Advanced Hardware Replacement, Firmware and General Upgrades  1.2.21 Technical Support services and labor  1.3.1 Part Full PoE Distribution Switch  1.3.2 Model (Vendor MUS) specify the switch model)  1.3.3 Network Interfaces: 24x GR R145 PoE (80.2.3af/st) and 4x 10GE SFP+  1.3.4 The proposed device shall support minimum 128Gbps switching capacity  1.3.5 The proposed device shall support minimum 128Gps switching capacity  1.3.6 The proposed device shall support minimum 190Mps throughput 1.3.7 The proposed device shall support minimum 190Mps throughput 1.3.7 The proposed device shall support minimum 190Mps throughput 1.3.7 The proposed device shall support minimum 190Mps throughput 1.3.7 The proposed device shall support minimum 190Mps throughput 1.3.7 The proposed device shall support minimum 190Mps throughput 1.3.7 The proposed device shall support minimum 190Mps throughput 1.3.7 The proposed device shall support minimum 190Mps throughput 1.3.7 The proposed device shall support minimum 190Mps throughput 1.3.7 The proposed device shall support minimum 2MB packet buffers  1.3.10 The device shall support the following Layer 2 Features and Protocols: Features and Protocols: REPE 802.18 X LAG, IEEE 802.18 MSTP, IEEE 802.18 MSTP, IEEE 802.38 LACP, STP BPDU Guard, STP Roof Guard, Jumbo frames  1.3.11 The device shall have the following Security and visibility Features:  2.3.11 The device shall have the following security and visibility Features  2.3.12 The device shall have the following security and visibi	1.2.14	Form factor: 1 RU, rack mounting accessories			
included. The transceiver shall be from the same OFM.  1.2.16  2 x Duplex LC-LC, Sm, MM, OMS fiber optic patch cable shall be included.  1.2.17 The proposed device shall support direct security and management integration with the existing Fortinet Fortigate Freewall Table into the existing Fortinet Fortigate Freewall support integration with the existing Fortinet Fortigate Freewall into the existing Fortinet Security Fabric  1.2.19 The device shall support integrating it directly into the existing Fortinet Security Fabric  1.2.20 Warranty: I-Year Parts and Service Advanced Hardware Replacement, Firmware and General Upgrades  1.2.21 Technical Support: I-Year 24x7 on-site technical support services and labor  1.2.21 Technical Support: I-Year 24x7 on-site technical support services and labor  1.3.2 4 Port Full PoE Distribution Switch  1.3.3 Meswork Interfaces: 24x GF R J45 PoE (802.3a/fat) and 4x 10GE SPP (802.3a/fat) and 1x 10GE SPP	1.2.15				
1.2.16   2x Duplex LC-LC, Sm. MM. OMS fiber optic patch cable shall be included.	1.2.10				
1.2.17 The proposed device shall support direct security and management integration with the existing Fortinet Fortigate Firewall  1.2.18 The device shall support integrating it directly into the existing Fortinet Fortigate Firewall  1.2.20 Wardamy; I-Year Parts and Service Advanced Hardware Replacement, Firmware and General Upgrades  1.2.21 Technical Support: I-Year 24x7 on-site technical support services and labor  1.3.24 Port Full PoE Distribution Switch  1.3.1 Brand (Switches should be of Fortinet brand)  1.3.2 Model (Vendor MUST specify the switch model)  1.3.3 Network Interfaces: 24x GE R145 PoE (802-34r4) and 4x 10GE SFP-  1.3.4 The proposed device shall support minimum 128Gbps switching capacity  1.3.5 The proposed device shall support minimum 190Mpps throughput  1.3.6 The proposed device shall support minimum 190Mpps throughput  1.3.7 The proposed device shall support minimum 190Mpps throughput  1.3.8 The proposed device shall support minimum 190Mpps throughput  1.3.9 The proposed device shall have minimum 2MB packet buffers  1.3.10 he device shall support the following Layer 2 Features and Protocols: IEEE 802.14x NLAG, IEEE 802.14x NLAG, IEEE 802.14x NLAG, IEEE 802.14x NFP, IEEE 802.14x NLAG, IEEE 802.14x NFP, IEEE 802.14x N					
1.2.17 The proposed device shall support direct security and management integration with the existing Fortinet Fortigate Firewall  1.2.18 The device shall support integrating it directly into the existing Fortinet Security Fabric  1.2.19 Installation and Configuration as per specification 4  1.2.20 Warranty: 1-Year Parts and Service Advanced Hardware Replacement, Firmware and General Upgrades  1.2.21 Technical Support: 1-Year 24x7 on-site rechnical support services and labor  1.3.2 How Full POE Distribution Switch  1.3.3 Newthen Should be of Fortinet brand)  1.3.4 The proposed device should be of Fortinet brand, but the following Layer 2 (802.3a/ra) and 4x 10GE SFP-  1.3.4 The proposed device shall support minimum 128Gbps switching capacity  1.3.5 The proposed device shall support minimum 128Gbps switching capacity  1.3.6 The proposed device shall support minimum 190Mps throughput  1.3.7 The proposed device shall support upto 4K VLANs  1.3.8 The proposed device shall support minimum 190Mps throughput  1.3.9 The proposed device shall support minimum 190Mps throughput  1.3.10 The proposed device shall have minimum 2MB packet buffers  1.3.10 Evices shall support the following Layer 2 Features and Protocols: EPD Goulard, Jumbo frames  1.3.11 The device shall support the following Layer 2 Features and Protocols: EPD, DHCP Relay, Stait Routing  1.3.11 The device shall support were shall support with the shall be included be included be included be included be included. The transceiver module shall be included.	1.2.16				
Fortinet Fortigate Firewall  1.2.18 The device shall support integrating it directly into the existing Fortinet Security Fabric  1.2.19 Installation and Configuration as per specification 4  1.2.20 Warranty: 1-Year Parts and Service Advanced Hardware Replacement, Firmware and General Upgrades  1.2.21 Technical Support: 1-Year 24x7 on-site technical support services and labor  1.3.1 Brad (Switches should be of Fortinet brand)  1.3.2 Model (Vendor MUST specify the switch model)  1.3.3 Network Interfaces: 24x GE R145 PoE  (802.3aFa) and 4x 10GE SFP+  1.3.4 The proposed device shall support minimum  128Gbps switching capacity  1.3.5 The proposed device shall support upto 4K  VI-ANs  1.3.8 The proposed device shall support upto 4K  VI-ANs  1.3.9 The proposed device shall have minimum 2MB packet buffers  1.3.9 The proposed device shall have minimum  512MB DRAM  1.3.10 the device shall support the following Layer 2  Features and Protocols:  IEEE 802.1A X LAG, IEEE802.1D STP, IEEE  802.1a W STP, IEEE 802.3ad LACP, STP BPDU  Guard, STP ROO Guard, Jumbo frames  1.3.11 The device shall have the following Security and visibility Features:  ACL, IEEE 802.1X A Lad, IEEE 802.1s MSTP, IEEE  802.1a KSTP, IEEE 802.3ad LACP, STP BPDU  Guard, STP ROO Guard, Jumbo frames  1.3.11 The device shall have the following Security and visibility Features:  ACL, IEEE 802.1X A Ladden include and include an	1.2.17				
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OEM.	1.3.15	included. The transceiver shall be from the same			
		OEM.			

