**STATE OF MAINE**

**Department of Administrative and Financial Services**

*Office of Information Technology*



**REQUEST FOR INFORMATION**

**RFI#201802025**

**Network Infrastructure Build Maintain & Refresh**

|  |  |
| --- | --- |
| **RFI Coordinator** | *All communication regarding this RFI must be made through the RFI Coordinator identified below*.  **Name:** Jeff Cotnoir **Title:** Contract Grant Specialist  **Contact Information:** [vmo.oit@maine.gov](mailto:vmo.oit@maine.gov) |
| **Informational Meeting** | **Date:** Tuesday, June 26, 2018 **Time:** 1:00 PM-3:00 PM, local time  **Location:** 45 Commerce Dr., Augusta, ME, Roman Rm. Ph. (207) 621-5086 |
| **Submitted Questions Due** | *All questions must be submitted to the RFI Coordinator identified above by:*  **Date:** Friday, June 29th, 2018, no later than 5:00 p.m., local time |
| **Response Submission** | **Submission Deadline:** Thursday, July 26th, 2018, no later than 5:00 p.m., local time. **Submit to:** [vmo.oit@maine.gov](mailto:vmo.oit@maine.gov) |

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# **PUBLIC NOTICE**

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**State of Maine**

**Department of Administrative Financial Services**

**RFI#201802025**

**Network Infrastructure Build Maintain & Refresh**

The State of Maine, Department of Administrative Financial Services / Office of Information Technology, is seeking information regarding a Network Infrastructure, Build, Maintain and Refresh.

A copy of the RFI, as well as the Question & Answer Summary and all other related documents to this RFI, can be obtained at the following website: <http://www.maine.gov/purchases/venbid/rfp.shtml>

An Informational Meeting will be held on **Tuesday, June 26, 2018 from 1:00 PM-3:00 PM, local time**

at the following location: **45 Commerce Dr., Augusta, ME, Roman Rm. Ph. (207) 621-5086**.

Responses must be submitted to: [vmo.oit@maine.gov](mailto:vmo.oit@maine.gov), on Thursday, July 26th, 2018, no later than 5:00 p.m., local time.

**\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\***

**RFI DEFINITIONS/ACRONYMS**

The following terms and acronyms shall have the meaning indicated below as referenced in this Request for Information:

1. **RFI:** Request for Information
2. **RFP:** Request for Proposal
3. **State:** State of Maine
4. **Department:** Department of Administrative and Financial Services / Office of Information Technology
5. **FOAA:** Maine Freedom of Access Act
6. **Respondent:** Any individual or organization submitting a response to this RFI.
7. **DHCP:** Dynamic Host Configuration Protocol
8. **VoIP:** Voice Over Internet Protocol

**State of Maine - Department of Administrative and Financial Services**

**RFI#201802025**

**Network Infrastructure Build Maintain & Refresh**

# **PART I INTRODUCTION**

## A. Purpose and Background

This Request for Information (RFI) is an information gathering and market research tool, not a formal solicitation of a specific requirement, such as in a Request for Proposals (RFP) document. The Department of Administrative and Financial Services (“Department”) is seeking information regarding a Network Infrastructure, Build, Maintain and Refresh from interested parties as defined in this RFI document. This is an opportunity for interested parties to help the Department better understand a marketplace and/or specific subject matter.

The State of Maine, Office of Information Technology currently manages the State of Maine’s network infrastructure, including voice, data, and video, supported by contracts with transport carriers, along with data and voice hardware and software partners.

The State of Maine is seeking alternative ways to provide these services.

## B. General Provisions

1. All contact with the State regarding this RFI must be made through the aforementioned RFI Coordinator. No other person/ State employee is empowered to make binding statements regarding this RFI.
2. This is a non-binding Request for Information. Therefore, no award shall be made as a result of the RFI process.
3. Issuance of this RFI does not commit the Department to pay any expenses incurred by a Respondent in the preparation of their response to this RFI. This includes attendance at personal interviews or other meetings and software or system demonstrations, where applicable.
4. Issuance of this RFI in no way constitutes a commitment by the State of Maine to issue a Request for Proposal (RFP).
5. All responses should adhere to the instructions and format requests outlined in this RFI and all written supplements and amendments, such as the Summary of Questions and Answers, issued by the Department.
6. All submissions in response to this RFI will be considered public records available for public inspection pursuant to the State of Maine Freedom of Access Act (FOAA) (1 M.R.S. §§ 401 et seq.).

<http://www.mainelegislature.org/legis/statutes/1/title1sec401.html>

1. All applicable laws, whether or not herein contained, shall be included by this reference. It shall be Proposer’s/Vendor’s responsibility to determine the applicability and requirements of any such laws and to abide by them.

# 

# **PART II INFORMATION SOUGHT**

1. **Infrastructure:**

The State of Maine is seeking information regarding a Respondent’s capability to architect, plan, install, maintain, monitor, and refresh the entire State of Maine Network Infrastructure. The current technical specifications are detailed in ***Appendix D***of this document.

The underlying infrastructure delivers data, VoIP, perimeter security, and load balancing to 15,000 State of Maine employees, located from Kittery to Fort Kent, as well as two data centers.

Some gross metrics to consider when preparing a response to this RFI are:

* 1,200 switches across 500 locations (see ***Appendix C***)
* up to 300,000 DHCP devices
* Major campuses include:
  + Augusta Mental Health Institute (AMHI)
  + Bangor Mental Health Institute (BMHI)
  + Augusta-Cross
  + Augusta- Central Maine Commerce Center (CMCC)
  + Portland Jetport

1. What is the approach used to architect a system that includes all the services/specifications listed in ***Appendix D***?
2. What are the steps your company would use for migration planning, including the development of a project management plan?
3. Describe your company’s new installation procedures
4. Describe your company’s proactive network management processes
5. Describe your company’s reactive network management processes, including troubleshooting, communication, triage, etc.
6. Describe your company’s practices for maintaining and refreshing network equipment
7. Describe your company’s approach when interacting with customers
8. Describe your company’s approach when interacting with third party suppliers (carriers, hardware, maintenance and support vendors).

