

MEMORANDUM OF UNDERSTANDING

This Memorandum of Understanding ("MOU") shall become effective (the "Effective Date") upon the last execution date set forth below, by and between The City of Columbus with offices located at 1111 E. Broad Street, Columbus, Ohio, 43215 (herein after called "City") and The Ohio State University on behalf of and as fiscal agent for the Ohio Academic Resource Network with offices located at 1224 Kinnear Road, Columbus, Ohio 43212 (hereinafter called "OARnet"). City and OARnet shall be individually referred to as a "Party" and collectively referred to as the "Parties".

WHEREAS, OARnet is the provider of the State of Ohio's 100 gigabit backbone network, which provides transport services to state and local government, education, research, and healthcare communities throughout Ohio. OARnet's network is the broadband gateway to a wide array of shared services designed to ensure Ohio is a technology leader.

WHEREAS, The City's Department of Technology provides Columbus' residents, visitors and businesses with sustained, reliable and efficient technology services, infrastructure and telecommunications. The City focuses on the delivery and operations of vital IT infrastructure network and telecommunication services, continuous service improvement and solutions to enable customer success.

NOW, THEREFORE, in consideration of the mutual covenants and promises set forth herein and for other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the Parties agree as follows:

1. Scope of Work

1.1 OARNET RESPONSIBILITIES

- 1.1.1 OARnet will be responsible for engineering and provisioning one (1) 10 Gigabit connection from Arlingate (Data Center West) to TNC for the City to access OARnet's network.
- 1.1.2 OARnet will be responsible for engineering and provisioning one (1) 10 Gigabit connection from the Hammond Building (Data Center East) to Rhodes State Office Tower for the City to access OARnet's network. (A drawing showing the configurations is included in Attachment A).
- 1.1.3 OARnet will be responsible for provisioning 2,000 Megabits of Internet service with DDoS Protection to the City over the 10 Gigabit connection at Arlingate.
 - 1.1.3a 1,000 Megabits will be provisioned for the City's WIFI.
 - 1.1.3b 1,000 Megabits will be provisioned for the City's Nitro.
- 1.1.4 OARnet will be responsible for provisioning 2,000 Megabits of Internet service with DDoS Protection to the City over the 10 Gigabit connection at Hammond Building.
- 1.1.5 OARnet will be responsible for monitoring the City's connections on a 24 hours x 7 days basis, and proactively respond to events that may impact the

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delivery of service under this MOU in accordance with the "Trouble Reporting and Escalation Process" set forth in Attachment B.

- 1.1.6 OARnet will also provide additional service as requested on the remaining capacity on the 10 Gigabit connection for the City.
- 1.1.7 OARnet will work with the City to obtain the diverse fiber paths from City's data centers located at Arlingate (Data Center West) to TNC and from the Hammond Building (Data Center East) to Rhodes State Office Tower.
- 1.1.8 OARnet will provide Juniper EX3300 switches at Arlingate and Hammond.

1.2 CITY RESPONSIBILITIES

- 1.2.1 City will be responsible for provisioning dark fiber from Arlingate to TNC and from Hammond to the State Office Tower.
- 1.2.2 City will be responsible for providing OARnet with space and power to locate their CPE at Arlingate and Hammond.
- 1.2.3 City will order 2,000 Megabits of Internet service with DDoS protection from OARnet to be provisioned on the 10 Gigabit connection at Arlingate. The Internet will be fully redundant and diverse.
- 1.2.4 City will order 2,000 Megabits of Internet Service with DDoS protection from OARnet to be provisioned on the 10 Gigabit connection at Hammond.
- 1.2.5 City will have the ability to order additional services as needed based on the capacity available on the ports on the CPE equipment.
- 1.2.6 City will have the ability to order additional capacity on the 10 Gigabit connections and CPE equipment as needed in the future.

2. Fees

- 2.1 OARnet will invoice the City a monthly charge for two (2) 10 Gigabit ports, \$400 per month, per port, for a total of \$800 per month. (One port at Arlingate and one port at Hammond.)
- 2.3 OARnet will charge the City for 4,000 Megabits of Internet service at a cost of \$1.50 per megabit or \$6,000 per month.
- 2.4 The City agrees to pay OARnet charges of \$6,800 per month.

3. Term and Termination

The initial term of this Agreement between OARnet and City shall begin upon the date that the Parties have executed this Agreement and shall extend until February 28, 2022.

