

INTERACTIVE INTELLIGENCE
Deliberately Innovative

Microsoft App-V 5.0

Technical Reference

Interactive Intelligence Customer Interaction Center® (CIC)™

Version 2015R1

Abstract

This document describes the various client application testing that was performed in a Microsoft App-V environment. This reference applies to Microsoft App-V versions 5.0.

Last Updated December 24, 2014

Interactive Intelligence, Inc.
7601 Interactive Way
Indianapolis, Indiana 46278
Telephone/Fax (317) 872-3000

www.ININ.com

Copyright and Trademark Information

Interactive Intelligence, Interactive Intelligence Customer Interaction Center, Interaction Administrator, Interaction Attendant, Interaction Client, Interaction Designer, Interaction Tracker, Interaction Recorder, ION, icNotify, Interaction Mobile Office, Interaction Optimizer, Insurance Content Management, and the "Spirograph" logo design are registered trademarks of Interactive Intelligence Inc. *Interaction Center Platform, Interaction Monitor, Customer Interaction Center, EIC, Interaction Fax Viewer, Interaction Server, Interaction Voicemail Player, Interactive Update, Interaction Supervisor, Interaction Migrator, Interaction Melder, and Interaction Screen Recorder* are trademarks of Interactive Intelligence Inc. The foregoing products are ©1997-2012 Interactive Intelligence Inc. All rights reserved.

Interaction Dialer and Interaction Scripter are registered trademarks of Interactive Intelligence Inc. The foregoing products are ©2000- 2012 Interactive Intelligence Inc. All rights reserved.

Messaging Interaction Center and MIC are trademarks of Interactive Intelligence Inc. The foregoing products are ©2001-2012 Interactive Intelligence Inc. All rights reserved.

e-FAQ and Interaction Director are registered trademarks of Interactive Intelligence Inc. *e-FAQ Knowledge Manager, Interaction FAQ, and Interaction Marquee* are trademarks of Interactive Intelligence Inc. The foregoing products are ©2002-2012 Interactive Intelligence Inc. All rights reserved.

Interactive Intelligence Live Conference is a trademark of Interactive Intelligence Inc. The foregoing products are ©2004-2012 Interactive Intelligence Inc. All rights reserved.

Interaction SIP Proxy and Interaction EasyScripter are trademarks of Interactive Intelligence Inc. The foregoing products are ©2005-2012 Interactive Intelligence Inc. All rights reserved.

Interaction Gateway is a registered trademark of Interactive Intelligence Inc. *Interaction Media Server* is a trademark of Interactive Intelligence Inc. The foregoing products are ©2006-2012 Interactive Intelligence Inc. All rights reserved.

Interaction Desktop is a trademark of Interactive Intelligence Inc. The foregoing products are ©2007-2012 Interactive Intelligence Inc. All rights reserved.

Interaction Message Indicator, Interaction Feedback, Interaction Process Automation, and Interaction SIP Station are trademarks of Interactive Intelligence Inc. *Deliberately Innovative* is a registered trademark of Interactive Intelligence, Inc. The foregoing products are ©2009-2012 Interactive Intelligence Inc. All rights reserved.

Interaction Web Portal, Interaction Analyzer, IPA, Latitude Software & Design are trademarks of Interactive Intelligence, Inc. The foregoing products are ©2010-2012 Interactive Intelligence Inc. All rights reserved.

Spotability is a trademark of Interactive Intelligence, Inc. ©2012 All rights reserved.

The veryPDF product is ©2000-2005 veryPDF, Inc. All rights reserved.

This product includes software licensed under the Common Development and Distribution License (6/24/2009). We hereby agree to indemnify the Initial Developer and every Contributor of the software licensed under the Common Development and Distribution License (6/24/2009) for any liability incurred by the Initial Developer or such Contributor as a result of any such terms we offer. The source code for the included software may be found at <http://wpflocalization.codeplex.com>.

A database is incorporated in this software which is derived from a database licensed from Hexasoft Development Sdn. Bhd. ("HDSB"). All software and technologies used by HDSB are the properties of HDSB or its software suppliers and are protected by Malaysian and international copyright laws. No warranty is provided that the Databases are free of defects, or fit for a particular purpose. HDSB shall not be liable for any damages suffered by the Licensee or any third party resulting from use of the Databases.

Other brand and/or product names referenced in this document are the trademarks or registered trademarks of their respective companies.

DISCLAIMER

INTERACTIVE INTELLIGENCE (INTERACTIVE) HAS NO RESPONSIBILITY UNDER WARRANTY, INDEMNIFICATION OR OTHERWISE, FOR MODIFICATION OR CUSTOMIZATION OF ANY INTERACTIVE SOFTWARE BY INTERACTIVE, CUSTOMER OR ANY THIRD PARTY EVEN IF SUCH CUSTOMIZATION AND/OR MODIFICATION IS DONE USING INTERACTIVE TOOLS, TRAINING OR METHODS DOCUMENTED BY INTERACTIVE.

Interactive Intelligence Inc.
7601 Interactive Way
Indianapolis, Indiana 46278
Telephone/Fax (317) 872-3000
www.ININ.com

Table of contents

Microsoft App-V.....	i
Copyright and Trademark Information	ii
Table of contents	iii
Introduction.....	4
Microsoft Application Virtualization	4
Goals	5
Test Environment.....	5
Assets	5
VMware Configuration.....	6
IC Configuration	6
Testing and Issues.....	7
Basic Functionality	7
Issues.....	7
App-V.....	7
I3trace_initializer.....	7
Interaction Screen Recoder.....	7
SIP Soft Phone	7
Interaction Fax.....	8
Interaction Administrator.....	8
Appendix A: Support Matrix	9
Appendix B: Change Log.....	10

Introduction

This document provides an overview of tests that were performed on Interactive Intelligence client applications in a Microsoft App-V environment. It contains technical insights and a general idea of what one may encounter while evaluating Microsoft App-V as a method of centralizing and consolidating contact center agent applications. The information is presented herein as a courtesy and should not be taken as an exact representation of any customer environment. Our intent is to provide an additional resource for engineers as they consider migrating users of Interactive Intelligence applications to a Microsoft App-V managed virtual application infrastructure.

Microsoft Application Virtualization

Microsoft App-V is a product built by Microsoft that provides users access to applications without application installs. App-V provides faster application deployment and updates without user interruptions. It also minimizes conflicts with other applications, allowing for faster application compatibility tests. It allows System Administrators to push applications to users desktops via a Web Console based on Active Directory roles. Microsoft's website explains in great detail the features and advantages this product can bring to an environment. We recommend visiting their product page if you have not already done so.

Sample High-Level App-V Environment

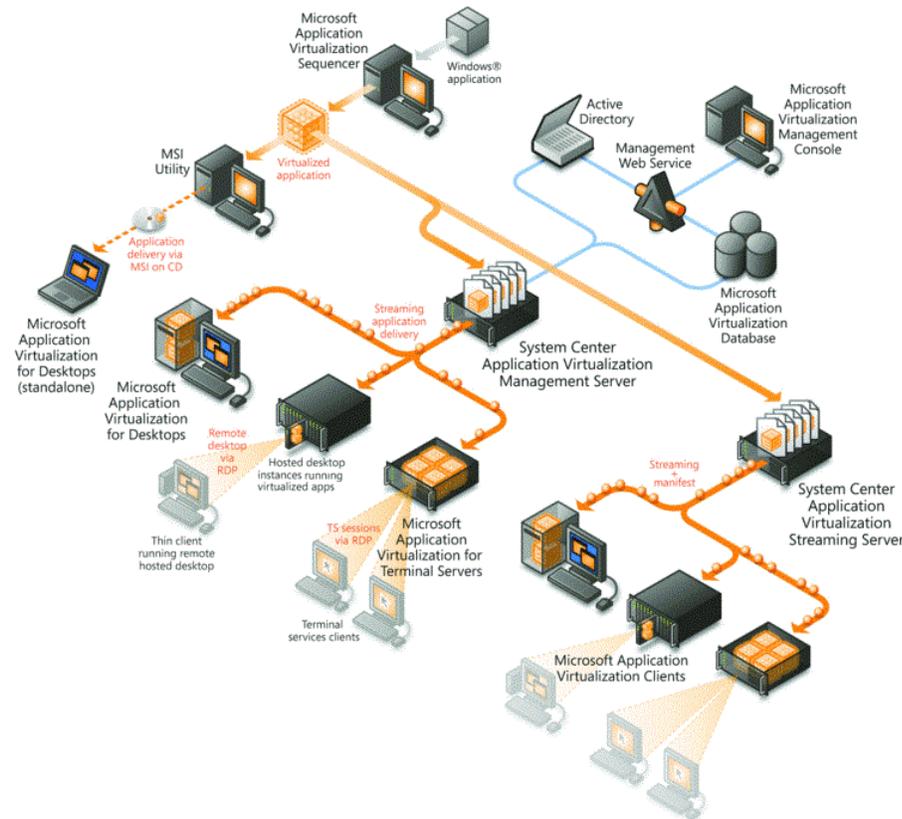


Figure 1: Overview of a Microsoft App-V environment

Goals

Our primary goal is to implement our mainstream Interaction Center 2015R1 applications into a Microsoft App-V environment, test them to ensure proper functionality, and support this type of deployment going forward. All drawbacks, issues, and unsupported applications found will be documented. This enhances the diversity of implementation strategies available to our current and potential customers by allowing virtualized applications to be pushed out to agent's desktops rather than installing them locally.

Test Environment

Assets

A dedicated test environment has been built to mimic a small production App-V implementation and allow for testing of applications. It includes:

- 1 App-V Server: Windows Server 2012 R2, 64-bit, 4GB RAM
- 1 App-V Sequencer and Client: Windows 8.1 Enterprise, 64-bit, 2GB RAM
- 1 SQL Server: Windows Server 2012 R2, 64-bit, 8GB RAM
- 1 IC Server: Windows Server 2008 R2 SP1 Enterprise, 64-bit, 6GB RAM, IC 2015R1
- 3 Phones: Polycom VVX600, Polycom VVX310, Polycom IP335
- 1 Headset: Sound Blaster Tactic 3D Rage Wireless (SIP Soft Phone testing)

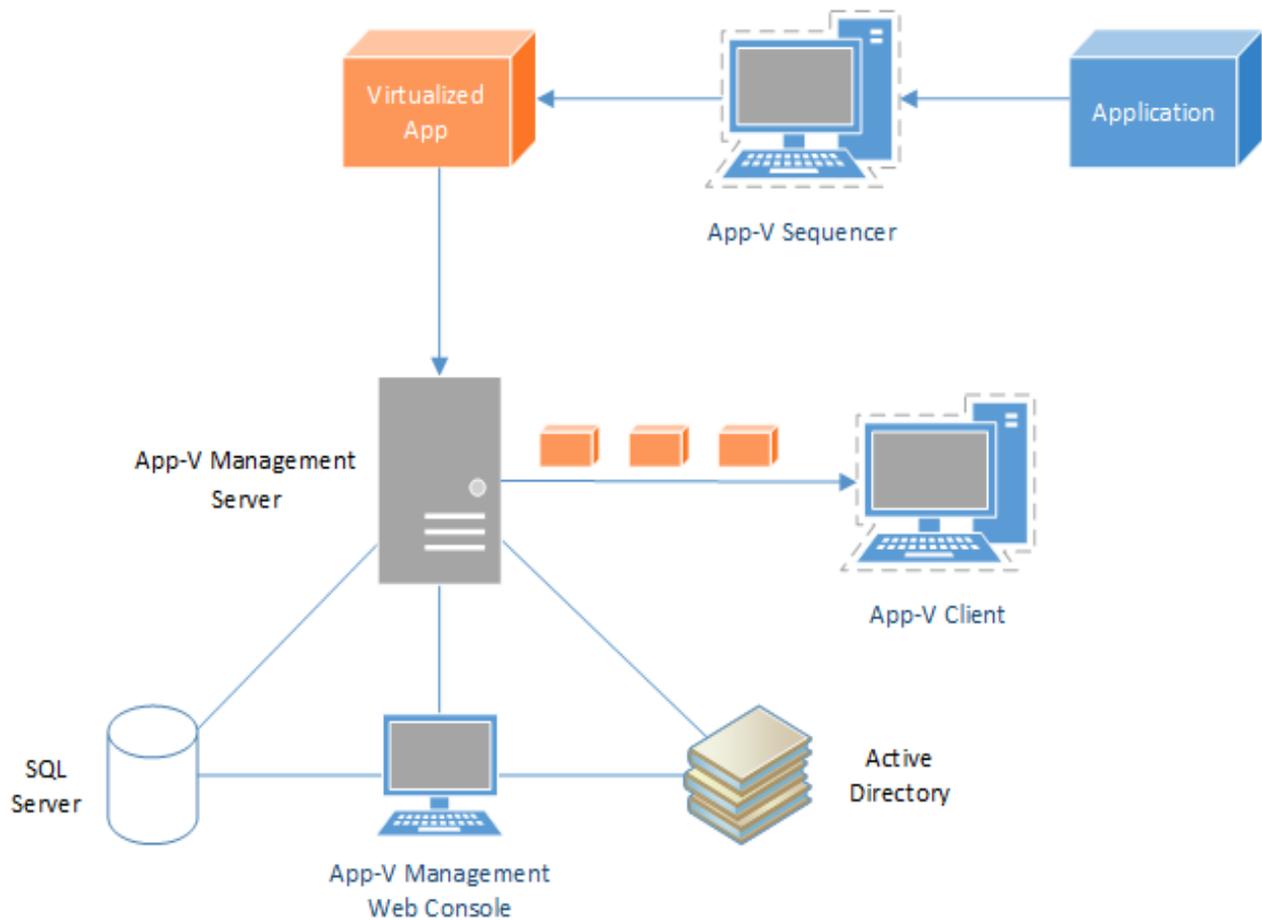


Figure 2: Microsoft App-V Test Environment

App-V Configuration

The App-V test environment was built to mimic a basic small scale infrastructure consisting of one server, sequencer, and client. The server was configured to serve the roles of managing, publishing, and reporting for the environment. The sequencer was configured and then snapshotted which allowed for reverting back to a clean state, with minimal reconfiguration needed, which is recommended in Microsoft's Best Practices Guide for Sequencing. The client machine was configured and the optional Client UI Application was installed to speed up testing by forcing updates.

IC Configuration

The Interaction Center 2015R1 environment used for testing consisted of two virtual IC servers in a switch-over pair configuration, one virtual Media server, and three managed IP phones. The system is configured to use external Active Directory, Exchange Server 2013 and SQL Server 2012 R2 resources in the Testing lab. All client-side application testing was done on a virtual machine running Windows 8.1 Enterprise, 64-bit.

Testing and Issues

Basic Functionality Tests

All testing was performed on our mainstream client-side applications to ensure basic functionality in a Microsoft App-V environment. All applications virtualized came from the ICUserApps.msi, ICServerManagerApps.msi, and ICBuisnessManagerApps.msi packages. The test cases executed were selected to ensure functionality and UI of the applications performed in a comparable manner to an installed version of the application.

Applications such as IC Server Manager, Interaction Designer, Interaction Attendant, IC System Manager, Interaction Host Recorder Client, Interaction Fax Cover Page Editor, and Interaction SOAP Tracer were not evaluated at the time of this writing.

Testing was performed using Microsoft App-V 5.0 SP2. Supported applications and notes can be found in Appendix A.

Issues

Windows 7

After extensive testing of App-V and ININ products in a Windows 7 environment it was determined that Windows 7 as a client OS is unsupported at this time. Unsupported behavior was experienced during testing with Windows 7.

App-V

Microsoft App-V does not support capturing drivers during the sequencing process. It was also found that certain ININ services did not function properly in the virtualized application. These services will be explained under applications where issues were found.

i3trace_initializer

One of the issues found while evaluating Microsoft App-V with the client-side applications that use the i3trace_initializer service will not properly unpublish from the client. This is due to the i3trace_initializer service holding the application in a "in use" state. The packages would unpublish with a system restart or by manually stopping the service.

Interaction Screen Recorder

During Screen Recorder testing, it was observed that the ScreenCaptureTransferServiceU.exe failed to remain a running background process. Without this service running, Interaction Screen Recorder will not function properly and fail to record. However, Screen Recorder does behave as expected if the service is started manually.

SIP Soft Phone

Virtualizing SIP Soft Phone will be an unsupported application when using App-V. It was found that although the SIP Soft Phone would provision correctly on the client machine, it failed to connect to the .Net client correctly. Due to this issue, the .Net Client failed to sign into the SIP Soft Phone workstation.

Interaction Fax

A limitation to Interaction Fax was observed when executing a test case, where Interaction Fax is not listed as a printer when trying to use other document applications i.e. Notepad. Besides this issue, a basic functionality test case for the application was performed and passed.

Interaction Administrator

App-V allows for you to configure the software being virtualized during the sequencing process. A caveat was found when virtualizing Interaction Administrator, where using the configure software option stores the hostname of the sequencing machine on one of the certificates used by IA. Due to this issue, IA will throw a cert error when trying to connect to the IC server. When the configure software option is not used, IA behaves as expected. Sequencing the application for streaming also behaves as expected.

Appendix A: Support Matrix

The following is a list of Interaction Center 2015R1 client-side applications that were tested on Windows 8.1 in the Microsoft App-V 5.0 test environment as of this writing. Below you will find our corresponding support stance on each of the applications tested, along with quick notes where you might find issues.

Application/Feature	Supported (App-V 5.0)	Notes
Interaction Client	Yes	
Interaction Voicemail Player	Yes	
Interaction Fax	Yes	Can't be selected as a printer. See Issues for details.
SIP Soft Phone	No	Can't connect to the client. See Issues for details
Interaction Screen Recorder	No	Transfer service closes. See Issues for details
Interaction Administrator	Yes	Can't be configured during sequencing. See Issues for details.
IC Business Manager	Yes	

Appendix B: Change Log

The following changes have been made to this document since release.

Change	Date
Initial Release	December 24, 2014