



Windchill® Installation and Configuration Guide - Visualization Services™

Windchill 8.0 M040

March 2007

Copyright © 2006 Parametric Technology Corporation. All Rights Reserved.

User and training documentation from Parametric Technology Corporation and its subsidiary companies (PTC) is subject to the copyright laws of the United States and other countries and is provided under a license agreement that restricts copying, disclosure, and use of such documentation. PTC hereby grants to the licensed user the right to make copies in printed form of this documentation if provided on software media, but only for internal/personal use and in accordance with the license agreement under which the applicable software is licensed. Any copy made shall include the PTC copyright notice and any other proprietary notice provided by PTC. This documentation may not be disclosed, transferred, modified, or reduced to any form, including electronic media, or transmitted or made publicly available by any means without the prior written consent of PTC and no authorization is granted to make copies for such purposes.

Information described herein is furnished for general information only, is subject to change without notice, and should not be construed as a warranty or commitment by PTC. PTC assumes no responsibility or liability for any errors or inaccuracies that may appear in this document.

The software described in this document is provided under written license agreement, contains valuable trade secrets and proprietary information, and is protected by the copyright laws of the United States and other countries. It may not be copied or distributed in any form or medium, disclosed to third parties, or used in any manner not provided for in the software licenses agreement except with written prior approval from PTC. UNAUTHORIZED USE OF SOFTWARE OR ITS DOCUMENTATION CAN RESULT IN CIVIL DAMAGES AND CRIMINAL PROSECUTION.

Registered Trademarks of Parametric Technology Corporation or a Subsidiary

Advanced Surface Design, Arbortext, Behavioral Modeling, CADDs, Computervision, CounterPart, Create • Collaborate • Control, EPD, EPD.Connect, Expert Machinist, Flexible Engineering, GRANITE, HARNESSDESIGN, Info*Engine, InPart, MECHANICA, Optegra, Parametric Technology, Parametric Technology Corporation, PartSpeak, PHOTORENDER, Pro/DESKTOP, Pro/E, Pro/ENGINEER, Pro/HELP, Pro/INTRALINK, Pro/MECHANICA, Pro/TOOLKIT, Product First, Product Development Means Business, Product Makes the Company, PTC, the PTC logo, PT/Products, Shaping Innovation, Simple • Powerful • Connected, The Way to Product First, and Windchill.

Trademarks of Parametric Technology Corporation or a Subsidiary

3DPAINT, Arbortext Editor, Arbortext Contributor, Arbortext Companion for MS Word®, Arbortext Advanced Print Publisher – Desktop, Arbortext Advanced Print Publisher – Enterprise, Arbortext Publishing Engine, Arbortext Dynamic Link Manager, Arbortext Styler, Arbortext Architect, Arbortext Digital Media Publisher, Arbortext Adapter to Documentum®, Arbortext Adapter to Oracle®, Associative Topology Bus, AutobuildZ, CDRS, CV, CVact, CVaec, CVdesign, CV DORS, CVMAC, CVNC, CVToolmaker, Create • Collaborate • Control • Communicate, EDACompare, EDAConduit, DataDoctor, DesignSuite, DIMENSION III, Distributed Services Manager, DIVISION, e/ENGINEER, eNC Explorer, Expert Framework, Expert MoldBase, Expert Toolmaker, FlexPDM, FlexPLM, Harmony, InterComm, InterComm Expert, InterComm EDACompare, InterComm EDAConduit, ISSM, KDiP, Knowledge Discipline in Practice, Knowledge System Driver, ModelCHECK, MoldShop, NC Builder, POLYCAPP, Pro/ANIMATE, Pro/ASSEMBLY, Pro/CABLING, Pro/CASTING, Pro/CDT, Pro/CMM, Pro/COLLABORATE, Pro/COMPOSITE, Pro/CONCEPT, Pro/CONVERT, Pro/DATA for PDGS, Pro/DESIGNER, Pro/DETAIL, Pro/DIAGRAM, Pro/DIEFACE, Pro/DRAW, Pro/ECAD, Pro/ENGINE, Pro/FEATURE, Pro/FEM POST, Pro/FICIENCY, Pro/FLY THROUGH, Pro/HARNESS, Pro/INTERFACE, Pro/LANGUAGE, Pro/LEGACY, Pro/LIBRARYACCESS, Pro/MESH, Pro/Model.View, Pro/MOLDESIGN, Pro/NC ADVANCED, Pro/NC CHECK, Pro/NC MILL, Pro/NC POST, Pro/NC SHEETMETAL, Pro/NC TURN, Pro/NC WEDM, Pro/NC Wire EDM, Pro/NETWORK ANIMATOR, Pro/NOTEBOOK, Pro/PDM, Pro/PHOTORENDER, Pro/PIPING, Pro/PLASTIC ADVISOR, Pro/PLOT, Pro/POWER DESIGN, Pro/PROCESS, Pro/REPORT, Pro/REVIEW, Pro/SCAN TOOLS, Pro/SHEETMETAL, Pro/SURFACE, Pro/VERIFY, Pro/Web.Link, Pro/Web.Publish, Pro/WELDING, ProductView, PTC Precision, Routed Systems Designer, Shrinkwrap, The Product Development Company, Validation Manager, Warp, Wildfire, Windchill DynamicDesignLink, Windchill PartsLink, Windchill PDMLink, Windchill ProjectLink, and Windchill SupplyLink.

Patents of Parametric Technology Corporation or a Subsidiary

Registration numbers and issue dates follow. Additionally, equivalent patents may be issued or pending outside of the United States. Contact PTC for further information. GB2366639B 13-October-2004. GB2363208 25-August-2004. (EP/DE/GB)0812447 26-May-2004. GB2365567 10-March-2004. (GB)2388003B 21-January-2004. 6,665,569 B1 16-December-2003. GB2353115 10-December-2003. 6,625,607 B1 23-September-2003. 6,580,428 B1 17-June-2003. GB2354684B 02-July-2003. GB2384125 15-October-2003. GB2354096 12-November-2003. GB2354924 24-September-2003. 6,608,623 B1 19-August-2003. GB2353376 05-November-2003. GB2354686 15-October-2003. 6,545,671 B1 08-April-2003. GB2354685B 18-June-2003. GB2354683B 04-June-2003. 6,608,623 B1 19-August-2003. 6,473,673 B1 29-October-2002. GB2354683B 04-June-2003. 6,447,223 B1 10-Sept-2002. 6,308,144 23-October-2001. 5,680,523 21-October-1997. 5,838,331 17-November-1998. 4,956,771 11-September-1990. 5,058,000 15-October-1991. 5,140,321 18-August-1992. 5,423,023 05-June-1990. 4,310,615 21-December-1998. 4,310,614 30-April-1996. 4,310,614 22-April-1999. 5,297,053 22-March-1994. 5,513,316 30-April-1996. 5,689,711 18-November-1997. 5,506,950 09-April-1996. 5,428,772 27-June-1995. 5,850,535 15-December-1998. 5,557,176 09-November-1996. 5,561,747 01-October-1996. (EP)0240557 02-October-1986.

Third-Party Trademarks

Adobe, Acrobat, Distiller, and the Acrobat logo are trademarks of Adobe Systems Incorporated. IBM, AIX, and Websphere are registered trademarks of IBM Corporation. Allegro, Cadence, and Concept are registered trademarks of Cadence Design Systems, Inc. Apple, Mac, Mac OS, Panther and Tiger are trademarks or registered trademarks of Apple Computer, Inc. AutoCAD and Autodesk Inventor are registered trademarks of Autodesk, Inc. Baan is a registered trademark of Baan Company. CADAM and CATIA are registered trademarks of Dassault Systemes. DataDirect Connect is a registered trademark of DataDirect Technologies. CYA, iArchive, HOTbackup, and Virtual StandBy are trademarks or registered trademarks of CYA Technologies, Inc. DOORS is a registered trademark of Telelogic AB. FLEXnet, InstallShield, and InstallAnywhere are trademarks or registered trademarks of Macrovision Corporation. Geomagic is a registered trademark of Raindrop Geomagic, Inc. EVERSINC, GROOVE, GROOVEFEST, GROOVE.NET, GROOVE NETWORKS, iGROOVE, PEERWARE, and the interlocking circles logo are trademarks of Groove Networks, Inc. Helix is a trademark of Microcadam, Inc. HOOPS is a trademark of Tech Soft America, Inc. HP, Hewlett-Packard, and HP-UX are registered trademarks of Hewlett-Packard Company. Advanced ClusterProven, ClusterProven, the ClusterProven design, Rational Rose, and Rational ClearCase are trademarks or registered trademarks of International Business Machines Corporation in the United States and other countries and are used under license. IBM Corporation does not warrant and is not responsible for the operation of this software product. I-DEAS, Metaphase, Parasolid, SHERPA, Solid Edge, TeamCenter, UG-NX, and Unigraphics are trademarks or registered trademarks of UGS Corp. Intel is a registered trademark of Intel Corporation. IRIX is a registered trademark of Silicon Graphics, Inc. I-Run and ISOGEN are registered trademarks of Alias Ltd. LINUX is a registered trademark of Linus Torvalds. MainWin and Mainsoft are trademarks of Mainsoft Corporation. MatrixOne is a trademark of MatrixOne, Inc. Mentor Graphics and Board Station are registered trademarks and 3D Design, AMPLE, and Design Manager are trademarks of Mentor Graphics Corporation. MEDUSA and STHENO are trademarks of CAD Schroer GmbH. Microsoft, ActiveX, JScript, Windows, Windows NT, Windows 2000, Windows 2000 Server, Windows XP, Windows Server 2003, the Windows logo, Visual Basic, the Visual Basic logo and Active Accessibility are trademarks or registered trademarks of Microsoft Corporation in the United States and/or other countries. Moldflow is a registered trademark of Moldflow Corporation. Netscape and the Netscape N and Ship's Wheel logos are registered trademarks of Netscape Communications Corporation in the U.S. and other countries. Oracle and interMedia are registered trademarks of Oracle Corporation. OrbixWeb is a registered trademark of IONA Technologies PLC. PDGS is a registered trademark of Ford Motor Company. RAND is a trademark of RAND Worldwide. RetrievalWare is a registered trademark of Convera Corporation. RosettaNet is a trademark and Partner Interface Process and PIP are registered trademarks of RosettaNet, a nonprofit organization. SAP and R/3 are registered trademarks of SAP AG Germany. SolidWorks is a registered trademark of SolidWorks Corporation. All SPARC trademarks are used under license and are trademarks or registered trademarks of SPARC International, Inc. in the United States and in other countries. Products bearing SPARC trademarks are based upon an architecture developed by Sun Microsystems, Inc. Sun, Sun Microsystems, the Sun logo, Solaris, UltraSPARC, Java and all Java based marks, and "The Network is the Computer" are trademarks or registered trademarks of Sun Microsystems, Inc. in the United States and in other countries. 3Dconnexion is a registered trademark of Logitech International S.A. TIBCO is a registered trademark and TIBCO ActiveEnterprise, TIBCO Designer, TIBCO Enterprise Message Service, TIBCO Rendezvous, TIBCO TurboXML, and TIBCO BusinessWorks are trademarks or registered trademarks of TIBCO Software Inc. in the United States and other countries. WebEx is a trademark of WebEx Communications, Inc. API Toolkit is a trademark of InterCAP Graphics Systems, Inc. BEA and WebLogic are registered trademarks of BEA Systems, Inc. BEA WebLogic Server and BEA WebLogic Platform are trademarks of BEA Systems, Inc. Compaq is a registered trademark of Compaq Computer Corporation. DEC is a registered trademark of Digital Equipment Corporation. Documentum and Documentum Administrator are trademarks of Documentum, Inc. Elan License Manager and Softlock are trademarks of Rainbow Technologies, Inc. JAWS is a registered trademark of Freedom Scientific BLV Group, LLC in the United States and other countries. FileNET is a registered trademark of FileNET Corporation. Panagon is a trademark of FileNET Corporation. Galaxy Application Environment is a licensed trademark of Visix Software, Inc. Interleaf is a trademark of Interleaf, Inc. IslandDraw and IslandPaint are trademarks of Island Graphics Corporation. Netscape, Netscape Navigator, and Netscape Communicator are registered trademarks and service marks of Netscape Communications Corporation. OSF/Motif and Motif are trademarks of the Open Software Foundation, Inc. Palm Computing, Palm OS, Graffiti, HotSync, and Palm Modem are registered trademarks, and Palm III, Palm IIIE, Palm IIIX, Palm V, Palm Vx, Palm VII, Palm, More connected, Simply Palm, the Palm Computing platform logo, all Palm logos, and HotSync logo are trademarks of Palm, Inc. or its subsidiaries. Proximity and Linguibase are registered trademarks of Proximity Technology, Inc. SPARC is a registered trademark and SPARCStation is a trademark of SPARC International, Inc. (products bearing the SPARC trademarks are based on an architecture developed by Sun Microsystems, Inc.). TeX is a trademark of the American Mathematical Society. UNIX is a registered trademark of The Open Group. X Window System is a trademark of X Consortium, Inc.

Third-Party Technology Information

Certain PTC software products contain licensed third-party technology:

Rational Rose and Rational ClearCase are copyrighted software of IBM Corp.

RetrievalWare is copyrighted software of Convera Corporation.

VisTools library is copyrighted software of Visual Kinematics, Inc. (VKI) containing confidential trade secret information belonging to VKI.

HOOPS graphics system is a proprietary software product of, and is copyrighted by, Tech Soft America, Inc.

I-Run and ISOGEN are copyrighted software of Alias Ltd.

Xdriver is copyrighted software of 3Dconnexion, Inc, a Logitech International S.A. company.

G POST is copyrighted software and a registered trademark of Intercim.

VERICUT is copyrighted software and a registered trademark of CGTech.

FLEXnet Publisher is copyrighted software of Macrovision Corporation

Pro/PLASTIC ADVISOR is powered by Moldflow technology.

Fatigue Advisor nCode libraries from nCode International.

TetMesh-GHS3D provided by Simulog Technologies, a business unit of Simulog S.A.

MainWin Dedicated Libraries are copyrighted software of Mainsoft Corporation.

DFORMD.DLL is copyrighted software from Compaq Computer Corporation and may not be distributed.

LightWork Libraries are copyrighted by LightWork Design 1990–2001.

Visual Basic for Applications and Internet Explorer is copyrighted software of Microsoft Corporation.

Parasolid is © UGS Corp.

TECHNOMATIX is copyrighted software and contains proprietary information of Technomatix Technologies Ltd.

TIBCO ActiveEnterprise, TIBCO Designer, TIBCO Enterprise Message Service, TIBCO Rendezvous, TIBCO TurboXML, and TIBCO BusinessWorks are provided by TIBCO Software Inc.

DataDirect Connect is copyrighted software of DataDirect Technologies.

Technology "Powered by Groove" is provided by Groove Networks, Inc.

Technology "Powered by WebEx" is provided by WebEx Communications, Inc.

Oracle 8i run-time, Oracle 9i run-time, and Oracle 10g run-time are Copyright 2002–2004 Oracle Corporation. Oracle programs provided herein are subject to a restricted use license and can only be used in conjunction with the PTC software they are provided with.

Adobe Acrobat Reader and Adobe Distiller are copyrighted software of Adobe Systems Inc. and are subject to the Adobe End-User License Agreement as provided by Adobe with those products.

Certain license management is based on Elan License Manager © 1989-1999 Rainbow Technologies, Inc. All rights reserved.

Portions compiled from Microsoft Developer Network Redistributable Sample Code, Copyright © 1998 by Microsoft Corporation.

The CD-ROM Composer and CD-ROM Consumer are based on Vivace CD-Web Composer Integrator © 1996-1997 KnowledgeSet Corporation. All rights reserved.

Larson CGM Engine 8.0, Copyright © 1992-2002 Larson Software Technology, Inc. All rights reserved.

Certain graphics-handling portions are based on the following technologies:

GIF: Copyright 1989, 1990 Kirk L. Johnson. The author disclaims all warranties with regard to this software, including all implied warranties of merchantability and fitness. In no event shall the author be liable for any special, indirect, or consequential damages or any damages whatsoever resulting from loss of use, data or profits, whether in an action of contract, negligence, or other tortious action, arising out of or in connection with the use or performance of this software.

JPEG: This software is based in part on the work of the Independent JPEG Group.

PNG: Copyright 2000, 2001 Glenn Randers-Pehrson.

TIFF: Copyright 1988-1997 Sam Leffler, Copyright © 1991-1997 Silicon Graphics, Inc. The software is provided AS IS and without warranty of any kind, express, implied, or otherwise, including without limitation, any warranty of merchantability or fitness for a particular purpose. In no event shall Sam Leffler or Silicon Graphics be liable for any special, incidental, indirect, or consequential damages of any kind, or any damages whatsoever resulting from loss of use, data or profits, whether or not advised of the possibility of damage, or on any theory of liability, arising out of or in connection with the use or performance of this software.

XBM, Sun Raster, and Sun Icon: Copyright, 1987, Massachusetts Institute of Technology.

ZLIB: Copyright 1995-1998 Jean-loup Gailly and Mark Adler.

PDFlib software is copyright © 1997-2003 PDFlib GmbH. All rights reserved.

PStill software is copyright © Dipl.- Ing. Frank Sievert, 1996-2004

Proximity Linguistic Technology provides spelling portions of certain software products: The Proximity/Bertelsmann Lexikon Verlag Database. Copyright © 1997 Bertelsmann Lexikon Verlag. Copyright © 1997, All Rights Reserved, Proximity Technology, Inc.; The Proximity/C.A. Strombertg AB Database. Copyright © 1989 C.A. Strombertg AB. Copyright © 1989, All Rights Reserved, Proximity Technology, Inc.; The Proximity/Editions Fernand Nathan Database. Copyright © 1984 Editions Fernand Nathan. Copyright © 1989, All Rights Reserved, Proximity Technology, Inc.; The Proximity/Espasa-Calpe Database. Copyright © 1990 Espasa-Calpe. Copyright © 1990, All Rights Reserved, Proximity Technology, Inc.; The Proximity/Dr. Lluís de Yzaguirre i Maura Database. Copyright © 1991 Dr. Lluís de Yzaguirre i Maura Copyright © 1991, All Rights Reserved, Proximity Technology, Inc.; The Proximity/Franklin Electronic Publishers, Inc. Database. Copyright © 1994 Franklin Electronic Publishers, Inc. Copyright © 1994, All Rights Reserved, Proximity Technology, Inc.; The Proximity/Hachette Database. Copyright © 1992 Hachette. Copyright © 1992, All Rights Reserved, Proximity Technology, Inc.; The Proximity/IDE a.s. Database. Copyright © 1989, 1990 IDE a.s. Copyright © 1989, 1990, All Rights Reserved, Proximity Technology, Inc.; The Proximity/Merriam-Webster, Inc. Database. Copyright © 1984, 1990 Merriam-Webster, Inc. Copyright © 1984, 1990, All Rights Reserved, Proximity Technology, Inc.; The Proximity/Merriam-Webster, Inc./Franklin Electronic Publishers, Inc. Database. Copyright © 1990 Merriam-Webster Inc. Copyright © 1994 Franklin Electronic Publishers, Inc. Copyright © 1994, All Rights Reserved, Proximity Technology, Inc.; The Proximity/Munksgaard International Publishers Ltd. Database. Copyright © 1990 Munksgaard International Publishers Ltd. Copyright © 1990, All Rights Reserved, Proximity Technology, Inc.; The Proximity/S. Fischer Verlag Database. Copyright © 1983 S. Fischer Verlag. Copyright © 1997, All Rights Reserved, Proximity Technology, Inc.; The Proximity/Van Dale Lexicografie by Database. Copyright © 1995, 1997 Van Dale Lexicografie by. Copyright © 1996, 1997, All Rights Reserved, Proximity Technology, Inc.; The Proximity/William Collins Sons & Co. Ltd. Database. Copyright © 1984, 1990 William Collins Sons & Co. Ltd. Copyright © 1988, 1990, All Rights Reserved, Proximity Technology, Inc.; The Proximity/Zanichelli Database. Copyright © 1989 Zanichelli. Copyright © 1989, All Rights Reserved, Proximity Technology, Inc.

The Arbortext Import/Export feature includes components that are licensed and copyrighted by CambridgeDocs LLC (© 2002-2005 CambridgeDocs LLC). This functionality:

Includes software developed by the Apache Software Foundation (<http://www.apache.org/>).

Redistributes JRE 1.4.2_08 from Sun Microsystems. The Redistributable is complete and unmodified, and only bundled as part of the product. CambridgeDocs is not distributing additional software intended to supersede any component(s) of the Redistributable, nor has CambridgeDocs removed or altered any proprietary legends or notices contained in or on the Redistributable. CambridgeDocs is only distributing the Redistributable pursuant to a license agreement that protects Sun's interests consistent with the terms contained in the Agreement. CambridgeDocs agrees to defend and indemnify Sun and its licensors from and against any damages, costs, liabilities, settlement amounts and/or expenses (including attorney's fees) incurred in connection with any claim, lawsuit, or action by any third party that arises or results from the use or distribution of any and all Programs and/or Software. This product includes code licensed from RSA Security, Inc. Some portions licensed from IBM are available at <http://oss.software.ibm.com/icu4j/>.

Redistributes the Saxon XSLT Processor from Michael Kay, more information, including source code is available at <http://saxon.sourceforge.net/>.

Uses cxImage, an open source image conversion library that follows the zlib license. cxImage further uses the following images libraries which also ship (statically linked) with cxLib: zLib, LibTIFF, LibPNG, LibJPEG, JBIG-Kit, JasPer, LibJ2K. See <http://www.xdp.it/cximage.htm>.

Includes software developed by Andy Clark, namely Neko DTD. NekoDTD is © Copyright 2002, 2003, Andy Clark. All rights reserved. For more information, visit <http://www.apache.org/~andyc/neko/doc/index.html>.

Includes code which was developed and copyright by Steven John Metsker, and shipped with Building Parsers with Java, from Addison Wesley.

Uses controls from Infragistics NetAdvantage 2004, Volume 3, © Copyright 2004 Infragistics.

Word, FrameMaker, and Interleaf filters. Copyright © 2000 Blueberry Software. All rights reserved.

Portions of software documentation are used with the permission of the World Wide Web Consortium. Copyright © 1994–2004 World Wide Web Consortium, (Massachusetts Institute of Technology, European Research Consortium for Informatics and Mathematics, Keio University). All Rights Reserved. <http://www.w3.org/Consortium/Legal/>. Such portions are indicated at their points of use.

Copyright and ownership of certain software components is with YARD SOFTWARE SYSTEMS LIMITED, unauthorized use and copying of which is hereby prohibited. YARD SOFTWARE SYSTEMS LIMITED 1987. (Lic. #YSS:SC:9107001)

METIS, developed by George Karypis and Vipin Kumar at the University of Minnesota, can be researched at <http://www.cs.umn.edu/~karypis/metis>. METIS is © 1997 Regents of the University of Minnesota.

Certain software components licensed in connection with the Apache Software Foundation, all rights reserved, and use is subject to the terms and limitations at <http://www.apache.org/>. Apache software is provided by its Contributors AS IS, WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, and any expressed or implied warranties, including, but not limited to, the implied warranties of title non-infringement, merchantability and fitness for a particular purpose are disclaimed. In no event shall the Apache Software Foundation or its Contributors be liable for any direct, indirect, incidental, special, exemplary, or consequential damages (including, but not limited to, procurement of substitute goods or services; loss of use, data, or profits; or business interruption) however caused and on any theory of liability, whether in contract, strict liability, or tort (including negligence or otherwise) arising in any way out of the use of this software, even if advised of the possibility of such damage. Apache software includes:

Apache Server, Tomcat, Xalan, Xerces, and Jakarta, Jakarta POI, Jakarta Regulat Expression, Commons-FileUpload

IBM XML Parser for Java Edition, the IBM SaxParser and the IBM Lotus XSL Edition

DITA-OT - Apache License Version

Pop-up calendar components Copyright © 1998 Netscape Communications Corporation. All Rights Reserved.

UnZip (© 1990 2001 Info ZIP, All Rights Reserved) is provided AS IS and WITHOUT WARRANTY OF ANY KIND. For the complete Info ZIP license see <http://www.info-zip.org/doc/LICENSE>.

The Java™ Telnet Applet (StatusPeer.java, TelnetIO.java, TelnetWrapper.java, TimedOutException.java), Copyright © 1996, 97 Mattias L. Jügel, Marcus Meißner, is redistributed under the GNU General Public License. This license is from the original copyright holder and the Applet is provided WITHOUT WARRANTY OF ANY KIND. You may obtain a copy of the source code for the Applet at <http://www.mud.de/se/jta> (for a charge of no more than the cost of physically performing the source distribution), by sending e-mail to leo@mud.de or marcus@mud.de—you are allowed to choose either distribution method. Said source code is likewise provided under the GNU General Public License.

GTK+ The GIMP Toolkit is licensed under the GNU Library General Public License (LGPL). You may obtain a copy of the source code at <http://www.gtk.org>, which is likewise provided under the GNU LGPL.

zlib software Copyright © 1995-2002 Jean-loup Gailly and Mark Adler.

#ZipLib GNU software is developed for the Free Software Foundation, Inc. 59 Temple Place, Suite 330, Boston, MA 02111-1307 USA, copyright ©1989, 1991. PTC hereby disclaims all copyright interest in the program #ZipLib written by Mike Krueger. #ZipLib licensed free of charge and there is no warranty for the program, to the extent permitted by applicable law. Except when otherwise stated in writing the copyright holders and/or other parties provide the program AS IS without warranty of any kind, either expressed or implied, including, but not limited to, the implied warranties of merchantability and fitness for a particular purpose. The entire risk as to the quality and performance of the program is with you. Should the program prove defective, you assume the cost of all necessary servicing, repair or correction. OmniORB is distributed under the terms and conditions of the GNU General Public License - The OmniORB Libraries are released under the GNU LGPL.

The Java Getopt.jar file, copyright 1987 1997 Free Software Foundation, Inc.

Java Port copyright 1998 by Aaron M. Renn (arenn@urbanophile.com) is redistributed under the GNU LGPL. You may obtain a copy of the source code at <http://www.urbanophile.com/arenn/hacking/download.html>. The source code is likewise provided under the GNU LGPL.

CUP Parser Generator Copyright ©1996-1999 by Scott Hudson, Frank Flannery, C. Scott Ananian—used by permission. The authors and their employers disclaim all warranties with regard to this software, including all implied warranties of merchantability and fitness. In no event shall the authors or their employers be liable for any special, indirect or consequential damages, or any damages whatsoever resulting from loss of use, data or profits, whether in an action of contract, negligence or other tortious action arising out of or in connection with the use or performance of this software.

Software developed by the OpenSSL Project for use in the OpenSSL Toolkit. (<http://www.openssl.org>): Copyright © 1998 2003 The OpenSSL Project. All rights reserved. This product may include cryptographic software written by Eric Young (ey@cryptsoft.com).