- 3.1 Any Party may terminate this Agreement if:

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- 3.1.1 The other Party commits a material breach, and
- 3.1.2 The non-defaulting Party sends notice of such breach describing the breach with reasonable specificity, and
- 3.1.3 During the thirty (30) day period following notice thereof, the defaulting Party either:
 - 3.1.3.1 Fails to cure the breach, or
 - 3.1.3.2 Fails to present an acceptable plan for curing the breach.

3.2 Any Party may terminate this Agreement for convenience upon 90 days written notice to the other Parties.

4. INDEPENDENT CONTRACTOR STATUS.

Each Party at all times shall be an independent contractor of the other Party in performing under this Agreement. Each Party's employees shall not represent to third parties that they are employees or agents of the other Parties or is party to any form of partnership or joint venture with the other Parties.

5. CONFIDENTIALITY INFORMATION.

If either party provides confidential information to the other or, if in the course of performing under this Agreement or negotiating this Agreement a party learns confidential information of the other, the receiving party shall, to the extent permitted by Ohio law, including without limitation, Ohio Revised Code Section 149.43 (a) protect the confidential information from disclosure to third parties with the same degree of care accorded its own confidential and proprietary information, but in any case with at least reasonable care and (b) refrain from using such confidential information except in performing under this Agreement.

6. PUBLICITY.

The Parties may jointly develop and distribute periodic press releases addressing activities and initiatives under the Agreement. Neither Party will issue a press release that deals with the collaborative technology and Services, or the relationship or collaborative activities of the Parties under this Agreement, without the prior written consent of the other.

7. NOTICES.

7.1 NOTICES TO OARNET.

7.1.1 All routine notices, announcements and other related communications may be made electronically to OARnet, to any electronic mail address specified by OARnet.

7.1.2 All written notices required to be given by a Party to OARnet under this Agreement shall be sufficient if delivered by one of the following methods: Certified Mail - return receipt requested, Courier Delivery, Hand Delivery, or Electronic Mail ("E-mail") to OARnet at the address set forth or to such other address as OARnet has designated by notice to the Parties.

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Pankaj Shah
Executive Director
OARnet
1224 Kinnear Rd.
Columbus, Ohio 43212
E-mail: pshah@oar.net

7.2 NOTICES TO THE CITY

7.2.1 All routine notices or other communications electronically may be made to the City, to the address of any staff member specified by City to receive particular notices or communications.

7.2.2 All written notices required to be given by a Party to City under this Agreement shall be sufficient if delivered by one of the following methods: Certified Mail - return receipt requested, Courier Delivery, Hand Delivery, or Electronic Mail ("E-mail") to City the address set forth or to such other address as City has designated by notice to the Parties.

Sam Orth
Chief Technology Officer
City of Columbus
Department of Technology
1111 E. Broad St.
Columbus, Ohio 43215
E-mail: hsorth@columbus.gov

8. GENERAL PROVISIONS.

- 8.1 **CHANGES AND AMENDMENT.** This Agreement may not be amended, and none of its provisions waived, except by written amendment executed by duly authorized representatives of all Parties.
- 8.2 **GOVERNING LAW.** This Agreement shall be governed by and construed in accordance with the laws of the State of Ohio applicable to contracts executed and performed therein.
- 8.3 **ENTIRE AGREEMENT.** Except as otherwise stated herein, this document is the entire agreement of the Parties and supersedes all prior agreements and understandings with respect to the same subject matter. No other document, unless in writing and signed by an authorized representative of each Party, shall modify or add to the terms agreed to herein of this Agreement.
- 8.4 **BINDING EFFECT.** This Agreement shall be binding upon the legal representatives, heirs, employees, agents, affiliates, successors and assigns of the respective Parties hereto.
- 8.5 **CHANGE IN LAW.** By entering into this Agreement, the Parties specifically intend to comply with all applicable laws, rules and regulations as they may be amended from

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time to time. In the event that any part of this Agreement is determined to violate federal, state, or local laws, rules, or regulations, the parties agree to negotiate in good faith revisions to the provision or provisions that are in violation. In the event the Parties are unable to agree to new or modified terms as required to bring the entire Agreement into compliance, either Party may terminate this Agreement on thirty (30) days written notice to the other Party.