Indicate a rough estimate for the providing these services. Please include what the estimate is based on and what is not part of the overall estimate.

# **PART III KEY RFI EVENTS**

1. **Informational Meeting**

The Department will sponsor an Informational Meeting concerning this RFI beginning at the date, time and location shown on the RFI cover page. The purpose of the Informational Meeting is to provide interested parties with additional information related to this RFI, field questions, and clarify any questions as to this RFI request.

## Questions

**1. General Instructions**

1. It is the responsibility of each interested party to examine the entire RFI and to seek clarification, in writing, if they do not understand any information or instructions.
2. Interested parties should use **Appendix B** – Submitted Questions Form – for submission of questions.
3. The Submitted Questions Form must be submitted by e-mail and received by the RFI Coordinator, identified on the cover page of this RFI, as soon as possible but no later than the date and time specified on the RFI cover page.
4. Submitted Questions must include the RFI Number and Title in the subject line of the e-mail. The Department assumes no liability for assuring accurate/complete/on time e-mail transmission and receipt.

**2. Question & Answer Summary**

Responses to all questions will be compiled in writing and posted on the following website: <http://www.maine.gov/purchases/venbid/rfp.shtml>. It is the responsibility of all interested parties to go to this website to obtain a copy of the Question & Answer Summary. Only those answers issued in writing on this website will be considered binding.

## Submitting the Response

1. **Responses Due**

Responses must be received no later than the date and time listed in the timeline above.

1. **Delivery Instructions**

Responses must be submitted to the RFI Coordinator, via e-mail, listed on the cover page of this RFI document.

# **PART IV SUBMISSION REQUIREMENTS**

This section contains instructions for Respondents to use in preparing their responses. It is requested that all responses follow the outline suggested below, including the numbering, section and sub-section headings as they appear here. The Department seeks detailed yet succinct responses that demonstrate the Respondent’s experience and familiarity with the subject matter. **As this is not a competitive RFP process,** **Respondents should not provide any specific cost or customized pricing documentation in their response.**

## Response Format

**1.** For clarity, the response should be typed or printed. Responses should be single-spaced with 1” margins on white 8 ½” x 11” paper using a font no smaller than 12 point Times New Roman or similar.

**2.** All pages should be numbered consecutively beginning with number 1 on the first page of the narrative (this does not include the cover page or table of contents pages) through to the end, including all forms and attachments. For clarity, the Respondent’s name should appear on every page, including Attachments. Each Attachment should reference the section or subsection number to which it corresponds.

**3.** Respondents are asked to be brief and to respond to each question and instruction listed in the “Submission Requirements” section of this RFI. Number each response to correspond to the relevant question or instruction of the RFI.

**4.** Include any forms provided in the package or reproduce those forms as closely as possible. All information should be presented in the same order and format as described in the RFI.

**5.** Please provide all information requested in the RFI package at the time of submission.

## 

## Response Contents

## Section I. Organization

* 1. Complete **Appendix A** (provided as an Appendix to this RFI)
  2. Provide Respondent’s location(s)
  3. Provide a brief description of Respondent’s main products/services
  4. Provide a brief description of years in business
  5. Provide a description of the management structure
  6. Describe any licensure required for any services described in the “Information Sought” section.
  7. Provide clients that are using comparable products or services (including contact information).
  8. Describe skills pertinent to the specific work described in the RFI.

## Section II. Response to Information Sought

Discuss the “Information Sought” section referenced above in Part II of this RFI and what the Respondent offers related to the goods and/or services described. Please respond to all questions in this section and give particular attention to describing the methods and resources necessary to accomplish the tasks involved. Respondents are also encouraged to share their knowledge and/or insight of the marketplace and of the specific goods and/or services in general for which information is being sought.

# 

# **PART V REVIEW OF RESPONSES RECEIVED**

# **General Information**

# The Department will review responses received for the purpose of gathering information and market research. The Department will not score or rate responses received.

# The Department reserves the right to communicate and/or schedule interviews/presentations with Respondents, if needed, to obtain clarification of information contained in the responses received.

# **PART VI LIST OF RFI APPENDICES AND RELATED DOCUMENTS**

**Appendix A: Response Cover Page**

**Appendix B: Submitted Questions and Answers Form**

**Appendix C: State Locations**

**Appendix D: Technical Specifications**

**IT Policies and Procedures:** <http://www.maine.gov/oit/policies/index.shtml>

**APPENDIX A**

**STATE OF MAINE**

**Department of Administrative and Financial Services**

## RESPONSE COVER PAGE

**RFI#201802025**

**Network Infrastructure Build Maintain & Refresh**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Lead Point of Contact - Name/Title:** | | |  | | |
| **Organization Name (if applicable):** | | |  | | |
| **Tel:** |  | | **Fax:** |  | |
| **E-Mail:** |  | | **Website (if applicable):** | |  |
| **Street Address:** | |  | | | |
| **City/State/Zip:** | |  | | | |

**APPENDIX B**

**State of Maine**

**Department of Administrative and Financial Services**

**SUBMITTED QUESTIONS FORM**

**RFI#201802025**

**Network Infrastructure Build Maintain & Refresh**

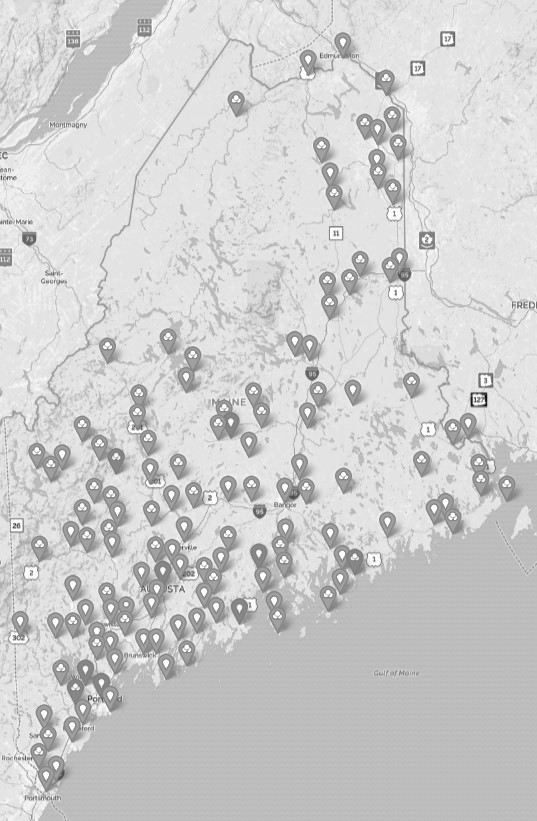
|  |  |
| --- | --- |
| **Organization/Responder’s Name:** |  |