ImageMagick software is Copyright © 1999-2005 ImageMagick Studio LLC, a nonprofit organization dedicated to making software-imaging solutions freely available. ImageMagick is freely available without charge and provided pursuant to the following license agreement: <http://www.imagemagick.org/script/license.php>.

Mozilla Japanese localization components are subject to the Netscape Public License Version 1.1 (at <http://www.mozilla.org/NPL>). Software distributed under the Netscape Public License (NPL) is distributed on an AS IS basis, WITHOUT WARRANTY OF ANY KIND, either expressed or implied (see the NPL for the rights and limitations that are governing different languages). The Original Code is Mozilla Communicator client code, released March 31, 1998 and the Initial Developer of the Original Code is Netscape Communications Corporation. Portions created by Netscape are Copyright © 1998 Netscape Communications Corporation. All Rights Reserved. Contributors: Kazu Yamamoto (kazu@mozilla.gr.jp), Ryoichi Furukawa (furu@mozilla.gr.jp), Tsukasa Maruyama (mal@mozilla.gr.jp), Teiji Matsuba (matsuba@dream.com).

The following components are subject to the Mozilla Public License Version 1.1 at <http://www.mozilla.org/MPL> (the MPL). Software distributed under the MPL is distributed on an AS IS basis, WITHOUT WARRANTY OF ANY KIND, either expressed or implied and all warranty, support, indemnity or liability obligations under PTC's software license agreements are provided by PTC. See the MPL for the specific language governing rights and limitations. Modifications to Mozilla source code are available under the MPL and are available upon request: Gecko and Mozilla components; text (www.lowagie.com/iText/). iCal4j is Copyright © 2005, Ben Fortuna, All rights reserved. Redistribution and use of iCal4j in source and binary forms, with or without modification, are permitted provided that the following conditions are met: (i) Redistributions of source code must retain the above copyright notice, this list of conditions, and the following disclaimer; (ii) Redistributions in binary form must reproduce the above copyright notice, this list of conditions, and the following disclaimer in the documentation and/or other materials provided with the distribution; and (iii) Neither the name of Ben Fortuna nor the names of any other contributors may be used to endorse or promote products derived from this software without specific prior written permission. iCal4j SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS AS IS AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT OWNER OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

The Independent JPEG Group's JPEG software. This software is Copyright © 1991-1998, Thomas G. Lane. All Rights Reserved. This software is based in part on the work of the Independent JPEG Group.

libpng, Copyright © 2004 Glenn Randers-Pehrson, which is distributed according to the disclaimer and license (as well as the list of Contributing Authors) at <http://www.libpng.org/pub/png/src/libpng-LICENSE.txt>.

Curl software, Copyright ©1996 - 2005, Daniel Stenberg, <daniel@haxx.se>. All rights reserved. Permission to use, copy, modify, and distribute this software for any purpose with or without fee is hereby granted, provided that the above copyright notice and this permission notice appear in all copies. THE SOFTWARE IS PROVIDED AS IS, WITHOUT WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT OF THIRD PARTY RIGHTS. IN NO EVENT SHALL THE AUTHORS OR COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING FROM, OUT OF OR IN CONNECTION WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS IN THE SOFTWARE. Except as contained in this notice, the name of a copyright holder shall not be used in advertising or otherwise to promote the sale, use, or other dealings.

The cad2eda program utilizes wxWidgets (formerly wxWindows) libraries for its cross-platform UI API, which is licensed under the wxWindows Library License at <http://www.wxwindows.org/>.

LAPACK libraries used are freely available at www.netlib.org (authors are Anderson, E. and Bai, Z. and Bischof, C. and Blackford, S. and Demmel, J. and Dongarra, J. and Du Croz, J. and Greenbaum, A. and Hammarling, S. and McKenney, A. and Sorensen, D.).

The following software, which is provided with and called by certain PTC software products, is licensed under the GNU General Public License: Ghost Script (www.cs.wisc.edu/~ghost/); The PJA (Pure Java AWT) Toolkit library (www.eteks.com/pja/en/).

JFreeChart is licensed under the GNU LGPL and can be found at www.jfree.org.

Java Advanced Imaging (JAI) is provided pursuant to the Sun Java Distribution License (JDL) at www.jai.dev.java.net/. The terms of the JDL shall supersede any other licensing terms for PTC software with respect to JAI components.

UNITED STATES GOVERNMENT RESTRICTED RIGHTS LEGEND

This document and the software described herein are Commercial Computer Documentation and Software, pursuant to FAR 12.212(a)-(b) (OCT'95) or DFARS 227.7202-1(a) and 227.7202-3(a) (JUN'95), and are provided to the US Government under a limited commercial license only. For procurements predating the above clauses, use, duplication, or disclosure by the Government is subject to the restrictions set forth in subparagraph (c)(1)(ii) of the Rights in Technical Data and Computer Software Clause at DFARS 252.227 7013 (OCT'88) or Commercial Computer Software-Restricted Rights at FAR 52.227 19(c)(1)-(2) (JUN'87), as applicable. 010106

Parametric Technology Corporation, 140 Kendrick Street, Needham, MA 02494 USA

Contents

Change Record	xiii
About This Guide.....	xix
Read This First	xix
Web Version of This Document.....	xix
Related Documentation	xx
Technical Support.....	xx
Documentation for PTC Products.....	xx
Comments	xxi
Documentation Conventions	xxi
Third-Party Products	xxii
Code Examples	xxii
Graphic Images	xxii
 I. General Information About Installing Windchill	
About the windchill Command.....	1-1
About the windchill Command	1-2
About the windchill shell	1-4
About the xconfmanager Utility	2-1
About the xconfmanager Utility.....	2-2
Formatting Property Value Guidelines	2-4
About Visualization Services	3-1
About Visualization Services	3-2
Software Matrices.....	3-4
Managing the Installation and Configuration Steps	3-4
Installing ProductView Client and CAD Object Adapters.....	3-5
Configuring CAD Object Adapters.....	3-6
Configuring CAD Agent for the CAD Worker.....	3-6
About Installing Windchill Products.....	4-1
Overview of an Installation Session.....	4-2
Choosing the Installer Language	4-2
Navigation and Canceling	4-3

Installation Type	4-3
Choosing Installation Directory.....	4-3
Terminology	4-4
Java Runtime Environment.....	4-4
Documentation on the CD Image.....	4-4
Disk Space Check Process.....	4-5
Launching the Installer	4-5
Single Installer on CD.....	4-5
Multiple Installers on One CD.....	4-6
Location of Actual Installer setup Executables.....	4-6
Loading and Mounting the CD-ROM on UNIX	4-7
Determining the SCSI ID of the CD-ROM Drive.....	4-7
Loading and Mounting the CD-ROM Locally.....	4-8
Loading and Mounting the CD-ROM Remotely.....	4-9
Installation Log Files	4-11
Troubleshooting	4-12

II. Installing Visualization Products

Installing ProductView Standard Edition Client.....	5-1
Before You Begin.....	5-2
Installing ProductView SE in a Windows Environment	5-2
Installing ProductView SE in a UNIX Environment	5-5
Prerequisites	5-5
UNIX Platform-specific Issues.....	5-6
ProductView UNIX Setup Overview	5-6
Typical ProductView Installation on UNIX.....	5-7
Installing the ProductView Plugin Manually.....	5-8
Running ProductView as a Web Plug-in	5-9
ProductView in REALIZER Mode	5-9
Specifying Export Settings Using version.pvm	5-9
Installation Summary	5-10
Installing Visualization - Windchill Support	6-1
Before You Begin.....	6-2
Installing Windchill Support.....	6-2
Loading the Demo Data	6-7
Creating Server-side Watermarks.....	6-7
Enabling Server-side Watermarks on the Server	6-10
Configuration the Default Thumbanil Generator.....	6-12
Installation Summary	6-14

Installing Visualization - ECAD Support.....	7-1
Before You Begin	7-2
Installing ECAD Support.....	7-3
Installation Summary.....	7-6
Installing Visualization - Object Adapter Support.....	8-1
Before You Begin	8-2
Installing Object Adapter Support.....	8-2
Installation Summary.....	8-5
Installing Visualization - Document Support	9-1
Before You Begin	9-2
Prerequisites.....	9-2
Where to Install.....	9-3
Installing Document Support	9-3
Mapping the Content to a Worker	9-7
Installing Adobe Distiller	9-8
Editing wvs.properties for the Collective Document Support Object Adapter.....	9-9
Editing wvs.properties for the JT Object Adapter	9-9
Installation Summary.....	9-10

III. Configuring CAD Agent

Configuring the CAD Agent.....	10-1
Introduction to CAD Agent.....	10-2
Before You Begin	10-3
Guidelines for Configuring a Worker "Common File System"	10-3
Configuring the CAD Agent	10-4
CAD Worker On The Same Machine	10-4
CAD Worker On A Different Windows Machine	10-9
Creating a Common Windows to Windows File System.....	10-9
Adding CAD Worker to a Different Machine	10-10
Running Worker Daemon as a Service	10-11
Running the Worker Daemon as a Program.....	10-13
CAD Worker On a Different UNIX Machine.....	10-13
Creating a Common File System.....	10-14
Adding a UNIX CAD Worker to the CAD Agent.....	10-14
Configuring a Non-English UNIX Worker to Run FTP Daemon	10-15
Defining Publish Queue and Worker Availability Settings	10-16
Testing the CAD Agent Configuration	10-17
Test 1: Starting the CAD Worker	10-17

Test 2: Create a Viewable on Demand	10-18
Test 3: Creating a Representation from Local Data	10-18
Using WVS with Multiple Background Servers	10-19
Configuring the CAD Agent in a Windchill Cluster	10-20
Generating Viewables and Thumbnails in Clustered Environments	10-20
ProductView Collaboration in a Clustered Environment.....	10-20
Making Thumbnails Viewable for Microsoft Word or Excel Files	10-22
Using Wildfire to Download and Publish Files.....	11-1
Before You Begin	11-2
Using the Pro/ENGINEER Wildfire Object Adapter to Download Files.....	11-2
Configuring the Pro/ENGINEER Wildfire Adapter for HTTPS	11-3
Publishing Wildfire Assemblies as Positioning Assemblies	11-4
Configuring the Arbortext Publishing Engine (APE) Worker and Publishing....	12-1
Configuring the APE Worker	12-2
Before You Begin	12-2
Configuring the APE Worker	12-3
Configuring the CAD Agent	12-5
Configuring Publishing for Arbortext Authored Dynamic Documents	12-6
Overview	12-6
Configuring the WVS Publisher for the Arbortext Authoring Application	12-7
Using Publishing Rules	12-7
 IV. Using Publish Rules	
Using Publish Rules	13-1
About Publish Rules.....	13-2
Enabling Publish Rules	13-2
Evaluating Publish Rules	13-3
Events that Trigger Publish Rules Evaluation	13-3
Evaluating Publish Rules.....	13-3
Post-Publishing	13-11
DefaultPostPublishDelegate.....	13-11
EPMPostPublishDelegate	13-13
Manual Post Publishing.....	13-15
Examples of Publish Rules XML Files	13-15
Simple Arbortext Publishing	13-15
Creating Arbortext Documents from CAD Documents	13-16
Creating Publish Rules	13-18

Loading the Publish Rules XML File	13-18
--	-------

V. Appendixes

About Properties Files	A-1
About the wvs.properties	A-2
Troubleshooting the CAD Agent.....	B-1
Common CAD Agent Problems	B-2
Troubleshooting the CAD Agent.....	B-2
Running the CAD Agent in debug mode.....	B-3
Manually Starting CAD Workers	B-3
Starting CAD Workers from the CAD Agent	B-6
Using the CADAgent Monitor.....	B-7
Manually Publishing a CAD Document.....	B-14
Using the Publish Monitor.....	B-15

Index

Change Record

This section describes the major changes made to this guide.

Table 1 Changes for Windchill 8.0 M040

Change	Description
Added new chapter (chapter 13, "Using Publish Rules)	Instructions for enabling and evaluating publish rules, post-publishing, and creating the publish rules file

Table 2 Changes for Windchill 8.0 M030

Change	Description
Fixed critical documentation SPRs.	<ul style="list-style-type: none">• Updated formats supported for Arbortext Publishing Engine (APE).• Added section titled "Defining Publish Queue and Worker Availability Settings" to chapter 10, Configuring the CAD Agent, to describe wvs.properties and agent.ini settings for publish queue day and time formats.

Table 3 Changes for Windchill 8.0 M020

Change	Description
Fixed critical documentation SPRs	Added information about default thumbnail generator configuration to chapter 6, "Installing Visualization - Windchill Support". Also added information about configuring a "Common File System" to chapter 10, "Configuring the CAD Agent".
Added chapter to describe ArborText Publishing Engine (APE) functionality.	Chapter describes how to configure the APE Worker, and how to define publishing rules.

Table 4 Changes for Windchill 8.0 M010

Change	Description
General maintenance update.	Fixed SPRs reported during M10 testing and localization.

Table 5 Changes for Windchill 8.0

Change	Description
Reorganization of content for modularity and usability.	Moved CAD object adapter configuration information to a new guide titled <i>Windchill Configuration Guide - Visualization Services Object Adapters</i> , which can be found on the Visualization Adapters installation CD.
WVS Publishing overhaul enhancements.	Added information about new and enhanced features related to WVS publishing.
Bug fixes throughout guide.	Updated errors to reflect correct file and path names throughout procedural topics.

Table 6 Changes for Windchill 7.0 M030

Change	Description
Updated ECAD viewing information in chapter 7	Described options for installing the ECAD viewer for ProductView Lite Edition and ProductView Standard Edition.
Made minor changes throughout chapter 5, Installing ProductView Standard Edition Client.	Updated procedures to correct errors in installation information.
Removed references to third party software that is no longer used.	ImageMagick software, a third party tool that was previously used to create animated gifs for thumbnails. This functionality has been replaced by the thumbnail generator.
Updated chapters chapters 15 and 43 (Pro/E and IDEAS Object Adapter Configuration sections)	Fixed screen captures and text regarding port settings in the Object Adapter Configuration dialog boxes.
Minor update to chapter 4, About Visualization Services.	Removed incorrect statement indicating that configuring the CAD Agent for the CAD Worker was the final step in the process of enabling Visualization Services.

Table 7 Changes for Windchill 7.0 M020

Change	Description
Added new chapter on Theorem adapter	Created a chapter describing how to configure the Theorem Inventor object adapter.
IDEAS information updated	Updated chapters 41 through 46 to improve technical accuracy. Removed chapter on Advanced Object Adapter configuration as it does not apply for IDEAS.
Document Support Worker information updated	Updated chapter 13 to include detail and changes to technical information about the Document Support Worker
Added overview information to chapter on using Wildfire to download files.	Added Before You Begin section to chapter 11, Using Wildfire to Download Files.

Change	Description
Added information about server-side watermarks.	New section in chapter 6 titled Creating Server-Side Watermarks.
Added section on installing oliplot for published drawings.	Added section to chapter 58, Configuring CATIA V4 CAD Object Adapter.
Updated installation information throughout chapter 6, Installing Visualization -- Windchill Support.	Edits throughout this chapter for technical accuracy.
Changed directory path in Remote Thumbnail documentation.	Updated chapter 51, Configuring Remote Thumbnail Generation, to change <Remote_Thumbnail> directory to <Remote_Thumbnail>\bin directory.

Table 8 Changes for Windchill 7.0 M010

Change	Description
Updated chapter 11, Using Wildfire to Download Files.	Added information about publishing. Changed all references to userworkerdownload to useworkerdownload.
Updated chapter 6, Installing Visualization -- Windchill Support.	Corrected information about filenames and paths specified.
Updated chapter 9, Installing Visualization -- Document Support.	Updated filenames.
Updated chapter 5, Installing ProductView Standard Edition Client.	Added a section on installing the client for UNIX platforms, and another section on running ProductView as a Web plugin.

Table 9 Changes for Windchill 7.0

Change	Description
Section dividers	Added section dividers to separate information groups. For example, the Installing Visualization Products section is composed of multiple chapters that describe the products you can install. This group of chapters is preceded by the Installing Visualization Products section page.
Replaced PTC.Setup installation procedures with InstallAnywhere.	Install Anywhere replaces PTC.Setup as the installation utility for the Visualization Products products. The installation chapters document the installation using InstallAnywhere. See About Installing Windchill Products for general information about installing.
Updated all wvs. properties file edits to use xconfmanager utility.	xconfmanager is the new utility to manage the Windchill property files. General information about using this utility can be found in About the xconfmanager Utility .
Reorganized and updated the information about configuring each object adapter.	To locate configuration information for a specific object adapter, locate the section divider for the object adapter and read the chapters listed under the divider.

About This Guide

The *Windchill Installation and Configuration Guide - Visualization Services* provides instructions for installing the Visualization Services products, including the ProductView client and object adapters, and for configuring the CAD Agent to use the CAD worker.

The object adapters work with Visualization Services. Before you can complete the configurations, Windchill and the corresponding CAD application for the CAD object adapter must be installed. The CAD object adapter interfaces with these products, and they must be installed and configured prior to configuring the CAD Agent to use the CAD worker.

Note: For information on configuring the various object adapters, please refer to the *Configuration Guide - Visualization Services Object Adapters*.

It is assumed that the reader has a solid understanding of terms and concepts for Product Data Management (PDM) and Computer Aided Design (CAD) systems.

Updates to this manual are posted on the PTC Web Site.

Read This First

The Read This First Windchill 7.0 provides information related to known problems, documentation omissions, and notes and cautions. A printed copy of the RTF is shipped with your product or, for your convenience, a version with the most up-to-date information is available online at:

<http://www.ptc.com/cs/doc/index.htm>

This URL directs you to the PTC Online Support Web page for reference documents. For your document search criteria, select your product from the product drop-down list.

Web Version of This Document

Please refer to the PTC Reference Documentation site for the latest version of this guide. This link is shown below:

<http://www.ptc.com/appserver/cs/doc/refdoc.jsp>

The Web version of this document will contain the most recent information. The version that is shipped with the installation CD will be as current as possible; however, the Web version might be more up to date.

Related Documentation

The following documentation may be helpful:

- *Windchill Installation and Configuration Guide - Windchill*
- CAD application installations guides

If books are not installed on your system, see your system administrator.

Technical Support

Contact PTC Technical Support via the PTC Web site, phone, fax, or email if you encounter problems using Windchill.

For complete details, refer to Contacting Technical Support in the PTC Customer Service Guide enclosed with your shipment. This guide can also be found under the Support Bulletins section of the PTC Web site at:

<http://www.ptc.com/support/index.htm>

The PTC Web site also provides a search facility that allows you to locate Technical Support technical documentation of particular interest. To access this page, use the following link:

<http://www.ptc.com/support/support.htm>

You must have a Service Contract Number (SCN) before you can receive technical support. If you do not have an ID, contact PTC License Management using the instructions found in your PTC Customer Service Guide under Contacting License Management.

Documentation for PTC Products

PTC provides documentation in the following forms:

- Help topics
- PDF books

To view and print PDF books, you must have the Adobe Acrobat Reader installed.

The Windchill installation documentation is included on the CD in the Docs directory. In addition, books updated after release (for example, to support a hardware platform certification) are available from the Reference Documents section of the PTC Web site at the following URL:

<http://www.ptc.com/cs/doc/reference/>

Comments


PTC welcomes your suggestions and comments on its documentation—send comments to the following address:

documentation@ptc.com

Please include the name of the application and its release number with your comments. For online books, provide the book title.

Documentation Conventions

Windchill documentation uses the following conventions:

Convention	Item	Example
Bold	Names of elements in the user interface such as buttons, menu paths, and dialog box titles. Required elements and keywords or characters in syntax formats.	Click OK . Select File > Save . License File dialog box create_<tablename>.sql
<i>Italic</i>	Variable and user-defined elements in syntax formats. Angle brackets (< and >) enclose individual elements.	create_<tablename>.sql
Monospace	Examples Messages	JavaGen "wt.doc.*" F true Processing completed.
"Quotation marks"	Strings	The string "UsrSCM" . . .
<Product>	Represents a product installation directory (loadpoint). <i>Product</i> is replaced with the actual product name.	<Info*Engine> For additional clarification, a where clause may be included: Where <Info*Engine> is the directory where Info*Engine is installed.
	The CAUTION symbol indicates potentially unsafe situations which may result in minor injury, machine damage or downtime, or corruption or loss of software or data.	When you add a value to an enumerated type (for example, by adding a role in the RolesRB.java resource file), removing that value can result in a serious runtime error. Do not remove a role unless you are certain there is no reference to it within the system.

Convention	Item	Example
<i><Product Name></i>	Describes the installation directory for a given product. Product Name is replaced with the name of the product.	<i><Windchill></i> <i><Windchill Services></i>

Third-Party Products

Examples in this guide referencing third-party products are intended for demonstration purposes only. For additional information about third-party products, contact individual product vendors.

Code Examples

Some code examples in this guide have been reformatted for presentation purposes and, therefore, may contain hidden editing characters (such as tabs and end-of-line characters) and extraneous spaces. If you cut and paste code from this manual, check for these characters and remove them before attempting to use the example in your application.

Graphic Images

Graphic images or screenshots used in this guide may not compare exactly to the images on your system. Slight differences between the images depicted within these pages and those observed on your system may be due to variations in platform and configuration environment.

I

General Information About Installing Windchill

1

About the windchill Command

This chapter contains information about the windchill command and how to use the windchill shell.

Topic	Page
About the windchill Command	1-2
About the windchill shell	1-4

About the windchill Command

PTC has provided a command, windchill, to invoke Windchill actions. For example, the command can be used to stop and start Windchill, check the status of the Windchill server, and create a new shell and set the environment variables. It can also be used as a Java wrapper. In that regard, it can accept a Class file as an argument, just like Java, and execute it without a predefined environment (Windchill classes in CLASSPATH, Java in PATH, and so on).

The windchill command should be used to execute any server-side Windchill Java code. This will insure that the environment that the command is executed in is properly setup. The environment that actions are executed within, including the windchill shell action, is defined by the wt.env properties in the wt.properties file. For example, the wt.env.CLASSPATH property will set the CLASSPATH environment variable for the action that is being invoked.

The windchill command is a Perl script that has also been compiled into a Windows binary executable. For UNIX systems, Perl 5.0 or greater must be installed. The windchill script assumes that Perl is installed in the standard install location of /usr/bin/perl. If Perl is not installed at this location, you can either create a symbolic link (recommended method) to the Perl install location or edit the windchill script to reference the Perl install location. To modify the windchill script, edit the <Windchill>/bin/windchill file. Locate the #! entry (for example, #!/usr/bin/perl -w) and change the Perl directory to the location where Perl is installed.

The windchill command is located in the <Windchill>\bin directory. If you receive a command not found message when you execute the windchill command, add the <Windchill>\bin directory to your PATH environment variable. The syntax of the windchill command is:

```
windchill [args] action
```

You can display the help for the windchill command by executing windchill with the -h argument or with no argument.

The following tables list some of the arguments and actions applicable to the windchill command. To see a complete list of the arguments, use the report generated from the help (argument).

windchill Arguments:

Arguments (optional)	Description
- h, --help	Displays help and exits.
-v, --[no]verbose	Explains what is being done when a command is executed. Default is noverbose.

Arguments (optional)	Description
-w, --wthome=DIR	Sets the Windchill home directory. Default is the parent directory containing the windchill script.
--java=JAVA_EXE	The Java executable. Default is the wt.java.cmd variable value specified in the \$WT_HOME/code-base/wt.properties file.
-cp, --classpath=PATH	Java classpath. Default is the wt.java.classpath variable value specified in the \$WT_HOME/code-base/wt.properties file.
--javaargs=JAVAARGS	Java command line arguments.

windchill Actions

Action	Description
shell	Sets up a Windchill environment in a new instance of the currently running shell.
start	Starts the Windchill server.
stop	Stops the Windchill server.
status	Retrieves the status of the Windchill server.
version	Displays the Windchill install version.
properties <resource>[,...][?key[&key2]...]	<p>Displays the properties as seen by Windchill for the given resource with substitution, etc. executed. It can be limited to a given set of keys.</p> <p>For example:</p> <p>windchill properties wt.properties — lists all wt.properties</p> <p>windchill properties wt.properties?wt.server.codebase — lists server codebase</p> <p>windchill properties wt.properties?wt.env.* — lists all the environment variables use by windchill shell</p> <p>windchill properties — with no arguments generates the help report</p>

Action	Description
CLASS [CLASS_ARGS]	Run a Windchill class with optional class arguments. For example: windchill wt.load.Developer -UAOps

About the windchill shell

The windchill shell brings up a new command shell, from the parent shell that is setup for the Windchill environment. This includes setting all environment variables defined in wt.env property in the wt.properties file.

To execute the windchill shell, at the command prompt enter the following command:

```
windchill shell
```

When you are finished using the windchill shell, you can exit the shell and return to the parent shell.

PTC recommends running all server-side Windchill applications, tools, and utilities from the windchill shell. Also, you can use the windchill shell to set up your development environment to use javac or Java directly.

2

About the xconfmanager Utility

This chapter contains information about the xconfmanager utility.

Topic	Page
About the xconfmanager Utility.....	2-2

About the xconfmanager Utility

The xconfmanager is a command-line utility that is used to add, remove, and modify the properties in the Windchill property files. You should use the xconfmanager (or the System Configurator) to manipulate properties; you should not manually edit property files.

There are property files that should not be modified using the xconfmanager. The following registry files are managed by Windchill Information Modeler and they also should not be edited manually or using the xconfmanager:

```
associationRegistry.properties
classRegistry.properties
descendentRegistry.properties
modelRegistry.properties
moduleRegistry.properties
moduleDir.properties
debug.properties
```

The xconfmanager utility saves your changes in the site.xconf file and provides an option to generate updated property files using those changes. The site.xconf file contains changes made to Windchill property files, starting with installation and continuing with each use of the xconfmanager utility or the System Configurator. The xconfmanager utility is located in the <Windchill>/bin directory.

This chapter describes only the information and instructions necessary to modify specific Windchill properties. A full description of the xconfmanager utility and management of the Windchill property files is documented in the *Windchill System Administrator's Guide* in the Administering Runtime Services chapter.

Anyone with write access to the XCONF files and the property files under the Windchill installation directory can successfully run the xconfmanager utility. The xconfmanager is executed from the command line from within a windchill shell. See the About the windchill Command for more information about the windchill shell.

The syntax of xconfmanager command with only commonly used parameters is as follows:

```
xconfmanager {-h} {-r <product_root>} {-s <property_pair>}
{-t <property_file>} [--add <property_pair>}
[--remove <property_pair>} [--reset <property_names>}
[--undefine <property_names>} {-d <property_names>} {-p}
```

For the purposes of modifying Windchill properties, you will primarily use the -s, -t, and -p parameters as follows:

- Use the -s (--set) parameter to identify the relevant property and specify the new property value. See the Formatting Property Value Guidelines section (below) for information about formatting the <property_pair> value.
- Use the -t (--targetfile) parameter to specify the directory location of the property file. If the file name or path contains spaces, you must enclose the

<property_file> value in double quotes (" "). It is recommended to use a fully qualified file name to ensure an accurate reference to the file is made.

