



A CONVERGEONE SOLUTION FOR

Scope of Work Prepared For:
City of Columbus

Presented By:

Julie Wilson, Account Manager: JWilson@ConvergeOne.com

Gary Comment, Senior Solutions Architect: GComment@ConvergeOne.com

Project Title:

City of Columbus PureConnect Upgrade to CIC 2021 R(X)

Date:

10/11/2021

Version-4

CONFIDENTIALITY NOTICE

THE INFORMATION CONTAINED HEREIN IS CONSIDERED CONFIDENTIAL AND PROPRIETARY, PRODUCED SOLELY FOR THE CUSTOMER IDENTIFIED ABOVE.

This Scope of Work is proprietary to ConvergeOne, Inc. (“ConvergeOne”) and contains ConvergeOne confidential information. It may not be disclosed in whole or in part without the express written authorization of ConvergeOne. No portion of this Scope of Work may be duplicated or used for any purpose other than to receive services or deliverables from ConvergeOne described herein.

Trademarks

All trademarks™ and registered trademarks® mentioned are the sole property of their respective companies.

Intellectual Property

This document and any accompanying documents, attachments, and/or materials contains privileged, proprietary, and/or confidential information of ConvergeOne. It is provided for the sole purpose of permitting the recipient to evaluate the information submitted herewith and/or attached. In consideration, the recipient agrees to maintain such information in confidence and to not disclose and/or distribute this information to any person or entity outside the group directly responsible for evaluation of its contents without prior written approval from ConvergeOne.

Copyright

©2021 ConvergeOne. All rights reserved.

This document may not be reproduced in any form, in whole or in part, by any means whatsoever, without the prior written permission of ConvergeOne.

REQUIREMENTS OVERVIEW

The intent of this proposal is to define the scope of the services ConvergeOne will provide City of Columbus (CoC) to implement the Genesys migration solutions as per the pricing schedule provided in the associated Solution Quote Report.

This Scope of Work (“SOW”) is subject to the terms and conditions of the Master Agreement between ConvergeOne (“C1”) and City of Columbus (“CLIENT”). The offer of this SOW is effective on 10/11/2021 and expires thirty (90) days from the last revision date of this document.

Actual project start date depends upon City of Columbus’s acceptance of this SOW and the availability of resources at that time. The project will be scheduled within 30 days of contract signature. To accomplish these objectives, ConvergeOne will provide resources for Engineering, Implementation Consultation, Training and Project Management to administer the functions and responsibilities of ConvergeOne Professional Services. ConvergeOne will communicate with City of Columbus’s Project Manager, the appointed Point of Contact for City of Columbus on this project, who will be responsible for all communications and project management among all City of Columbus parties (staff, vendors, consultants) and for the escalation and resolution of any issues for City of Columbus.

This SOW is intended to provide deliverable goals and system functionality for City of Columbus. A significant portion of this project is dependent upon the joint design and team commitment between ConvergeOne and City of Columbus. City of Columbus should expect professionalism and commitment from the ConvergeOne team.

CONVERGEONE CUSTOMER CARE CLIENT DISCOUNT

This quote includes a 15% C1 Standard 24x7x365 Customer Care Client discount on the ConvergeOne Genesys professional services. This discount is provided for PURECONNECT release updates to ConvergeOne Genesys Clients who have a current ConvergeOne Standard or Premier Customer Care agreement.

PROJECT OVERVIEW

ConvergeOne will provide the professional services to upgrade City of Columbus' existing PureConnect 2017 R 2 system and the associated applications software and hardware to current PureConnect 2021 R (X) release. The upgrade will be a migration upgrade of the Production and Development systems. All existing servers in the existing platform(s) will be retired (Except for one Media Server) and the new software will be loaded onto net new servers which will comprise the new platform. These new media servers will be provided by ConvergeOne.

The Genesys PureConnect upgrade will include ConvergeOne tasks and software as defined below. There will also be tasks, software and hardware that will be City of Columbus responsibility as defined in this scope of work.

All other server hardware, Gateways and SBC units will be the responsibility of the City of Columbus. There is no end user training included in this engagement. The ConvergeOne engineer will take some time and provide some information on any changes in process or functionality that the end users will experience as a result of this upgrade process. This will be provided in the form of an email to the CoC IT staff. The team at COC can then determine how they would like to distribute this information to the end users.

ConvergeOne Responsibilities:

- Provide overall project management.
- 520 additional hours to be used as needed by the City of Columbus.
- Provide all Genesys Licenses needed for the upgrade. These include:
 - 1 MRCP license, required for the later version of Nuance software to be upgraded
 - 4 Genesys Medium Media Server appliances
 - 1 MRCP HA/DR license, required for the later version of Nuance software to be upgraded
 - 76 HA/DR Nuance Recognizer 11 Tier 2 licenses
 - 24 HA/DR Nuance Vocalizer TTS Ver 7 licenses
- The currently installed licenses are eligible for upgrade as they are under a support agreement with ConvergeOne and Genesys. All existing licenses will be converted/upgraded to the latest release during this process.
- Update the current PureConnect software to PureConnect 2021 R1. This new software will be loaded onto new servers provided by City of Columbus . The configuration from the existing platform will be loaded onto the new equipment once the CIC software has been loaded.
- ConvergeOne will split the CIC server pair and place 1 CIC server in each of the 2 data centers. C1 will test the connection between the newly split pair to verify functionality of switchover in the platform.