|  |  |
| --- | --- |
| **RFI Section & Page Number** | **Question** |
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*\* If a question is not related to any section of the RFI, state “N/A” under “RFI Section & Page Number”.*

*\*\* Add additional columns, if necessary.*

**APPENDIX C - STATE LOCATIONS**



**State locations by City/Town**

|  |  |
| --- | --- |
| CITY/TOWN | LOCATION |
|  |  |
| ADAMSTOWN TOWNSHIP | 966 WILSONS MLS |
| ALFRED (4 locations) | 502 WATERBORO RD |
|  | 71 STONE RD |
|  | 45 KENNEBUNK RD |
|  | 1 LAYMAN WAY |
| ARUNDEL | 39 LIMERICK RD |
| ASHLAND (4 locations) | 25 MASARDIS RD |
|  | 45 RADAR RD |
|  | 63 STATION ST |
|  | 17 BRIDGHAM ST |
| AUBURN (5 locations) | 2 TURNER ST |
|  | 250 POLAND SPRING RD |
|  | 945 CENTER ST |
|  | 2 TURNER ST |
|  | 552 MINOT AVE |
| AUGUSTA (36 locations) | 210 STATE ST |
|  | 125 STATE ST |
|  | 161 CAPITOL ST |
|  | 163 MOUNT VERNON RD |
|  | 220 CAPITOL ST |
|  | 225 WESTERN AVE |
|  | 66 LEIGHTON RD |
|  | 85 LEIGHTON RD |
|  | 45 COMMERCE DR |
|  | 24 STONE ST |
|  | 1 WESTON CT |
|  | 2870 N BELFAST AVE |
|  | 333 CONY ST |
|  | 45 MEMORIAL CIR |
|  | 194 WINTHROP ST |
|  | 286 WATER ST |
|  | 81 HATCHERY RD |
|  | 108 SEWALL ST |
|  | 82 HATCHERY RD |
|  | 51 COMMERCE DR |
|  | 45 COMMERCE DR |
|  | 101 HOSPITAL ST |
|  | 151 CAPITOL ST |
|  | 295 WATER ST |
|  | 100 CAPITOL ST |
|  | 22 ARMORY ST |
|  | 2870 N BELFAST AVE |
|  | 66 INDUSTRIAL DR |
|  | 143 BLUE STAR AVE |
|  | 244 WATER ST |
|  | 5 CALDWELL RD |
|  | 210 STATE |
|  | 8 FEDERAL ST |
|  | 80 BOG RD |
|  | 111 SEWALL ST |
|  | 320 WATER ST |
| BAILEYVILLE | 636 HOULTON RD |
| BANGOR (11 locations) | 396 GRIFFIN RD |
| BANGOR | 1129 UNION ST |
| BANGOR | 45 OAK |
| BANGOR | 394 ODLIN RD |
| BANGOR | 500 MAIN ST |
| BANGOR | 84 HARLOW ST |
| BANGOR | 26 FRANKLIN ST |
| BANGOR | 59 PARK AVE |
| BANGOR | 198 MAINE AVE |
| BANGOR | 656 STATE ST |
| BANGOR | 78 EXCHANGE ST |
| BANGOR | 35 STATE HOSPITAL DR |
| BAR HARBOR (3 locations) | 1061 STATE HIGHWAY 102 |
| BAR HARBOR | 37 FIREFLY LN |
| BAR HARBOR | 33 MCFARLAND HILL DR |
| BATH | 752 HIGH STREET |
| BEAVER COVE | 1 N STATE PARK RD |
| BELFAST (5 locations) | 103 CHURCH ST |
|  | 137 CHURCH ST |
|  | 2 FRANKLIN ST |
|  | 23 MILL LN |
|  | 2 PUBLIC SAFETY WAY |
| BELGRADE | 183 US ROUTE 135 |
| BENTON | 57 BANGOR RD |
| BIDDEFORD (4 locations) | 208 GRAHAM ST |
|  | 25 ADAMS ST |
|  | 39 ALFRED |
|  | 15 YORK ST |
| BINGHAM | 13 MURRAY ST |
| BOOTHBAY HARBOR | 194 MCKOWN POINT RD |
| BREWER | 250 STATE ST |
| BRIDGTON (3 locations) | 3 CHASE ST |
|  | 720 PORTLAND RD |
|  | 10 IREDALE ST |
| BROOKSVILLE | 172 INDIAN BAR RD |
| BROWNVILLE | 496 CHURCH ST |
| BRUNSWICK (3 locations) | 275 BATH RD |
|  | 85 PLEASANT ST |
|  | 29 BURBANK AVE |
| BUCKSPORT (2 locations) | 10 FLYING DUTCHMEN CAMPGROUND RD |
|  | 89 FRANKLIN ST |
| CALAIS (5 locations) | 1 COLLEGE DR |
|  | 382 SOUTH ST |
|  | 23 WASHINGTON ST |
|  | 5 LOWELL ST |
|  | 1 MAIN ST |
| CANAAN | 661 MAIN ST |
| CAPE ELIZABETH (2 locations) | 7 TOWER DR |
|  | 325 OCEAN HOUSE RD |
| CARATUNK | 234 MAIN ST |
| CARIBOU (7 locations | 30 SKYWAY DR |
|  | 1 EVERGREEN PKWY |
|  | 14 ACCESS HWY |
|  | 144 SWEDEN ST |
|  | 43 HATCH DR |
|  | 25 HIGH ST |
|  | 37 LOMBARD RD |
| CARMEL | 991 FULLER RD |
| CHARLESTON (2 locations) | 1182 DOVER RD |
|  | 515 DOVER RD |
| CHELSEA | 1 VA CTR |
| CHERRYFIELD (2 locations) | 182 BLACKS WOODS RD |
|  | 140 MAIN ST |
| COLUMBIA | 15 STATION RD |
| CUMBERLAND FORESIDE | 290 TUTTLE RD |