- Use the **-p** (**--propagate**) parameter to propagate the changes made to the XCONF files into the property file being modified in order to keep the XCONF and the property files in synch with one another.
- Use the **-h** (**--help**) parameter to view the help for xconfmanager. The help describes all xconfmanager parameters.

Additionally, you can add and remove property values from properties that are declared as a multi-valued properties using the following parameters:

- Use the **--add** parameter to add the value specified at the end of the set of ordered values already defined in the property.
- Use the **--remove** parameter to remove the value specified from the set of ordered values already defined in the property.

Tip: If you are unsure as to whether a property is multi-valued, you can display the current set of values using the **-d** parameter. The output from this parameter lists the multivalue separator when the property is multi-valued.

Some examples of using the xconfmanager utility are as follows:

- xconfmanager is run from the windchill shell. To open a windchill shell, execute the following command at a command prompt:

```
windchill shell
```

- To display xconfmanager help, execute the following command from the windchill shell:

```
xconfmanager -h
```

- To display the current settings for a property, execute the following command from the windchill shell:

```
xconfmanager -d <property_names>
```

<property_names> is a comma-separated list of property names. This means that you can display the current settings for multiple properties by executing one command.

- To change a property value, execute the following command from the windchill shell:

```
xconfmanager -s <property_name>=<property_value>  
-t <property_file> -p
```

Tip: Use the fully qualified name of the property file to ensure an accurate reference. If you are sure that there is only one property file that is known to xconfmanager containing the property, you can omit the **-t** parameter. When setting a value for a new property not in a property file, you must include the **-t** parameter to name the property file to which the property is added.

- To add a new classpath entry to the Windchill classpath specified in the wt.java.classpath property, execute the following command from the windchill shell:

```
xconfmanager --add wt.java.classpath=d:\MyLibraries\somelibrary.jar -p
```

The value d:\MyLibraries\somelibrary.jar will be added to the end of the ordered set. You do not have to specify the delimiter \$(path.sep) as this will be added to the property value automatically by the xconfmanager.

Tip: The previous example command did not include the target file in the -t parameter since the property is known to be in only wt.properties.

Formatting Property Value Guidelines

The following guidelines will help ensure that you set properties correctly on the command line when using xconfmanager:

- To specify a property whose value contains characters that might be interpreted by your shell (such as spaces and special characters), escape them using the appropriate technique for the shell you are using.

On a Windows system, you can include spaces in a value by enclosing the argument with doubles quotes or you can escape the space character with ^. For example, use either of the following:

```
-s "wt.inf.container.SiteOrganization.name=ACME Corporation"
-s wt.inf.container.SiteOrganization.name=ACME^ Corporation
```

On a UNIX system, you can use doubles quotes or you can escape the space character with \. For example, use either of the the following:

```
-s "wt.inf.container.SiteOrganization.name=ACME Corporation"
-s wt.inf.container.SiteOrganization.name=ACME\ Corporation
```

- In many UNIX shells, the use of a backward slash (\) escapes the following character as a literal. In most cases, using forward slashes (/) in file paths is a simple way to specify a path without having to know the intricacies of your shell's command line escaping rules.
- On UNIX, dollar signs are usually interpreted by shells as variable prefixes. To set a property value that has a dollar symbol in it, use single quotes around the argument so that the shell does not interpret it or use backslash to escape the dollar symbols. For example, use either of the following:

```
-s 'wt.homepage.jsp=$(wt.server.codebase)/wtcore/jsp/wt/portal/index.jsp'
```

or

```
-s wt.homepage.jsp=
\$(wt.server.codebase)/wtcore/jsp/wt/portal/index.jsp
```

Other than escaping arguments so that the command-line shell does not misinterpret them, you should not need to escape other values to be compatible with XML or property file syntaxes. The xconfmanager escapes property names and values automatically if necessary.

3

About Visualization Services

Visualization Services is a component of the Windchill and ProductView solution set. This chapter provides an introduction to Visualization Services, and the processes necessary to install and configure the CAD object adapters and configure the CAD Agent for the CAD workers.

Topic	Page
About Visualization Services	3-2
Software Matrices.....	3-4
Managing the Installation and Configuration Steps	3-4
Installing ProductView Client and CAD Object Adapters.....	3-5
Configuring CAD Object Adapters.....	3-6
Configuring CAD Agent for the CAD Worker	3-6

About Visualization Services

Visualization Services is a transparent service that converts CAD and document data into a file form (referred to as *publishing*) that ProductView (a data viewing and visualization tool) can display. The published data is stored as a representation. The representations can then be viewed as thumbnail images displayed on property pages and listings throughout Windchill. Selecting a thumbnail image launches ProductView, which presents a visual representation of a part, an assembly, a document, or a drawing.

Visualization Services is an integrated component of Windchill and is inherently available to you when you install Windchill.

This documentation provides instructions to interface Windchill and the following applications to enable CAD objects to be viewed:

- Document Support — Microsoft Word, Excel, PowerPoint, and PDF files
- Pro/ENGINEER
- CATIA V4 and CATIA V5
- Unigraphics
- CADD5
- I-DEAS
- SolidWorks
- ECAD

The following table lists the CD sets and the Windchill Visualization Services product content for each of the CDs.

Visualization Services Products

CD Title	CD Content
Visualization - Product View Client	<ul style="list-style-type: none">• Windchill ProductView Standard Edition client for Windows and UNIX• Realizer• Composer Edit• Import Filters• Simulation Viewer (Windows only)

CD Title	CD Content
<p>Visualization - Windchill Support</p> <p>Note: This CD is only available to the following customers:</p> <ul style="list-style-type: none"> • All Windchill PDMLink/ProjectLink/Foundation PDM customers • Pro/INTRALINK 8.0 customers who previously purchased the DIVISION Graphics Server • Pro/INTRALINK 8.0 customers who have purchased ProductView Collaboration 	<ul style="list-style-type: none"> • Windchill ProductView Lite Edition for Windows and UNIX • ProductView Collaboration Agent • Thumbnail Viewer • Thumbnail Generator • Remote Thumbnail Generator • PSE Visualization Support • Demonstration Data
Visualization - Object Adapter Support	<ul style="list-style-type: none"> • Adapter Utilities • Batch Import • Pro/ENGINEER Adapter • Unigraphics Adapter • I-DEAS Adapter • SolidWorks Adapter • CADDs Adapter • CATIA V4 Adapter
Visualization - ECAD Support	<ul style="list-style-type: none"> • ECAD viewer • ECAD object adapter.

CD Title	CD Content
Visualization - Document Support	<ul style="list-style-type: none"> • Document viewer • Document adapter • Adobe Acrobat <ul style="list-style-type: none"> – CD 1: English, French, German, Spanish – CD 2: Japanese and Korean – CD 3: Chinese Standard and Chinese Traditional • Acrobat Distiller

Software Matrices

The software matrix lists the combinations of platforms, operating systems, and third-party products that are certified for use with this release on Windows and UNIX operating systems.

To obtain a copy of the software matrix, use the following URL. This URL will direct you to the PTC Online Support Web page for reference documents. For your document search criteria, select your product from the product drop-down list. Select the **Software Matrix** for this release from the returned document list.

<http://www.ptc.com/cs/doc/index.htm>

Product and version matrix information is updated periodically to adjust to environment changes. See the PTC Web site (previously listed) for the latest copy of the software matrices.

Managing the Installation and Configuration Steps

The instructions included in this guide assume that the CAD applications and relevant licenses are installed and configured correctly and that Windchill is installed and configured properly.

To enable Visualization Services for Windchill, you must install and configure the CAD object adapters, and configure the CAD Agent for the CAD workers. When these tasks are complete, Visualization Services will be configured and you will be able to view CAD objects in Windchill.

Perform the following instructions to configure Visualization Services for Windchill:

1. Install the ProductView client and object adapters.

2. Configure the CAD object adapter.
3. Configure the CAD Agent for the CAD worker.

Installing ProductView Client and CAD Object Adapters

The instructions to install the Visualization Services products (ProductView client, object adapters, and so on) are located in separate chapters in this guide. The Location Visualization Services Product Install Instructions table lists the Visualization Services installation instructions that have been provided and the chapter location for the instructions. Select your product from the table and perform the instructions to complete the installation.

Location Visualization Services Product Install Instructions

Visualization Service Product	Perform these instructions to
ProductView Standard Edition Client	<p>Install the ProductView Standard Edition client on either the Windchill server or the client system.</p> <p>The installation instructions are located in Installing ProductView Standard Edition Client.</p>
<p>Windchill Support</p> <p>Note: This CD is only available to the following customers:</p> <ul style="list-style-type: none"> • All Windchill PDMLink/ProjectLink/Foundation PDM customers • Pro/INTRALINK 8.0 customers who previously purchased the DIVISION Graphics Server • Pro/INTRALINK 8.0 customers who have purchased ProductView Collaboration 	<p>Install ProductView Lite, collaboration agent, thumbnail viewer, thumbnail generator, remote thumbnail generator, PSE visualization support, and demo data.</p> <p>The installation instructions are located in Installing Visualization - Windchill Support.</p>
Object Adapter Support	<p>Install object adapters and batch import adapters for Pro/ENGINEER, UniGraphics, I-DEAS, SolidWorks, CATIA, and CADD5.</p> <p>The installation instructions are located in Installing Visualization - Object Adapter Support.</p>

Visualization Service Product	Perform these instructions to
ECAD Support	<p>Install the ECAD viewer and object adapter.</p> <p>The installation instructions are located in Installing Visualization - ECAD Support.</p>
Document Support	<p>Install the Document viewer and object adapter, Adobe Acrobat, and Acrobat Distiller.</p> <p>The installation instructions are located in Installing Visualization - Document Support.</p>

Configuring CAD Object Adapters

The instructions to configure the CAD object adapters are located in separate chapters in this guide based on your CAD object adapter type. The Location of CAD Object Adapter Configuration Instructions table lists the CAD object adapter configuration instructions that have been provided and the chapter location for the instructions. Select your CAD object adapter from the table to perform the instructions to configure the CAD object adapter.

For instructions on configuring the various object adapters after they are installed, refer to the *Windchill Configuration Guide - Visualization Services Object Adapters*.

Configuring CAD Agent for the CAD Worker

In this step, you configure the CAD Agent to use the CAD worker (the configured CAD object adapter) to convert native data to ProductView format.

When Visualization Services receives a request to convert a CAD object (or other format for which a worker exists) to the format used by the ProductView client, the CAD Agent calls a CAD worker. The worker opens a non-graphical session of the CAD application (for example, Pro/ENGINEER) and converts the designated CAD object to the ProductView format. The CAD application then publishes the CAD data as needed, without direct user intervention.

- Perform the instructions in [Configuring the CAD Agent](#) chapter to configure the CAD Agent for the CAD worker.
- Perform the instructions in the [Using the Pro/ENGINEER Wildfire Object Adapter to Download Files](#) chapter to configure the Pro/ENGINEER Wildfire object adapter for file downloads. This is an optional configuration.

4

About Installing Windchill Products

This chapter provides information about installing Windchill products, the InstallAnywhere installation utility, and loading and mounting a CD-ROM on UNIX systems.

Topic	Page
Overview of an Installation Session.....	4-2
Terminology	4-4
Java Runtime Environment	4-4
Disk Space Check Process	4-5
Disk Space Check Process	4-5
Launching the Installer.....	4-5
Loading and Mounting the CD-ROM on UNIX	4-7
Installation Log Files.....	4-11
Troubleshooting.....	4-12

Overview of an Installation Session

The following sections provide an introduction to the installation utility.

Choosing the Installer Language

When the installer is launched, the language specified by your system is now the default install language. The installer assumes, therefore, that your system is set to the locale of your preference (the locale must be a supported Windchill locale) prior to initiating an installation. Once the language environment variable has been set, any messages issued by the installer are issued in that language. For information about the languages supported with this release, use the following URL:

<http://www.ptc.com/appserver/cs/doc/refdoc.jsp>

This URL directs you to the PTC Online Support Web page for reference documents. For your document search criteria, select your product from the **Product** drop-down list, select the current release from the **Release** drop-down list, select **All User Roles** from the **User Role** drop-down list, and select **Matrices - Language** from the **Document Type** drop-down list.

The following instructions are provided to assist you in verifying (or setting) the language environment variable on your system before you start the installation process:

Windows

To review (or set) the language environment variables, select **Start > Settings > Control Panel > Regional Options**. In the **Regional Options** dialog box select the **General** tab. From the drop down list, choose the appropriate language variable.

Note: Alternatively, you can set (or change) the locale for your system using a command. At the command prompt enter:

```
set LANG=<language>
```

Where *<language>* is the language specification for your platform.

UNIX

You can use the following command to determine the correct values for the locale:

```
locale -a
```

For Latin-1 languages, ISO88591 the option should be used, if available.

At the shell prompt enter:

```
setenv LANG <language>
setenv LC_ALL <language>
```

```
export LANG LC_ALL
```

Where *<language>* is the language specification for your platform.

When the current locale for the system is set to an Asian language, the installer allows you to choose only that Asian locale or English from the locale drop-down list. When the current locale for the system is a non-Asian language, all of the non-Asian languages in the drop-down list, including English, appear.

Navigation and Canceling

Installers operate in a standard wizard paradigm using **Next** and **Previous** to move forward or backward through the steps of the installation. A navigation bar on the side of the installer window gives a course-grained view of where you are in the overall installation process. Be aware, that on busy systems and with complex installers there can occasionally be a delay in moving between steps. Avoid clicking **Next** or **Previous** a second time while you are waiting for the switch as this could cause the wizard to skip the appropriate panel.

The basic interaction of each installer is to first collect information from you, then offer you a chance to review the most critical settings before actually beginning the modification of files on your system. At this point, the label on the **Next** button is changed to **Install** to signal that if you proceed that files on your system will be changed.

Clicking **Cancel** in the installer window can stop an installation; however, if you cancel *after* you have clicked **Install**, be aware that your file system has already been modified and the installers cannot undo what they have changed. Should you accidentally click **Cancel**, you are prompted to either confirm the cancellation or resume the installation. Unless specifically noted, the installers in the Windchill product suite do not have an uninstall capability.

Installation Type

Some installers offer specialized installation types, execution modes, and custom options. The most common installation types for the Windchill product suite installers are: Typical and Custom. Typical is the most common course of prompts and options. Custom allows you to select options that may not be available using the Typical installation type or allows you to skip portions of the installation. Some installers offer additional installation types that allow for specialized processing.

Choosing Installation Directory

All installers require you to choose where you want to install the software. Some products can be installed in any location, whereas others must be installed into the same installation directory as another product. If the product has no restrictions on where it is installed, you can also enter a new directory path and the installer will create it.

If the product you are installing must be installed in the same location as another product, the panel indicates the name of the prerequisite product or products. It then shows a list of one or more directories that it believes meet the prerequisites.

Note: The list of directories comes from a central registry that the installers maintain on your system. If a previous installation has been deleted, a directory may be shown which no longer exists.

You can then choose one of the listed directories or browse to another directory if the one you want is not shown. After the directory is selected, the installer then performs a more in-depth validation of the chosen directory. If it does not meet the requirements, you are informed and given the chance to choose another location.

Terminology

Installer -- The program that you interact with to perform the installation; for example, setup (or setup.vbs) is referred to as the installer. The term installer is not intended to refer to the person doing the work.

Installation Directory -- The directory where you choose to place the product you are installing.

InstallAnywhere -- The framework and toolset, provided by ZeroG, which is used to develop the Windchill installers.

Java Runtime Environment

To run, the InstallAnywhere software requires the specific version of the Java Runtime Environment (JRE) which is bundled with each installer. When you run an installer using the documented scripts from the CD root, the installer automatically uses the bundled JRE and does not use a JRE from your system. The SDK on the Windchill server system is no longer used when installing Windchill products.

Documentation on the CD Image

For some CD images, a Docs directory is present on the root of the CD image. This directory contains one or more *.pdf files of manuals for the product(s) being installed from that CD. It is common for there to be a copy of the installation guide in that directory, plus possibly other manuals of an administrative nature. These books, along with others that are embedded elsewhere in the installation image, are copied onto your system by the installer.

Additionally, the Windchill Installation Overview is provided on the Third Party Software CD at the root level. Use this overview to become familiar with set of products that are in a given release of Windchill Info*Engine and Windchill solutions. The overview also provides guidance on the order in which products should be installed.

Disk Space Check Process

The installation of some products takes a considerable amount of disk space. The **Review Settings** panel of each installer gives an indication of the estimated disk space requirements to complete the installation based upon the options you have chosen. Once you click **Install** on the **Review Settings** panel, the installer checks your system for the required disk space. If it does not believe there is enough space, the installer presents a dialog box that informs you of this and waits for the space to be freed up. You may also choose to go back and select a different installation directory.

The disk space check can be disabled completely by setting the environment variable `CHECK_DISK_SPACE` to a value `OFF` (note all caps) prior to launching the installer.

Launching the Installer

The installer placement and behavior differs depending on the following things:

- Whether the your system platform is Windows or UNIX.
- Whether there is only one or multiple installers on the same CD.

Note: Running installers from a windchill shell or having a windchill shell open when you are installing is not recommended and causes errors to occur if you are installing or updating Windchill Services. Instead, be sure to modify the system `PATH` variable to include the path to your installed SDK bin directory before running the setup file.

The following sections describe where actual installer executables are located, as well as the installer placement and behavior based on whether there is one installer on the CD or multiple installers on the CD.

Single Installer on CD

The following describes what to expect when there is only one installer on the CD.

Automatic and Manual Execution on Windows

If you are using a CD to do the installation and there is only one installer on the CD, the setup program may automatically start when you insert the CD. Otherwise, to manually run the setup program, double click the **setup.vbs** program that is located in the CD root directory.

UNIX Setup Script

The UNIX installer script name is **setup**. It is located directly under the CD image root. The script automatically launches the program for the operating system on which the installation is taking place.

Before you install, check the DISPLAY environment variable setting to ensure that the installation windows will display on the machine. The DISPLAY value on the machine that runs the setup program should be set to `<machine>:0.0`, where `<machine>` is the name of the system where the setup program is installed.

If the DISPLAY variable is not set correctly, the installation program exits with the following error:

```
Configuring the installer for this system's environment...

Invocation of this Java Application has caused an
InvocationTargetException. This application will now exit. (LAX)
```

Multiple Installers on One CD

In some cases, there are multiple Windchill products on one CD. For example, the Windchill Third Party Software CD has the Tomcat, Apache, OCU, and JRE products. On Windows, the installer does not automatically launch when a CD contains multiple products. The scripts for each installer are located at the root directory of the CD.

To run the installation, navigate to the root directory on the CD and locate the setup script for the product you want to install. Run the setup script, as follows:

- On Windows -- Run the VBS setup file for the product. The actual name of the setup file includes the product name, such as `setup_tomcat.vbs` for the Tomcat product.
- On UNIX -- Run setup script for the product. The actual name of the setup file includes the product name, such as `setup_tomcat` for the Tomcat product.

Before running the setup script on a UNIX system, check the DISPLAY environment variable setting to ensure that the installation windows will display on the machine.

Location of Actual Installer setup Executables

As a convenience, the setup VBS file (for Windows) and the setup script file (for UNIX) are located in the root directory of the CD.

The actual setup executable files are located further down in the directory hierarchy:

- For Windows, the `setup.exe` file can be found in the `Disk1\InstData\Windows\NoVM` directory for the product you are installing.
- For UNIX, first locate the UNIX platform directory under the `Disk/InstData` directory for the product you are installing. Within that directory, the `setup.bin` file can be found in the `NoVM` directory.

Note: Do not run the setup executable directly to start an installer. The executable files are not coded to use the bundled JRE. Instead, always use the setup files that are in the CD root directory.

Loading and Mounting the CD-ROM on UNIX

Most UNIX systems automatically mount the CD-ROM after it is loaded into the CD-ROM drive. For users whose machines do not mount automatically, the following instructions explain how to load and mount the CD-ROM both locally and remotely.

Note: Sun Solaris 2.x has automatic CD mounting. For more specific information on how to mount CDs on Sun hardware, visit <http://docs.sun.com/>.

Determining the SCSI ID of the CD-ROM Drive

You specify the SCSI identification number of your CD-ROM drive when you mount the CD-ROM file system to your UNIX workstation.

If you already know the SCSI ID of your CD-ROM drive, proceed to the next step.

If you do not already know the SCSI ID of your CD-ROM drive:

- For external CD-ROM drives, the SCSI ID can be found on the back of your CD-ROM drive. Look for a single-digit switch. The displayed number is the SCSI ID number.
- For internal CD-ROM drives, use the following table to find the command(s) you need to enter to determine the SCSI ID (the number in bold is the ID).

Commands Used to Find the SCSI ID of the CD Device

System	Command and Output	SCSI ID
HP-UX	<ol style="list-style-type: none">1. Insert the CD-ROM into the drive.2. Become root user.3. For each file in the /dev/rdsk directory, type the following at the command line: <code>/etc/diskinfo /dev/rdsk/<device></code> <device> should be replaced with each item in the /dev/dsk directory. For the device file identified as type: CD-ROM, the SCSI ID is to the right of the letter t in this example of a device file name: <code>c0t3d0</code> <p>Note: The identified device file name is the same file name that is used in the command to mount the CD-ROM.</p>	3

System	Command and Output	SCSI ID
SUN	Automatically mounts the CD-ROM.	
AIX	lsdev -C -c cdrom -H cd0 Available 00-08-00-40 CD-ROM Drive	4 (in the string 00-08-00-#0)

Note: The inclusion of a system in this table does not indicate support for that system; this information is only included to help you determine the SCSI ID for CD-ROM drives that are remotely mounted to your workstation. See the software platform matrix (available from <http://www.ptc.com/appserver/cs/doc/refdoc.jsp>) for information on supported systems and platforms.

Loading and Mounting the CD-ROM Locally

1. Turn on the CD-ROM drive and insert the CD-ROM.
2. If the /cdrom directory does not already exist, create it using the following command:


```
mkdir /cdrom
```
3. To mount the CD-ROM drive, enter the command appropriate for your UNIX workstation system.

For Sun, the command is:

```
mount -F hsfs -o ro /dev/dsk/c0t#d0s0 /cdrom
```

In the command line, replace the # symbol with the SCSI ID of the drive.

For AIX, the command is:

```
/usr/sbin/mount -v cdrfs -f /dev/cd0 /cdrom
```

For Hewlett-Packard, the procedure is:

- a. Add the following line to the /etc/pfs_fstab file. The first entry is the CD-ROM device file, the second is the mount point. The third entry indicates that the CD-ROM to be mounted is in ISO9660 format with Rockridge extension:

```
<device_file> <mount_point> <filesystem_type>  
<translation_method>
```

Example:

```
/dev/dsk/c5t2do /cdrom pfs-rrip xlat=unix 0 0
```

- b. Perform this step (and steps c through e) as the root user. Run the following file:

```
# nohup /usr/sbin/pfs_mountd &
```

- c. Run the following file:

```
# nohup /usr/sbin/pfsd &
```

- d. Run the following command to mount the CD-ROM:

```
# /usr/sbin/pfs_mount /cdrom
```

- e. Exit the root user account:

```
# exit
```

- f. Change directories to /cdrom, where you can see a lowercase listing of the directories and files on the CD-ROM. The mounted CD-ROM should appear as another read-only file system.

Loading and Mounting the CD-ROM Remotely

The CD-ROM drive should be mounted using NFS version 2. On machines that support NFS 3, an extra argument needs to be added to the mount command to force the use of NFS 2.

1. Load and mount the CD-ROM on the remote UNIX system to which the CD-ROM drive is connected. Use the procedure outlined in the [Loading and Mounting the CD-ROM Locally](#) section.
2. The CD-ROM file system must be exported before a remote UNIX system can allow access to the CD-ROM from your local UNIX workstation. To accomplish this, a line must be added to a file on your local UNIX workstation and, in some cases, a command needs to be executed.
3. Use the following table to look up the system of the remote UNIX system. Select your system from the **System** column, and add the text line in the **Line to Add** column to the file in the **File to Edit** column. You must have correct write permissions to edit these files.
4. If necessary after you have made the changes, execute the command listed in the **Command** column.

Exporting the CD File System

System	File to Edit	Line to Add	Command
HP-UX	/etc/exports	/cdrom -ro	exportfs /cdrom
AIX	/etc/exports	/cdrom	/usr/sbin/exportfs /cdrom
Sun	/etc/dfs/dfstab	share -F nfs -o ro /cdrom	shareall

5. If the /cdrom directory does not already exist on your local UNIX workstation, create it using the following command:

```
mkdir /cdrom
```

6. The CD-ROM directory must be mounted from the remote UNIX system to your local workstation. Use the following table to identify your local UNIX workstation type and execute the corresponding command. In the command, specify values, as follows:

- *<node>* is the name of the remote UNIX system to which the CD-ROM drive is connected.
- *<cdmount>* is the CD-ROM mount directory used on the remote UNIX system.

CD Device Remote Mounting Commands

System	Remote Mounting Command
HP-UX	<code>/etc/mount -o ro,hard <node>:<cdmount> /cdrom</code>
AIX	<code>/usr/sbin/mount -o ro,hard <node>:<cdmount> /cdrom</code>
Sun	<p><code>mount -o ro,hard <node>:<cdmount> /cdrom</code></p> <p>Note: If problems occur while using an installer from a remote-mounted CD-ROM, you can try remounting the remote CD-ROM using one of the following commands:</p> <p>For Sun systems:</p> <pre>mount -o ro,hard,vers=2 <node>:<cdmount> /cdrom</pre> <p>For IBM RS/6000 systems:</p> <pre>/usr/sbin/mount -o ro,hard,vers=2 <node>:<cdmount> /cdrom</pre>

7. If your system does not automatically mount the CD-ROM, enter the required command. For example, for Hewlett Packard systems:

```
/etc/mount -F cdfs -o ro /dev/dsk/c?t#d0 /cdrom
```

Note: In the preceding example, the number sign (#) represents the SCSI ID of the CD-ROM drive.

8. The CD-ROM file system must be exported before a remote UNIX system allows access to the CD-ROM from your local UNIX workstation. To accomplish this, you must add a line to a file on your local UNIX workstation, and, in some cases, execute a command.

9. Use the following table, to identify your remote system; add the text in the **Line to Add** column to the file listed in the **File to Edit** column. You must have the correct write permissions to edit the files. If necessary, execute the command listed in the **Command** column. For additional information, see your hardware-specific documentation.