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1.3.16	2 x Duplex LC-LC, 5m, MM, OM5 fiber optic		
	patch cable shall be included.		
1.3.17	The proposed device shall support direct security		
	and management integration with the existing		
	Fortinet Fortigate Firewall		
1.3.18	The device shall support integrating it directly		
	into the existing Fortinet Security Fabric		
1.3.19	Installation and Configuration as per		
	specification 3		
1.3.20	Warranty: 1-Year Parts and Service Advanced	1	
	Hardware Replacement, Firmware and General		
	Upgrades		
1.3.21	Technical Support: 1-Year 24x7 on-site		
	technical support services and labor		

### 1.4 Network Switches - Installation, Configuration, Migration, Documentation and Training

#### 1.4.1 Project Team

To ensure successful implementation, the project delivery team must consist of OEM certified personnel who will be onsite for the duration of the installation, configuration, and migration work. The team should include:

- Project Manager: responsible for overseeing the entire project and ensuring that all aspects of the project are completed within the timeline and budget.
- Network Professional: responsible for configuring the switches and integrating it with the existing FortiGate firewall, as well as verifying the proper functioning of the integrated solution.
- VMware Professional: responsible for configuring, integration and migration of VMware management networks, and VM networks.
- Security Specialist: responsible for ensuring the integrated solution meets the necessary security requirements, including configuring access control, implementing secure communication protocols, and ensuring that the solution adheres to industry best practices.