| DANFORTH | 18 CENTRAL ST |
| DIXFIELD | 547 MAIN ST |
| DOVER FOXCROFT (6 locations) | 159 E MAIN ST |
|  | 401 STATE PARK RD |
|  | 112 PARK ST |
|  | 52 COURT ST |
|  | 125 SUMMER ST |
|  | 182 E MAIN ST |
| EAST MILLINOCKET (2 locations) | 191 MAIN |
|  | 1 INDUSTRIAL DR |
| EDGECOMB | 56 ROUTE 1 |
| EDMUNDS TOWNSHIP | 35 S EDMUNDS RD |
| ELLSWORTH (6 locations) | 17 EASTWARD LN |
|  | 180 BANGOR RD |
|  | 50 STATE |
|  | 416 HIGH ST |
|  | 9 RESORT WAY |
|  | 22 SCHOOL ST |
| FAIRFIELD (2 locations) | 10 MOUNTAIN AVE |
|  | 1 ONE POLICE PLZ |
| FALMOUTH | 2 MARSHALL DR |
| FARMINGTON (7 locations) | 647 FAIRBANKS RD |
|  | 129 MAIN ST |
|  | 133 FYFE RD |
|  | 140 MAIN ST |
|  | 120 SCHOOL ST |
|  | 123 COUNTY WAY |
|  | 218 FAIRBANKS RD |
| FORT FAIRFIELD | 86 HIGH ST |
| FREEPORT (2 locations) | 426 WOLFES NECK RD |
|  | 12 DESERT RD |
| GARDINER | 76 NORTHERN AVE |
| GEORGETOWN | 375 SEGUINLAND RD |
| GORHAM | 28 HUSKY DR |
| GREENVILLE (2 locations) | 43 LAKEVIEW ST |
|  | 20 VILLAGE ST |
| GUILFORD | 295 WATER ST |
| HALLOWELL (2 locations | 103 WATER |
|  | 268 WHITTEN RD |
| HANCOCK (2 locations) | 327 THORSEN RD |
|  | 258 US HIGHWAY 1 |
| HODGDON | 96 CALAIS RD |
| HOULTON (11 locations) | 11 HIGH ST |
|  | 1 DARCIE DR |
|  | 159 BANGOR ST |
|  | 26 COURT |
|  | 28 DARCIE DR |
|  | 97 MILITARY ST |
|  | 25 SCHOOL ST |
|  | 97 MILITARY ST |
|  | 6 WATER ST |
| INDIAN ISLAND | 12 WABANAKI WAY |
| INDIAN TOWNSHIP RESERVATION | 443 ROUTE 1 |
| ISLESBORO (2 locations) | 502 FERRY RD |
|  | 609 FERRY RD |
| JACKMAN | 24 LONG POND RD |
| JAY (2 locations) | 340 MAIN |
|  | 1230 MAIN ST |
| JEFFERSON (2 locations) | 536 WALDOBORO RD |
|  | 8 STATE PARK RD |
| KENNEBUNK (2 locations) | 63 PORTLAND RD |
|  | 86 YORK ST |
| KENNEBUNKPORT | 101 MAIN ST |
| KITTERY (4 locations) | 10 US ROUTE 1 BYP |
|  | 200 ROGERS RD |
|  | 11 SHAPLEIGH RD |
|  | 1 WALKER ST |
| LAMOINE | 22 COALING STATION LN |
| LEWISTON (9 locations) | 5 MOLLISON WAY |
|  | 35 WESTMINSTER ST |
|  | 71 LISBON ST |
|  | 200 MAIN ST |
|  | 65 CENTRAL AVE |
|  | 140 CANAL ST |
|  | 66 A ASH ST |
|  | 5 GENDRON DR |
|  | 85 PARK ST |
| LIMERICK | 55 WASHINGTON ST |
| LIMESTONE | 89 KANSAS RD |
| LINCOLN (3 locations) | 52 MAIN ST |
|  | 19 SCHOOL ST |
|  | 6 MARIETTA DR |
| LISBON | 300 LISBON ST |
| LIVERMORE FALLS | 2 MAIN ST |
| LUBEC | 973 S LUBEC RD |
| LYMAN | 2277 ALFRED RD |
| MACHIAS (6 locations) | 38 PRESCOTT DR |
|  | 47 COURT ST |
|  | 1 STACKPOLE DR |
|  | 28 CENTER ST |
|  | 247 MAIN ST |
|  | 7 COURT ST |
| MACHIASPORT | 64 BASE RD |
| MADAWASKA (3 locations) | 14 FOURNIER RD |
|  | 645 MAIN ST |
|  | 428 MAIN ST |
| MARS HILL | 157 PRESQUE ISLE RD |
| MASARDIS | 1602 MASARDIS RD |
| MEDWAY | 168 GRINDSTONE RD |
| MEXICO | 3 RECREATION DR |
| MILLINOCKET (3 locations) | 207 PENOBSCOT AVE |
|  | 64 BALSAM DR |
|  | 970 CENTRAL ST |
| MILO | 27 D O T RD |
| MOSCOW | 364 CANADA RD |
| NEW GLOUCESTER | 60 PINELAND DR |
| NEWPORT | 16 WATER ST |
| NORRIDGEWOCK | 564 SKOWHEGAN RD |
| NORTH BERWICK | 30 QUARRY RD |
| NORTH HAVEN (2 locations) | 18 MAIN ST |
|  | 60 SOUTH SHORE RD |
| NORTHPORT | 116 ATLANTIC HWY |
| OLD ORCHARD BEACH | 16 E EMERSON CUMMINGS BLVD |
| OLD TOWN | 8 AIRPORT RD |
| ORLAND | 161 GILPIN RD |
| OXFORD (2 locations) | 16 MADISON AVE |
|  | 777 CASINO WAY |
| PARIS (3 locations) | 243 MAIN ST |
|  | 34 BUCKFIELD RD |
|  | 39 WESTERN AVE |
| PEMBROKE | 48 ROUTE 1 |
| PHIPPSBURG | 10 PERKINS FARM LN |
| PITTSFIELD | 8 PARK ST |
| PORTAGE LAKE | 30 RANGER |