Exporting the CD-ROM File System

System	File to Edit	Line to Add	Command
HP-UX	/etc/exports	/cdrom -ro	exportfs /cdrom
Sun	/etc/dfs/dfstab	share -F nfs -o ro /cdrom	shareall

If problems occur while using an installer from a remote-mounted CD-ROM on Sun Solaris systems, try remounting the remote CD-ROM using the following command:

```
mount -o ro,hard,vers=2 <node>:<cdmount> /cdrom
```

Installation Log Files

During the installation, information is written to various log files. The log files are located in the *<installation directory>/installer/logs* directory. There are generally two log files written per installation session:

- *<installer short name>_InstallLog.xml*
- *<installer short name>_PtcInstall.log*

Note: The *<installer short name>_InstallLog.xml* is only available after the installer terminates.

When multiple executions of the same installer are performed to the same installation directory, these log files are backed up and the file names are changed to include a sequence number. The sequence numbers begin with 000. For example, the log files for the first execution of the installer would be named as follows:

- *<installer short name>_InstallLog.000.xml*. For example, WNC_InstallLog.000.xml
- *<installer short name>_PtcInstall.000.log*. For example, WNC_PtcInstall.000.log

Up until the point where you have actually clicked **Install** on the **Review Settings** panel, the log files are written to the temporary directory controlled by the operating system as follows:

- On Windows, the environment variable %TMP% is used and typically defaults to Local Settings\Temp directory of the current users in the User

Profile directory. For example, d:\User Profiles\<userid.domain>\Local Settings\Temp.

Note: On Windows, the Local Settings directory may be hidden by default. If you cannot find the Local Setting directory using the Windows Explorer, check your folder options to ensure that hidden folders are displayed.

- On UNIX, the logs are temporarily written to either /var/tmp or /tmp (JVM implementation dependent). If the installer does not have permission to write to the temporary directory, it writes the <installer short name>_InstallLog.xml file to the user's <HOME> directory, but the <installer short name>_PtcInstall.log is held in memory until they are both written to <Windchill>/installer/logs. If the installation fails before you have actually clicked **Install**, there is no <installer short name>_PtcInstall.log written when the installer does not have permission to write to the temporary directory.

When the installer is executed in a language other than English, messages in the <installer short name>_PtcInstall.log files are written in both English and the translated form. Not all messages have a translated form.

If problems should occur during the installation, write down the location of the log files and be prepared to send them to PTC Technical Support for analysis. If an installer should fail before the install has actually started, the files are located in the directory identified by the operating system as noted previously.

Troubleshooting

Reading through the following common problem descriptions may help you in troubleshooting your installation problems.

Problem:

When an installation fails, the installer logs are not written to the standard output directory of <installation directory>/installer/logs.

Action:

In this case, the installer displays the location of the installation log files that it has produced. Write down the location specified by the installer. The location of the log files depends upon when in the installation process the installation fails. Refer to the [Installation Log Files](#) section for details.

Problem:

On a UNIX system, the installer does not run.

This can happen if the TMP directory does not have the disk space required by the installer.

Action:

Set the environment variable LAX_DEBUG=1 in the shell where the installer was launched and restart the installer. This should result in output being written to the console window.

If the output produced indicates that the amount of /tmp disk space required to perform this installation is greater than what is available, you can set the IATEMPDIR environment variable to a directory on a disk partition with enough free disk space (as described in the output). Then restart the installer.

Problem:

On UNIX, the installer terminates unexpectedly.

Action:

PTC has encountered situations where a core dump is caused by corrupt font files. This problem is known to have occurred in 1.4.x JVMs. If you are running a 32-bit JVM, then set the environment variable LAX_DEBUG=1 in the shell where the installer was launched, and restart the installer. Navigate through the installer until it fails. This should result in output being written to the console window. Browse the console output for the following message:

```
Assertion failed: offset < fFileSize, file
../../../../src/share/natvie/sun/awt/font/fontmanager/fontobjects/fon
tObject.cpp, line XXX
Abort - core dumped
```

The solution is to identify the problematic fonts per the Evaluation sections in the following Java Bug Parade reports provided by Sun:

<http://developer.java.sun.com/developer/bugParade/bugs/4838130.html>

Problem:

The installer cannot find a valid Java Virtual Machine.

This can happen in the following situations:

- If you try running the installer using an executable file that is located in a NoVM directory.
- You are trying to install one of the products from the Windchill Third Party Software CD or the Windchill Services CD over a network connection, and you do not have a supported Java VM on your local machine. For the installers, the supported Java VM is a version of Java 1.4 (Java 1.5 cannot be used by the installers).

Either of the following messages could be returned:

- The installer requires Java 1.4 in your path. (on UNIX)
- Could not find a valid Java virtual machine to load. (on Windows).

Action:

If you were not using a setup script that is located at the root directory on the CD, rerun the installer using the setup script located in the root directory. Running the installer from the root directory ensures that the Java Virtual Machine bundled with the installer is used.

If you are installing over a network connection, locate a supported Java VM and rerun the installer using the setup command with the following as the first two arguments on the command line.

UNIX:

```
<install_dir>/<setup_script> LAX_VM <java_install_dir>/bin/java
```

Windows:

```
<install_dir>/<setup_script> LAX_VM <java_install_dir>/bin/java.exe
```

Where *<install_dir>* is the directory path to the setup file, *<setup_script>* is the setup script in the root directory of the CD for the product you are installing (such as *setup_tomcat.vbs*), and *<java_install_dir>* is the installation directory for the Java VM. The second argument is the actual Java VM executable, not a directory. If any other arguments are passed in, they must follow these two arguments.

Alternative Method:

An alternative to running the setup script from command line and including the LAX_VM option is to set the LAX_VM environment variable to the same value that would be used on the command line. When this variable is set, running the setup script that is in the root directory on the CD automatically adds LAX_VM and *<java_install_dir>/bin/java* to the command line for the installer that you are starting.

Problem:

On AIX, the installer core dumps and does not launch.

Action:

This can happen if the IBM_MIXED_MODE_THRESHOLD environment variable is set. Unset the IBM_MIXED_MODE_THRESHOLD variable.

Problem:

Technical Support asks you to provide additional diagnostic information about how the installer launches and what JRE is used to execute the installer.

Action:

There are two ways to obtain additional diagnostics:

- On some Windows versions, you can press the control key when you double-click on the setup.vbs script that is at the root level of the CD. This brings up a

command shell window with diagnostic information. You can copy this information into a file to send to Technical Support.

- On UNIX and Windows, you can set the environment variable `LAX_DEBUG` to 1. Then execute the setup script for the installer that is at the root level of the CD. The diagnostics are shown in the same command window (UNIX) or in a pop-up window (Windows).

Problem:

The installer does not run. The error message returned indicates that one of the following requirements is not true:

- The installer only runs on the following platforms:
AIX, HP-UX, Solaris, Windows 2000, or Windows 2003
- The installer requires Java 1.4 or higher in your path.

Action:

Ensure that you are running on a supported platform. Although the message does not indicate that Windows XP is supported, the installers can run on Windows XP also.

Additionally, ensure that you are running the installer using the scripts located in the root directory of the CD. This ensures that Java Virtual Machine bundled with the installer is being used.

Problem:

Sometimes the installer appears to skip over a step.

Action:

The installers behave in a wizard-like fashion with **Next** and **Previous** buttons. In a system where the response is slow, the wizard may not advance to the next or previous step as quickly as expected and you may click the **Next** or **Previous** button again (repeatedly). This mouse click event is queued up and acted upon when the system responds. This may advance the windows beyond the expected window.

Once the **Next** or **Previous** button has been clicked, wait for the installer to respond and advance to the intended window.

Under normal system conditions, the installer moves forward and backward through the windows with little noticeable delay.

This issue has been filed as a bug with the software vendor ZeroG.

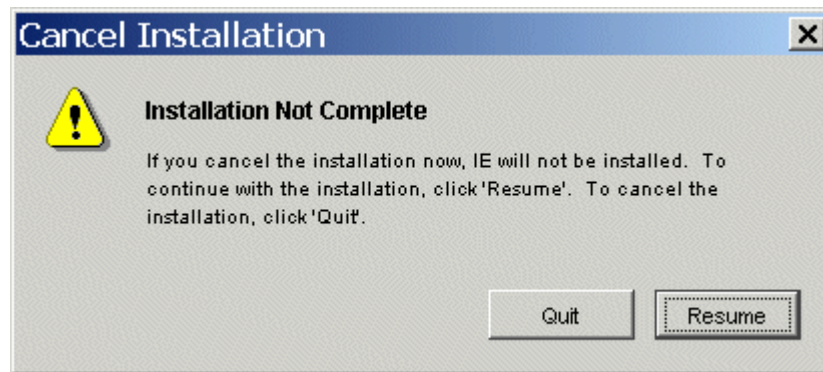
Problem:

On Windows, the installer **Cancel Installation** dialog box demands the user interface focus.

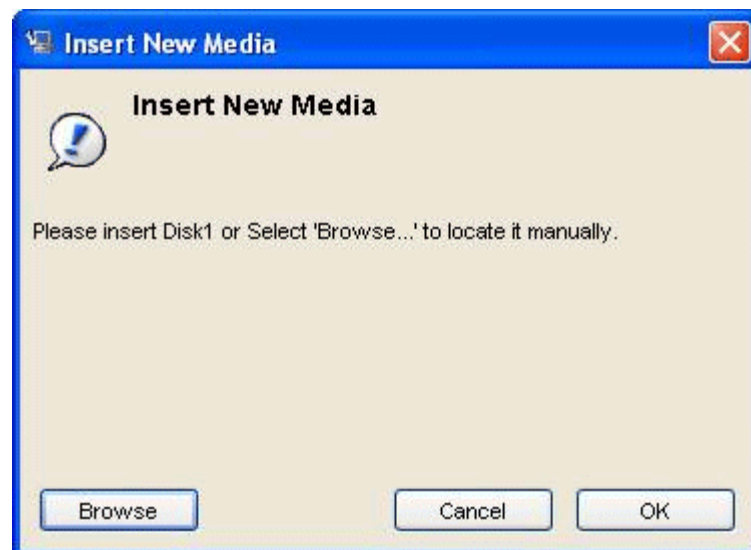
Action:

When you try to cancel the installer through the **Cancel Installation** dialog box, the window monopolizes the window focus on the desktop.

To release the focus, click either the cancel (the X in the upper right corner of the dialog box) or **Resume** button.

**Problem:**

During an installation, the installer displays the following:

**Action:**

The appearance of this window indicates that the installer could not locate a required file from the current media set.

If you are installing over a network, the window can be an indication that the response time across the network is too slow for the installer. Click **Cancel** and rerun the installer. If the window appears again, try running the installer when

there is less network traffic or from another network, or copy the installation files to your local system.

If you are installing from the installation CDs or a local directory, then the installation data set is incomplete. Try downloading the installation files again. If this fails to correct the problem, contact Technical Support for assistance.

Gathering Information for a Support Call

Prior to contacting Technical Support for assistance with your installation problem, gather the log files for your particular installer from the *<installation directory>/installer/logs* directory.

In some cases, the files are quite large. You may want to ZIP or TAR them before sending them to Technical Support.

If you are reporting an issue for a product installed into the Windchill installation directory, also provide the information generated by the Windchill version command. This information can be obtained by executing the following command in a command prompt window:

```
windchill version
```

A report similar to the following report is generated:

```
X:\>windchill version
```

Support Datecode	Support Release Number	Release Id	Installer Sequence	Display Label
F000	8.0	ie.8.0.00.34	06	Info*Engine
F000	8.0	wccm.8.0.00.34	01	Windchill Classification and Reuse
F000	8.0	pdml.8.0.00.34	01	Windchill PDMLink
F000	8.0	wnc.8.0.00.34	01	Windchill Services

There are no temp patches installed.

There is no non-default locale support installed.

Provide the information in this report when submitting your information to Technical Support.

II

Installing Visualization Products

5

Installing ProductView Standard Edition Client

This chapter describes how to install Visualization - ProductView Client (ProductView Standard Edition).

Visualization - ProductView Client is installed using the InstallAnywhere utility. For information about using InstallAnywhere, see [About Installing Windchill Products](#).

Before You Begin.....	5-2
Installing ProductView SE in a Windows Environment	5-2
ProductView in REALIZER Mode	5-9
Specifying Export Settings Using version.pvm	5-9
Installation Summary	5-10

Before You Begin

Before you begin to install ProductView Standard Edition client (ProductView SE), you must have:

- Installed and configured Windchill Services if you are installing the client on the Windchill server.

There are two methods available to install and distribute ProductView SE client. They are described as follows:

- Install for Windchill Server— This option installs ProductView SE client on the Windchill server for the purpose of distributing ProductView SE from the server to multiple client systems. The only information needed to install ProductView SE is the location where Windchill Services is installed.
- Install for Client Systems — This selection allows you the option to install ProductView SE and additional client options directly on a client system.

Complete the following steps to install ProductView SE:

- Installing ProductView SE.
- Installation Summary.

Installing ProductView SE in a Windows Environment

ProductView SE located on the Visualization - ProductView Client CD.

1. Before initiating the installation, stop any running Web server or servlet engine, or any other application that may have a Windchill file open (for example, a text editor or a Windchill log file).
2. Insert the Visualization - ProductView Client CD into the CD drive.
3. When the installer begins, the first window that opens is **Before You Begin**. This section summarizes the pre installation requirements, provides a link to the software matrices, and a reference to the *Windchill Installation and Configuration Guide - Visualization Services*.

When you are ready to proceed with the installation, click **Next**.

4. In the **Select Installation Type** panel, select the type of installation to perform.

The installation options are described in the table below. The next window that opens depends on which installation option you select. In both cases, you must specify an installation directory, however, the directories are different.

Select Installation Type

Select this option	To	Go to...
Install for Windchill Server	Install ProductView SE on the Windchill server. This option requires that Windchill Services be installed as ProductView SE is installed into this directory. Once installed, ProductView SE is available for download.	Step 6
Install for Client System	Install ProductView SE on a client system.	Step 7

5. Specify the installation directory, as shown in the next table.

Installation Directory

For this option...	This panel opens...	Go to...
Install for Windchill Server	<p>In the Specify Directory panel, enter the location where Windchill Services is installed.</p> <p>ProductView SE must be installed into the same directory as Windchill Services. Accept the default that is displayed and selected, or click Browse to select a different path.</p>	Step 6
Install for Client System	<p>In the Select Directory panel, enter a location to install ProductView SE.</p> <p>ProductView SE can be installed in any directory. Accept the displayed default, or click Browse to create or select a different path.</p> <p>Note: Do not use a directory name with any upper case characters in the name.</p>	Step 7

6. If you selected **Install for Windchill Server**, you need to select the server option:
 - ProductView Standard Edition - ECAD Viewer
7. If you selected **Install for Client System**, in the **Select Client Options** panel, specify the additional client options to install. By default, no options are selected. You can select multiple options.

Select Client Options

Select this option	To
Realizer	Installs the components needed to author mechanisms, animations, and perform interference checking.
Composer Edit	Installs the components needed to author Composer sequences.

Select this option	To
Import Filters	Installs the import filters for viewing Pro/ENGINEER, DGN, GBF, IGES, STL, and VRML files.
PDF Collaboration (Windows Only)	Provides PDF support for document viewing.
Simulation Viewer (Windows only)	Installs the components needed to view DIVISION MockUp files. This option only applies to Windows.

8. The **Review Settings** panel lists the selections you specified for the installation. Verify the information is correct, and then click **Install**.
9. The **Installing** panel displays the installer progress as files are copied to the system and configurations are performed.
10. When the installation completes successfully, the **Installation Complete** panel displays the directory where ProductView Standard Edition was installed. The installation log files are located in the <Product>/installer/logs directory. The log files for the installation are named:
 - <product_short_name>_InstallLog.xml
 - <product_short_name>_PtcInstall.log

If the installation fails, a panel is displayed that contains error messages and the name of the log files. Document the location and name of the log files. The log files can be helpful in assisting you in determining the cause of the failure. Be sure to include them when filing an installation support request. See the Installation Log Files section in the [About Installing Windchill Products](#) for more information.

Installing ProductView SE in a UNIX Environment

You can install ProductView on the following UNIX machines:

- Solaris 2.8 and 2.9
- HP-UX 11i
- IBM AIX 5.2

Prerequisites

ProductView SE on UNIX requires OpenGL. If you do not have OpenGL on your workstation, you must install it first. You can obtain OpenGL from the following URL(s):

- For Solaris: <http://www.sun.com/solaris/opengl>
- For HP-UX: <http://us-support.external.hp.com>

To view compressed Product Structures (such as .edp, .edz, or .zip files), the host machine must have Unzip installed somewhere along the PATH environment variable. Unzip source and several compiled binaries are found at: Unzip:

<http://www.cdrom.com/pub/infozip/UnZip.html>

UNIX Platform-specific Issues

This section contains platform specific issues on UNIX.

Required Patches

The following patches are required:

Solaris 8

- 108434-10 - SunOS 5.8: 32-Bit Shared library patch for C++
- 111721-04 - SunOS 5.8: Math Library (libm) patch

Solaris 9

- 111711-03 - SunOS 5.9: 32-bit Shared library patch for C++
- 111722-04 - SunOS 5.9: Math Library (libm) patch
- OpenGL 1.2.2

HP-UX 11.11

PHSS_28880 - s700_800 11.11 HP aC++ -AA runtime libraries (aCC A.03.50)

AIX 5.2

No patches required.

ProductView UNIX Setup Overview

The UNIX ProductView installation contains two components, with each component having various sub-components:

- ProductView installation
- ProductView import filters

The installation procedures describe each of these components and their optional sub-components.

Note: For program maintenance issues, such as repairing or modifying a UNIX ProductView or import filters installation, rerun the PTC.Setup installation wizard. The files you select for reinstallation will be overwritten.

When upgrading an installation on UNIX, you do not need to remove the previous version of ProductView or its components. However, it is suggested that you choose a new or different installation directory from the previous installation.

Typical ProductView Installation on UNIX

Follow these steps to perform a typical installation:

1. Insert the ProductView CD-ROM into the CD-ROM drive. Navigate to the directory containing the setup script. Open a terminal window and, at the command prompt, type:

```
./setup
```

The PTC.Setup program runs and opens the first page of the UNIX installation wizard.

2. Click **Next** and the **Define Installation Components** dialog box opens.
3. Check the **Installation Directory** option to ensure that the correct installation path is specified. Accept the default path or click the folder icon to browse to select a different directory for this installation. If the default installation directory does not exist, PTC.Setup creates it for you.
4. When you select **ProductView** in the **Components** window, the following subcomponents are available for selection in the **Select Client Options** window:
 - Realizer option
 - Composer edit
 - Import filters
 - Simulation viewer (Windows only)
 - PDF Collaboration option
5. Under the **Platforms** section, select the UNIX platforms you want to be able to access files on your system. The installation platform should already be enabled by default. The other platforms can be enabled, if you know that machines of that type will be accessing information on your network.

Available selections include:

- HP - HP-UX 11.11
- IBM - AIX 5.2
- Sun - Solaris

English is the only default under the Languages section.

6. Click **Yes** to begin the installation. A green check mark appears after an installation step is completed. If the PTC.Setup installation utility cannot

proceed at some point, a red **X** appears next to the installation step that failed. The Installation Progress dialog box progress bar shows the current stage of the installation.

If any of the installation steps fail, a PTC.Setup Messages terminal window opens and displays the error log file.

7. Click **Next**, and the **Installation Complete** dialog box opens. Click **Yes** to complete the installation and exit the PTC Setup installation wizard.

Your UNIX ProductView installation is now complete.

Setting Mode of Operation

ProductView allows the UNIX user to choose between Windows and Motif interface modes. The default mode is Windows. To select the Motif mode, set the MWLOOK environment variable to MOTIF.

Note: The MWLOOK variable should be set prior to starting the application.

Run a launcher shell script or a small executable to set MWLOOK before passing control to the applications executable or add it to the .startup.csh file.

Installing the ProductView Plugin Manually

Installation of ProductView sometimes fails if there are multiple installations of Web browsers (repeated installations) or if only Microsoft Internet Explorer is installed on the system. Often, re-running the ProductView Setup utility solves this problem.

In addition, the ProductView installation utility occasionally fails to recognize Netscape Navigator.

If the setup utility fails to install ProductView properly, follow these steps to manually install the application on Windows:

1. Install the ProductView application (if it is not already installed).
2. Copy the npwed32.dll plugin from the ProductView directory in: Program Files > PTC > ProductView.
3. Paste the npwed32.dll file in the plugins subdirectory for the browser application installed on your system.
4. Restart the Web browser.

To install the plugin on UNIX, follow these steps:

1. Copy the npedc.<so/sl> file from:

```
<productview_loadpoint>/<platform_name>/netscape_plugins
```

to the appropriate plugins directory for Netscape. The appropriate plugin directory is usually under the Netscape loadpoint or under <user_home>/netscape/plugins.

2. The location of the <productview_loadpoint>/bin directory must be added to the users PATH variable.
3. Start Netscape. Select **Help > About Plugins** and verify that the ProductView plugin is registered and enabled.

Running ProductView as a Web Plug-in

To run ProductView from Windchill or the graphics server on UNIX, you must set your PATH environment variable to include the bin directory within the ProductView installation. Or, you can set an environment variable PVIEW_EXEC to the full path of your ProductView executable.

An example of a C shell command to set the path is:

```
setenv PATH /usr/local/netscape:/opt/ptc/productview70/bin:$PATH
```

or

```
setenv PVIEW_EXEC /opt/ptc/productview70/bin/pview
```

You must start ProductView using the **-new** flag the first time after installation, for example, **pview -new** or **pview_realizer -new**.

ProductView in REALIZER Mode

In order for a UNIX ProductView client to launch in REALIZER mode (supports animation and constraints) from Windchill, the PVIEW_EXEC environment variable setting must be updated on the client system. This is accomplished by setting the environment variable value to point to the pview_realizer script in the /bin directory of the ProductView client load point.

Specifying Export Settings Using version.pvm

The version.pvm file can be used to specify the export distribution for the ProductView client when using Windchill Foundation & PDM. ProductView client reads this file to determine when a new configuration file (client settings for toolbars, layouts, color preferences and so on) should be downloaded to the client. A sample version.pvm file is available in the <Windchill>/codebase/wtcore/jsp/wvs/download/ directory. You can customize this file for your installation. For example, to distribute the configuration file to all clients, you could specify the following parameters in the version.pvm file:

- In [main], set the numcommands=2
- In [command2], set url=<install location of the ProductView client>
- In [command2], set key=0

A key value of 0 indicates to always download and update the settings or you can set the value to the datecode of the latest version of the ProductView client.

When the key value is set to a positive number, the client checks to see if the new value is greater than the currently saved value. If it is greater, it downloads the configuration file and updates the currently saved value. If it is equal or less, it does not download and update the settings.

Installation Summary

Based on the installation options you selected, you should be able to:

- Download the ProductView Standard Edition client from Windchill.

The ProductView SE client is now available within Windchill and available for download by a requesting client system. At this time, it is not necessary for you as a System Administrator to download ProductView SE client, rather, it is the intention to point out to you where the client is accessible to the user when they need to install the client.

- On Windchill PDM, the ProductView SE client is available by clicking the **Visualization** icon; which opens the **Visualization** page. From this page, select the **Click Here** link to install ProductView.
- On Windchill PDMLink and Windchill ProjectLink, the ProductView SE client is available by navigating from the **Home** tab to **Utilities > Software Downloads > ProductView Installation** (under the Setup and Installation heading). Selecting **ProductView Installation** will open a welcome page from which you can download the ProductView SE client. Follow the instructions listed on the welcome to install ProductView SE client.
- If you elected to install any of the following options, links for these options will appear on the ProductView downloads page:
 - ProductView_all.exe
 - ProductView_en.exe
 - PVClientImportFilters.exe
 - PVSimulationViewer.exe

6

Installing Visualization - Windchill Support

This chapter describes how to install Visualization - Windchill Support.

Note: The Windchill Support installation CD is only available to the following customers:

- All Windchill PDMLink/ProjectLink/Foundation PDM customers
- Pro/INTRALINK 8.0 customers who previously purchased the DIVISION Graphics Server
- Pro/INTRALINK 8.0 customers who have purchased ProductView Collaboration

Visualization - Windchill Support is installed using the InstallAnywhere utility. For information about using InstallAnywhere, see [About Installing Windchill Products](#).

Topic	Page
Before You Begin.....	6-2
Installing Windchill Support	6-2
Installation Summary	6-14

Before You Begin

Before you begin to install Windchill Support, you must have installed and configured Windchill Services.

The Windchill Support components must be installed on the same machine as Windchill. These components include the ProductView collaboration agent, ProductView Lite, thumbnail generator, thumbnail viewer, support for PSE (Product Structure Explorer), and demonstration data.

Note: The thumbnail generator component can be installed on a remote machine. This requires a separate installation option (Remote Thumbnail Generator), which is explained later in this chapter.

There are three methods available to install and configure Windchill Support:

- Windchill Server— Installs and configures all of the Windchill Support products. The only information needed to install Windchill Support is the location where Windchill Services is installed. If you want to select the products to install, then use the custom installation option.
- Remote Thumbnail Generator — Installs the software used to generate thumbnail viewables for Windchill on a remote system (machine other than Windchill).
- Custom — Allows you to selectively choose the options to install and configure Windchill Support. These options include:
 - ProductView collaboration agent
 - ProductView Lite
 - Thumbnail viewer
 - Thumbnail generator
 - Remote thumbnail generator
 - PSE Visualization support
 - Demo data

The next section explains how to install Windchill Support.

Installing Windchill Support

The Windchill Support installer is located on the Visualization - Windchill Support CD.

The Windchill Support components must be installed in the same directory as Windchill Services, except the remote thumbnail generator, which can be installed on a system of choice.

During the Windchill Support installation, all configurations are performed automatically, without requiring user intervention. The difference between the typical and custom option is that the custom option allows you to choose which products to install, whereas the typical option automatically installs all of the options (custom) for you.

1. Before initiating the installation, stop any running Web server or servlet engine, or any other application that may have a Windchill file open (for example, a text editor or a Windchill log file).
2. Insert the Visualization - Windchill Support CD into the CD drive.

Note: This CD is only available to the following customers:

- All Windchill PDMLink/ProjectLink/Foundation PDM customers
 - Pro/INTRALINK 8.0 customers who previously purchased the DIVISION Graphics Server
 - Pro/INTRALINK 8.0 customers who have purchased ProductView Collaboration
3. When the installer begins, the first window that opens is **Before You Begin**. This section summarizes the pre installation requirements, provides a link to the software matrices, and a reference to the *Windchill Installation and Configuration Guide - Visualization Services*.

When you are ready to proceed with the installation, click **Next**.

4. In the **Select Product Options** panel, select the product option to install. The product options are described next.