- 8.6 **WAIVER.** Any waiver by any Party of any act, failure to act or breach on the part of the other Party shall not constitute a waiver of such waiving Party of any prior or subsequent act, failure to act or breach by such other Party.
- 8.7 **CAPTIONS.** The captions used in connection with the sections and subsections of this Agreement are inserted only for the purpose of reference. Such captions shall not be deemed to govern or limit, or in any manner be used to interpret the scope, meaning or intent of the provisions of this Agreement or any part thereof; nor shall such captions otherwise be given any legal effect.
- 8.8 **THIRD PARTIES.** Nothing herein expressed or implied is intended or shall be construed to confer upon or give any person other than the Parties hereto, and their permitted successors and assigns, any rights or remedies under or by reason of this Agreement.
- 8.9 **SEVERABILITY.** The Parties agree that if any part, term or provision of this Agreement shall be found illegal, invalid or unenforceable by any court of law, the remaining provisions shall be severable, valid and enforceable in accordance with their terms.
- 8.10 **FURTHER ASSURANCES.** Consistent with the terms and conditions hereof, each Party hereto shall execute and deliver all instruments, certificates and other documents and shall perform all other acts, which the other Party may reasonably request in order to carry out this Agreement and the transactions contemplated hereby.

[SIGNATURES ON FOLLOWING PAGE]

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IN WITNESS WHEREOF, intending to be legally bound, the Parties have executed this Agreement on the date set forth above.

PARTIES:

Ohio Academic Resource Network ("OARnet")

City of Columbus ("City")

By: _____

By: _____

Name: Pankaj Shah

Name: Sam Orth

Title: Executive Director, OARnet

Title: Chief Technology Officer, City of Columbus

Date: _____

Date: _____

The Ohio State University, as fiscal agent for OARnet

By: _____

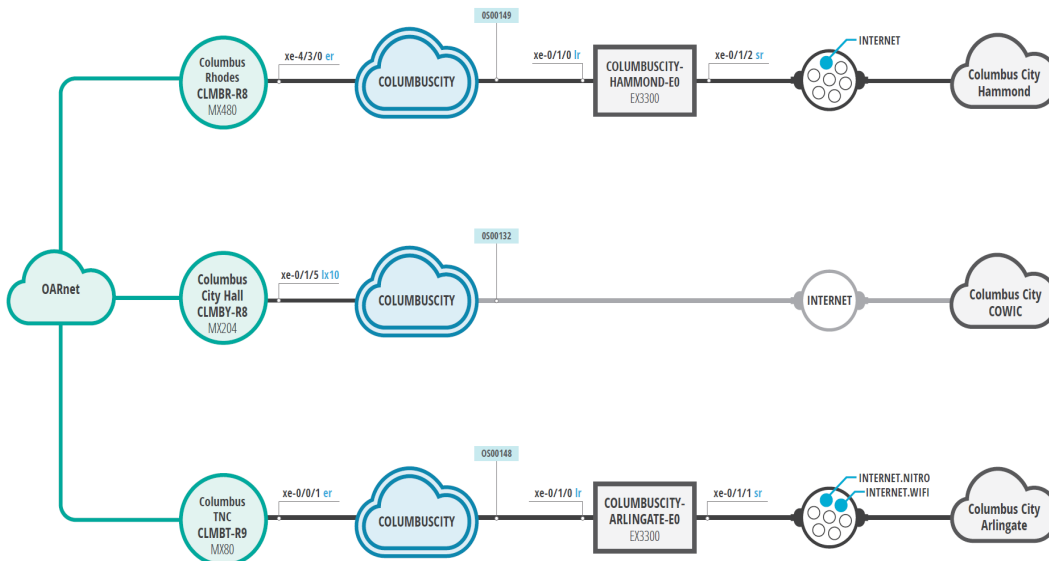
Name: Michael Papadakis

Title: Sr. Vice President for Business & Finance & Chief Financial Officer

Date: _____

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Attachment A: Drawing of the 10 Gigabit Connections



LEGEND

- OARnet Backbone
- 10 Gbps Ethernet
- 1 Gbps Ethernet
- OARnet Network
- OARnet Router
- Client Switch (CPE)
- Client Site (LAN handoff)
- Outside Plant Fiber / Dark Fiber Provider
- OARnet Optical ID OS, OM or OT
- Access Port w/ Services
- Trunk Port w/ Services
- Interface *media type*
- Interface Description
- Service Redundancy
- Service on VLAN

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Attachment B: Internet Description and Trouble Reporting and Escalation Process

Service Description

OARnet's Internet Service is a unique offering, which includes 400 Gigabits of capacity from multiple Internet service providers with four geographically diverse locations in the state to guarantee the highest quality of service and maximum up time. This approach is designed to be fully redundant and diverse with the capability to meet our clients' demand for Internet service, and to provide the reliability to support mission critical services. OARnet is also including Distributed Denial of Service (DDoS) Protection to our Internet service and Internet filtering using Domain Name Service (DNS), which represents a total Internet solution for our clients.

OARnet Provides

OARnet provides support for ordering service including identifying recommended capacity

OARnet provides installation support including vendor coordination and technical support

OARnet provides CPE equipment on the connection for 7X24 proactive monitoring and faster trouble resolution

OARnet provides escalation list to ensure your service is our highest priority

OARnet clients can increase bandwidth on demand if there is a need for additional capacity

Service Cost:

Annual Cost: There will be no cost to the City of Columbus for this service for the duration of the MOU.

OARnet Trouble Reporting and Escalation Process

The OARnet Network Operation Center (the "NOC") is available 24 hours x 7 days per week to help you with your service. The trouble reporting process outlined below describes how service issues are addressed when working with the NOC.

Preparing to report trouble

The authorized technical or administrative contacts from your organization may contact OARnet to report a service issue. The authorized contact will be verified by OARnet before making any changes to your service.

Please collect as much information as possible about the service issue before contacting the NOC. Detailed information may not be available to you regarding the issue, but every bit of information you can provide will help the NOC find and resolve the problem as quickly as possible.

Some helpful information to collect before you contact the NOC includes:

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- a. Specific error messages received;
- b. Date and beginning and end time of problem;
- c. Source and destination IP addresses or DNS site names;
- d. A trace route from the source address to the destination address demonstrating the problem;
- e. Circuit identification number and provider, if you believe it is a circuit problem; and
- f. Trouble ticket number, if you are contacting the NOC on a previously reported issue.

How to contact the Network Operation Center

The NOC is staffed 24 hours x 7 days per week and is always available to help you with your service and may be reached via phone or e-mail as noted below:

Phone: 800-627-6420

E-mail: Support@oar.net

How to track issues

Every call or e-mail to the NOC is logged in our Service Now Incident Request System. This system generates a tracking number, which will be given to you when a problem is reported, and provides a database for monitoring, communicating, and escalating issues within OARnet operations. Status of and for your reported incident can be obtained by checking with the NOC or requesting updates be provided by the NOC until the problem is resolved. OARnet's overall network status can be accessed through OARnet website under Service Desk under "Trouble Reporting and Status".

How issues are escalated

The technical, administrative, or billing contact(s) of record from your organization may request escalation of an issue within OARnet at any time. If an issue remains unresolved, it will be escalated from the current level to the next higher level within OARnet in the following manner until it is resolved. You may also request an escalation of your problem until you feel you are satisfied. Escalation requests can be made through the NOC and your issue will be typically be escalated through the following levels.

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Levels of Escalation:

- a. OARnet Service Desk - 800-627-6420
- b. Engineering Network Operations Center (NOC) 614-292-9191
- c. Engineer Network Operations Shift Lead (upon request to Engineering NOC)
- d. Network Director, Aaron Wise – 614-787-0437
- e. Chief Technology Officer, Mark Fullmer – 614-562-7999
- f. OARnet Executive Director, Pankaj Shah – 614- 354-9309

Post – mortem review of an outage

System-wide outages and their resolutions will be posted on the OARnet website under Service Desk in the Network Maintenance and Outages Subsection. It is the responsibility of the OARnet's Network Director and Network Operations Manager.

Non-reported issues

The NOC may notify your organization of service issues before you are aware a problem exists. The type and level of notification depends on the specific situation that is occurring. Some examples of such situation are:

- a. Your circuit(s) or service goes down during “off-hours”. The NOC staff will notify at least one contact person of record for your organization via phone and/or e-mail. This type of circuit outage can often be resolved during overnight testing with the telecommunications service providers.
- b. Excessive errors (CRC, Frame) are seen on a circuit, but the circuit is not “down”. The NOC staff will notify the appropriate contact person of record via phone and/or e-mail in order to arrange for circuit testing to resolve the problem.
- c. Secondary DNS errors are showing up in our name server logs. The NOC staff will notify the appropriate contact person of record via e-mail and will include a copy of the error logs in the email. Testing with the NOC may be arranged if assistance in fixing the problem is required.