| PORTLAND (21 locations) | 135 PRESUMPSCOT ST |
|  | 142 FEDERAL ST W |
|  | 125 PRESUMPSCOT ST |
|  | 2360 CONGRESS ST |
|  | 312 CANCO RD |
|  | 107 WASHINGTON AVE |
|  | 69 BELL ST |
|  | 68 MARGINAL WAY |
|  | 356 STATE ST |
|  | 430 RIVERSIDE ST |
|  | 415 CONGRESS ST |
|  | 120 CASCO BAY BRG |
|  | 100 MIDDLE |
|  | 50 COUNTY WAY |
|  | 142 FEDERAL ST W |
|  | 109 MIDDLE ST |
|  | 100 MIDDLE ST |
|  | 1355 CONGRESS ST |
|  | 45 FOREST AVE |
|  | 1037 FOREST AV |
|  | 1011 FOREST AVE |
| POWNAL | 528 HALLOWELL RD |
| PRESQUE ISLE 9 locations) | 41 RICE |
|  | 744 MAIN ST |
|  | 1235 CENTRAL DR |
|  | 66 SPRUCE ST |
|  | 27 RIVERSIDE DR |
|  | 43 NORTH ST |
|  | 30 SECOND ST |
|  | 985 SKYWAY ST |
|  | 87 STATE PARK RD |
| PROSPECT | 711 FORT KNOX RD |
| RANDOLPH | 78 BIRMINGHAM RD |
| RANGELEY (3 locations) | 248 STATE PARK RD |
|  | 15 SCHOOL ST |
|  | 1400 US ROUTE 16 |
| RICHMOND (2 locations) | 1009 BRUNSWICK RD |
|  | 31 LANCASTER RD |
| ROCKLAND (6 locations) | 91 CAMDEN ST |
|  | 143 RANKIN ST |
|  | 360 OLD COUNTY RD |
|  | 62 UNION ST |
|  | 301 PARK ST |
|  | 517A MAIN ST |
| ROCKWOOD STRIP T1 R1 NBKP | 3638 ROCKWOOD RD |
| ROQUE BLUFFS | 145 SCHOPPEE POINT RD |
| RUMFORD (3 locations) | 145 CONGRESS ST |
|  | 60 LOWELL ST |
|  | 65 LINCOLN AVE |
| SABATTUS | 190 MIDDLE RD |
| SACO | 20 STORER ST |
| SANFORD (2 locations) | 890 MAIN ST |
|  | 935 MAIN ST |
| SCARBOROUGH (5 locations) | 335 ROUTE 1 |
|  | 51 PLEASANT HILL RD |
|  | 246 ROUTE 1 |
|  | 200 EXPEDITION DR |
|  | 570 ROUTE 1 |
| SEAL HARBOR | 21 SEA ST |
| SEARSPORT | 290 E MAIN ST |
| SEDGWICK | 22 SNOWS COVE RD |
| SHIRLEY | 4 OLD ROUTE 15 LOOP |
| SIDNEY | 270 LYONS RD |
| SKOWHEGAN (8 locations) | 140 NORTH AVE |
|  | 162 W FRONT ST |
|  | 264 CANAAN RD |
|  | 41 COURT ST |
|  | 151 NORTH AVE |
|  | 39 POULIN DR |
|  | 8 COUNTY DR |
|  | 666 WATERVILLE RD |
| SOUTH BERWICK | 180 MAIN ST |
| SOUTH PARIS (2 locations) | 251 PARK ST |
|  | 26 WESTERN AVE |
| SOUTH PORTLAND (4 locations) | 30 ANTHOINE |
|  | 176 GANNETT DR |
|  | 675 WESTBROOK ST |
|  | 151 JETPORT BLVD |
| SOUTHWEST HARBOR (2 locations) | 26 VILLAGE GREEN WAY |
|  | 276 MAIN ST |
| SPRINGVALE (5 locations) | 447 MAIN ST |
|  | 456 MAIN ST |
|  | 9 BODWELL CT |
|  | 83 STANLEY RD |
|  | 634 MAIN ST |
| STRONG | 689 FARMINGTON RD |
| THOMASTON (2 locations) | 358 MAIN |
|  | 41 BUTTERMILK DR |
| TOPSFIELD | 35 SOUTH RD |
| TOPSHAM (3 locations) | 31 MAINTENANCE WAY |
|  | 100 MAIN ST |
|  | 125 MAIN ST |
| TREMONT | 45 GRANVILLE RD |
| VAN BUREN | 271 STATE ST |
| VASSALBORO | 15 OAK GROVE RD |
| VINALHAVEN | 79 SANDS RD |
| WALDOBORO (2 locations) | 143 DEPOT ST |
|  | 1510 OLD ROUTE 1 |
| WATERVILLE (4 locations) | 18 COLBY ST |
|  | 93 MAIN ST |
|  | 10 COLBY ST |
|  | 10 APPLETON ST |
|  | 325 E KENNEDY MEMORIAL DR |
| WELLS | 1563 POST RD |
| WESLEY | 4401 AIRLINE RD |
| WEST BATH | 147 NEW MEADOWS RD |
| WEST FORKS PLANTATION | 3108 US ROUTE 201 |
| WEST GARDINER (2 locations) | 1 LEWISTON RD |
|  | 299 LEWISTON RD |
| WESTBROOK | 570 MAIN ST |
| WILTON | 865 US ROUTE 2 E |
| WINDHAM (3 locations) | 17 MALLISON FALLS RD |
|  | 22 HIGH ST |
|  | 375 GRAY RD |
| WISCASSET (5 locations) | 32 HIGH ST |
|  | 42 BATH RD |
|  | 51 BATH RD |
|  | 522 BATH RD |
|  | 10 WATER ST |
| WOODLAND | 175 MORSE RD |
| YARMOUTH (2 locations) | 478 PORTLAND ST |
|  | 200 MAIN ST |
| YORK (6 locations) | 2 INTERSTATE 95 |
|  | 949 ROUTE 1 |
|  | 11 CHASES POND RD |
|  | 10 SPUR RD |
|  | 33 INTERSTATE 95 |
|  | 9 HANNAFORD DR |