Select Product Options

Select this option	To	Go to...
Windchill Server	<p>Installs and configures Visualization - Windchill Support.</p> <p>This option installs and automatically configures the following products:</p> <ul style="list-style-type: none">• ProductView collaboration agent• ProductView Lite• Thumbnail viewer• Thumbnail generator	Step 6.
Remote Thumbnail Generator	<p>Install the thumbnail generator on a machine other than Windchill (remote).</p> <p>Additional configurations are necessary to enable the thumbnail generator for Windchill.</p> <p>Note: Do not use a directory name with any upper case characters in the name.</p>	Step 6.
Custom	Specify your installation options for Visualization - Windchill Support.	Step 5.

5. In the **Select Installation Type** panel, specify the options to install the Windchill Support components. This panel appears when you select the **Custom** product option.

You can select and deselect the installation type options as desired.

Select Installation Type

Select this option	To
ProductView Collaboration Agent	<p>Install the supporting file which is required if you intend to run ProductView collaboration sessions from Windchill Visualization Services.</p> <p>A collaboration session allows multiple participants to connect with other ProductView users in order to view 3D models, 2D drawings, and office documents.</p>
ProductView Lite	<p>Install the ProductView Lite Edition client executable. This lightweight viewer provides basic viewing functionality, with fewer features than ProductView Standard Edition.</p> <p>The ProductView Lite installation options also include the option to install the Document Collaboration Option.</p> <p>Note: For non-administrative users to install ProductView Lite Edition to a location where they have write access, they must update the productview.installdirectory property in wvs.properties to specify this writable location.</p> <p>Use the xconfmanager command to update this property value based on the current value of the Windows %USERPROFILE% User Environment Variable. For example:</p> <pre>-xconfmanager -s "productview.installdirectory=\$(USERPROFILE)\$(wvs.dir.sep)ptc\$(wvs.dir.sep)pviewlite" -t %WT_HOME%\codebase\wvs.properties -p</pre>

Select this option	To
Thumbnail Viewer	Install the components needed to view 2D and 3D thumbnail images in Windchill.
Thumbnail Generator	Install and configure the thumbnail generator on the Windchill Server. The thumbnail generator converts the files into viewable 2D and 3D images for Windchill.
Remote Thumbnail Generator	Install and configure the thumbnail generator from a remote machine.
PSE Visualization Services	Install the components needed to enable visualization for Product Structure Explorer (PSE).
Demo Data	Downloads the ProductView demonstration data into the <Windchill>\loadFiles\wvs directory. To enable the system to create parts and representatons from this demo data, you must copy all of the .ini files from this download directory to the <Windchill>\temp\wcinput directory. See the procedure in the next section, "Loading the Demo Data", for more information. In addition, you can edit the .ini files to change information such as part names and locations.

6. In the **Specify Directory** panel, enter the location where Windchill Services is installed.

Windchill Support components must be installed into the same directory as Windchill Services. Accept the default that is displayed and selected, or click **Browse** to select a different path.
7. The **Review Settings** panel lists the selections you specified for the installation. Verify the information is correct, and then click **Install**.
8. The **Installing** panel displays the installer progress as files are copied to the system and configurations are performed.

9. When the installation completes successfully, the **Installation Complete** panel displays the directory where Windchill Support was installed. The installation log files are located in the <Product>/installer/logs directory. The log files for the installation are named:

- <product_short_name>_InstallLog.xml
- <product_short_name>_PtcInstall.log

If the installation fails, a panel is displayed that contains error messages and the name of the log files. Document the location and name of the log files. The log files can be helpful in assisting you in determining the cause of the failure. Be sure to include them when filing an installation support request. See the Installation Log Files section in the [About Installing Windchill Products](#) for more information.

Loading the Demo Data

As described in the previous section, you select **Demo Data** from the **Select Installation Type** panel to install the ProductView demonstration data into the <Windchill>\loadFiles\wvs directory.

To load the demo data into the Windchill database, follow these steps:

1. Navigate to the <Windchill>\loadfiles\wvs directory. This is where the demo data is downloaded.
2. Copy all of the .ini files into the <Windchill>\temp\wcinput directory. This enables the system to create parts and representations from the demo data.

Note: You will probably need to edit the .ini files to change information such as part names and locations. For example, you use "partcontainer" to specify the container in which to create the demo part. You must also edit the <Windchill home>/loadFiles/wvs/*.ini files to match the Windchill system where the data is being loaded.

For more information on administering Visualization Services, and working with ticket .ini files for loading visualization files into Windchill PDMLink, refer to the *Windchill Business Administrator's Guide*.

Creating Server-side Watermarks

You can create server-side watermarks for Windchill, Windchill ProjectLink, and Windchill PDMLink. This is useful when you want users to be able to access a common watermark across the enterprise, such as a company logo. Watermarks can be viewed along with objects in the ProductView client.

To set up a server-side watermark, follow these steps:

1. Back up and remove all default files from the <ProductView>\enu\watermark folder.

2. Open the ProductView Watermark Editor to create the watermark(s) you need for the various types of objects, such as 3D models, 2D drawings, documents, and images.
3. Save the watermark in the `<ProductView_installation>\enu\
<watermark_folder>`. You can name the watermark folder `ssw_default`, which is used as an example throughout this procedure. The watermark file will be saved as an `.ini` file (`ssw_default.ini`).

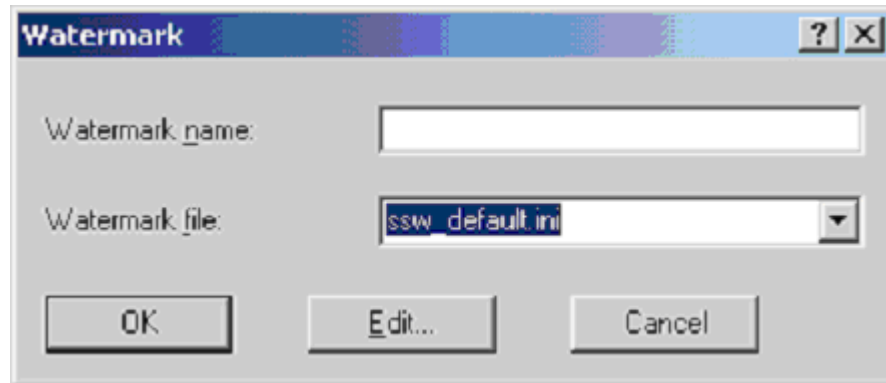


Figure 6-1 Watermark dialog box

4. Open the ProductView client and choose **Edit > Preferences**.
5. In the **Preferences** dialog box, select **Watermarks** to display **Watermarks Preferences**.
6. Click **Watermarks** to display the **Watermarks** dialog box shown below.

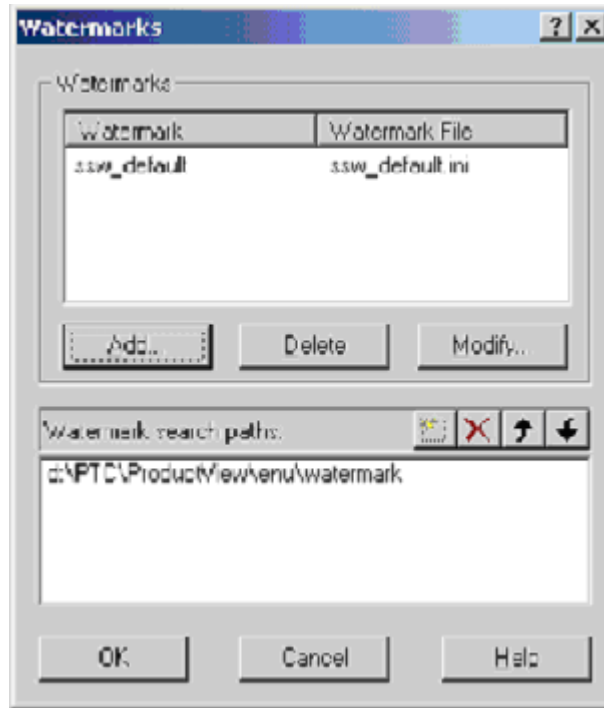


Figure 6-2 Watermarks dialog box

7. In the **Watermarks** dialog box, click **Add** and select the watermark (in this case, ssw_default.ini) from the **Watermark File** drop-down list.
8. Click **OK**. The **Watermarks** dialog box now displays the watermark you added.
9. Click **OK** again to enable the watermark when viewing and printing. View the watermark in the ProductView client to ensure that it looks correct.
10. Close Product View and, using the command line window, type `<Pview_install>\wcexport`, where `<Pview_install>` is the ProductView installation directory.

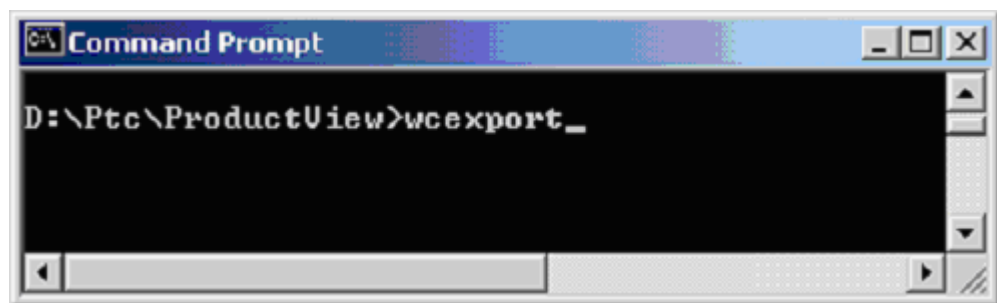


Figure 6-3 wcexport command

11. In the **Export Watermark Configuration** dialog box, in the **Target File** field, enter the path and name of the target zip file you want to create. For example, type d:\temp\ssw_default.zip.

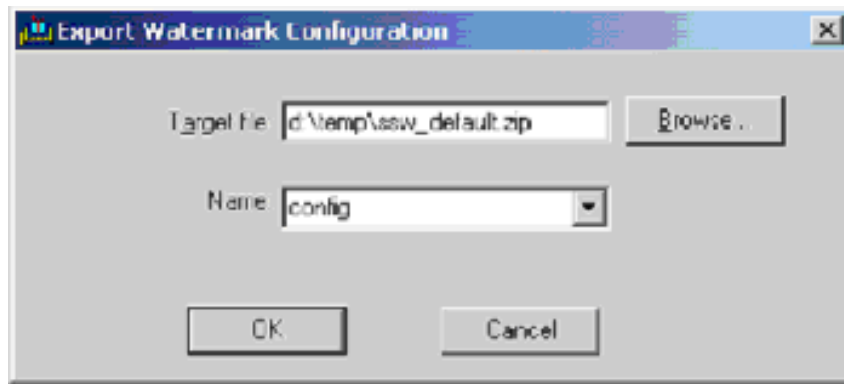


Figure 6-4 Export Watermark Configuration Dialog Box

12. Use the **Name** drop-down list in the **Export Watermark Configuration** dialog box to specify areas such as Collaboration, Collection, Document, EPM document, or a part for the server-side watermark. Select **config** in the **Name** field to enable server-side watermarks for all objects and areas.
 - When publishing a shared object in ProjectLink, and viewing in the context of a share, WVS uses the context of the Project instead of the Product. As a result, when viewing the representation created in the share, the watermark displays the context of Project.
 - In ProjectLink, when you publish an EPMDocument in a Project with the Latest configuration specification, the representation that is created will display detail information such as "EPM: Project: WVS Project1", when listed in the Representations table.
13. Click **OK** to create the server-side watermark zip file (in this case, ssw_default.zip). This zip file will contain bitmap (BMP) files for images that you used in the watermark, along with two .ini files: config.ini and <watermark_filename>.ini. Note: In this example, ssw_default is the watermark filename.
14. To disable users from editing watermarks, you can append the config.ini file within ssw_default.zip with [Locked] as follows:

```
[Locked]
"WatermarksLocked"=dword:01
```

Enabling Server-side Watermarks on the Server

To enable server-side watermarks on a Windchill or PDMLink server, follow these steps:

1. Log in as an administrator (wcadmin/wcadmin).
2. Set the value "productview.configfromserver=true" in the wvs.properties.xconf file, then propagate this change to wvs.properties using the xconfmanager tool.
3. As with any change to wvs.properties, you must restart the method server and servlet engine.
4. To create a watermark configuration, go to the **Server Controlled Configuration of ProductView**, accessed from the admin link in the Visualization Portal (or equivalent on bundled server configurations).
5. Select **Site > Utilities > ProductView Configuration Administrator** and click the **Create Configuration** button to add the watermark zip file. Create a configuration, for example, ssw_default.

Note: In the ProjectLink or PDMLink environments, this process adds the configuration to the current container context, such as Product, Project, Organization, or Site. For example, a configuration added at the Product level will be used in preference to a configuration added at the Organizational level, which in turn will be used in preference to a configuration added at the Site level.

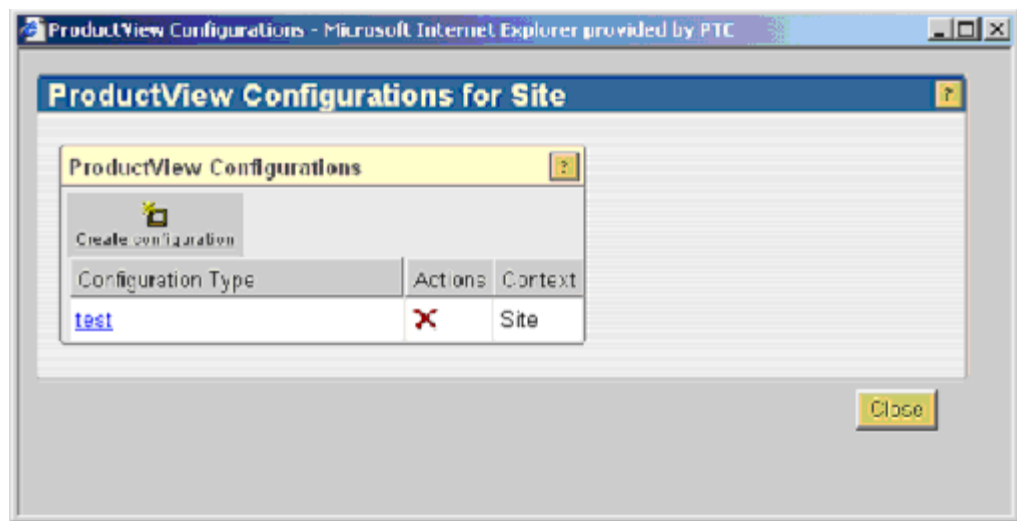


Figure 6-5 ProductView Configurations Window

When you click **Create Configuration**, use the **Files** box to add files to the configuration.

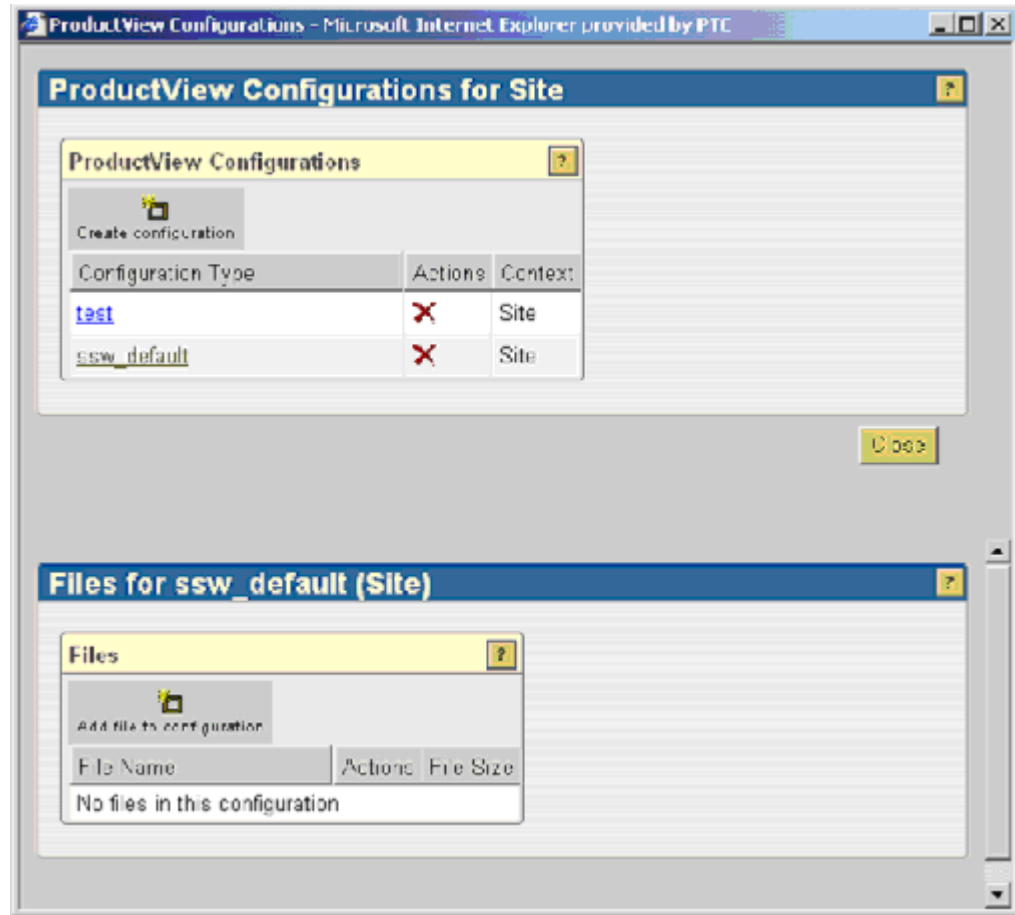


Figure 6-6 Create Configuration Window: Files Box

6. Browse to select the watermark zip file (ssw_default.zip) to the server. Click **Add File to Configuration**.

You can view the server-side watermarks in ProductView Standard Edition and in ProductView Lite Edition. Refer to the ProductView client help for details on viewing watermarks.

Configuration the Default Thumbnail Generator

The thumbnail generator (edthumb.exe) can reside in three places:

- Windchill Server: The standard installation of the Visualization – Windchill Support CD installs the thumbnail generator on the Windchill server.
- Remote: The thumbnail generator is installed as a remote worker and the agent.ini file is configured with the appropriate settings. In this case, Windchill Visualization Services (WVS) uses the remote thumbnail worker

instead of the thumbnail generator on the server to generate thumbnails. The remote thumbnail generator is installed from the Visualization – Windchill Support CD onto a machine other than the Windchill server. WVS will use a thumbnail worker when the property `thumbnail.usecadagent` is set to true in `wvs.properties`.

- **CAD Worker:** The thumbnail generator is installed on the CAD worker machine as part of the Visualization Object Adapters installation. This configuration tells the WVS Loader not to generate thumbnails from the Windchill server.

There are three ways to generate thumbnails:

- **By Worker** allows the CAD Worker to generate thumbnails, and is the default configuration. This configuration requires the following `wvs.properties` settings. Note: These are the default settings.
 - `thumbnail.byworker.enabled` = TRUE (affects all workers on the Windchill server)
 - `thumbnail.usecadagent` = FALSE

Note: For this option to work, `thumbnail.byworker` must be enabled in WVS and the thumbnail generator must be installed with the CAD worker. By default, the thumbnail generator is installed into the worker's object adapter installation directory.

If you don't want a specific worker to generate thumbnails, you must remove `edthumb.exe` from the `\bin` subfolder of that worker's object adapter installation directory.

- **By WVS Loader** uses the thumbnail generator configured on the Windchill server. This configuration requires the following `wvs.property` settings:
 - `thumbnail.byworker.enabled` = FALSE
 - `thumbnail.usecadagent` = FALSE (`edthumb` runs locally)

Note: Setting `thumbnail.byworker.enabled` to FALSE applies to all workers across the board. With this setting, no workers will generate thumbnails.

- **By WVS Loader - using the CADAgent and a thumbnail worker** uses the CAD Agent to generate thumbnails via a remotely configured thumbnail worker. In this scenario, the WVS Loader sends the request to the CAD Agent to generate the thumbnail via a worker that is configured as type THUMBNAIL. This configuration requires the following `wvs.property` settings:
 - `thumbnail.byworker.enabled` = FALSE
 - `thumbnail.usecadagent` = TRUE

Installation Summary

Based on the installation options you selected, you should be able to:

- Use the ProductView Lite client. Once installed, it is automatically downloaded to the client system. When the download takes place, the only action necessary on the part of the user is for the user to accept the security certificate.
- View 3D thumbnail images in Windchill.
- Perform real time collaboration meetings with ProductView Standard Edition.
- View visualization data within PSE (Product Structure Explorer).
- View the Visualization demo data within Windchill.

7

Installing Visualization - ECAD Support

This chapter describes how to install Visualization - ECAD Support viewer and object adapter.

Visualization - ECAD Support is installed using the InstallAnywhere utility. For information about using InstallAnywhere, see [About Installing Windchill Products](#).

Topic	Page
Before You Begin.....	7-2
Installing ECAD Support	7-3
Installation Summary	7-6

Before You Begin

This installer installs two Visualization - ECAD Support products, ECAD viewer and ECAD object adapter.

The object adapters serve as a link between the Windchill server and ProductView. Once installed, the object adapters are transformed to CAD workers after they are configured on the machine where the CAD application that is related to resides.

There are no absolute prerequisites to installing an object adapter. However, to configure the adapter for use, the following prerequisites apply:

- Windchill Services must be installed and configured.
- The companion CAD software must be installed and configured.

The ECAD viewer is located on the same CD as the ECAD object adapter. ECAD viewer is a client-based component and designed specifically to support the ProductView Standard Edition client. The ECAD viewer does not require any configuration.

There are no prerequisites to install the ECAD object adapter, however, to use its functionality, the related CAD application must be installed and running. The ECAD object adapter is installed on the system where the CAD application is installed.

To install the ECAD viewer, the following prerequisites must be met:

- When installing on the Windchill server, for the purpose of using the server as a client distribution mechanism, Windchill Services must be installed and configured as the ECAD viewer is installed into the Windchill Services directory. Once installed, it is available for download to client systems.
- When installing directly on a client system, the ProductView Standard Edition client must be installed on the client system.

You must evaluate the installation options, because the system on which you install the ECAD products will make a difference.

There are three methods available to install the ECAD products:

- An installation of the ECAD viewer on the Windchill server machine.
Windchill Services must be installed for this option. The ECAD viewer for ProductView Standard Edition are then available for download to other client systems.
- An installation of the ECAD viewer directly on the client system.
ProductView Standard Edition client must be installed for this option.
- An installation of the ECAD object adapters on the CAD application system.

The related CAD application must be installed for this option. When the Windchill server and the CAD application software reside on different machines (remote) and the installation is being performed on a Windows platform, you can configure a worker daemon to run as a Windows service. The installer can perform the Windows service configuration for the worker daemon automatically for you.

Perform the following instructions to install the ECAD Support object adapter and viewer:

- Installing ECAD Support
- Installation Summary

Installing ECAD Support

Visualization - ECAD Support is located on the Visualization - ECAD Support CD. The ECAD Support components consist of the ECAD object adapter and the ECAD viewer. The ECAD object adapter is installed on the machine where the corresponding CAD software application resides. The ECAD viewer can be installed on the Windchill server machine or a client machine where the ProductView Standard Edition client resides.

1. Insert the Visualization - ECAD Support CD into the CD drive.
2. When the installer begins, the first window that opens is **Before You Begin**. This section summarizes the pre installation requirements, provides a link to the software matrices, and a reference to the *Windchill Installation and Configuration Guide - Visualization Services*.

When you are ready to proceed with the installation, click **Next**.

3. In the **Select Installation Type** panel, select the type of installation to perform.

The installation options are described as follows:

Select Installation Type

Select this option	To	Go to...
Install for Windchill Server	Installs the ECAD viewer on the Windchill server. This option requires that Windchill Services be installed as ECAD viewer is installed into this directory. Once installed, the ECAD viewer is available for download.	Step 4.
Install Client System	Install the ECAD viewer on a client system. This option requires that ProductView Standard Edition client be installed, as the ECAD viewer is installed into the ProductView Standard Edition installation directory.	Step 7.
Install Object Adapter	Install the ECAD object adapter. This option requires that the CAD application be installed.	Step 4.

4. The next window that opens depends on whether you selected the **Install for Windchill Server** or **Install Object Adapter** option. In both cases, you must specify an installation directory, however, the directories are different.

Note: When installing the ECAD viewer on a client system, the ECAD viewer is automatically installed into the directory where the ProductView Standard Edition client is installed. No action is necessary on your part to specify an installation directory.

Installation Directory

For this option...	This panel opens...	Go to...
Install for Windchill Server	<p>In the Specify Directory panel, enter the location where Windchill Services is installed.</p> <p>The ECAD viewer must be installed into the same directory as Windchill Services. Accept the default that is displayed and selected, or click Browse to select a different path.</p>	Step 6.
Install for Object Adapter	<p>In the Select Directory panel, enter a location to install the ECAD object adapter.</p> <p>The ECAD object adapter can be installed in any directory. Accept the displayed default, or click Browse to create or select a different path.</p> <p>Note: Do not use a directory name with any upper case characters in the name.</p>	Step 5.

- The **Select Worker Daemon Options** panel provides you the option to configure a Windows service on a remote machine. The worker daemon is used in the case when the Windchill server and the CAD software application reside on different Windows machines, and you want Windchill to be able to start the CAD worker automatically.

Select Worker Daemon Options

Select this option...	To...
Configure Worker Daemon as a Windows Service	<p>Install and configure the worker daemon as a Windows service if you are installing the ECAD object adapter on a remote Windows machine; the install is not taking place on the Windchill server machine.</p> <p>By default, the configure Worker Daemon option is not selected.</p> <p>Go to step 7.</p>

Select this option...	To...
Port Number	Specify the port number the worker daemon listens on. Go to step 7.

6. If you selected **Install for Windchill Server**, the **Select Server Options** panel appears, allowing you to select the ECAD viewer for ProductView Standard Edition. Select the appropriate option for your configuration.
7. The **Review Settings** panel lists the selections you specified for the installation. Verify the information is correct, and then click **Install**.
8. The **Installing** panel displays the installer progress as files are copied to the system and configurations are performed.
9. When the installation completes successfully, the **Installation Complete** panel displays the directory where ECAD was installed. The installation log files are located in the <Product>/installer/logs directory. The log files for the installation are named:
 - <product_short_name>_InstallLog.xml
 - <product_short_name>_PtcInstall.log

If the installation fails, a panel is displayed that contains error messages and the name of the log files. Document the location and name of the log files. The log files can be helpful in assisting you in determining the cause of the failure. Be sure to include them when filing an installation support request. See the Installation Log Files section in the [About Installing Windchill Products](#) for more information.

Installation Summary

At this time, the ECAD viewer and object adapter are installed. The next step is to configure the ECAD object adapter for use as a worker. Those instructions are located in the *Configuration Guide -- Visualization Services Object Adapters*.

8

Installing Visualization - Object Adapter Support

This chapter describes how to install the Visualization - Object Adapter Support object and batch import adapters.

Visualization - Object Adapter Support is installed using the InstallAnywhere utility. For information about using InstallAnywhere, see [About Installing Windchill Products](#).