All members of the project delivery team must be OEM certified personnel and possess relevant industry certifications such as Fortinet NSE (Network Security Expert), and VMware Data Center Certification. They must have experience working with the proposed switch, FortiGate firewall, VMware Datacenter products. The onsite presence of the project delivery team is essential to ensure timely troubleshooting and problem resolution. They will be responsible for providing ongoing support and maintenance until the handover of the integrated solution to the Ministry of Education (MoE).

#### 1.4.2 Planning

- Review the existing network infrastructure and topology.
- Determine the required number of Switches and their placement in the network.
- Identify any potential issues or challenges that may arise during the integration.

### Integration with FortiGate Firewall

- Integrate with the existing FortiGate firewall.
- Configure the FortiGate firewall to recognize and manage the core switches and edge switches
- Configure VLANs, port settings, and any other necessary configurations.

#### Configuration

- Configure the Switches to work seamlessly with the FortiGate firewall.
- Configure VLANs, port settings, and any other necessary configurations.

#### Integration with Existing Network Topology

- Integrate the new solution with the existing network infrastructure.
- Configure the new solution to support any necessary protocols or applications.

### Testing and Verification

- Conduct testing to ensure that the integrated solution meets the performance and security requirements.
- Verify that the integrated solution is operating correctly and efficiently.
- Prepare test results and verification reports.

#### Documentation, Training and Handover

• Provide training to minimum 3 IT staff of the MoE on the configuration and operation of the integrated solution.

Handover the integrated solution to the network team with all necessary documentation (documentation should include all switch related configurations such as VLANs, port filtering, etc).

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#	Minimum Requirements	Quantity	Meets? Yes/No/Better	Specification o relevan
LOT 2	UPS and Server Room Environment Monitoring System Documentation and Training	- Supply,	Installation, Co	onfiguration, Mig
1.1	Primary Site Redundant UPS	01		
1.1.1	<ul> <li>01 Nos x APC Symmetra LX 16kVA Scalable to 16kVA N+1 Rackmount, 220/230/240V</li> <li>04 Nos x APC Symmetra LS Battery Module SYBT5</li> <li>04 Nos x APC Symmetra LX 4kVA Power Module</li> <li>01 Nos x Intelligence module</li> <li>01 Nos x Network management card 2 with environmental monitoring</li> <li>01 Nos x APC Symmetra LX Communications Card</li> <li>01 Nos x APC Symmetra LX 4-post rack-mounting rails</li> <li>02 Nos x APC Easy PDU, Metered, ZeroU, 16A, 230V, (18) C13 &amp;</li> </ul>	Bundle		
1.1.2	(3)C19			
1.1.3	40 Nos x APC 1U 19" Black Modular Toolless Blanking Panel			
1.1.4	Installation and Configuration as per specification 7			
1.1.5	Warranty: 1-Year hardware repair or replacement warranty including on-site support  Technical Support: 1-Year 8x5 on-site technical support services and			
1.1.6	labor			
1.2	Server Room Environment Monitoring System	01		
1.2.1	Brand (Vendor MUST specify the brand)	Bundle		
1.2.2	Model (Vendor MUST specify the model)			
1.2.3	01 x Large Enterprise Environment Monitoring System with Redundant AC Power			
1.2.4	01 x Integrated Temp/Humidity Sensor, PoE			
1.2.5	02 x Temperature/Humidity/Dew Point Sensor			
1.2.6	01 x Smoke Detector with Built-In Fixed-Temperature Heat Sensor			
1.2.7	01 x Adaptive Dual Microwave/PIR Motion Detector			
1.2.8	01 x Ultra-HD Wired Day/Night Outdoor Bullet IP Camera with PoE			
1.2.9	01 x Liquid Detection Sensor, Plenum Rope-Style (10x10ft)			
1.2.10	01 x USB 4G Modem (compatible with local Telecom providers)			
1.2.11	1 x AC Voltage Detector with Relay & IEC C14 Socket			
1.2.12	1 x AC Voltage Detector with Relay & IEC C14 Socket			
1.2.13	Warranty: 1-Year Parts and Service with on-site support			
1.2.14	Technical Support: 1-Year 24x7 on-site technical support services and labor			
1.3	APC UPS and Environment Monitoring System- Installation, Config	guration, M	ligration, Documer	ntation and Training
1.3.1	<ul> <li>Project Team</li> <li>To ensure successful implementation, the project delivery team must consist of OEM certified personnel who will be onsite for the duration of the installation, configuration, and migration work. The team should include:</li> <li>4. Project Manager - responsible for overall project management and coordination.</li> <li>5. Site Surveyor - responsible for site survey, electrical and civil works.</li> <li>6. Installation Professional - responsible for unpacking, assembling, and installing the APC Symmetra and Environment Monitoring</li> </ul>			

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System.