**APPENDIX D**

**STATE OF MAINE**

**Department of Administrative and Financial Services**

**CURRENT TECHNICAL SPECIFICATIONS**

**RFI# 201802025**

**Network Infrastructure Build Maintain & Refresh**

D-1 General:

* All proposed software and hardware solutions must be from recognized industry leaders with solid references
* All people with access to State of Maine resources must obtain a State of Maine background check
* All equipment supplied must be new from manufacture (no grey market)
* Refresh networking equipment in a 7-year cycle
* Provide minimum 10GbE scalable to 100GbE backhaul to core from State offices located within Augusta Metro area
* Provide a minimum of 1GbE per wired device at locations throughout the State of Maine
* Bandwidth at WAN location must be synchronous 1Mbps per attached device or greater
* Bandwidth for WAN Security Cameras at remote locations must be 5Mbps per attached Camera
* Provide wireless access for guest, vendor and State of Maine employees
* Provide 802.1x based port security on all switch ports / network access points wired or wireless
* Provide AAA (Authentication, Accounting, Authorization) for all devices accessing State of Maine network, also known as NAC.
* Provide secure 2 factor remote access for all supported users (remote access VPN)
* Provide high quality low latency jitter free transport for all VOIP (Voice over Internet Protocol) Systems traffic.
* Maintain 5 9s on all data center systems
* Maintain 4 9s on all Augusta Metro facilities
* Maintain 3 9s for all remote site facilities
* Maintain 2ms round trip or less latency for all Augusta Metro sites
* Maintain 20ms round trip or less latency from remote sites
* Provide, install, monitor and maintain redundant ISP connections providing no less than 10Gbps ISP access for State of Maine
* Provide secure communications for fixed and mobile Dept. Public Safety users adhering to CJIS Standards
* Provide secure wired, wireless and remote connections for Maine Revenue Services compliant to NIST 800-53, latest version standards.

D-2**.** Data Centers (2)

* Establish, maintain, monitor highly available 10GbE access ports for servers and appliances within the data center utilizing link aggregation control protocol
* Connect 2 geographically separated data centers with complete logical and physically diverse connectivity with meshed 120 Gbps topology proving 99.999% reliability
* Establish, maintain, monitor network security edge switch fabric in support of network DMZ

D-3 Campus Wiring

* Horizontal cabling from Telco Closet Network Switching to desktop will be a minimum of CAT5E
* Vertical cabling from building main distribution frame to telco closets will be single mode fiber
* Data and Voice

D-4 Wide Area Network:

* Synchronous business class bandwidth
* Routed fully meshed topology

D-5 Remote Site WAN Routers:

* Capabilities for appliance:
* VPN or NAC
* 25,000 ssl or 50,000 nac Concurrent connections
* 10Gbps
  + Encryption Data Acceleration
* Current configured – 8000 users
* Router models available for different levels of WAN bandwidth - throughput options (total throughput)
  + 35-50Mbps
  + 50-100Mbps
  + 100-300Mbps
  + 200-400Mbps
  + 500-1Gbps
  + 1Gbps-2Gbps
* Router Features
  + Out of band management
  + Redundant power supply in models 500Mbps and up
  + Zone based firewall
  + NAT support
  + Hardware VPN
    - AES 256 encryption
    - Multipoint VPN
  + Intrusion Prevention support
  + OSPF, BGP
  + MPLS-Lite (VRF)
  + VXLAN
  + Policy Based Routing
  + IPv4 and IPv6
  + 802.Q Tagging/sub interfaces
  + HQOS
  + NBAR v2
  + SNMP v3
  + Access Lists
  + LACP
  + Copper and Fiber interface options
  + Encrypted Traffic Analytics (ETA)
  + Netflow (or similar)
  + Syslog output
  + DHCP Relay

D-6 Client Access and Aggregation Switches which meet the following specification

* Integrated wired/wireless converged networking
* Support for Software defined networking
* Wireless scale with Wave 2 access points supported on a single switch with select models
* Template-based, configurable allocation of Layer 2 and Layer 3 forwarding, access control lists (ACLs), and quality of service (QoS) entries
* Virtual or Physical stacking capabilities of no less than 8 stack members
* Minimum of 480 Gbps of local stack switching bandwidth
* Flexible and dense uplink offerings with 1GbE, Multigigabit, 10GbE, and 40GbE, with platform readiness for 25GbE
* Flexible downlink options with 1G and Multigigabit links
* PoE capabilities with up to 384 ports of PoE per stack, 60W UPOE, and PoE+
* Power stacking technology (ability to share and shed power loads to stack members)
* Line-rate, hardware-based Flexible NetFlow (FNF), or equivalent flow export technology (sFlow, Jflow, IPFIX)
* IPv6 support in hardware, providing wire-rate forwarding for IPv6 networks
* Dual-stack support for IPv4/IPv6 and dynamic hardware forwarding table allocations
* Modern operating system for the enterprise with support for model-driven programmability including NETCONF, RESTCONF, YANG, on-box Python scripting, streaming telemetry, container-based application hosting, and patching for critical bug fixes. The OS also has built-in defenses to protect against runtime attacks
* Encrypted Traffic Analytics (ETA): Machine learning to identify and take actions toward threats or anomalies in your network, including malware detection in encrypted traffic (without decryption) and distributed anomaly detection
* AES-256 MACSec on uplinks and client downlinks
* Wirespeed layer 3 routing
* Wirespeed switching on all ports (all frame sizes)
* VRF/ route table segmentation (or similar technology)
* Embedded Wireshark
* Network Based Application Recognition (NBAR v2)
* SNMP v3
* Out of band management
* 802.1X
* VXLAN
* SPAN
* Jumbo frame support
* Options for 24 and 48 Copper port models (Not including uplink ports)
* Support for up to 8 10GbE uplinks on access switches
* Options for 12 and 24 port 40GbE QSFP based aggregation switches
* Options for up to 40 10GbE SFP+ based aggregation switches
* Modular Uplink ports/expansion
* Redundant field replaceable power supplies
* Redundant field replaceable cooling fans
* 24x7x365 support
* Lifetime hardware warranty

D-7 WAN Headend Routers

* Fully redundant WAN routers located at multiple Data Centers
* Minimum of 20Gbps throughput per router
* 1 and 10GbE Interface options
* Minimum of 8Gbps Encryption throughput per router
* Dual Power Supply
* Out of band management
* Zone based firewall
* NAT support
* Hardware VPN
  + AES 256 encryption
  + Multipoint VPN
* Intrusion Prevention support
* OSPF, BGP
* MPLS-Lite (VRF)
* ECMP
* VXLAN
* Policy Based Routing
* IPv4 and IPv6
* 802.Q Tagging/sub interfaces
* HQOS
* NBAR v2
* SNMP v3
* Access and Control Lists
* LACP
* Copper and Fiber interface options
* Encrypted Traffic Analytics (ETA)
* Netflow (or similar)
* Syslog output

D-8 Internet Routers

* Fully redundant Internet routers located at multiple Data Centers
* Minimum of 20Gbps throughput per router
* 1 and 10GbE Interface options
* Dual Power Supply
* Out of band management
* Zone based firewall
* NAT support
* Hardware VPN
* AES 256 encryption
* Multipoint VPN
* Intrusion Prevention support
* OSPF, BGP
* Memory for multiple full BGP internet routing tables
* MPLS-Lite (VRF)
* ECMP
* Policy Based Routing
* IPv4 and IPv6
* 802.Q Tagging/sub interfaces
* HQOS
* NBAR v2
* SNMP v3
* Access and Control Lists
* LACP
* Copper and Fiber interface options
* Encrypted Traffic Analytics (ETA)
* Netflow (or similar)
* Syslog output

D-9 Augusta Backbone Core: 4 Chassis based multilayer switches split between two data centers

* Support for up to 384 10GbE SFP+ interfaces
* Support for up to 192 40GbE Interfaces
* Support for up to 96 100GbE interfaces
* Minimum of 1.32Tbps per slot throughput
* Redundancy of all switch components
* Online Insertion and removal of Line cards, power supplies and other components
* Support for in service software upgrades
* Layer 2 and 3 capabilities on all ports
* Distributed architecture
* Stateful supervisor failover
* VOQ support (Virtual output Que)
* QOS
* Minimum of 64,000 MAC address entries per line card
* Support for Virtual Device Contexts
* LISP support
* Full MPLS support
* Support for 16 SPAN sessions
* Netflow
* Support for a minimum of 128,000 ARP entries
* OSPF, BGP
* ECMP
* BFD
* HSRP and or VRRP support
* MPLS-Lite (VRF)
* Policy Based routing
* VXLAN support
* SNMP v3
* 802.1AE MACSEC support in hardware
* Control plane policing
* Twinax support

D-10 Data Center Core/Aggregation - 4 Data Center Core/Aggregation multilayer switches (2 per data center)

* Modular expansion
* Support for up to 384 10GbE ports
* Support for up to 96 40GbE ports
* Support for up to 32 100GbE ports
* Virtual Port Channel or MEC support
* Minimum of 7.68 Tbps of switching capacity
* Layer 2 and Layer 3 support on all ports
* 1 microsecond or less of port to port latency
* Support for at least 256,000 combined ARP and MAC entries
* MPLS-Lite (VRF) Support
* Minimum of 32,000 IPv4 host prefixes
* Minimum of 4096 VLANs
* OSPF, BGP support
* BFD
* Layer 2 and Layer 3 Access and Control Lists
* Redundant power supplies
* Policy Based routing
* VOQ support (Virtual output Que)
* QOS
* VXLAN support
* SNMP v3
* Support minimum of 31 line rate SPAN sessions
* Control plane policing
* Twinax support

D-11 Data Center Access Switching

* SSDC - 2 Rack Pod design with 2 switches per pod
  + Minimum of 2 40GbE uplinks to DC aggregation layer per switch
  + Minimum of 48 1/10/25 GbE host ports per copper switch
  + Minimum of 48 1/10GbE SFP+based host ports per SFP+ based switch
  + vPC, MEC or stacking to be used for switch pair to act as 1 switch
    - * Hosts to use LACP for redundancy to each switch in pod
  + 20 2 rack pods
  + 1920 10GbE ports
* CMCC - 2 Rack Pod design with 2 switches per pod
  + Minimum of 2 40GbE uplinks to DC aggregation layer per switch
  + Minimum of 48 1/10/25 GbE host ports per copper switch
  + Minimum of 48 1/10GbE SFP+based host ports per SFP+ based switch
  + vPC, MEC or stacking to be used for switch pair to act as 1 switch
    - * Hosts to use LACP for redundancy to each switch in pod
  + 15 2 rack pods
  + 14400 10GbE ports
* Data Center Access switch requirements
* Minimum of 48 1/10/25 GbE non blocking ports per copper switch
* Minimum of 48 1/10 GbEnon blocking ports per SFP+ switch
* Minimum of 6 40/100 GbE QSFP interfaces
* Minimum of 2.16Tbps of switching throughput
* vPC, MEC or stacking to be used for switch pair to act as 1 switch
* VXLAN support
* Wirespeed layer 3 routing
* Out of band management
* Dual power supply
* Redundant cooling fans
* Minimum 40MB port buffers
* Field replaceable fan and power supplies
* Layer 3 and Layer 2 Access control lists
* OSPF, BGP support
* MPLS-Lite/VRF Support
* Minimum of 4 SPAN sessions
* HSRP and or VRRP support
* Syslog
* SNMP v3
* Support for up to 256,000 MAC addresses
* IGMP Snooping
* ECMP
* Low latency cut-through switching
* QOS
* 24 x7 Monitor System with Alerts
  + Provide, install, monitor and maintain real-time monitoring and alerting system
* UPS and Power backups
  + Provide, install, monitor and maintain all UPS systems for all switches and routers within the State of Maine network
  + Intelligent and Network Manageable (SNMP v3/web)

D-12 Wireless Infrastructure

* Provide, install, monitor and maintain wireless infrastructure for unsecured, untrusted public access
* Provide, install, monitor and maintain wireless infrastructure for secure proprietary State of Maine financial, health and PII data
* 802.11ac Wave 2
* High Availability (HA)
* Scalable to support up to 6000 access points

D-13 Load Balancer (Hardware) - Load balance across multiple platforms, applications and servers in 2 geographically separated networks

* 500 applications and growing
* 5 virtual devices at each datacenter

D-14 Building Standards

* Evaluate
* Governance

D-15 Phone System - Transport Infrastructure supporting VOIP system meeting 4.0 Mean Opinion Score (MOS)

* Equipment connected to the Network:
  + - 13,000 VOIP end points
    - 43 Media Gateways
    - 54 VOIP Servers
* Services needed to provide service:
  + - POE
    - MOS score of 4.0 or greater.
    - DHCP
    - DNS
    - VLANS/Subnets.
    - E911 compliant
    - SIP

D-16 Security

* Web Application firewall at the perimeter
* Central Logging with SEIM (Security Event Incident Management)
* Ability to increase Network DLP at the perimeter
* Provide Cloud Based Reverse Proxy and DDOS for 24+ Servers
* DHCP (Hardware)
* 300 DHCP leases Per second
* capacity for up to 300,000 leases
* IPAM (Hardware)
* Need to be able to handle 14,000 networks
* DNS (Hardware)
* 45,000 DNS queries per second
* Firewall (Hardware)
* Current Standards range from 2.1 Gbps through 30Gbps
* 53 Firewalls supporting:
* 800 Policy rules
* 375 NAT rules
* 120 VPN rules
* IDS/IPS Intrusion Protection
* Anti Bot, Anti-Spam, and Anti-Virus
* Application Control
* URL Filtering
* Identity Monitoring

D-17 Labor Requirements **–** resources to support all areas within RFI

* + Respond to state locations within the state 24/7/365
  + Dispatch and respond within 60 minutes to remedy critical system outages throughout the State of Maine. On call 24/7 support is expected with subject matter expert response and assigned within 30 minutes or less.
  + Attend for a minimum of 7 hours of change management meetings per week to ensure network support of emerging requirements
  + Tie into State Ticket system (Footprints). Footprints tickets will be used to track all requests and trouble tickets.  Urgent & High tickets must be updated daily and Medium & Low on a weekly basis.
    - To address both break fix requests and add, move, change requests from state resources.
    - Appropriate Staff resources to monitor and respond to tickets to meet Standard Service Level Agreements below:

***Low –*** This is for planned requests, informational requests, enhancements, documentation, and clarification of components.  The result does not impede the operations of a system.  The requester will receive a response from the assigned CTS team member within 3-5 business days.

***Medium –*** A minor loss of service.  The impact is an inconvenience, a workaround is available.  The requestor will receive a response from the assigned CTS team member within 2 business days of CTS receiving the request via Footprints.

***High –***Experience a severe loss of service.  Important features of a system are unavailable with no acceptable workaround; however operations can continue in a restricted fashion.  The requestor will receive a response from the assigned CTS team member within 4 hours of CTS receiving notification.

***Urgent –*** A production system is stopped or so severely impacted that you cannot reasonably continue to work.  You experience a complete loss of service.  The operation is mission critical to the business and the situation is an emergency.  Characteristics of an Urgent request are:

* Data corruption
* Hardware failure with no built in redundancy
* Critical documented function is not available
* System hangs indefinitely, causing unacceptable or indefinite delays for resources or response
* System crashes, or crashes repeat after restarts

**Server Priority Levels for monitoring:**

* Level 1: Non-Production/Test/Dev - Support staff receive email notifications, but no phone calls.
* Level 2: Production - Weekday Business Hours - Automated alerts and follow-up phone calls during normal business hours, 6:00am - 6:00pm.
* Level 3: 24x7 Production Critical - Automated alerts and phone calls **anytime** this device goes down, day or night, including weekends.
  + Establish port connectivity for new drop requirements with 14 days
  + Establish wireless service within 45 days of initial request
  + Coordinate with State of Maine to plan and deliver network services during major office moves. Delivery timelines can fluctuate between 7 and 120 days from time of notice.
  + Provide Performance Monitoring and diagnostics across Open System Interconnect (OSI) model.
    - Troubleshoot latency in application, database, and access on an as needed basis
* Provide Advanced level network Architect design and implementation (Certified Network Engineer)
  + Provide Senior level resource(s) for trouble resolution (Certified Network Professional)
  + Provide Senior Level Data Center technician to research, recommend and execute hardware patching, upgrades and topology changes
  + Provide Security for the following:
    - Perimeter execute, monitor and maintain the policy directive
    - Firewall
    - Remote Access
    - IP Security Administration
    - DHCP Security Administration
    - DNS Security Administration