Topic	Page
Before You Begin.....	8-2
Installing Object Adapter Support.....	8-2
Installation Summary	8-5

Before You Begin

The object adapters serve as a link between the Windchill server and ProductView. Once installed, the object adapters are transformed to CAD workers after they are configured on the machine where the CAD application that it is related to resides.

There are no prerequisites to install the MCAD object and batch import adapters, however to configure them for use, then:

- Windchill Services must be installed and configured.
- The companion CAD software must be installed and configured.

The MCAD object adapters and the batch import adapters are installed on the machine where the related CAD application resides. The installation instructions are as follows:

- Installing Object Adapter Support
- Installation Summary

Installing Object Adapter Support

Visualization - Object Adapter Support is located on the Visualization - Object Adapter Support CD. The Object Adapter Support components must be installed on the same machine where their corresponding CAD software application resides.

The object adapters must be installed under a CAD software administrator account. When configured, the user must be able to start the CAD worker.

1. Insert the Visualization - Object Adapter Support CD into the CD drive.
2. When the installer begins, the first window that opens is **Before You Begin**. This section summarizes the pre installation requirements, provides a link to the software matrices, and a reference to the *Windchill Installation and Configuration Guide - Visualization Services*.

When you are ready to proceed with the installation, click **Next**.

3. In the **Select Product Options** panel, select the products to install.

The product categories are Batch Import Adapters and the CAD-specific object adapters. You can select one or multiple products to install.

Selecting the Batch Import Adapters option automatically selects all of the batch import adapters in the list, alternatively, you can select each of the batch import adapters you wish to install.

Selecting the CAD object adapter will automatically select all of the versions available for that object adapter, alternatively, you can select only the version you wish to install.

The products viewed in the installer are based on your operating system platform. If the installation is taking place on a Windows platform, then only the Windows-supported products will appear. The same applies to the UNIX platform. For your convenience, all of the products supported by this installer are listed in the Select Product Options table.

Select Product Options

Select this product	To
Document Adapter	Install the object adapter for converting Microsoft Office documents to ProductView format.
DGN	Install the batch import adapter for the Microstation DGN files.
GBF	Install the batch import adapter for the GAF/GBF files.
IGES	Install the batch import adapter for the IGES files.
PGL	Install the batch import adapter for the Pro/ENGINEER PGL files.
STL	Install the batch import adapter for the STL files.
VRML	Install the batch import adapter for the VRML files.
Pro/ENGINEER	Install the object adapter for Pro/ENGINEER. Select Pro/ENGINEER to install all the supported versions, or select a specific version to install.
UniGraphics	Install the object adapter for UniGraphics. Select UniGraphics to install all the supported versions, or select a specific version to install.
I-DEAS	Install the object adapter for I-DEAS. Select I-DEAS to install all the supported versions, or select a specific version to install.

Select this product	To
SolidWorks	Install the object adapter for SolidWorks. Select SolidWorks to install all the supported versions, or select a specific version to install.
CATIA	Install the object adapter for CATIA. Select CATIA to install all the supported versions, or select a specific version to install.
CADDS	Install the object adapter for CADDS. Select CADDS to install all the supported versions, or select a specific version to install.

4. In the **Select Directory** panel, enter the location where to install the Object Adapter components.

The Object Adapter components can be installed in any directory. Accept the displayed default, or click **Browse** to create or select a different path.

Note: Do not use a directory name with any upper case characters in the name.

The next window that opens depends on the operating system on which the installation is taking place. If you are installing on the Windows platform, then you are provided the option to install a Worker Daemon, go to Step 5, otherwise, go to Step 6.

5. The **Select Worker Daemon Options** panel provides you the option to configure a Windows service on a remote machine. The worker daemon is used in the case when the Windchill server and the CAD software application reside on different Windows machines, and you want Windchill to be able to start the CAD worker automatically.

Select Worker Daemon Options

Select this option...	To...
Configure Worker Daemon as a Windows Service	Install and configure the worker daemon as a Windows service if you are installing the MCAD object adapters on a remote Windows machine; the install is not taking place on the Windchill server machine. By default, the configure Worker Daemon option is not selected.
Port Number	Specify the port number the worker daemon listens on.

6. The **Review Settings** panel lists the selections you specified for the installation. Verify the information is correct, and then click **Install**.
7. The **Installing** panel displays the installer progress as files are copied to the system and configurations are performed.
8. When the installation completes successfully, the **Installation Complete** panel displays the directory where the Object Adapters were installed. The installation log files are located in the <Product>/installer/logs directory. The log files for the installation are named:
 - <product_short_name>_InstallLog.xml
 - <product_short_name>_PtcInstall.log

If the installation fails, a panel is displayed that contains error messages and the name of the log files. Document the location and name of the log files. The log files can be helpful in assisting you in determining the cause of the failure. Be sure to include them when filing an installation support request. See the Installation Log Files section in the [About Installing Windchill Products](#) for more information.

Installation Summary

At this time, the object adapters are installed. The next step is to configure these object adapters for use as CAD workers. Those instructions are located in the *Configuration Guide -- Visualization Services Object Adapters*.

9

Installing Visualization - Document Support

This chapter describes how to install Visualization - Document Support viewer and object adapter, and Adobe Acrobat.

Document Support is a Windows-based product that provides the ability to view and annotate various Document and CAD data formats that are stored as content on a Windchill Document (WTDocument). These formats include Microsoft Word, Excel, and PDF documents.

For information on configuring the Document Support Object Adapter, please refer to the *Configuration Guide -- Visualization Services Object Adapters* on the Visualization Adapters installation CD.

Visualization - Document Support is installed using the InstallAnywhere utility. For information about using InstallAnywhere, see [About Installing Windchill Products](#).

Topic	Page
Before You Begin.....	9-2
Installing Document Support.....	9-3
Installing Adobe Distiller	9-8
Editing wvs.properties for the Collective Document Support Object Adapter...	9-9
Editing wvs.properties for the JT Object Adapter.....	9-9
Installation Summary	9-10

Before You Begin

This installer installs Document Support viewer, Document Support object adapter, and Adobe Acrobat. Adobe Acrobat is distributed on 3 CDs:

- CD 1: Contains versions for English, French, German, Spanish, Italian, Portuguese.
- CD 2: Contains versions for Japanese and Korean
- CD 3: Contains versions for Chinese Simplified and Chinese Traditional

Note: The CDs containing Japanese, Korean and Chinese versions are special orders. See PTC Sales division for more information on obtaining these CDs. The installation instructions are included in this chapter.

The object adapters serve as a link between the Windchill server and ProductView. Once installed, the object adapters are transformed to CAD workers after they are configured on the machine where the Microsoft applications reside.

There are no absolute prerequisites to installing the Document Support object adapter, however to configure it for use, then:

- It can only be configured for a Windows system.
- Windchill Services must be installed and configured.
- Acrobat Distiller and Microsoft Word or Excel must be installed. Acrobat Distiller is packaged with Document Support, however, it must be installed manually. Instructions are included in this chapter to perform the installation.
- The Document Support object adapter must be installed under a Document Support administrator account. When configured, the user must be able to start Document Support worker.

Document viewer is a client-based component and designed specifically to support the ProductView Standard Edition client. The Document viewer does not require any configuration, however the Document viewer requires the use of ProductView Standard Edition client.

Prerequisites

To install Document viewer the following prerequisites must be met:

- When installing on the Windchill server, for the purpose of using the server as a client distribution mechanism, Windchill Services must be installed and configured as Document viewer is installed into the Windchill Services directory. Once installed, it is available for download from the server to client systems.
- When installing directly on a client system, the ProductView Standard Edition client must be installed on the client system.

- The client system where the Document viewer is installed (downloaded to or directly installed) must be a Windows system.

Where to Install

You must evaluate the installation options, because the system on which you install the Document Support products will make a difference.

There are three methods available to install the Document Support products:

- An installation of the Document viewer on a Windchill server machine.

Windchill Services must be installed for this option. The Document viewer is then available for download to other client systems. The client system must be a Windows system. Document viewer does not support UNIX systems and there are no other alternatives or options to support UNIX.

- An installation of the Document viewer directly on the client system.

ProductView Standard Edition client must be installed for this option. The client system must be a Windows system. Document viewer does not support UNIX systems and there are no other alternatives or options to support UNIX.

- An installation of the Document object adapters on the Microsoft application system.

Acrobat Distiller and Microsoft Word or Excel must be installed. When the Windchill server and the Microsoft application reside on different machines (remote), you can configure a worker daemon to run as a Windows service. The installer can configure the Windows service configuration for the worker daemon automatically for you.

The next sections explain how to install the Document Support object adapter and viewer, along with Adobe Acrobat Distiller.

Installing Document Support

Visualization Document Support is a Windows only product and it can only be used on a Windows system.

Document Support is located on the Visualization - Document Support CD (CD 1 of 3). The Document Support components, installed with InstallAnywhere, consist of the Document object adapter and viewer, and Adobe Acrobat. The Document object adapter is installed on the machine where Microsoft Word or Excel resides. The Document viewer can be installed on the Windchill server machine or a client machine (Windows only) where the ProductView Standard Edition client resides.

Installing Visualization Document Support CD 1

This CD includes Document Support viewer and object adapter, and Adobe Acrobat versions for English, French, German, Spanish, and Italian.

1. Insert the Visualization - Document Support CD 1 into the CD drive.
2. When the installer begins, the first window that opens is **Before You Begin**. This section summarizes the pre installation requirements, provides a link to the software matrices, and a reference to the *Windchill Installation and Configuration Guide - Visualization Services*.

When you are ready to proceed with the installation, click **Next**.

3. In the **Select Installation Type** panel, select the type of installation to perform.

The installation options are described as follows:

Select Installation Type

Select this option	To	Go to...
Install for Windchill Server	<p>Installs the Document viewer on the Windchill server.</p> <p>This option requires that Windchill Services be installed as Document viewer is installed into this directory. Once installed, the Document viewer is available for download.</p>	Step 4.
Install Document Collaboration Service	<p>Install the Document object adapter.</p> <p>This option requires that Microsoft Word, Microsoft Excel, and Adobe Distiller be installed.</p>	Step 4

4. The next window that opens depends on whether you selected the **Install for Windchill Server** or **Install Document Collaboration Service** option. In both cases, you must specify an installation directory, however, the directories are different.

Note: When installing the Document viewer on a client system, the Document viewer is automatically installed into the directory where the ProductView Standard Edition client is installed. No action is necessary on your part to specify an installation directory.

Installation Directory

For this option...	This panel opens...	Go to...
Install for Windchill Server	<p>In the Specify Directory panel, enter the location where Windchill Services is installed.</p> <p>The Document viewer must be installed into the same directory as Windchill Services. Accept the default that is displayed and selected, or click Browse to select a different path.</p>	Step 5.
Install Document Collaboration Services	<p>In the Select Directory panel, enter a location to install the Document object adapter.</p> <p>The Document object adapter can be installed in any directory. Accept the displayed default, or click Browse to create or select a different path.</p> <p>Note: Do not use a directory name with any upper case characters in the name.</p>	Step 6.

5. In the **Select Server Options** panel, select from the following options:
 - Document Viewer Plug-in - ProductView Lite Edition
 - Document Viewer Plug-in - ProductView Standard Edition
 - Adobe Acrobat V6.0 Limited - English, French, German
 - Adobe Acrobat V6.0 Limited - Spanish, Italian
6. The **Select Worker Daemon Options** panel provides you the option to configure a Windows service on a remote machine. This option is supported with the Document Support object adapter.

The worker daemon is used in the case when the Windchill server and Microsoft application reside on different Windows machines, and you want Windchill to be able to start the object adapter worker automatically.

Select Worker Daemon Options

Select this option...	To...
Configure Worker Daemon as a Windows Service	Install and configure the worker daemon as a Windows service if you are installing the Document Support object adapter on a remote Windows machine; the install is not taking place on the Windchill server machine. By default, the configure Worker Daemon option is not selected.
Port Number	Specify the port number the worker daemon listens on.

7. The **Review Settings** panel lists the selections you specified for the installation. Verify the information is correct, and then click **Install**.
8. The **Installing** panel displays the installer progress as files are copied to the system and configurations are performed.
9. When the installation completes successfully, the **Installation Complete** panel displays the directory where Document Support was installed. The installation log files are located in the <Windchill>/installer/logs directory. The log files for the installation are named:
 - <product_short_name>_InstallLog.xml
 - <product_short_name>_PtcInstall.log

If the installation fails, a panel is displayed that contains error messages and the name of the log files. Document the location and name of the log files. The log files can be helpful in assisting you in determining the cause of the failure. Be sure to include them when filing an installation support request. See the Installation Log Files section in the [About Installing Windchill Products](#) for more information.

Installing Visualization Document Support CDs 2 or 3

These CDs include:

- CD 2: Adobe Acrobat versions for Japanese and Korean.
 - CD 3: Adobe Acrobat versions for Chinese Standard and Chinese Traditional.
1. Insert the Visualization - Document Support CD 2 or 3 into the CD drive.
 2. When the installer begins, the first window that opens is **Before You Begin**. This section summarizes the pre installation requirements, provides a link to

the software matrices, and a reference to the *Windchill Installation and Configuration Guide - Visualization Services*.

When you are ready to proceed with the installation, click **Next**.

3. In the **Select Installation Type** panel, select the **Install for Windchill Server** option to install Adobe Acrobat on the Windchill server.
4. In the **Specify Directory** panel, enter the location where Windchill Services is installed.

Adobe Acrobat must be installed into the same directory as Windchill Services. Accept the default that is displayed and selected, or click **Browse** to select a different path.

5. In the **Select Server Options** panel, select the version of Adobe Acrobat to install.

When Adobe Acrobat is installed, it will be available from Windchill to download to the client systems.

6. The **Review Settings** panel lists the selections you specified for the installation. Verify the information is correct, and then click **Install**.
7. The **Installing** panel displays the installer progress as files are copied to the system and configurations are performed.
8. When the installation completes successfully, the **Installation Complete** panel displays the directory where Document Support was installed. The installation log files are located in the *<Product>/installer/logs* directory. The log files for the installation are named:

- *<product_short_name>_InstallLog.xml*
- *<product_short_name>_PtcInstall.log*

If the installation fails, a panel is displayed that contains error messages and the name of the log files. Document the location and name of the log files. The log files can be helpful in assisting you in determining the cause of the failure. Be sure to include them when filing an installation support request. See the Installation Log Files section in the [About Installing Windchill Products](#) for more information.

Mapping the Content to a Worker

Document Support allows many Document and CAD data formats to be stored as content on a Windchill Document (WTDocument).

In *wvs.properties*, you can create a worker mapping to map a file extension or DataFormat to a particular worker type. The document is then available for publishing.

For example, if you add the mapping:

```
worker..DOC=OFFICE
```

this allows files with the extension ".doc" to be mapped to the Office worker.

Or, if you add the mapping:

```
worker..DGN=DGN
```

this maps the files with the extension ".dgn" to the DGN worker.

Note: The "." in the extension is included, so there are 2 periods in the mapping.

With a data format, you specify the data format name (with spaces removed) instead of the extension. For example, the mapping:

```
worker.MicrosoftWord=OFFICE
```

maps files of DataFormat "Microsoft Word" to the Office worker.

Installing Adobe Distiller

The Document Support object adapter is used to support Microsoft Word and Excel by providing an interface between Windchill and the Microsoft products. It provides the ability to convert Word documents, Excel spreadsheets, and PostScript files to PDF files.

To support the conversion of files to PDF, Acrobat Distiller, a third party product, is used. If you do not already have a copy of Adobe Distiller installed on the Windchill server system (must meet the requirements specified in the Windchill software matrix - see link above), you can install the version packaged with Document Support. The installation is manual.

Note: Acrobat Reader cannot be used in place of Acrobat Distiller, as it does not provide sufficient capabilities to view PDF files for Windchill.

Acrobat Distiller is located on the Document Support CD 1 in the installer directory. Acrobat Distiller must be installed on the Windchill server. Complete the following instructions to manually install Acrobat Distiller:

1. Insert the Visualization - Document Support CD 1 into the CD drive.
2. Navigate to the installers directory to locate the distiller505.exe file.
3. Copy the distiller505.exe file to a directory of choice.

Once Acrobat Distiller is installed, go to **Start > Settings > Printer > Acrobat Distiller**, open Acrobat Distiller properties, click **Printing Preferences**, and deselect **Do not send fonts to Distiller** option in Adobe PDF Settings.

Editing wvs.properties for the Collective Document Support Object Adapter

This procedure explains how to edit the wvs.properties file to add the following new Collective Document Support properties, enable the publishing checkin, and revise capabilities.

- worker..MPP=OFFICE
- worker..RTF=OFFICE
- worker..TXT=OFFICE
- worker..GEM=OFFICE
- worker..WP=OFFICE

Follow these steps to add the properties:

1. Use the xconfmanager to add the properties to the wvs.properties file. From a Windchill shell, execute the following command:

```
xconfmanager  
  
-s worker..MPP=OFFICE -s worker..RTF=OFFICE  
  
-s worker..TXT=OFFICE -s worker..GEM=OFFICE  
  
-s worker..WP=OFFICE -t <Windchill>/codebase/wvs.properties -p
```

where <Windchill> is the location where Windchill is installed.

2. To enable checkin publishing, use the xconfmanager to set the publish.service.documents.checkin.enabled property to true. To do this, from the Windchill shell, execute the following command:

```
xconfmanager -s  
  
publish.service.documents.checkin.enabled=true  
  
-t <Windchill>/codebase/wvs.properties -p
```

where <Windchill> is the location where Windchill is installed.

Editing wvs.properties for the JT Object Adapter

In order to correctly map the JT Object Adapter, you must edit the wvs.properties file to add specific JT adapter properties. To update wvs.properties, you can use the xconfmanager via the Windchill shell.

Examples of properties to add are:

```
xconfmanager -s worker..=JT -t wvs.properties -p  
  
xconfmanager -s worker..JTZ=JT,type\=zip,extension\=jt -p
```

Installation Summary

At this time, the Document Support products are installed. The next step is to configure the Document Support object adapter for use as a worker. Those instructions are located in the *Configuration Guide -- Visualization Services Object Adapters*.

III

Configuring CAD Agent

10

Configuring the CAD Agent

The CAD Agent is used to manage the relationship between one or more CAD workers and the visualization server.

When instructed by the CAD Agent, the CAD worker opens a non-graphical session of the CAD system, and converts the designated CAD objects to ProductView format. The Agent tells the workers what to convert, where to obtain the objects, and where to place the converted output files.

This functionality allows automated conversion by the visualization server using the CAD object adapter as a worker. In this mode, the CAD object adapter is continually available to convert native CAD objects, as the visualization server requires.

Topic	Page
Introduction to CAD Agent.....	10-2
Before You Begin.....	10-3
Guidelines for Configuring a Worker "Common File System"	10-3
Configuring the CAD Agent	10-4
CAD Worker On The Same Machine	10-4
CAD Worker On A Different Windows Machine.....	10-9
CAD Worker On a Different UNIX Machine	10-13
Defining Publish Queue and Worker Availability Settings	10-16
Testing the CAD Agent Configuration	10-17
Using WVS with Multiple Background Servers	10-19
Configuring the CAD Agent in a Windchill Cluster.....	10-20

Introduction to CAD Agent

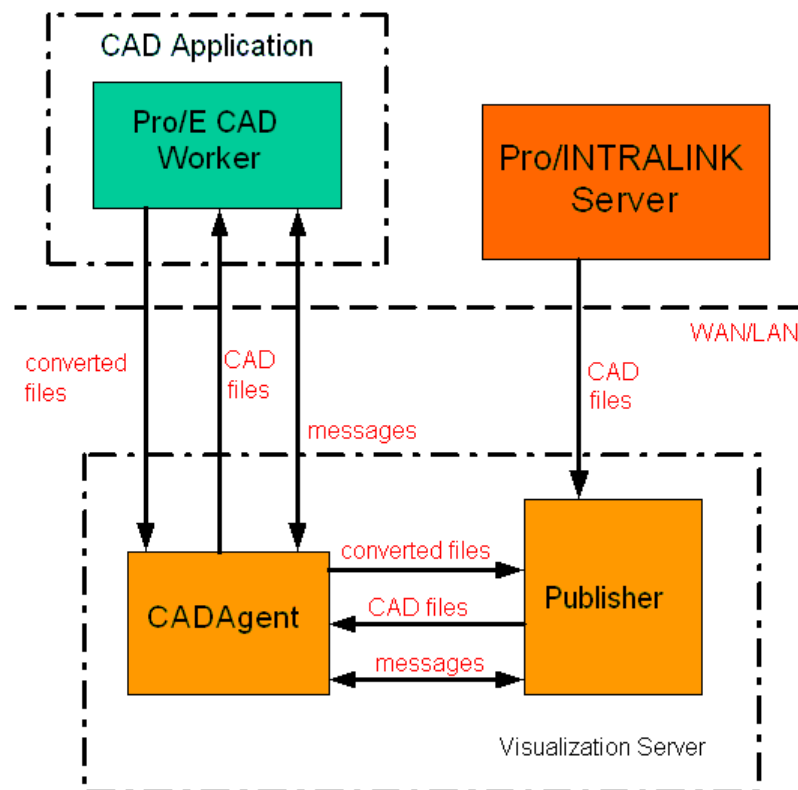
The CAD Agent and CAD workers are an important link in achieving the full functionality of the visualization server. Through the worker, the visualization server can communicate with a number of object adapters, which are described in the About Visualization Services chapter.

When the visualization server receives a client request to convert a CAD object to ProductView format, the server calls a CAD worker. This worker is an instance of a CAD object adapter. The worker then opens a background session of a CAD system, and converts the designated objects to the ProductView format.

In a standard CAD worker configuration, when a publishing request is received, the Publisher passes the CAD file to the CAD Agent, which invokes the CAD worker to convert the CAD data and to store the resulting published data in Windchill.

The following diagram depicts the flow of information between the CAD Agent and the CAD worker across the network.

Publishing - Standard CAD Worker



Before You Begin

When you configure the CAD object adapter as a worker for the CAD Agent, this process generates a worker script, which launches the object adapter in a server-controlled mode. In this mode, the object adapter is referred to as a *CAD worker*. The complete path to the worker script is required when configuring the CAD Agent to use the worker, as detailed in the next section. Also, you must know the visualization server host name and port number to complete the configuration process.

Note: The CAD object adapter must be configured separately. For more information, refer to the section titled Server Controlled Publishing in your relevant CAD object adapter configuration chapter.

Configuring the CAD Agent to use a CAD worker follows the same pattern, regardless of the type of worker used by your system. The subsequent sections of this chapter use the Pro/ENGINEER Object Adapter as an example, which uses the **proeworker** script to launch the worker.

Guidelines for Configuring a Worker "Common File System"

You can configure "Common File Systems" to communicate between various Windows and UNIX server/worker combinations. This section describes which tools are supported for the various configurations.

Note: For any combination other than Windows to Windows, you must use an FTP setup between file systems.

The configurations that are tested and supported by PTC are listed below.

- Windows server to Windows worker:
 - Uses the WorkerDaemon service to start the worker.
 - Transfers data via a common file system using a Windows mapped drive or a UNC path.
 - Transfers data via a common file system using FTP to the IIS FTP Service installed with Windows on the worker machine.
- Windows server to UNIX worker:
 - Uses Telnet to start the worker.
 - Transfers data via a common file system using FTP to the bundled FTPD service installed with the UNIX operating system on the worker machine.
- UNIX server to Windows worker:
 - Uses the WorkerDaemon service to start the worker.

- Transfers data via a common file system using FTP to the IIS FTP Service installed with Windows on the worker machine.
- UNIX server to UNIX worker:
 - Uses Telnet to start the worker.
 - Transfers data via a common file system using FTP to the bundled FTPD service installed with the UNIX operating system on the worker machine.

Configuring the CAD Agent

The CAD Agent communicates with the CAD worker under four possible scenarios. The worker is located either on the same machine as the Agent or on a different machine.

This chapter contains procedures for four different worker configurations:

- Scenario 1: The worker is on the same Windows machine as the visualization server.
- Scenario 2: The worker is on a different Windows machine than the visualization server.
- Scenario 3: The worker is on the same UNIX machine as the visualization server.
- Scenario 4: The worker is on a different UNIX machine than the visualization server.

Note: The CADAgent wizard is used to configure the CAD Agent for the CAD worker. The CADAgent wizard is a component of the CAD Agent Monitor. You can click **Show Help** in the wizard window to open the Help section. Help information is displayed in the lower portion of the wizard window.

CAD Worker On The Same Machine

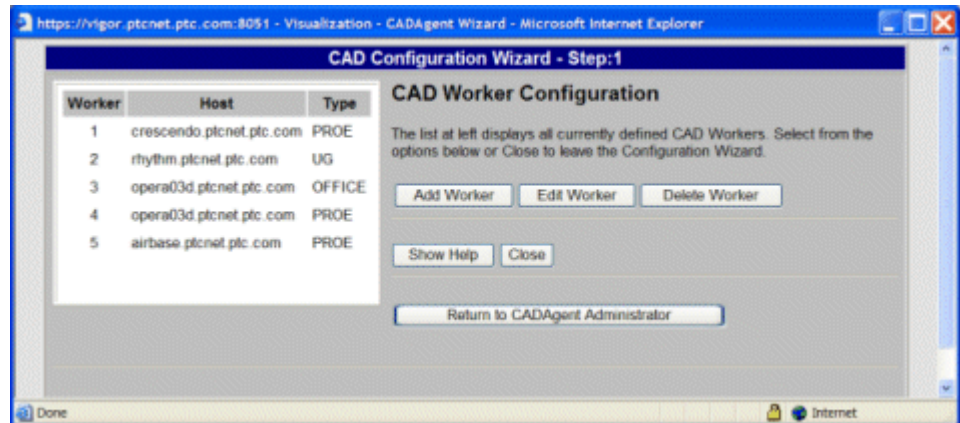
In the simplest scenario, the CAD worker and the CAD Agent are on the same machine. The instructions for Windows and UNIX are the same when the visualization server and the CAD worker reside on the same machine.

1. Open Windchill in a Web browser.
2. Depending on the Windchill application, do one of the following to navigate to the CAD Agent Monitor:
 - Windchill Foundation & PDM — Click on the **Visualization** icon > **Administrator** (link) > **CAD Agent Monitor** (link located under Administration Tasks heading).
 - Windchill PDMLink or Windchill ProjectLink — Click on the **Site** (tab) > **Utilities** (tab) > **CAD Agent Administrator** (link located under Administration Tasks heading).

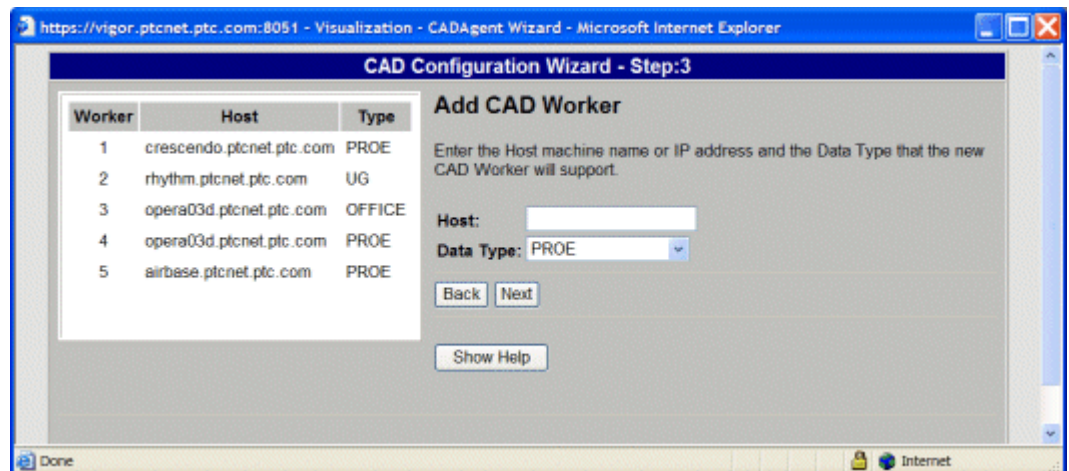
3. The **CADAgent Administration** window opens.

This window displays a list of the configured CAD workers and general statistics about the worker, for example, its running status. From this window, you can start and stop, and reload the CAD worker.

- Click **Configure** to configure a CAD worker.



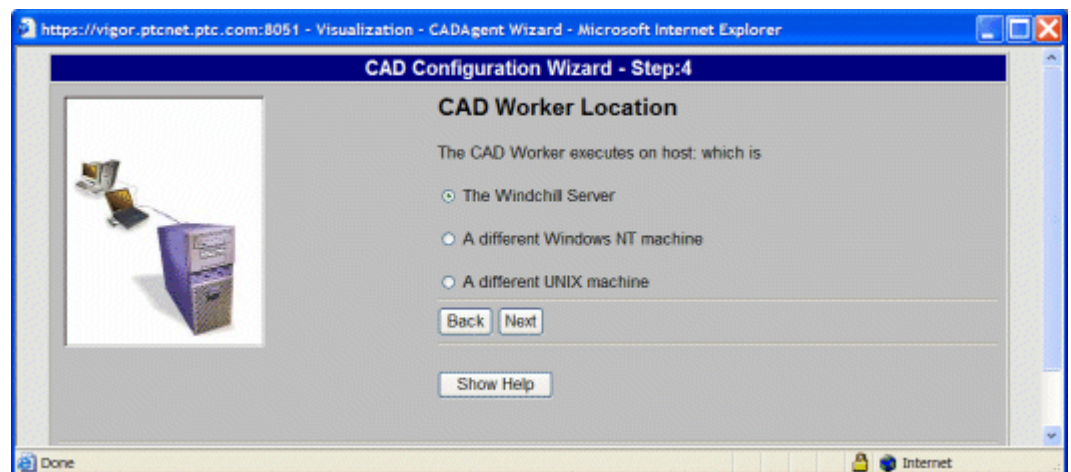
4. In the **CAD Worker Configuration** panel, you are presented with three options: **Add Worker**, **Edit Worker**, and **Delete Worker**. In this example, the **Add Worker** option is described.
5. Click **Add Worker** to add a new worker configuration.



6. In the **Add CAD Worker** panel, you specify the host name of the visualization server and the data type of the CAD Worker to be created. For example, if you are processing Pro/ENGINEER CAD Documents or parts, then you will create a Pro/ENGINEER worker to translate the CAD objects into a viewable image.
- **Host** — Specify the full path to the visualization server machine.

- **Data Type** — Specify the data type of the worker to be created. The data type options available are:
 - PROE
 - CADDs
 - CATIA
 - UG
 - IDEAS
 - SOLIDWORKS
 - PROD
 - SOLIDDESIGNER
 - ME10
 - AUTOCAD
 - ECAD
 - THUMBNAIL
 - CATIAV5
 - IGES
 - VRML
 - OFFICE

7. Click **Next**. This displays the **CAD Worker Location** panel.

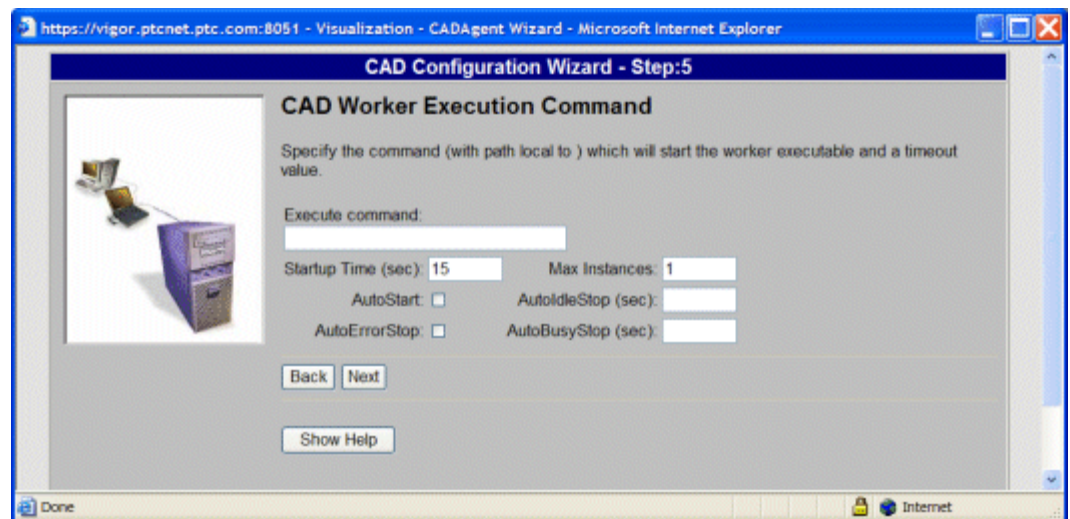


8. Select the location where the CAD worker resides:

- **The Windchill Server** — The CAD worker resides on the same machine as the Windchill server.
- **A different Windows NT machine** — The CAD worker resides on a Windows machine other than the Windchill server.
- **A different UNIX machine** — The CAD worker resides on a UNIX machine other than the Windchill server.

In this example, since the CAD worker resides on the same machine as the visualization server, select **The Windchill Server**.

9. Click **Next** to display the **CAD Worker Execution Command** panel.



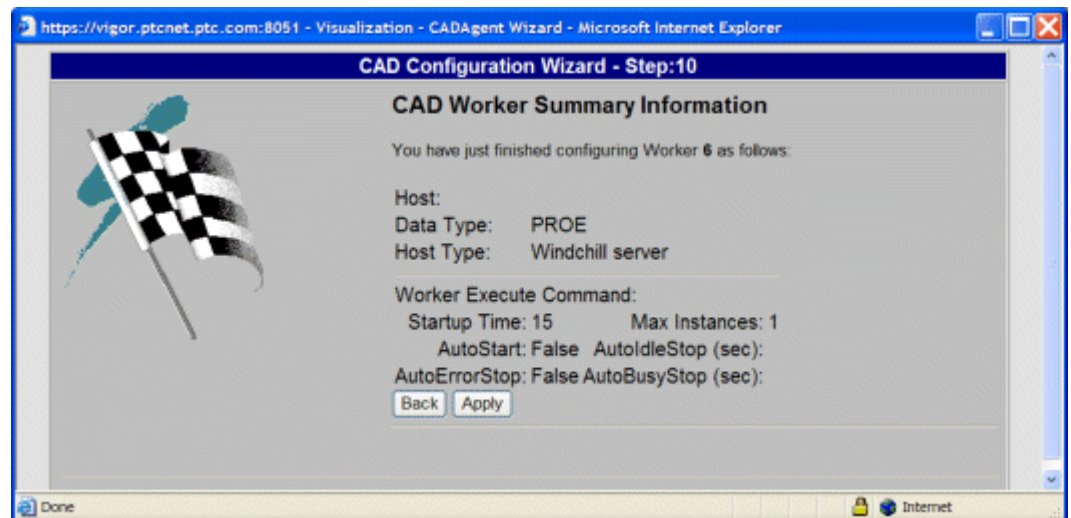
In this panel, you specify the script used to start the worker and the execution settings. Enter values for the following parameters:

- **Execute Command** — The execute command is the CAD worker script created during the CAD object adapter configuration, see the section Server Controlled Publishing in the relevant CAD object adapter configuration chapter. Type the complete path to this script in the Execute Command text field.
- **Startup Time (sec)** — Specify an amount of time in seconds that it takes for the worker and the CAD system to completely start, initialize, and be able to return a message confirming this. If this value is not large enough, the worker does not start reliably. Adjust the setting to work on your system.
- **Max Instances** — Specify the maximum number of instances of this worker that can be started. You should only set this value to be greater than one (1) if the worker machine is capable of running multiple copies of the CAD application effectively (that is, a multiprocessor possessing sufficient memory resources).

- **AutoStart** — Select this option to set the worker to start automatically whenever it is needed. You should use this option if you want your system to automatically start up after a reboot or if you want the CAD agent to automatically satisfy heavy demand.
- **AutoIdleStop (sec)** — Specify an amount of time in seconds that determines how long the worker can remain idle before it is automatically stopped. If you leave this field empty or set it to zero (0), the worker is not stopped automatically at idle time. Use this option if you need to release the CAD license when it is not being used.
- **AutoErrorStop** — Click this option to set the worker to stop automatically whenever it returns an error from a conversion request. Use this option if you need to make sure that the CAD application is not left in an unstable state after an error condition.
- **AutoBusyStop (sec)** — Specify an amount of time in seconds that determines how long the worker can spend on a single conversion request without automatically being stopped upon finishing that conversion. If you leave this field empty or set it to zero (0), the worker is not stopped automatically when it has completed a conversion.

Note: If you are configuring a Pro/ENGINEER worker, and you enabled distributed processing by setting "distributedcadagent.enabled=true", an additional field, **Rule Used To Invoke Worker**, appears in the **CAD Worker Execution Command** panel. Distributed processing is described in the *Pro/INTRALINK Gateway Administrator's Guide*.

10. Click **Next** to display the **CAD Worker Summary Information** panel. This panel displays the values you entered or selected during the add worker process.



11. Review the CAD worker configuration information in this panel. If needed, use **Back** to return to the appropriate wizard step and make any corrections. When you have verified that the CAD worker information displayed in this panel is correct, click **Apply**.
12. You are returned to the **CAD Worker Configuration** window (step 1 of the wizard). Click **Save File** to update the <Windchill>\codebase\agent.ini file with your configuration changes.
13. Click **Reload CadAgent** to commit the changes and update the **CADAgent Administration** worker entries.

You have now finished configuring the CAD Agent to use a CAD worker on the same machine as the visualization server. Refer to [Testing the CAD Agent Configuration](#) to confirm your configuration is correct.

CAD Worker On A Different Windows Machine

The CAD worker can be configured on a Windows machine that is different from the visualization server machine. The configuration procedures for this scenario are exactly the same as the example of configuring the CAD worker on the same machine as the visualization server, except for these differences:

- The need for a common file system shared between the two machines.
- The use of the Worker Daemon to facilitate the communication between the two machines. This communication is handled by using a small executable named WorkerDaemon.exe. The WorkerDaemon.exe is placed on the Windows machine running CAD object adapter. The Worker Daemon was made available to you for installation when you installed the object adapter(s). These instructions assume that you installed the Worker Daemon.

Creating a Common Windows to Windows File System

For the visualization server machine and the CAD worker machine to exchange files, the two machines must share a common file system directory. This directory, which can be located on either machine, or even on a third machine, serves as a file transfer point between the server and worker machines.

Note: Because there are numerous ways in which a shared file directory can be created (mapped Windows drives, FTP, and so forth), no attempt is made to describe the creation of a shared file directory in these procedures.

Tip: If you are using a network file system, this directory can exist on any machine in the network; but you must be able to mount the directory on both the Windchill machine and the CAD worker machine. If you are using FTP, the Windchill machine must be able to connect with an FTP server running on the CAD worker machine and the worker path must be a directory which is local to the CAD worker machine.

After creating the common file directory, make note of the full path to the common directory used by the server machine and by the worker machine. Each of these paths must be entered during subsequent procedures.

For example, from the server machine, the full path to the common file directory could be:

```
D:\shared_Worker_dir
```

The full path from the worker machine to the same, shared file directory could be:

```
X:\D_drive\shared_Worker_dir
```

Note: This common directory must be fully accessible from the user account specified during the initial installation of the visualization server. This can require that both machines have the same log on account. This is a security concern the administrator must address by policy before installing the worker.

Adding CAD Worker to a Different Machine

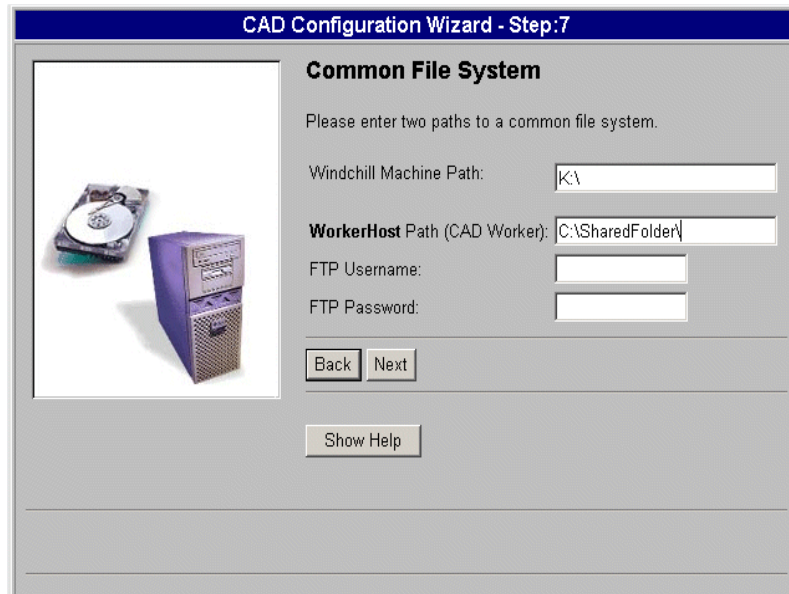
The CAD Agent must know where the CAD worker is on the system. The next set of procedures explains how to configure the CAD Agent to use this worker.

Because the worker configuration steps are similar regardless of whether the configuration being performed is local or remote, the common configuration steps are not repeated. Where possible, you are directed to the detailed instructions described in the CAD Worker on the Same Machine section.

1. Follow steps 1 through 5 in the section [CAD Worker On The Same Machine on page 10-4](#).
2. In the **CAD Worker Location** window, select **A different Windows NT machine** option as in this scenario the visualization server and the CAD worker machines are different, and the worker resides on a Windows machine.
3. Complete the **CAD Worker Execution Command** instructions as described in the [CAD Worker On The Same Machine](#) the section.
4. In the **Worker Daemon Port** window, specify the port number that the Worker Daemon, running on the Windchill server, listens to. This instruction assumes that the Worker Daemon was installed and configured during the installation of the object adapter(s).

Accept the default, 601, or enter the correct port number.

5. In the **Common File System** window, enter the information needed to connect to the common file system.



- **Windchill Machine Path** — Enter the Location of the shared file system relative to the Windchill machine; for example, the drive mapped to the share on the worker machine. In this example, the path is:

K:\

- **<machine_name> Path (CAD Worker)** — Enter the location of the shared file system on the Pro/ENGINEER CAD worker machine; for example, the shared folder to which the Windchill server must connect to via a mapped drive. In this example, the path is:

C:\SharedFolder

- **FTP Username** — If you used FTP to connect to the common file system location, type the FTP user name; otherwise, leave this field blank.
- **FTP Password** — If you used FTP to connect to the common file system location, type the FTP password; otherwise, leave this field blank.

6. For the remaining steps, follow the instructions through the end of the [CAD Worker On The Same Machine](#) section.

Running Worker Daemon as a Service

The Worker Daemon procedures described in this section allow you to configure the Worker Daemon to run either as a program (which is the default) or as a service. The next procedure details how to start the Worker Daemon if you are running it as a service:

When you ran InstallAnywhere, the WorkerDaemon.exe was installed in <ProductView adapter>\i486_nt\obj\ directory.

Installing the Worker Daemon

1. Open a **Command Prompt** window and navigate to the *<ProductView adapters>\i486_nt\obj* directory.
 - At the prompt, enter the following command to install the GS Worker Daemon as a Windows service.

```
workerdaemon -install
```
2. Open the **Services** dialog box, which now lists a Worker Daemon service. **Start** the Worker Daemon to begin running it as a service.

Changing the System Account

1. By default the Worker Daemon runs as a system account. You can also use the **Services** dialog box to change the account it runs on using the startup profile for the Worker Daemon.
 - Open the **Properties** window for the GS Worker Daemon.
2. From the **Log On** tab, select **This account** option, and pick the account you want to run under. Use **Browse** to display the **Select User** list, and select a name from the list.

For example, you can run the Worker Daemon from the administrator account. Enter a password, and click **OK**. The account you selected is now configured to run the Worker Daemon as a service.

Configuring the Port Number

To configure the port number for the Worker Daemon, when it is running as a service, at the command prompt enter the `reinstall\install` command:

```
workerdaemon -install <port#>
```

This command ensures that, when the service is operating, it will be listening on the configured port.

About the Worker Daemon Log File

When the Worker Daemon is running as a service it produces a log file called `workerwaemon.log`, which is important, when debugging a Worker Daemon problem.

The log file shows when the Worker Daemon is running, the commands it receives, what port it is listening on, along with other event information.

Removing the Worker Daemon Service

You can remove the Worker Daemon service by executing the following command at the prompt:

```
workerdaemon -remove
```

Running the Worker Daemon as a Program

These procedures describe how to run the Worker Daemon as a program.

There are several ways to start the Worker Daemon. The Worker Daemon can run not only as a service in the background, as described above, but it can also be run as a program. To run the Worker Daemon as a program, select one of the following options:

- Start the Worker Daemon by double-clicking the **WorkerDaemon.exe** file. The Worker Daemon executable on the CAD worker machine must be running at all times, as explained in the next note.

Note: After the user is logged off on the worker machine, the Worker Daemon process ends. Alternatively, the Worker Daemon can remain running by locking the workstation instead of logging out. In this case, the machine is left in a secure state. To lock the workstation, press **CTRL+ALT+DEL**, then click **Lock Computer**.

- Start the Worker Daemon using a command line parameter. By default, the Worker Daemon listens on port 601. The Worker Daemon can be forced to use another port by specifying the port number as a command line parameter when starting the Worker Daemon.
- Start the Worker Daemon using **Auto Start**. The Worker Daemon is started automatically when the computer starts by creating a shortcut to it and then placing the shortcut in the following directory:

```
<WINNT directory>\User Profiles\All Users\Start Menu\Programs\Startup
```

Where *<WINNT directory>* is the Windows system directory.

Note: Be sure that the service account configured to launch the Worker Daemon has been granted access rights to log on as a service.

You have now finished configuring the CAD Agent to use a CAD worker on a different Windows machine. Refer to [Testing the CAD Agent Configuration](#) to confirm your configuration is correct.

CAD Worker On a Different UNIX Machine

The configuration procedures for this scenario are exactly the same as for configuration of the CAD worker on the same machine as the visualization server, except for one difference. The difference is the need for a common file system shared between the two machines.

Note: On UNIX there is no need for the Worker Daemon.exe used on Windows.

Creating a Common File System

For the server machine and the UNIX worker machine to exchange files, the two machines must share a common file system directory. This directory, which can be located on either machine or even on a third machine, serves as a file transfer point for the server and UNIX worker machines.

Create a shared directory that is accessible to both the server machine and the UNIX worker machine. It is important that the path the CAD worker machine uses does not contain any special characters which the worker cannot handle. For example, Pro/ENGINEER running on Windows does not allow spaces in the path. Because there are many ways to create a shared file directory specific procedures are not provided in this guide. One common method of creating a shared directory is by creating the directory on the UNIX machine and accessing it using FTP on the server machine.

After creating the common file directory, make note of the full path used by the server machine and the UNIX worker machine to access the common directory. These paths must be entered during a subsequent procedure.

In the example used in the following procedure, FTP is used to mimic a shared file system. The full path from the server machine to the shared file directory is:

```
FTP:/CW/shared_dir
```

In this example, the full path from the UNIX worker machine to the shared file directory is:

```
/CW/shared_dir
```

Adding a UNIX CAD Worker to the CAD Agent

The CAD Agent must know where the CAD worker is located on the system. The next set of procedures explains how to configure the CAD Agent to use this worker.

1. Follow steps 1-5 in section [CAD Worker On The Same Machine](#).
2. In the **CAD Worker Location** panel, select the **a different UNIX machine** option as in this scenario the visualization server and the CAD worker machines are different, and the worker resides on a UNIX machine.
3. Complete the **CAD Worker Execution Command** instructions described in section [CAD Worker On The Same Machine](#).
4. In the **Telnet Account** panel, specify the information needed to access the remote worker. Enter values for the following fields:
 - **Username** — Specify the account to log on to the machine where the worker resides. This account must already exist and the log on process must not require any interactive log on scripts, the required environment variables must be defined automatically, and no special commands must be required to start the worker.

- **Password** — Specify the password used to log on to the telnet account.
- **Shell Prompt** — Enter the shell prompt that the CAD Agent will see when logging onto the account. When the CAD Agent logs onto the account, it will wait to receive this prompt. Once the prompt is detected, the worker executable will be started.

5. In the **Common File System** panel, specify the common file system information you prepared in the [Creating a Common File System](#) section.

If you used FTP, the **Windchill Machine Path** and the **<machine name> Path (CAD Worker)** must be exactly the same except that the **Windchill Machine Path** starts with 'ftp:'. Enter values for the following parameters:

- **Windchill Machine Path** — Specify the mount path of the common directory as seen from the Windchill server machine.
- **<machine name> Path (CAD Worker)** — Specify the mount path of the common directory as seen from CAD worker machine.

Note: It is important that the path the CAD worker machine uses does not contain any special characters that the worker cannot handle. For example, Pro/ENGINEER running on Windows does not allow spaces in the path.

- **FTP Username** — If you used FTP, specify the account used to start the UNIX worker. The FTP connection is established based on this account. If you are using a network file system, the FTP account information is not required.

Note: For instructions on configuring a UNIX worker using FTP, see the section in this chapter [Using WVS with Multiple Background Servers](#). Special instructions apply if your UNIX worker is running on a non-English locale.

- **FTP Password** — Specify the password for the user name connecting to the account.

6. For the remaining steps, follow the instructions through the end of the [CAD Worker On The Same Machine](#) section.

You have now finished configuring the CAD Agent to use a CAD worker on a different UNIX machine. Refer to [Testing the CAD Agent Configuration](#) to confirm your configuration is correct.

Configuring a Non-English UNIX Worker to Run FTP Daemon

For any data access object adapter, including CADDs File System (CaddsFS), Catia File System (CFS), Unigraphics File System (UGFS) or Pro/INTRALINK,

when retrieving converted files from a remote UNIX worker and when the CAD agent uses FTP for the retrieval, the CAD agent can have problems determining the correct file names, if the file names are not in US/English.

There are special considerations for configuring a CAD worker on a UNIX platform, if a non-English language is involved. The reason for these special instructions is to reduce the likelihood of FTP file transfer issues occurring between a CAD object adapter running in a non-US/English UNIX locale and the graphics server using US/English on Windows server.

Note: This occurs in cases where the UNIX CAD object adapter host is configured with a non-US/English locale (European or Asian), for example, DBCS. If, for example, the CADDSS worker is running on Japanese UNIX with Japanese FTP server, the CADDSS5 object adapter can not transfer converted Caddss models from a Japanese FTP server, and only creates a zero (0) byte OL file in the EDR.

The use of non-English file names has resulted in various file transfer issues, the most common being the retrieval of zero (0) size files. This can occur because the FTP API was given an invalid file name, for which it does not generate an error condition.

See Technical Application Note (TAN) #106245 for further information.

Defining Publish Queue and Worker Availability Settings

It is possible to control the availability of additional WVS Publisher Queues and Workers, thereby increasing WVS Publishing throughput during off-peak hours. These settings are defined in the WVS properties file, as well as the Worker agent.ini file, as specified below.

In wvs.properties, the publish queue settings use the format:

```
publish.publishqueue.availabletimes.<queuename>=
```

For example:

```
publish.publishqueue.availabletimes.PublisherQueue1=
```

```
publish.publishqueue.availabletimes.PublisherQueue2=
```

Individual workers use the property in that worker's section of the agent.ini file:

```
availabletime=
```

The format of the string that sets the time/days is the same for the worker availabletime as for the publish queue setting:

```
<time1> , <time2> , <timeN>
```

where each time is defined as

```
<start-time> - <end-time> [- <day-of-week>]
```

The start and end times can be repeated as many times as needed. The time of day format applies to the local area where the Method Server is running, as defined by java. For example, the USA would use AM/PM format, whereas the UK would be 24 hour format. Each of the time of day specifications can also include a day of week qualification

An example of a UK day and time format would be:

```
availabletime=19:00-06:00, 05:00-20:00 - sat, 05:00-20:00 - sun
```

where the worker is available each night from 19:00 to 06:00 the next morning, and on Saturday and Sunday is available from 05:00 to 20:00.

An example of USA format for the same times and days would be:

```
availabletime=7:00 pm-6:00 am, 5:00 am-8:00 pm - sat, 5:00 am-8:00 pm - sun
```

If the format is incorrect, Method Server messages will display.

Testing the CAD Agent Configuration

Once you have completed any one of the four worker configuration scenarios, you can test the operation of the worker. The tests are fairly generic between object adapters. This section uses the Pro/ENGINEER Object Adapter as an example.

Test 1: Starting the CAD Worker

1. From within the CAD Agent wizard, return to the **CADAgent Administration** panel. This panel displays a list of the configured CAD workers and their current status.