- Install 4 Media Server appliances which are physical servers provided by ConvergeOne. Two Media Servers will be placed in each data center to provide for additional system redundancy. ConvergeOne will remotely assist the City of Columbus with the installation.
- Upgrade 1 of the existing Media Servers (most recently installed) to current Media Server software version and to Media Server 2021 R (X) as needed.
- Upgrade the Nuance Automatic Speech Recognition (ASR) and Text to Speech (TTS) currently working in the platform. The newest CIC release requires an upgrade of the Nuance software from release 9 up to release 11. The existing Nuance licenses are under support from Genesys and will be upgraded from Rel 9 to Rel 11. The MRCP license is required to provide functionality in this newest release.
- Add Nuance HA/DR licensing for both ASR and TTS to provide functionality during a data center outage. Either data center is designed to be able to stand-alone should the other data center ever go dark.
- Coordinate with the staff of CoC on setting up telco terminations at both data centers along with verifying telco operation and functionality at both sites. The intention is to have all calls following into the main data center (West) at all times. CoC will coordinate with the service provider so if the main data center ever goes dark all calls will be routed to the back-up data center (East).
- Provide guidance to the City of Columbus technical staff as needed on the upgrade requirements for all PureConnect Clients as well as provide support as needed during the Client updates.
- Upgrade existing Scheduled Reports server.
- Upgrade existing Custom Reports server.
- Implement PureConnect 2021 R (X) onto the Dev server and load the final PureConnect 2021 R (X) configuration once the upgrade and migration to the new platform is completed.
- Provide the Server Specifications for all new servers in the new platform. This information is seen later in this document.
- Provide 4 hours of system admin training to the admin staff of the City of Columbus. This will be an informal knowledge transfer led by the C1 engineer doing the upgrade or another qualified training staff member.
- Will perform or assist the City of Columbus with OS upgrade.
- Has accounted for and will provide necessary resources for afterhours work.

City of Columbus Responsibilities:

- Upgrade all PureConnect Clients (see specification below).
- Provide 9 virtual machines for other servers in the PureConnect platform.
- Provide rack space and power for new Media Servers.

- Update OS on existing Media Server. ConvergeOne will perform or assist with OS upgrade.
- Provide and configure the SBC and/or gateways required at each data center to process calls through that data center.
- Communicate with the CoC telco/service provider(s) on the placement of telco circuits and functionality desired in the end state of failover in the event of a dark main data center.
- Test all applications prior to cutover.
- Provide remote access to the servers needing upgrade.
- Provide a primary Point of Contact for the implementation resources.
- Provide information and assist as needed during project and the cutover event.
- Provide your own UAT test plan for testing by the CoC staff in preparation for the cutover event.

UPGRADE PROCESS

ConvergeOne will upgrade City of Columbus's environment in a multiple-step process.

1. Upgrade the single remaining Interaction Media Server.
2. Install configuration on 4 new Media Servers.
3. Install the new software onto the new servers comprising the split CIC pair between data center locations.
4. Install the software onto all other new servers which comprise the PureConnect environment.
5. There will be a duplication of ASR and TTS servers between the 2 data centers (active in the main and DR in the back-up data centers). The ASR/TTS servers will stay in their current data center but will be upgraded and placed on new servers. In the event the main data center goes dark, ASR/TTS functionality will be duplicated with the HA/DR licenses included in this proposal.
6. Upgrade the Dev PureConnect servers to PureConnect 2021.
7. After the successful upgrade and testing of the Dev PureConnect environment, C1 will then focus on the production PureConnect environment. The timing of all phases will be discussed and mutually agreed upon.
8. ConvergeOne will migrate the existing configuration from the retiring platform onto the new platform. (A MAC Freeze may/will be necessary at this time.)
9. Perform all required C1 and then provide time for CoC testing to verify operation of the new environment.
10. Place the new environment into service.

Adjustments to the order of these steps will be determined by the operations team.

Dev Environment Upgrade:

It is assumed City of Columbus will want implemented all PureConnect applications on the PureConnect 2021 R (X) Dev system that they want to pre-test in the Dev environment.

- ConvergeOne will upgrade the Dev environment to PureConnect 2021 R (X).
- ConvergeOne will upgrade any Custom Handlers or IceLib on the Dev System.
- ConvergeOne will perform initial testing and then turn over to City of Columbus for full UAT prior to upgrading the Production environment.

Production Environment Upgrade:

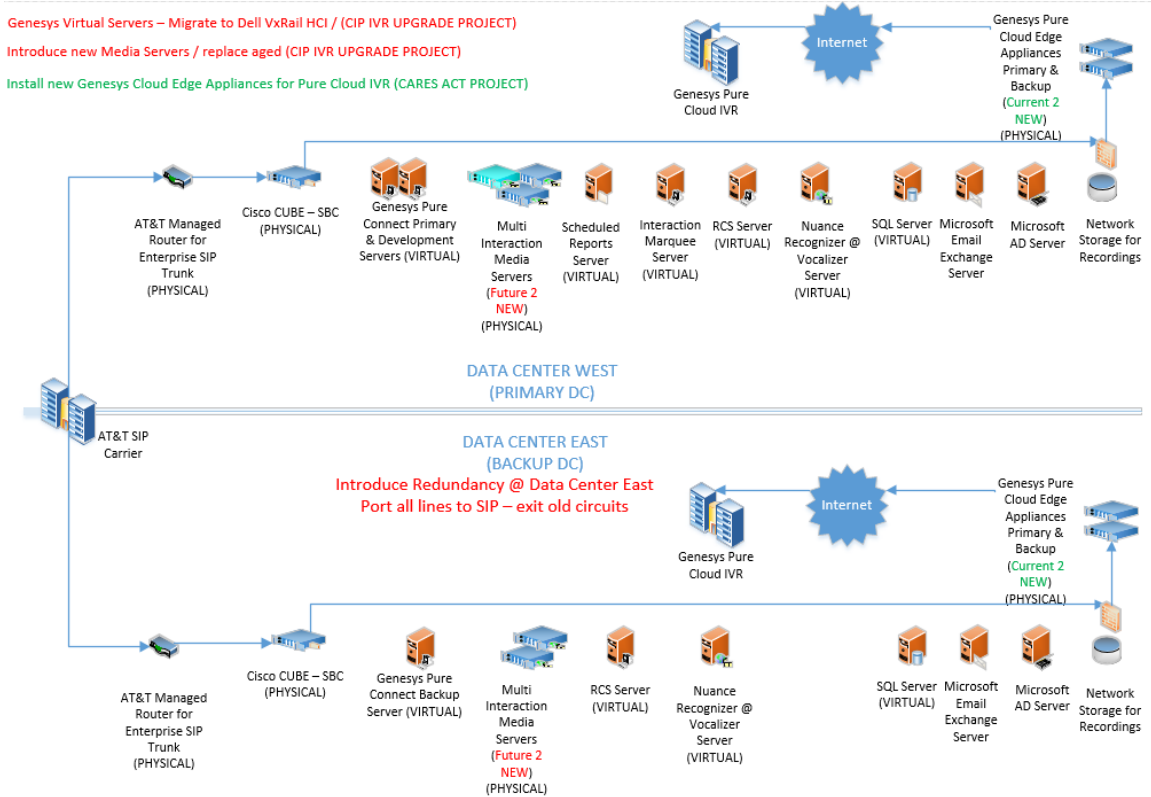
ConvergeOne will upgrade the Production environment after the successful upgrade of the Development environment. ConvergeOne will provide the professional services to upgrade City of Columbus's existing PureConnect 2017 R 2 Production environment to PureConnect 2021 R (X). Upgrade includes loading software onto net new servers provided by CoC (except for the Media Servers):

- (2) CIC servers (PureConnect Advanced Server Application Software) One in each data center.
- (4) Medium sized Interaction Media Server appliances, these are physical machines. Two in each data center.
- (1) Existing Media Server which is to remain in the main data center.
- (2) RCS Servers for Recording storage. One at each data center.
- (1) Interaction Scheduled Reports Application Software. This will remain in the main data center. This service will not be redundant across data centers.
- (1) Interaction Marquee/Web server. Redundancy not supported. (CoC could consider the option of having a server sitting Cold in back up data center?)
- (2) Nuance ASR/TTS Servers. One in each data center. All production ASR/TTS licenses to be loaded into the main data and all HA/DR licenses to be loaded into the back-up data center.
- (1) Dev CIC server at the main data center.
- ConvergeOne will upgrade all existing Custom Handlers or IceLib currently in use.
- ConvergeOne will provide initial application testing and then turn over to City of Columbus for full UAT and acceptance.
- ConvergeOne will provide change control information as required to the City of Columbus.

City of Columbus will be responsible for the upgrade of all Interaction Clients. Interaction Client updates are an in-place upgrade.

The specific schedule of updates will be jointly developed by ConvergeOne and City of Columbus. ConvergeOne assumes service effecting tasks will be performed during scheduled service windows and or during low traffic times.

PROJECTED DIAGRAM OF PURECONNECT PLATFORM



ASSUMPTIONS

This is a migration to new hardware along with the CIC release upgrade and assumes no configuration changes or additions to the PureConnect or applications beyond those changes required to facilitate the upgrade. Should City of Columbus choose to implement new features or functions provided by the new software release that particular implementation must wait until after the completion of this release upgrade. Should City of Columbus require or desire ConvergeOne’s assistance with implementation or training of end users for the new features and functions, please contact your Account Manager in order to scope the effort required and to provide a separate quote.

All PureConnect Clients have been upgraded to Interaction Desktop or Interaction Connect.

All ConvergeOne services will be delivered remotely during normal business hours of 8:00 AM to 5:00 PM Eastern Time, Monday thru Friday with the exception of service effecting tasks. Service

effecting tasks will be scheduled outside of normal business hours and coordinated with City of Columbus.

Important note: Hardware and software requirements change as the Genesys product evolves; therefore, the information in this document could be outdated. You should always refer to Genesys Test Lab site for the current information:

<https://testlab.genesys.com/ProductsPage.aspx?ProductType=20>

See Workstation requirements below.

MULTIPLE LOCATIONS

This engagement includes the splitting of the CIC pair. All application servers will remain in the main data center where they reside today and be duplicated, as needed, in the back-up data center.

The main data center (West) will have:

- CoC provided SBC unit
- Primary CIC server
- 2 new Media Servers
- 1 existing Media Server - upgraded
- CoC provided SQL server
- Scheduled Reports server
- Marquee server
- 1 RCS server
- 1 ASR/TTS
- 1 CIC Dev server

The second data center (East) will have:

- CoC provided SBC unit
- Second CIC server
- 2 new Media Servers
- CoC provided SQL server
- 1 RCS server
- 1 ASR/TTS

These servers will provide redundancy for system operation at both locations. Redundancy of Scheduled Reports and Marquee servers is not supported and will not be duplicated in the second data center.

CURRENT ENVIRONMENT

The server environment for PureConnect 2021 has some changes from the older 2017 environment. Please see the Genesys Testlab web site for additional information or detail:

<https://testlab.genesys.com/ProductsPage.aspx?ProductType=20>

CHANGES TO CURRENT CONFIGURATION

No changes to the current PureConnect configuration are included in this scope of work beyond those required by the upgrade to PureConnect 2021 R (X). It is assumed the configuration will remain the same for the upgrade.

There will need to be a point during this process where there will need to be a “MAC Freeze”. This will allow for the configuration to be moved from the retiring platform to the new platform. The length of this freeze will be determined by the C1 project team and will be coordinated with the CoC stakeholders to insure the least amount of disruption possible.

PROJECT TIME FRAME

The actual project time frame and project plan will be jointly developed by ConvergeOne and City of Columbus during the initial planning phase of this project. It is expected that the upgrade portion of this project will complete within 4 months from the start of this project.

Additional engineer/designer hours have been added to this project. These 520 hours will need to be used by December 31, 2022. The City of Columbus is encouraged to track these hours as they are being used in the manner they choose. ConvergeOne will track these hours internally and provide regular updates on the hours used and the hours still available in this block of dollars/block of hours. These 520 hours were calculated at \$200.00 per hour for time worked during regular business hours. Any time worked after hours, applied to this BOD, will be decremented at \$300.00 per hour.

TRAVEL EXPENSES

Travel expenses are not included in this proposal. This project has been scoped as all ConvergeOne services will be performed remotely. Typically, ConvergeOne will coordinate all travel with City of Columbus security and travel policies as they are provided by City of Columbus. All travel will be approved by City of Columbus prior to booking any travel arrangements. All ConvergeOne travel expenses for this project will be billed to the City of Columbus based on actual travel expenses incurred. At this time there are no plans to have a ConvergeOne engineer travel to the CoC data centers.

COVID-19 Onsite Support: Due to the ongoing COVID-19 pandemic restrictions on travel and social distancing. ConvergeOne will follow its own corporate guidance and comply with any City of Columbus guidance on travel and PPE use. The safety and the health of the staff members of both teams will be paramount in travel decision making by both parties. ConvergeOne asks that City of Columbus provides the same considerations.

SERVER REQUIREMENTS

PURECONNECT (CIC) SERVER REQUIREMENTS:

PureConnect 2021R(X) operates on a Microsoft Windows Server 2016, or 2019 64-bit environment. In general, all server application associated with the PureConnect must also operate on Microsoft Windows Server 2016 and 2019. A list of all PureConnect 2021R(X) applications are listed on the Genesys Test lab website at:

<https://testlab.genesys.com/ProductsPage.aspx?ProductType=20>

Please reference this site to verify specific information. Server and workstation specifications are as follows at the time of writing of this SOW.

Most PureConnect 2021R(X) applications including the PureConnect server itself are now supported in a virtual environment. The most notable exception is the Interaction Media Server(s) which have traditionally operated on dedicated servers. Under special circumstances, exceptions to this can be requested through Genesys and a survey will be performed on the customer's environment to verify if the Media Servers can reside on customer provided virtual servers. Please note that if there is interest in this option, substantial dedicated resources are required of the host servers.

CIC Server Operating System (Supported on Virtual machines)

Microsoft Windows Server 2019 (64-bit)

Supported in PureConnect 2020 R1 and later

Interaction Web Portal and Interaction Administrator Web Edition are not supported because Windows Server 2019 does not support Silverlight.

Microsoft Windows Server 2016 (64-bit)

Supported in PureConnect 2018 R2 and later

Microsoft Windows Server 2012 R2 (64-bit)

Supported in CIC 2015 R1 and later

Download and apply Microsoft KB article [2919355](#)

Microsoft .NET Framework 4.7 or later

Required for PureConnect 2018 R4 and later

Microsoft .NET Framework 4.5.2 or later

Required for CIC 2016 R1 through 2018 R3

Microsoft .NET Framework 3.5

Windows Server 2016: Can be added via the Server Manager

Windows Server 2012 R2: Install in Server Manager->Add roles and features. **Note:** See Microsoft KB article [2734782](#) for known issue.

City of Columbus Specific PureConnect Virtual Server Recommendations:

PureConnect Server Requirements:

Medium implementation - For 300 - 1000 ACD agents and 30 – 100 supervisors:

- Four virtual processors with 100% reservation highly recommended
- 6 GB RAM minimum
- 300 GB hard drive minimum¹
- Paravirtualized/synthetic virtual network adapters
- For VMware, a dedicated NIC is recommended

¹ For sites that may require increased tracing for troubleshooting purposes, it is highly possible that more than the minimum disk requirement will be needed. In some cases where increased tracing as performed, 600 GB was the increased disk size. Your individual requirements and results may vary.

SCHEDULED REPORTS SERVER REQUIREMENTS:

The following provides the minimum Scheduled Reports Monitor Server hardware and server software requirements. This server is supported on physical or virtual servers.

Hardware Requirements:

- Two virtual processors with 100% reservation highly recommended
- 2 GB RAM minimum
- Paravirtualized/synthetic virtual network adapters
- 300 GB hard drive minimum

Software Requirements:

- Microsoft Windows Server 2019 or Server 2016
- Microsoft .NET Framework
 - Microsoft .NET Framework 4.7
 - Windows Server 2016 (all editions): Includes the .NET Framework 4.7 as an operating system component installed by default, except in the Server Core configuration.
 - Microsoft .NET Framework 3.5
 - Windows Server 2016: Can be added via the Server Manager
- Scheduled Reports Configurator
- Oracle 12.1.x (32 bit) administrator client or instant client with SQLPlus. SQLPlus is required. (only necessary if using Oracle for database)

INTERACTION RECORDER REMOTE CONTENT SERVER REQUIREMENTS:

The following provides the minimum Interaction Remote Content Server hardware and server software requirements. This server is supported on physical or virtual servers.

Hardware Requirements:

- Two virtual processors

- 2 GB RAM minimum
- 346 MB of free space, 7,200 rpm or higher
 - Additional storage for recording files – Recommend 1TB minimum
- Paravirtualized/synthetic virtual network adapters
- NIC – Gigabit Ethernet

Software Requirements:

- Microsoft Windows Server 2019 or Server 2016
- Microsoft .NET Framework
 - Microsoft .NET Framework 4.7
 - Windows Server 2016 (all editions): Includes the .NET Framework 4.7 as an operating system component installed by default, except in the Server Core configuration.
 - Microsoft .NET Framework 3.5
 - Windows Server 2016: Can be added via the Server Manager

INTERACTION WEB PORTAL/MARQUEE SERVER REQUIREMENTS:

The following provides the minimum Interaction Marquee server and browser hardware and software requirements. This server is supported on physical or virtual servers.

Web server

Hardware Requirements:

Interaction Marquee is expected to monitor 25,000 statistics or less

- Two virtual processors
- 4 GB RAM minimum
- 300 GB of free space
- Paravirtualized/synthetic virtual network adapters
- NIC – Gigabit Ethernet

Interaction Marquee is expected to monitor between 25,000 and 80,000 statistics

- Eight virtual processors
- 8 GB RAM minimum
- 300 GB of free space
- Paravirtualized/synthetic virtual network adapters
- NIC – Gigabit Ethernet

Interaction Marquee is expected to monitor over 80,000 statistics

- 12 virtual processors
- 12 GB RAM minimum
- 300 GB of free space
- Paravirtualized/synthetic virtual network adapters
- NIC – Gigabit Ethernet

Software Requirements:

- Windows Server 2012 R2 or Server 2016
 - Microsoft .NET Framework
 - Microsoft .NET Framework 4.6.2

- Windows Server 2016 (all editions): Includes the .NET Framework 4.6.2 as an operating system component installed by default, except in the Server Core configuration.
- Microsoft .NET Framework 4.5.2 or later
 - Windows Server 2012 R2: If not installed via Windows Update, install .NET Framework 4.5.2 or later from \Third Party Installs on the CIC 2016 R1 or later .iso
- Microsoft .NET Framework 3.5
 - Windows Server 2012 R2: Install in Server Manager->Add roles and features. Note: See Microsoft KB article 2734782 for known issue.
- Microsoft IIS 8.5 or IIS 10
 - IIS Media Services (available for download here: <https://www.microsoft.com/en-us/download/details.aspx?id=27955>)
- Lightweight Directory Services (LDS) Role
- Requires ASP.NET
 - Windows Server 2012 R2 – ASP.NET 4.5
 - Windows Server 2016 – ASP.NET 4.6

Web browsers

- Microsoft Edge 80
- Firefox 73 or later
- Safari for Mac 13.0.5 or later
- Google Chrome 80 or later

WEB SERVICES SERVER REQUIREMENTS:

The Web server is supported on the following. This server is supported on physical or virtual servers.

Hardware Requirements: Up to 500 chats or Interaction Connect connections

- 4 virtual processors
- 4 GB RAM minimum
- 300 GB of free space
- Paravirtualized/synthetic virtual network adapters
- NIC – Gigabit Ethernet

Software Requirements:

- Microsoft IIS 8.5 or IIS 10
- ASF Apache 2.4.7+ (ConvergeOne to support this application if needed)

PROXY SERVER REQUIREMENTS:

The Proxy server is supported on the following. This server is supported on physical or virtual servers.

- Microsoft Windows Server 2012 R2 or Server 2016
- Must support TLS v1.2 transport layer protocol
- Up to 30 CPS (calls per second)
- Hard Drive – 300 GB of free space, 7,200 rpm or higher
- CPU – 2 Cores
- RAM – 2 GB
- Paravirtualized/synthetic virtual network adapters
- NIC – Dedicated Gigabit Ethernet
- Web browsers
 - Microsoft Edge 80 or later
 - Firefox 73 or later
 - Safari for Mac 13 or later
 - Google Chrome 80 or later

DEVELOPMENT PURECONNECT SERVER REQUIREMENTS:

Development PureConnect 2021R(X) system operates on a Microsoft Windows Server 2012R2, 2016 or 2019 64-bit environment. In general, all server application associated with the PureConnect must also operate on Microsoft Windows Server 2012R2, 2016 or 2019.

Minimum Recommendations:

PureConnect 2021R(X) Development System:

- Two virtual processors with 100% reservation highly recommended
- 4 GB RAM minimum
- Paravirtualized/synthetic virtual network adapters
- 300 GB hard drive minimum¹

¹ For sites that may require increased tracing for troubleshooting purposes, it is highly possible that more than the minimum disk requirement will be needed. In some cases where increased tracing was performed, 600 GB was the increased disk size. Your individual requirements and results may vary.

Minimal Processor Speed: Intel Xeon E-series 64-bit quad-core processor or better

Recommended: Intel Nehalem 2.40 GHz or greater Examples: E5620 2.40 GHz, X5677 3.47GHz

MEDIA SERVER REQUIREMENTS:

This server is supported only on physical servers.

Minimum Hardware and Software Requirements:

https://help.genesys.com/pureconnect/mergedProjects/wh_tr/mergedProjects/wh_tr/media_server/desktop/install_interaction_media_server_software.htm

For assistance with determining hardware requirements for various workloads, see the following:

Medium Media Server 360 Gen10 Technical Specifications

(https://help.genesys.com/pureconnect/mergedprojects/wh_tr/mergedprojects/wh_tr_media_server/desktop/pdfs/medium_mssp.2018.hp360g10-01m.070118.r3p4_marketing_specs.pdf)

The requirements are as follows:

HARDWARE BASE:

CPU (minimum)	Intel quad-core, hyper-threaded CPU
RAM	4 GB
Local storage space	2 - 500 GB SATA hard drives
Cache	256 MB Battery Backed Write Cache (BBWC)
Power supply units (PSUs)	2 - 365 W redundant power supply units
Network interface	<p>1 GB Ethernet with driver software that supports Receive Side Scaling (RSS)</p> <p>Important!</p> <p>Receive Side Scaling (RSS) is a technology that distributes the processing of received network packets across multiple physical CPU cores. For RSS to function, the operating system, the network interface card (NIC) hardware, and the NIC driver must support this feature. RSS is, however, independent of any application, such as Interaction Media Server.</p> <p>You can use the Device Manager application in Windows to ensure proper RSS configuration of the NIC. Set the number of queues that the RSS feature of the NIC supports to a number that is equal to the number of physical CPU cores in the host computer. The RSS settings for NICs vary between the different brands and models of NICs. Consult the documentation for the NIC to configure the RSS queue to the appropriate value.</p>
Systems	A functional CIC server in the network
Domain (optional)	If you do not connect Interaction Media Server to a domain, limit the computer name of Interaction Media Server to a maximum of 15 characters. Failure to follow this restriction can result in connectivity problems.

For assistance with determining hardware requirements for various workloads, see the following:

- [Medium Media Server 360 Gen10 Technical Specifications](#)
- [Large Media Server 360 Gen10 Technical Specifications](#)

Interaction Media Server software requirements

Operating system	<ul style="list-style-type: none"> • Windows Server 2019 (64-bit), Windows Server 2016 (64-bit), or Windows Server 2012 R2 (64-bit) • Datacenter edition • Enterprise edition • Standard edition
Software	<p>Microsoft .NET Framework 4.7 or later and Microsoft .NET Framework 3.5.1 or later</p> <p>Tip: To enable Microsoft .NET Framework 3.5.1 or later, use Server Manager -> Features.</p> <p>Note: Only the iUpdate software updating product uses the Microsoft .NET Framework. Interaction Media Server does not use Microsoft .NET Framework.</p>
Web browser	<p>Internet Explorer, Microsoft Edge, Mozilla Firefox, or Google Chrome</p> <p>Important! To access the Interaction Media Server web interface, your browser must support version 1.1 or 1.2 of the Transport Layer Security (TLS) protocol. The Interaction Media Server web interface does not support the TLS v1.0 or SSL protocols.</p>

WORKSTATION REQUIREMENTS

CLIENT WORKSTATION SOFTWARE REQUIREMENTS:

The following lists the basic software requirements for client workstations running PureConnect User applications, PureConnect Business Manager Applications, or PureConnect Server Manager Applications. The City of Columbus is responsible for installing all appropriate versions of the software listed below on the client workstations before installing any PureConnect applications on them.

Important note: Hardware and software requirements change as the Genesys product evolves; therefore, the information in this document could be outdated. You should **always** refer to Genesys Test Lab site for the **current** information:

<https://testlab.genesys.com/ProductsPage.aspx?ProductType=20>

- **Microsoft Windows OS**

The following Microsoft OS versions are supported on PureConnect client workstations:

- **Microsoft Windows 10 version 1511 and later (32-bit and 64-bit)** All PureConnect workstation applications are supported in Windows 10.

Important Note: Microsoft KB 3147458 will cause a connection failure with Interaction Desktop. See PureConnect Customer Care KB article [Q145694399400320](https://support.genesys.com/s/article/Q145694399400320)

- **Microsoft .NET Framework**

PureConnect client workstations require the following Microsoft .NET Framework versions:

- **Microsoft .NET Framework 4.7**
- **Microsoft .NET Framework 3.x**

- **Microsoft Windows Installer**

PureConnect client workstations require Microsoft Windows Installer 4.5 or later.

- **Microsoft Windows Installer 5.0** is included with Windows 7 and Windows 8. No further installation is necessary.

- **PureConnect Applications**

Once the basic software referenced above has been installed on the client workstations, then you can install the appropriate PureConnect applications. Your Genesys Converged Engineer will provide you with the listing of PureConnect applications and updates that need to be installed on your client workstations. The required applications may vary depending on the User's Role and configuration in the PureConnect system.

CLIENT WORKSTATION HARDWARE REQUIREMENTS:

This section describes the minimum and recommended hardware requirements for running PureConnect User Applications, PureConnect Business Manager Applications, Interaction Optimizer in PureConnect Business Manager (for schedule creation/modification and intraday reforecasting), and PureConnect Server Manager Applications on client workstations.

PureConnect User Applications:

This section describes the minimum and recommended hardware requirements for running PureConnect User Applications on client workstations.

Minimum requirements

- **Processor:** Intel® Pentium® 4 @ 2.4GHz or AMD equivalent (Athlon XP/MP)
- **Memory:** 4 GB system memory
- **Disk space for default installation:** 550 MB of available hard disk space
- **Disk space for full installation:** 900 MB of available hard disk space
- **Disk space for tracing and debugging files:** Up to 8 GB disk space*
- **Network:** 100 Mb network controller

Recommended requirements

- **Processor:** Intel® Core™ i3 Processor or AMD equivalent
- **Memory:** 8 GB system memory
- **Disk space for default installation:** 700 MB of available hard disk space
- **Disk space for full installation:** 1 GB of available hard disk space
- **Disk space for tracing and debugging files:** Up to 20 GB disk space*
- **Network:** 1 Gb network controller

For workstations running IC User Applications, IC Business Manager Applications, and IC Server Manager Applications.

Genesys supports the latest Microsoft OS cumulative updates and security updates for these applications. We recommend application of minor version updates, cumulative updates, and security updates to keep your software secure. See testlab.genesys.com for information on the latest validation test results.

Microsoft Windows 10 version 1511 and later (32-bit and 64-bit)

Supported in CIC 2016 R2 and later

See testlab.genesys.com for known issues with Microsoft patches

Microsoft Windows 8.1 (32-bit and 64-bit)

Supported in CIC 2015 R1 and later

Microsoft Windows 8 (32-bit and 64-bit)

Supported in CIC 2015 R1 through 2018 R3

Microsoft Windows 7 SP1 (32-bit and 64-bit)

PureConnect 2018 R3 is the last release to support Microsoft Windows 7

Microsoft .NET Framework 4.7 or later

Required for PureConnect 2018 R4 and later

Microsoft .NET Framework 4.5.2 or later

Required for CIC 2016 R1 through 2018 R3

Microsoft .NET Framework 3.x

Microsoft .NET Framework 4.7 or later

Required for PureConnect 2018 R4 and later

Microsoft .NET Framework 4.5.2 or later

Required for CIC 2016 R1 through 2018 R3

Microsoft .NET Framework 3.x

Please see the Genesys Test lab web site for additional information or detail:

<https://testlab.genesys.com/ProductsPage.aspx?ProductType=20>

PureConnect Business Manager Applications:

This section describes the minimum and recommended hardware requirements for running PureConnect Business Manager Applications on supervisor and administrator workstations.

Minimum requirements

- **Processor:** Intel® Core™ i5 Processor or AMD equivalent
- **Memory:** 4 GB system memory
- **Disk space for installation:** 700 MB of available hard disk space
- **Disk space for tracing and debugging files:** Up to 20 GB disk space*
- **Network:** 100 Mb network controller

Recommended requirements

- **Processor:** Intel® Core™ i7 Processor or AMD equivalent
- **Memory:** 8 GB system memory
- **Disk space for installation:** 1 GB of available hard disk space for installation

- **Disk space for tracing and debugging:** Up to 80 GB of disk space*
- **Network:** 1 Gb network controller

Interaction Optimizer in PureConnect Business Manager:

Needed for schedule creation/modification and intraday reforecasting. For more information, see Interaction Optimizer Requirements and Limitations Overview.

Minimum requirements

- **Processor:** Intel® Core™ i7 Processor with at least 4 cores or or AMD equivalent (Fx)
- **Memory:** 8 GB system memory
- **Disk space for installation:** No extra besides PureConnect Business Manager requirements
- **Disk space for tracing and debugging files:** No extra besides PureConnect Business Manager requirements
- **Network:** No extra besides PureConnect Business Manager requirements

Recommended requirements

- **Processor:** Intel® Core™ i7 4-core Processor Extreme Edition with at least 6 cores or or AMD equivalent (Fx)
- **Memory:** 16 GB system memory (DDR4-1600/2133)
- **Disk space for installation:** No extra besides PureConnect Business Manager requirements
- **Disk space for tracing and debugging:** No extra besides PureConnect Business Manager requirements
- **Network:** No extra besides PureConnect Business Manager requirements

PureConnect Server Manager Applications:

This section describes the minimum and recommended hardware requirements for running PureConnect Server Manager Applications on administrator workstations.

Minimum requirements

- **Processor:** Intel® Pentium® 4 @ 2.4 GHz or AMD equivalent
- **Memory:** 4 GB system memory
- **Disk space for installation:** 900 MB of available hard disk space
- **Disk space for tracing and debugging files:** Up to 10 GB disk space*
- **Network:** 100 Mb network controller

Recommended requirements

- **Processor:** Intel® Core™ i3 Processor or AMD equivalent
- **Memory:** 8 GB system memory
- **Disk space for installation:** 1.2 GB of available hard disk space
- **Disk space for tracing and debugging:** Up to 20 GB of disk space*
- **Network:** 1 Gb network controller

* Hard drive sizing recommendations are based upon moderate loading of average-sized implementations with trace levels set to default values. Increasing the trace log levels beyond this level can greatly affect storage requirements. Monitoring of available drive space at

regular intervals will be required due to the uncompressed nature of these off-host logs files. Only trace logs generated on the PureConnect server get compressed on a daily basis.