• 01 Nos x APC Symmetra LX 4-post rack-mounting rails

All members of the project delivery team must be OEM certified Personnel and possess relevant industry certifications. The onsite presence of the project delivery team is essential to ensure timely troubleshooting and problem resolution. They will be responsible for providing ongoing support and maintenance until the handover of the system to the MoE.

Install and configure an APC Symmetra LX 16kVA UPS system and Environment monitoring system, including all the electrical work required for a successful installation. It also includes the rack mounting of the UPS and the recabling of all existing data center equipment and PDUs. Additionally, the project will involve configuring, alerting and monitoring to ensure the system is operating optimally. Existing APC UPS and Environment Monitoring System at Primary Site need to be moved, installed and configured at the Disaster Recovery (DR) site. Existing APC UPS at DR Site need to be moved and installed at the Primary site.

#### **Project Deliverables:**

The following are the deliverables of this project:

- 8. A fully installed and configured APC Symmetra UPS system, rack mounted and connected to all necessary equipment and PDUs.
- 9. Move and install existing APC Symmetra LX UPS to DR Site
- 10. Move and install existing 2 x APC UPSs at DR Site to Primary Site
- 11. Move and install existing APC Environment Monitoring System at Primary Site to DR Site
- 12. A fully installed and configured Environment Monitoring System at the Primary Site
- 13. A complete set of documentation, including installation, configuration and operation manuals
- 14. Provide training to minimum 3 IT staff of the MoE on how to operate and maintain the system

#### **Project Tasks:**

The project tasks shall include, but not limited to:

- 13. Site Survey: Conduct a site survey to determine the best location for the APC Symmetra LX 16kVA installation and ensure proper rack space for the unit.
- 14. DR Site Electrical Work: Install and connect a dedicated circuit breaker, ELCB, and an isolation switch for the system.

(Note: Primary Site server room already has dedicated breakers installed)

- 15. Unpacking and Assembling: Unpack the APC Symmetra LX 16kVA and assemble it as per the manufacturer's guidelines.
- 16. Rack Mounting and re-cabling: Mount the APC Symmetra LX 16kVA in the appropriate rack space and re-cable all existing data center equipment and PDUs as necessary
- 17. Configuration: Configure the APC Symmetra LX 16kVA system according to the MoE's requirement
- 18. Move and install existing APC Symmetra LX UPS at the Primary Site to DR Site
- 19. Rack mounting and re-cabling for APC Symmetra LX UPS in DR Site
- 20. DR Site Electrical Work: Install and connect a dedicated circuit breaker, ELCB, and an isolation switch for the system

1.3.2

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21. Alerting and Monitoring: Configure alerting and monitoring	
systems to ensure optimal system performance. Alerting and	
monitoring shall be configured for both sites	
22. Testing: Conduct comprehensive testing of the APC Symmetra	
and Environment Monitoring System to ensure its functionality	
23. Documentation: Provide a complete set of documentation,	
including installation, configuration and operation manuals.	
24. Training and Handover: Provide training to minimum 3 IT staff of	
the MoE on how to operate and maintain the system	

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#### **Team members Information**

List all Members in the team as per regirement in section 7

(Team Members Curriculum Vitae and supporting documents should be submitted along with the proposal and this form should be signed and stamped by Tenderer).

Team member Name	Contact No	ID Card No	Qualifications

Primary required certificates of the professional(s) – LOT 1:

- Fortinet NSE (Network Security Expert)
- VMware Certified

Primary required certificates of the professional(s) – LOT 2:

• APC Certified

The vendor shall submit the following documents:

- Certifications copy of the relevant training
- ID card or Passport Copy of the certified person/ personnel

### **Curriculum Vitae**

- 1. Name:
- **2. Education** [Indicate college/university and other specialized education of staff member, giving names of institutions, degrees obtained, and dates of obtainment]:
- 3. Other Training
- **4.** Languages [For each language indicate proficiency: good, fair, or poor in speaking, reading, and writing]:
- **5. Experience/ employment record** [Starting with present position, list in reverse order every employment held since graduation, giving for each employment (see format here below): dates of employment, name of employing organization, positions held.]

From [Month/Year] - To [Month/Year]:

Employer:

Positions held:

6. Summary of projects/assignments undertaken/role

Name of project/ assignment:

Experience classification: General / specific

Scope of project/ assignment: Role/ Position undertaken:

Period of assignment: