

**RESOLUTION  
ROCK COUNTY BOARD OF SUPERVISORS**

Finance Committee  
INITIATED BY



Diana Arneson, Asst. to IT Dir  
DRAFTED BY

Finance Committee  
SUBMITTED BY

May 7, 2019  
DATE DRAFTED

**AUTHORIZING UPGRADE FOR COUNTY CITRIX ENVIRONMENT**

1 **WHEREAS**, one of the Information Technology Department's 2019 Strategic Initiatives is the budgeted  
2 upgrade of the County's Citrix environment; and,  
3  
4 **WHEREAS**, the 2019 Information Technology Department Capital Projects Account (07-1444-0000-  
5 67135) includes funding for the Citrix software upgrade; and,  
6  
7 **WHEREAS**, the Information Technology Department and the County's Citrix systems provider, EDCI,  
8 Inc., has developed the project plan for implementing the upgrade from Citrix 6.5 to Citrix 7.15 Long Term  
9 Service Release (LTSR).  
10  
11 **NOW, THEREFORE, BE IT RESOLVED** that the Rock County Board of Supervisors duly assembled  
12 this 23rd day of May, 2019 that a Purchase Order for the upgrade from Citrix 6.5 to Citrix  
13 7.15 LTSR be issued to EDCI, Inc. for an amount not to exceed \$30,000.

Respectfully submitted,

FINANCE COMMITTEE

FISCAL NOTE:

Mary Mawhinney, Chair

Funds were included in the budget for the cost of this project.

Mary Beaver, Vice Chair

Brent Fox

Sherry Oja  
Finance Director

J. Russell Podzilni

LEGAL NOTE:

Bob Yeomans

The County Board is authorized to take this action pursuant to secs. 59.01 and 59.51, Wis. Stats. In addition, sec. 59.52(29), Wis. Stats. requires the project to be let to the lowest responsible bidder. EDCI, Inc. is the sole source provider.

ADMINISTRATIVE NOTE:

Richard Greenlee  
Corporation Counsel

Recommended.

Josh Smith  
County Administrator

19-5B-249

### **Authorizing Upgrade to the County's Citrix Environment**

The Information Technology department currently supports a Citrix environment that is used by several County departments for critical application delivery. One of the strategic initiatives for the IT Department for 2019 is the project to upgrade the County's Citrix environment from Citrix 6.5 to Citrix 7.15 LTSR. The purpose of the upgrade is to lower IT Desktop support efforts, lower the Desktop total cost of ownership, and upgrade the County's mobile access to real time data. Additionally the Citrix servers will be upgraded from Server 2008 r2 to Server 2016. Since support for Server 2008 r2 is due to be discontinued on 1/14/2020, it is prudent for the Information Technology department to perform the update now before Server 2008 r2 support ends. The 7.15 LTSR version of Citrix also delivers a consistent virtual desktop interface allowing users to access their applications from any location and from any device that is on the County's network or the Internet.

This project is the next step of the existing long-term project of Citrix technology that has been in-process within the County's computer and network environment, and the project has relied on the professional services of EDCI, Inc. the leading implementation provider of Citrix enterprise solutions in the state of Wisconsin.

The purchase of both the Citrix software and the associated implementation services will be procured from EDCI, Inc., the County's Citrix systems provider, and will total an amount not to exceed \$30,000.

# Rock Co Information Technology

Janesville, WI

## Statement of Work

#004500

### Citrix Upgrade 6.5 to 7.15 LTSR

April 17, 2019

By



Celebrating

**35** *years*  
1979-2014

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Principal Citrix Engineer  
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hphillippi@edci.com



## Executive Summary

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EDCi is pleased to have the opportunity to provide this Statement of Work to Rock Co Information Technology for the Citrix project. We are looking forward to working with you to achieve the business and information technology objectives identified in this project.

The proposed solution will provide Rock Co Information Technology the following benefits:

- Lower IT Desktop Support Efforts
- Lower Desktop Total Cost of Ownership
- Mobile Access to Real Time Data

If you require any further information or clarification on this document, please feel free to contact us. We are looking forward to the opportunity to work with Rock Co Information Technology and develop a strong partnership for success.



## Project Scope & Approach

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### Environment Review

Verification of Citrix XenApp 6.5 environment is compatible with Citrix requirements 7.15 LTSR

- Verify License Server version
- Verify SQL version
- Verify Microsoft windows server operating system
  - Current Citrix Environment windows 2008r2 and 2012r2
  - Migrate to 2016
- Verify vDisk Master VM
- Verify memory resources on hypervisor
- Verify Current virtual PVS
- Verify Thin Clients
  - Support XenApp 7.15 LTSR
  - Supports HDX Insight for MAS Implementation

**Note:** Citrix environment must meet Citrix current release system requirements before each upgrade can take place to Citrix XenApp 7.15 LTSR.

### XenDesktop LTSR Install

Side by Side upgrade of Citrix XenApp 6.5 to 7.15 long term service release (LTSR) environment on Windows 2016 with the latest updates and patches.

Virtual machines to be created to support Citrix XenApp 7.15 LTSR on existing VMware environment:

- Create 2 Citrix Data Collectors (DDC) as dedicated servers
- Create 2 Citrix StoreFront servers to front-end the XenApp environment
- Create 1 Citrix License server
- Create 2 Citrix XenApp application image for physical PVS

Migration from XenApp 6.5 to XenApp 7.15 LTSR

- Migration of DDC from server 2008r2 to Windows Server 2016
  - 4 hours have been allocated for published application migration.
- Migration from Web Interface 2008r2 to StoreFront on Windows Server 2016
- Migration of Citrix License server from 2008r2 to Windows Server 2016
- Migration of virtual PVS from 2012r2 to Windows Server 2016
  - If Rock Co Information Technology chooses to keep the current physical PVS servers they will be responsible for the Windows OS reinstall.
- Assist in installation of Citrix Universal Print Server components on a new Windows Server 2016 server.

Knowledge Transfer for 7.15 LTSR

- Director and Studio
- VDA
- Basic admin tasks

**Note:** Microsoft Licensing **NOT** included:

- Microsoft Windows Server 2016
- Microsoft SQL
- Microsoft Windows 2016 User RDCals - per Citrix User



- Microsoft VDA for true VDI - per VDI user

## Workload Migration

The following tasks will be completed at the main Rock Co Information Technology datacenter to upgrade workloads to the latest Long Term Support release (v7.15 CU3 at the time of this writing).

- Review the current environment, including Active Directory and the Hypervisor, and determine if any existing conditions could affect the stability of the items within the scope of this project.
- Migrate current Windows 2008 R2 workloads into new XenDesktop LTSR farm
- Create updated Machine Catalogs and Delivery Groups to reflect the current production environments
  - Note: Migration of published applications is capped at 2 hours. Additional time can be added with change orders if needed
- Configure Citrix User Profile Manager according to EDCi and Citrix best practices

## Test Workload Creation

In order to allow Rock Co Information Technology to test compatibility with Windows 2016 and Citrix's latest features, a new Windows 2016 based workload will be created.

- Create a new Windows 2016 image to test production applications and serve as base for future workloads
- Configure test group policies enabling latest HDX features such as Adaptive HDX and Framehawk

EDCi will also configure Citrix Machine Creation Services (MCS) during this step so that Rock Co Information Technology may evaluate it as a possible replacement for Provisioning Services.

## NetScaler

Upgrade NetScaler to Current Release access the new Citrix environment with the following functionality:

- ICA Proxy Access Gateway for the client devices with SSL encryption
- Mobile smartphone (iPad, Droid, iPhone) access to the XenApp/XenDesktop environment
- Load Balancing the two StoreFront servers
- Load Balancing XenApp XML Broker services
- Load Balance the PNAgent for thin clients, etc. to connect to instead of StoreFront

## Production Cutover

Production user cutover to the new environment consisting of:

- System modifications as outlined above
- Design the Active Directory group membership method that will allow users access to the new Citrix environment. Actual group creation and membership additions will be completed by the customer.
- Document any changes to the environment, monitoring results, and any recommendations for performance improvements.
- Provide a baseline customer test plan of the common features that should be validated from the end user perspective.

## Scope Other

- Implementing "Best Practices" for the Citrix environment including policies, licenses, and printing services.



- Provide knowledge transfer of the system implemented allowing I.T. staff the ability to support day-to-day Move/Add/Change tasks.
- Document the system as it was built which includes screen shots and IP/Naming set within the configurations.

## Out of Scope

The following items will not be addressed in the scope of this project:

- Software or hardware bugs that are outside the control of EDCi.
- Client information that was incorrect or incomplete.
- Software, hardware, and labor requirements that are not part of this document.
- Subcontractor labor that is outside the control of EDCi.
- 3rd party software and hardware that is outside the control of EDCi.
- Network hardware, software, and QoS issues that are outside the control of EDCi.
- EDCi is not responsible for any delays during the course of the project that are outside of its control. This includes delay because of items not defined in the scope of work.
- Additional features included within the product sets not listed within the scope of this project.
- All hardware requirements, including SAN storage and server equipment, not included in the quote will be customer provided and available before EDCi engineers engage with the project.
- If after reviewing the current environment and it is determined that any existing conditions could affect the stability of the items within the scope of this project, EDCi will stop the project until these conditions are corrected either through a change order or by the customer.
- Production user cutover to the new environment unless specifically listed with the scope of this project.

## Client Responsibilities

Rock Co Information Technology understands and accepts the responsibility regarding these services, which include the following:

- Complete all system testing, user acceptance testing and usability studies.
- Project Manage the entire effort, while EDCi will Project Manage the tasks assigned to it per the scope of this Statement of Work.
- Application installation and configuration in the Citrix environment. While EDCi will prepare the system for the applications, customer will actually install and configure the individual applications.
- Provide the Citrix client installation and configuration on the workstations. Configuration details will be provided by EDCi.
- Application/printing testing of the new system.
- System backups for the equipment.
- Add any/all testing users to access the new environment.
- Provide all hardware, software license/media.
- Provide SSL Wildcard Certificate (EDCi recommends godaddy.com) if Citrix NetScaler/Access Gateway is within scope.
- Install all Windows servers and join to the existing Active Directory domain.
- All hardware and VMware installation and configurations.
- All SAN configurations, physical attachments and storage unless specifically listed otherwise in the Scope section of this project.
- If utilizing XenMobile within the scope of this document, the Cloud Gateway App Controller requires an Apple subscription for application wrapping on an Apple Mac. Customer will provide subscription and Mac.
- All endpoints (thin client models, PC's, mobile devices, etc.) should be tested before being deployed to ensure an adequate user experience, regardless of the state of Citrix Support.

## Project Approach

The following depicts the approach that will be taken to complete the project objectives:



- Project planning
- Project kick off meeting
- Backup of existing systems
- Software/Hardware implementation
- Determine testing approach
- System testing
- Cutover
- Training/Knowledge transfer
- Project closure

### Testing Approach

- As the project transitions into the Testing Phase, the EDCi Support Services team will be engaged to assist with issues resolution through the Client's System Testing process. EDCi recommends that each client develop System Test Procedure that it exercises through different applicable business scenarios of the Citrix-delivered software.
- EDCi's Support Services Engineers can address issues identified through System Testing prior to the next Project or Field Engineer visit. With the EDCi Support Engineers' ability to remotely resolve issues found during the System Testing process, they may be leveraged throughout the project depending on customer needs. EDCi will track and communicate updates on these issues via EDCi's Ticket System.
- Once identified issues through testing have been resolved by EDCi's Engineers, a Go/No-Go decision will be made. Clients can determine if they would prefer to have an EDCi Engineer on-site or if the Support Services team should be leveraged remotely.





## Project Management, Deliverables, Assumptions And Concerns

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### Project Management

EDCi provides project management and technical direction for all projects regardless of size. For projects, such as this one, the project manager may provide the following support either remotely or onsite:

- Plan the project to fulfill the project objectives and scope.
- Schedule and coordinate the necessary resources to support the project.
- Complete Change Order documentation as required.
- Identify, escalate and document project issues as necessary.
- Complete project closeout process by obtaining customer's approval of the Project Closure form. If EDCi receives no feedback from customer on project closeout after five business days, EDCi will close the project.

### Project Deliverables

It is important for Rock Co Information Technology to work from a firm foundation to complete the project. To this end, we will provide the following deliverables to ensure Rock Co Information Technology's success:

- Status reporting upon request. EDCi will prepare and submit weekly status reports indicating the work performed by EDCi personnel.
- Project schedule that will define tasks to be accomplished, dates of completion, and responsibility for completion and also act as a project status mechanism.
- As-Built documentation that records how the system was configured.

### Assumptions

The following assumptions have been made as to the delivery of this project:

- Customer resources will be available during project.
- Some work may be performed by EDCi remotely and access will be available to access the systems remotely.
- The total estimated labor is merely an estimate and does not represent a fixed fee. The estimated labor in the Project Fees section is our best estimate of what it will take to complete this Statement of Work. This estimate may change depending on any unknowns encountered and any labor up to 10% of the estimate will be billed without formal notification.
- All IP addressing, server names, and naming convention will be supplied by the customer. Naming may be advised by EDCi.
- EDCi will have administrative access, physical access and ample working space to the physical equipment.
- It is assumed all applications will work properly within the Citrix environment and are compatible.
- All customer tasks will be completed before an EDCi engineer engages on the project.
- The customer test plan is intended to provide the base starting platform of recommended user testing and allows the customer to add additional "specific" items as appropriate. It is assumed the customer will own the process, modifications and completion of the user testing. The results should be communicated to EDCi to determine if the user experience can be improved.
- EDCi has included estimated labor efforts for the following items. This estimate may change depending on the items encountered:
  - 12 hours effort troubleshooting 3rd party applications
  - 4 hours production cutover assistance if included within the scope of this project
  - 8 hours system knowledge transfer on Move/Add/Change's
- Further assistance can be provided through EDCi's support offerings, which are outside the scope of this Statement of Work.
- The components will be configured in parallel to the production environment and may not include "Production Cutover" unless specifically included within the scope of this project.



## Project Fees and Schedule

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### Project Fees

#### XenApp 6.5 to 7.15 LTSR

	<u>Qty</u>	<u>Unit</u>	<u>Total</u>
Citrix Installation Labor	1	\$27,380.00	\$27,380.00
			<b>\$27,380.00</b>

### Project Investment

**\$27,380.00**

+ Tax & Freight

The project price includes estimated labor and project management for complete installation and testing of the above listed materials during normal working hours (8am - 5pm Monday through Friday).

The total estimated labor is merely an estimate and does not represent a fixed fee. The estimated labor in the Project Fees section is our best estimate of what it will take to complete of this Statement of Work. This estimate may change depending on any unknowns encountered and any labor up to 10% of the estimate will be billed without formal notification.

Travel time, expenses and other out-of-pocket expenses are not included in the fee estimate provided and will be billed as incurred Terms Net 10 days.



## Schedule

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### Expenses

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Travel time, expenses and other out-of-pocket expenses are not included in the fee estimate provided and will be billed as incurred Terms Net 10 days.

### Delivery Schedule

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The actual project start and end dates depend on your timely approval of this Scope of Work, final agreed-upon project outcomes and scope, and your availability and participation. The process to schedule services will commence as soon as we receive a signed copy of this Scope of Work.

Personnel will be assigned as available when the project is approved. Depending on availability at the time of project approval, EDCi will assign specific resources to the project.

### Client Initiated Testing and Troubleshooting

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Clients may request EDCi to test or troubleshoot a feature of the platform that is not meeting expectations or not functioning as anticipated. If EDCi determines that the platform is functioning within normal and expected means, all hours accrued as part of this activity will be invoiced on a time and materials basis.

### Confidentiality

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We acknowledge that Rock Co Information Technology data, along with the documentation of the business requirements, might disclose some of your company's confidential information. We will use the confidential information only to complete the solution outlined in this document. We will restrict access to confidential information to those EDCi personnel who are providing services under this project.

### Conclusion

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We invite Rock Co Information Technology to work with a partner who shares your mutual desire for excellence, solid design and long-term results.

We have also completed similar solutions for other clients in the past and feel our past expertise and understanding will serve to augment the success of this effort. We view your satisfaction as paramount to measuring success and will ensure this system exceeds your expectations of quality.

We look forward to speaking with you about this opportunity and will contact you shortly to answer any questions you might have. If you have any questions regarding any of these arrangements, please feel free to contact us.

We appreciate the opportunity to be of assistance to you, and assure you that this project will be given our close attention.



## Terms and Conditions

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Labor only Terms for Blocks. All blocks of labor purchases will be invoiced once the order is received from the client.

Terms are Net 10 days.

Pricing is effective for 30 days.

All equipment and component and labor purchases will be invoiced once the equipment ships from EDCi. Terms are Net 10 days. Partial shipments will result in multiple invoices.

If the equipment cannot be shipped due to a project delay which is caused by circumstances out of the control of EDCi, including, but not limited to, customer error, circuit delays, manufacturing delays, etc. EDCi will ship and invoice items that have been received after a period of not less than 14 business days from receipt of the equipment at EDCi. If project timeline is delayed, additional project management and/or project coordination hours will be accrued and invoiced.

Pricing is effective for 30 days.

## Change Orders

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If the labor effort to complete this Statement of Work is more than estimated, **(10% or more)**, or if the customer requests a change to the scope and time involved to complete the Statement of Work, EDCi will communicate this with the customer and receive approval on a Change Order form before continuing.

Other additions or deletions to this Statement of Work may be made only pursuant to a written "Change Order" signed by both EDCi and the designated authorized representative of the Purchaser or his designee. All terms of duly signed Change Orders are deemed as part of this Statement of Work.



## Return Policy Criteria

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### Product Returns or Exchanges

Requests for product returns or exchanges will be honored as long as the products meet the following criteria:

- Products must be returned in new, sellable condition within 30 days of shipment date.
- Products must be returned in their original, unopened, unmarred packaging, including all accessories, manuals, and documentation.
- Important: Products or packaging for products that have writing or customer-supplied labels affixed to them will be refused.

EDCi will refuse any products that do not meet these criteria.

### Restock Fees Schedule

All non-defective returns for credit meeting the Return Policy Criteria above will be subject to the following Restocking Fee Schedule:

Timeframe that the request is received	Restock Fee
Within 30 days from receipt of materials	30%
Day 31 and beyond	No Returns

NOTE: All shipping charges are non-refundable.



## RMA Process

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All items being returned (regardless of reason) to EDCi must follow these steps:

1. Contact your sales representative to ensure you are eligible for a return and to obtain return materials authorization (RMA) number. No returns can be accepted without an approved RMA number. **Important:** Any items that are received without an RMA number will be refused and returned by our receiving team.
2. Please include your name, company name, date of purchase, PO# or order number if possible, and product serial number(s), model name or number of the hardware in need of return, and a reason stating why you need to return the unit(s) in your correspondence. **Important:** Requests for returns of defective products need to start with a call to our Technical Services Coordinator to diagnose the issue.
3. If your product RMA requires a replacement product:  
Once the RMA # is approved and issued, EDCi will process an order for a replacement product, generate a placeholder RMA invoice, and will ship the replacement to the address identified in the RMA request.
4. EDCi reserves the right to change or amend the above stated policy at any time.
5. EDCi reserves the right to limit or deny any returns for sales credits that are deemed non-compliant with the above stated policy.
6. EDCi is not liable for any lost or stolen property.

## Warranty

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EDCi warrants all of its labor and its materials for defects of material significance for 30 days from the date of substantial completion of the installation of the Equipment. EDCi makes no other express or implied warranties. EDCi's entire obligation and liability under this Statement of Work shall be exclusively limited to repair, replacement, or substitution of defective labor and materials. EDCi shall not under any circumstances be liable to Client or any other party for any incidental, consequential, special or other damages. THIS WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES WRITTEN, ORAL, EXPRESSED OR IMPLIED, INCLUDING ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.

As a complete exception to the warranty language above, EDCi does not warrant the repair, replacement, of installation, of defective electronic equipment, components, parts or software manufactured or programmed by third parties despite any provisions above to the contrary. The warranties of all third party manufacturers for electronic equipment, components or parts integrated into the project are hereby assigned to the Client such that said warranties may be enforced either in the name of EDCi or in the name of the Client for the Client's benefit. EDCi reserves the right to enforce any such warranties so assigned to the Client should the Client elect not to enforce warranties pursuant to this assignment.

## Lien Rights

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As required by Wisconsin Construction Lien Law, EDCi hereby notifies Client that EDCi may have lien rights against Client's real estate for unpaid labor and materials furnished upon owner's real estate. Client further grants a security interest to EDCi in all equipment delivered to Client to secure bona fide payments of the purchase price due under this Statement of Work.



### Approval to Proceed Together

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If the preceding terms are acceptable to you and the services outlined are in accordance with your needs, please sign this Statement of Work and return to the designated EDCi contact on the cover of this Statement of Work.

We appreciate the opportunity to work with you.

Company Name: Rock Co Information Technology

By: \_\_\_\_\_

Title: \_\_\_\_\_

Date: \_\_\_\_\_

Company Name: EDCi

By: \_\_\_\_\_

Title: \_\_\_\_\_

Date: \_\_\_\_\_