VDI WORKSTATIONS

Desktop Virtualization is supported on:

- Citrix Xen App 7.16
- Citrix XenDesktop 7.16
- VMware Horizon 7
- Microsoft Server 2016 Remote Desktop Services

ConvergeOne will work to implement 1 headset using USB pass-through on a VDI workstation in an effort to provide that functionality in the contact center. This effort will be limited to 4 hours of investigation and consultation with the headset and VDI vendors and all communication with the vendors will be the responsibility of City of Columbus. Any additional effort past this limited amount of time will become a billable engagement. All other VDI implementation/configuration will be the responsibility of the customer.

ConvergeOne will work to implement screen recording on a VDI workstation in an effort to provide that functionality in the contact center. This effort will be limited to 4 hours of investigation and consultation with the City of Columbus VDI vendor and all communication with the vendors will be the responsibility of City of Columbus. Any additional effort past this limited amount of time will become a billable engagement.

All other VDI implementation/configuration will be the responsibility of the customer.

CLIENT REQUIREMENTS

- City of Columbus will provide a main point contact throughout entire project life cycle.
- City of Columbus will provide the required number of virtual machines required to support the environment. (Currently projected to be 9 virtual machines).
- City of Columbus will provide onsite assistance for any onsite equipment setup needs to provide a remote connection to the required equipment.
- City of Columbus will provide access to internal infrastructure throughout PureConnect implementation including, but not limited to, database servers, email servers, directory servers, and other system data repositories or application servers.
- Engineering or configuration changes made by City of Columbus after project initiation may affect the agreed-upon project schedule and will require a project review to determine impact and schedule requirements.
- City of Columbus will be responsible for keeping regular back-ups of the system. ConvergeOne strongly encourages City of Columbus to have two or more reliable backups of everything on City of Columbus's system.

- ConvergeOne personnel will have unrestricted access to work areas as needed, to be arranged with the designated client contact. ConvergeOne understands City of Columbus security requires scheduling for escorted access, however this is a remote project. No ConvergeOne staff will be on site.
- ConvergeOne is not responsible for the performance, quality, or delays caused by third-party vendors hired by City of Columbus. Additional professional services may be required should on-site work be delayed based on third-party vendors.
- ConvergeOne will collaborate with City of Columbus but maintains that ConvergeOne is the final arbitrator of what is in or out of scope.

ENHANCED 911 (E911) REQUIREMENTS

A PureConnect R release is considered a major upgrade to a PureConnect solution. As such it falls under the ruling that E911 must be brought into standards with a major upgrade.

ConvergeOne and the City of Columbus are currently engaged in a separate effort to bring their E-911 calling into alignment with the newly enacted and current laws. E-911 will not be addressed as part of this upgrade effort. It will be a requirement for the City of Columbus to take action on E-911 dialing abilities for their employees and anyone else using the platform.

BILLING

Products will be invoiced upon shipment. The Solution Summary contains an estimate of ConvergeOne Professional Services. This provides the cost basis for the Services detailed within this SOW as well as the Services budget for the project. ConvergeOne will make all reasonable efforts to deliver the Services described in this SOW within the time and cost constraints detailed above and below, however, given that requirements documented herein are primarily high-level, project scope may increase or decrease based on details gathered prior to and/or during the project.

The ConvergeOne Project Manager or National Account Manager will report project hours/fees to City of Columbus on a monthly basis and will inform City of Columbus of any expected changes from the initial estimate. If required, the ConvergeOne Project Manager will issue a Change Order requesting additional funding. The impact to the cost and schedule will be assessed and reviewed as part of the Change Order process. If there are differences in the perceived meaning of the requirements language in this scope of work between any parties ConvergeOne will collaborate with City of Columbus about any issues of what is or is not in scope and what requires a change order. Professional services for change orders will be invoiced on a time and materials basis along with any new hardware or software at time of change order execution.

All Services will be billed on a time and materials basis. As such, City of Columbus will be invoiced only for the actual hours worked by ConvergeOne or one of its subcontractors on a monthly basis. City of Columbus requested or required after hours Services will be billed at one and a half (1.5)

times the business hours rates. All other Services will be performed between 8:00 AM and 5:00 PM local Site time (based on customer location), Monday through Friday, excluding ConvergeOne-designated holidays. ConvergeOne recognizes 9 holidays each year. These holidays will be identified and addressed during project timeline and planning session to avoid any disruption to project plan.

There are 2 components to this project. There is the upgrade project and then the additional 520 hours. Invoices will be sent on a monthly basis for all hours as they are used, this includes the additional 520 hours.

Customers shall complete internal testing requirements in no later than 30 days of receiving ConvergeOne work product.

(Remainder of page left blank intentionally)

SCOPE OF WORK ACCEPTANCE

The signature below of an authorized City of Columbus representative indicates acceptance of the terms and conditions of this Scope of Work by City of Columbus. A signature by an authorized ConvergeOne representative indicates ConvergeOne's acceptance to perform the defined work under the terms of this proposal. Signatures by authorized representatives of both parties constitute the agreement.

**ConvergeOne, Inc.
Authorized Representative:**

Signature

Printed Name

Title

Date

City of Columbus Authorized Representative:

Signature

Printed Name

Title

Date

City of Columbus Primary Contact:

Printed Name

Title

Email Address

Phone Number