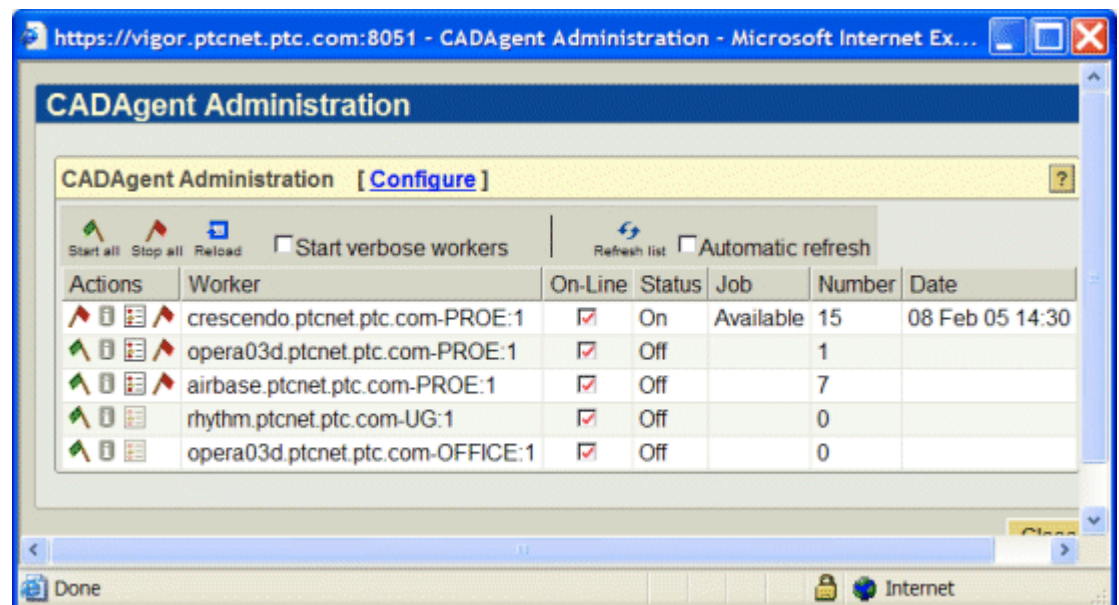


Figure 10-1 CADAgent Administration Panel

2. To start the CAD worker, click the green flag icon in the **Actions** column. After the CAD worker has started, the **Status** column displays **On**.

If the status does not change to **On**, refer to the appendix [Troubleshooting the CAD Agent](#).
3. When the connection tests prove successful, you can turn off the CAD worker by clicking the red flag icon.

Test 2: Create a Viewable on Demand

To perform this test, you will need CAD document data loaded on the Windchill system. This data must be in its native state, meaning that it has not already been converted to a viewable (published). You will use this data to test the publishing capabilities.

Note: The CAD worker must be running to perform this test. If you did not enable **Auto Start** in the worker configuration, the worker must be manually started. See [Test 1: Starting the CAD Worker](#).

1. Open Windchill in a Web browser.
2. Browse to a CAD Document, and open the properties page for that document. When CAD Documents are loaded into Windchill through workgroup managers or an EPM gateway, Windchill Visualization Service can publish a representation of this data.

A **ProductView** icon appears. Mousing over the icon displays **Create Representation**.

3. Select the **ProductView** icon.
4. The **Publish Monitor** page opens, displaying the publishing processes. You can observe the CAD worker, through the Publish Monitor, as it converts the CAD Document to a viewable.

If successful, a thumbnail image is generated.

5. Select the thumbnail image to view the CAD Document.

If the object fails to publish, refer to [Troubleshooting the CAD Agent](#).

Test 3: Creating a Representation from Local Data

To perform this test, you will need CAD part data loaded on the Windchill system. This data must be in its native state, meaning that it has not already been converted to a viewable (published). You will use this data to test the publishing capabilities.

1. Open Windchill in a Web browser.
2. Create an empty wt.part; which will serve as a placeholder for the CAD part.

3. Open the property page for wt.part.
4. Open the Representation wizard (**Display list of representations**).
5. Select **Create representation** to create a representation to associated with wt.part.
 - Assign the representation a name.
 - Select the CAD worker data type from the **CAD type/name** drop-down list.
 - **Browse** to a CAD part on the local system.

These steps will set the action for the Windchill server to retrieve a CAD part (for example, a Pro/ENGINEER part), and the properly configured CAD worker (PROE) is triggered to create the viewable and populate the representation.

6. Complete the remaining steps described by the wizard accepting the defaults.
7. Upon finishing, you are presented with a link to the **Publish Monitor** where you can observe the viewable conversion take place.

If the CAD worker has been properly configured and the data is valid, the Publisher will conclude successfully and a thumbnail link is presented. Click the thumbnail link to view the image.

If the object fails to publish, refer to [Troubleshooting the CAD Agent](#).

Using WVS with Multiple Background Servers

You can configure multiple background method servers, and have different "queue groups" process in each background method server. For specific instructions on doing this, refer to the *Windchill Performance Tuning Guide*.

By default, the WVS publishing queues, the CADAgent, and the Loader execute in the background method server that is processing the queue group "default". This requires no further configuration.

However, if you want to optimize performance and scalability, you can dedicate a background method server to WVS processing. For example, if the queue group "wvs" is being used, you must change the WVS queues to specify that queue group, and update wvs.properties to include the setting:

```
wvs.queueGroup=<group_name>
```

where, in this example, the <group_name> is wvs.

This property setting instructs the CADAgent and loader to start in the background method server, which is processing the queue group "wvs". This is the same background method server that the publishing queues are running in.

Configuring the CAD Agent in a Windchill Cluster

The WVS CAD Agent has a "host" parameter that can be used for cluster configurations. This parameter should be manually added to the [agent] section of the agent.ini file on the slave machines in the cluster (for example, those machines not running the background method server). The value of the host parameter would be the hostname of the machine that runs the background method server, and hence the CADAgent.

The "host" parameter enables the CAD Agent Administration Pages, running on Foreground MethodServers, to connect to the Background MethodServer (BGMS), which might be running on a different host machine, by identifying the hostname of the machine running the BGMS.

Note: The property **publish.tempuploadir** is set to a common directory between all the method servers in the cluster, in the case of creating representations from local data only.

Generating Viewables and Thumbnails in Clustered Environments

All publishing and thumbnail conversion is processed using background queues. In a cluster, only one Windchill server processes the queue, using a dedicated MethodServer called the Background MethodServer. As a result, in a clustered environment, all viewable generation is done through the Background MethodServer.

Unless you are using remote thumbnail generation, the thumbnail generation is also done from the Background MethodServer, as the CAD Agent runs on the method server that is processing queues. The distribution of thumbnail generation is provided by configuring remote thumbnail workers, which would typically be put on a remote dedicated machine instead of a method server machine.

ProductView Collaboration in a Clustered Environment

When a ProductView collaboration session is initiated, the MethodServer that handles this client request starts a dedicated process for managing the meeting. The command syntax for starting this process is defined by collaboration.server in wvs.properties, and in our example, is called "pview_collaboration".

All users participating in the collaboration session must access pview_collaboration directly through TCP/IP. The ranges of port for this can be restricted by passing the "-p" and "-m" options when starting the process. For example, the following option for collaboration.server would specify that the processes only listen to ports between 1000 and 1999:

```
collaboration.server=$(wt.home)\\bin\\pview_collaboration.exe -p 1000 -m 1999 -i 600
```

By default, the pview_collaboration process broadcasts itself as running on the host on which it was started. For secure configurations, this host may not be accessible. In this case, you can use the "-a" option to indicate a specific hostname or IP address, which the clients can resolve.

For example, the following option for collaboration.server would specify that the processes identify themselves as running on host "windchill.company.com":

```
collaboration.server=$(wt.home)\bin\pview_collaboration.exe -a  
windchill.company.com -p 1000 -m 1999 -i 600
```

Note: Connections to an externally accessible machine that is not running collaboration must be forwarded to the machine that is running collaboration.

In addition, the MethodServer needs to access the pview_collaboration process through a socket. When pview_collaboration starts, it generates a random port number that is used by the MethodServer, and inserts this port number in a temporary file created in collaboration.tempdir, as defined in wvs.properties. When it needs to connect to this process, the MethodServer will read this file to obtain the IP address and port number to connect to. During this process:

- The communication is one-way : from the MethodServer to the pview_collaboration process.
- The port number generated is random and cannot be restricted in the current releases of Windchill.

In Windchill releases prior to 7.0, the collaboration.tempdir folder is used to cache information about the meetings. In Windchill 7.0 and above, the Windchill cache is used instead.

Suggested configuration for a Windchill cluster

In a Windchill cluster, there are several physical hosts that run MethodServers. Users access a virtual URL and are then forwarded to one of the hosts running a Windchill instance.

In the sample architecture below, the generic host is "windchill.company.com", which is a router that forwards requests on the cluster nodes, "node1" and "node2". When a user starts a meeting, this starts a pview_collaboration process on one of the nodes, and all users connecting to this meeting will be forwarded to the proper host :

- The pview_collaboration process on each node is identified as being on the router ("-a windchill.company.com")
- Each node uses different ports for the collaboration processes, for example:
 - on node1 : "-p 1000 -m 1999" in collaboration.server
 - on node2 : "-p 2000 -m 2999" in collaboration.server
- The router at "windchill.company.com" is configured to forward the requests on ports 1000-1999 to node1, and request on ports 2000-2999 to node2.
- In order for the pview_collaboration processes to share the same cache information, node1 and node2 must share the same temporary directory for collaboration. The collaboration.tempdir must point to the same physical

folder (for example, using NFS) for all nodes of the cluster. This is not required in 7.0.

Suggested configuration to run pview_collaboration on a separate machine

You can also run pview_collaboration on a separate host than the MethodServer. To do this, replace the value of collaboration.server with the appropriate program/script. This needs to be completely transparent to the MethodServer, so it is necessary that:

- The pview_collaboration is visible to end users (for example, by using the "-a" option, or running it on a machine that is already accessible).
- The MethodServer can connect to the pview_collaboration host on any port (one-way traffic).
- The temporary folder collaboration.tempdir points to the same physical location both from the MethodServer and pview_collaboration perspective, which requires a service like NFS.

Making Thumbnails Viewable for Microsoft Word or Excel Files

In order to display thumbnails for Windchill viewables containing Microsoft Word or Excel files, you must modify the Word or Excel file.

Note: This technique applies only to Microsoft Office files being converted to PDF format by the Microsoft Office worker. It does not apply when those files are not being published.

1. Open the file in Word or Excel, and select **File > Properties**.
2. Check the **Save preview picture** option on the **Summary** tab.
3. Save the file, and update it or check it back into Windchill.

After completing this procedure, a thumbnail of the file should now be displayed when viewing the details page of this file in Windchill.

11

Using Wildfire to Download and Publish Files

This chapter provides the instructions to configure the Pro/ENGINEER Wildfire object adapter to assist the visualization server in publishing a viewable, when a drawing or assembly cannot be viewed.

Topic	Page
Using the Pro/ENGINEER Wildfire Object Adapter to Download Files	11-2
Publishing Wildfire Assemblies as Positioning Assemblies	11-4

Before You Begin

A Pro/ENGINEER drawing or assembly cannot be viewed if, for example, it is renamed in Pro/INTRALINK. In order for the renamed version to be recognized, it must be updated by Pro/ENGINEER prior to publishing. This is accomplished using file synchronization.

For file synchronization to work properly, Wildfire must be the CAD worker for 7.0 and higher releases of Windchill or Windchill PDMLink. You can use Pro/ENGINEER 2001 for designing and engineering; however, you must configure the CAD worker to use Wildfire or a higher version of Pro/ENGINEER for publishing and generating viewables on the Windchill server.

Using the Pro/ENGINEER Wildfire Object Adapter to Download Files

These instructions apply if you are using the Pro/ENGINEER Wildfire object adapter. This configuration allows Windchill Visualization Services to create a viewable by using the Pro/ENGINEER Wildfire adapter to download the file from Windchill.

1. Append the useworkerdownload variable to the publish.cadconvert.PROE variable in the wvs.properties file using xconfmanager. This tells the publisher to use the worker for the file download (useworkerdownload) and that the username and password to give the worker can be found in the fileadapterauth.properties file in the Windchill directory.

From a windchill shell, execute the following commands:

- a. To display the current value of the publish.cadconvert.PROE variable:

```
xconfmanager -d publish.cadconvert.PROE
```

- b. Append the useworkerdownload variable definition to the publish.cadconvert.PROE variable. Using the information results of the display command, append to that:

```
useworkerdownload=$(wt.home)$(wvs.dir.sep)fileadapterauth.properties
```

Use a comma (,) separator when appending the new value. For example:

```
xconfmanager -s publish.cadconvert.PROE=com.ptc.wvs.server.publish.CadConvertPROE,
useworkerdownload=$(wt.home)$(wvs.dir.sep)fileadapterauth.properties
-t <Windchill>\codebase\wvs.properties -p
```

where <Windchill> is the location where Windchill is installed.

2. The publish.cadconvert.PROE variable edited in the previous step, references the fileadapterauth.properties file. At this time, the file does not exist and it must be created. Complete the following steps:

- a. Locate the fileadapterauth.properties file in the Windchill directory. For security reasons, the file should not be located in the codebase directory.
- b. Create the fileadapterauth.properties file using a text editor of choice.
- c. Add an authentication variable that includes a user name and password value. This will be the only entry in this file. The syntax is :

```
auth=<username>:<password>
```

Replace *<username>* and *<password>* with valid values. The user name must have read access to the Windchill data published through Windchill Visualization Services and it must have the authorization to download the file from Windchill.

- d. Save your changes and close the fileadapterauth.properties file.
3. Restart the Windchill servers.

Configuring the Pro/ENGINEER Wildfire Adapter for HTTPS

Because certificates are needed to create viewable files, the Pro/ENGINEER Wildfire adapter must be configured to download files when operating in an HTTPS environment. This process is explained next, for both Windows and UNIX platforms.

Accepting Certificates on Windows

For the Windows CAD worker to publish data, the GS Worker Daemon service must be configured with the specific logon information of a user who can log on to the local host and accept certificates from the Windchill server. To accomplish this, do the following:

1. Open the Windows Service Panel, and click **Start > Settings > Control Panels**. Once the Control Panel window opens, double-click the **Services** icon. The **Services** window opens.
2. View the properties of the **GS Worker Daemon**.
3. Return to the **Services** window and click **Stop** to stop the Service.
4. Click the **Log On** tab.
5. Choose **Select This Account** and enter the user logon and password information.
6. Click the **General** tab and start the Service.
7. Open Pro/ENGINEER Wildfire and browse to the Windchill server.
8. Install (Accept) the security certificate for the secure site.
9. Click **Exit** to exit Pro/ENGINEER Wildfire.
10. Refer to steps to configure the CAD worker on the server.

Accepting Certificates on UNIX

A UNIX worker only publishes on HTTPS servers if you log into the worker machine and enable the `xhost +` command. In addition, the Pro/ENGINEER Worker (`proeworker`) file must include the environment variable to display the machine name. For example:

```
setenv DISPLAY <machine name>:0
```

A sample modified `proeworker` file is shown next:

```
#!/bin/csh -f

echo Launching proe2pv in worker mode - see log file
proeworker.log

setenv DISPLAY crescendo.ptcnet.ptc.com:0

setenv LD_LIBRARY_PATH ""

setenv PVIEW_HOME "/disk2/ndm-viz/local/productview_adapters70"

setenv PVIEW_WORKING_DIR `pwd`

cd "/disk2/ndm-
viz/local/workers_70/qaxw6000_PDMPJL70_63/wildfire"

echo Launching proe2pv in worker mode > proeworker.log

"$PVIEW_HOME/bin/proe2pv" -vc -vL "/disk2/ndm-
viz/local/workers_70/qaxw6000_PDMP
JL70_63/wildfire/proeworker.log" -EW -CSsonata 2573 -r "/disk2/ndm-
viz/local/workers_70/qaxw6000_PDMPJL70_63/wildfire/proe2pv.rcp"
$*:q &
```

Accepting Certificates from Pro/ENGINEER Wildfire

A UNIX worker must be configured to accept certificates from the Pro/ENGINEER Wildfire browser. To accomplish this, follow these steps:

1. Open Pro/ENGINEER Wildfire on the CAD worker system.
2. Browse to the Windchill server using the same logon information as the CAD worker on the server.
3. Select the option for **Remember this certificate permanently** and click **Continue**.
4. Click **Exit** to exit Pro/ENGINEER Wildfire.

Publishing Wildfire Assemblies as Positioning Assemblies

This section explains how to configure visualization to publish Wildfire assemblies as positioning assemblies.

A *positioning assembly* is a high-level assembly that is used to fix the relative location (position) of its child assemblies. As a result, there can be no assembly

features used between these assemblies. In addition, if parametric positioning is used, ensure that changes in any child components do not impact the position of components within the assembly being published as a positioning assembly.

When an assembly is converted as a positioning assembly, ProductView branch links are used to reference the child assemblies' representations, rather than converting the data in the context of the parent assembly. When the parent assembly representation is created with a latest configuration spec, this allows the latest child assemblies to be automatically displayed for the parent, without the parent needing to be republished.

To publish a Wildfire assembly as a positioning assembly:

1. Specify that the EPMDocument should be published as a positioning assembly. You can do this using the Publish and Thumbnail Control user interface from the Utilities page for the appropriate Product/Project/Org/Site.

Or, you can specify a list filename, IBA name, or custom method to identify which EPMDocuments should be published as positioning assemblies, using the methods described next:

```
<Property default="" name="publish.positioningassembly.filename"/>
<Property default="" name="publish.positioningassembly.ibaname"/>
<Property default="" name="publish.positioningassembly.filtermethod"/>
```

- If you specify a list filename, that file should contain a list of EPMDocument CADNames that will be positioning assemblies. If the EPMDocument type does not define a CADName, the EPM number displays instead.
- If an EPMDocument is not specified in the file, the IBA name (if specified) will still be checked. If you specify an IBA name, the IBA should be Boolean, where a return of Boolean.TRUE indicates that the EPMDocument is a positioning assembly, and FALSE indicates that it is not. If the IBAname is not present, that EPMDocument would not be processed as a positioning assembly.

Additionally, an administrator can specify on the Create Representation wizard that a representation be created by publishing an appropriate EPMDocument as a positioning assembly. This will override the other methods of specifying a positioning assembly.

- If you specify a custom method, only that method will be used. In this case, the property value format should be:

```
classname/methodname
```

with the following signature:

```
public static Boolean methodname(EPMDocument d)
```

where a return of Boolean.TRUE indicates that the EPMDocument is a positioning assembly, and FALSE indicates that it is not.

2. Specify whether to publish the children when publishing a positioning assembly, if there was no representation for the positioning assembly to use.

```
<Property default="false" name="publish.positioningassembly.publishchildren"/>
```

The property can be any of the following values:

- false - no publishing of children will take place.
- true or latest - If a positioning assembly is being created with a latest configuration spec, the children will be published if required.
- default - If a positioning assembly is being created as the default representation, the children will be published if required.
- all - If any positioning assembly is being created, the children will be published if required.

12

Configuring the Arbortext Publishing Engine (APE) Worker and Publishing

This chapter provides instructions for configuring the Arbortext Publishing Engine (APE) Worker, configuring the WVS publisher for the Arbortext Authoring Application, and defining and loading publishing rules.

Topic	Page
Configuring the APE Worker.....	12-3
Configuring Publishing for Arbortext Authored Dynamic Documents	12-6

Configuring the APE Worker

Before You Begin

The APE Worker is automatically installed with Windchill. This worker publishes Dynamic Documents created using the Arbortext Editor into standard output formats such as PDF or HTML.

This chapter defines the steps to configure the APE Worker.

Prerequisites

Prior to configuring the APE Worker, you should have:

- Installed and configured the APE software and relevant licenses.
- The URL to a working instance of an Arbortext PE (this will be the `ape.server` value in the `wvsape.properties` file).
- Installed Windchill PDMLink.
- Windows PE runs with Tomcat, and UNIX PE it runs with both Apache and Tomcat.

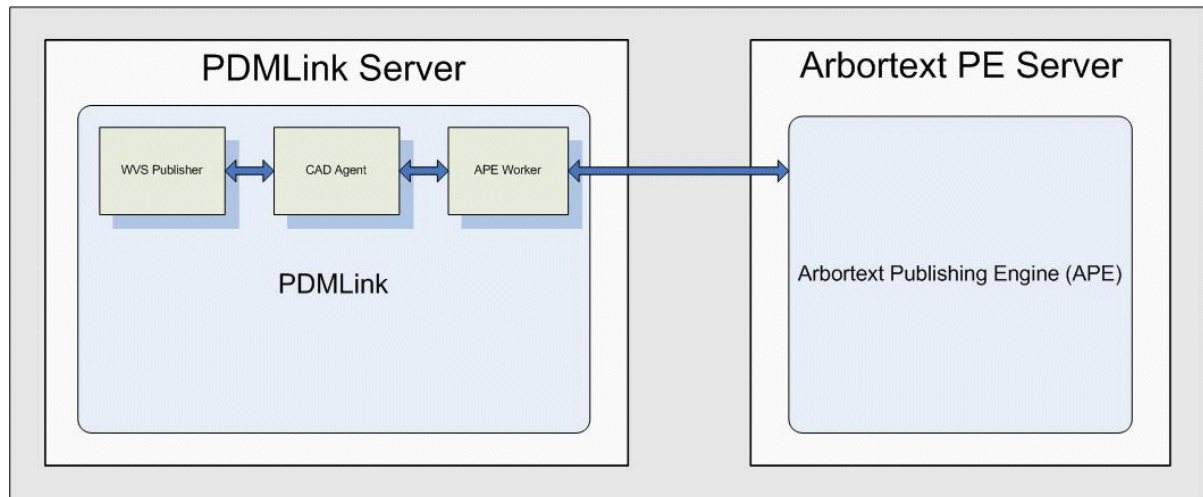
Naming Conventions

For the purposes of this documentation, the following directory name conventions will be used:

- `<Windchill>` — The Windchill installation directory.
- `<APEWorker>` — The directory that stores the worker configuration files: `arbortextEngineWorkerstart.bat` and `wvsape.properties`.

Process Overview

The diagram below illustrates the relationship between the Windchill server, Visualization Services, the CAD Agent, APE Worker and APE, to provide an understanding of what needs to be configured.



The following process is used to complete the APE Worker configuration:

1. Configure the APE Worker.
2. Configure the CAD Agent (agent.ini) using the CAD Configuration Wizard.
3. Verify that the CAD Agent, APE Worker, and AP Engine are all communicating properly.

A wvsape.properties file and a worker batch file are used to configure the APE Worker. Detailed descriptions of these files and their parameters are provided in the subsequent sections.

Configuring the APE Worker

The APE worker configuration involves a batch file that executes the APE Worker and a wvsape.properties file that is used to specify the APE Worker settings. PTC recommends that these configuration files reside in a new working directory that you create to preserve the installed worker files. This section explains how to create the batch and wvsape.properties files to configure the worker.

Follow these steps to configure the APE Worker:

1. Create a new *<APEWorker>* directory on the Windchill server, for example, C:\PTC\APEWorker, to store the worker batch and wvsape.properties files.

Note: Remote configuration is currently not supported.

2. Locate the sample configuration files in the %WT_HOME%\codebase\com\ptc\wvs\server\workers directory. In this example, the batch file name is **arbortextEngineworkerstart.bat**.
3. Copy the sample files to the new directory you created in step 1. Do not edit or move the files from their original location.
4. Using a text editor of choice, edit the worker batch file. This batch file is used as the APE Worker executable command when you configure the CAD Agent in a subsequent step.

Note: This procedure assumes you are using Windows; however, if you are on UNIX, you would create a UNIX (.sh) script.

The sample worker batch file is shown below, followed by descriptions of the settings.

```
@echo on
set WORKER_DIR=C:\ptc\apeworker
set DEBUG="-D"
set PORT="5600"
set HOST="localhost"
set TYPE="APE"
set CMDCLASS="com.ptc.wvs.server.workers.ArbortextEngineWorker"
set DIR="%WORKER_DIR%\logs"
set LOG="ape"
java -Dwvs.ape.properties=%WORKER_DIR%\wvsape.properties
com.ptc.wvs.server.cadagent.GenericWorker %DEBUG% -PORT %PORT%
-HOST %HOST% -TYPE %TYPE% -CMDCLASS %CMDCLASS% -DIR %DIR% -LOG
%LOG%
```

- set WORKER_DIR=C:\PTC\APEWorker - This value is critical and must be set to the <APEWorker> directory created in step 1.
- set DEBUG="-D" - This value is reserved for debugging and should not be changed.
- set PORT="5600" - This value can be changed, but it is not recommended to do so. If you change this value, you must ensure that it matches the "port" value in the [agent] section of the agent.ini file. 5600 is the default value.
- set HOST="localhost" - This value can be left as "localhost", but should match the hostname of the machine where the worker resides, which, for the APE Worker, will be the PDMLink machine.
- set TYPE="APE" - This value should not be changed.
- set CMDCLASS="com.ptc.wvs.server.workers.ArbortextEngineWorker" - This value should not be changed.
- set DIR="%WORKER_DIR%\logs" - This value can be changed, but it is not recommended. If you change this value, you must ensure that the path points to an empty directory.

- set LOG="ape" - This value should not be changed.
5. Save your changes to the batch file into the <APEWorker> directory.
 6. Edit the wvsape.properties file as needed. A sample properties file is shown below, followed by descriptions of the settings.

```
ape.server=http://localhost/e3/servlet/e3
ape.worker.logfile.dir=C:\\ptc\\Windchill\\logs\\arbortext\\
ape.class=com.arbortext.ptc.windchill.Compose
ape.verbose=false
ape.default.output.type=PDF
```

Note: The ape.server URL you provide should correspond to the URL associated with your current Arbortext release. The full URL should be specified.

- ape.server is the URL to the installed Arbortext PE server. It is required that you define this value.
- ape.worker.logfile.dir is the directory that stores the Arbortext worker log file. You should change this directory to match the location where you keep your log files.
- ape.class is the Java class that the APE server will use when the Arbortext worker posts a composition request to it. This value should not be changed.
- ape.verbose is a true/false switch for verbose mode.
- ape.default.output.type is the fall-through Arbortext output file type that is used if Publishing Rules are turned off (which is not recommended). The available output types are listed in the commented sample properties file, and the default output type is PDF.

Caution: The wvs.properties file contains a setting (publish.usesPublishRules=ARBORTEXT). If this property is removed from wvs.properties, WVS does not use Publishing Rules, and the ape.default.output.type described above is used instead. This is *not recommended*.

7. Save your changes into the <APEWorker> directory and close the properties file.

UNIX

For UNIX, you would create a script file instead of a batch file.

Configuring the CAD Agent

To configure the CAD Agent for the APE Worker, please refer to chapter 10 in this guide, and follow these guidelines for APE:

- Select data type **ARBORTEXT**.
- The **HOST** should be the name of the server.
- The **CAD Worker Location** should remain **Windchill Server**.
- The number of **Max Instances** in the **CAD Worker Execution Command** page of the **CAD Configuration Wizard** must match the **maxSubprocesses** value defined for the APE pool designated to WVS. Refer to the APE documentation for information about pools and maxSubprocesses.
- The Execute Command on the same page should point to the batch file you created when configuring the APE Worker, in the previous section.

Configuring Publishing for Arbortext Authored Dynamic Documents

This section describes the process of publishing Dynamic Documents that were created using the Arbortext Editor.

The WVS framework allows the publishing of Dynamic Documents, an EPMDocument soft-type, authored using Arbortext Editor. To configure publishing of these documents, you must configure the WVS Publisher for the Arbortext Authoring Application using WVS properties. You can then define and load rules for publishing the documents. These are called *publishing rules*.

Note: For detailed information about managing published jobs, refer to the *Windchill Business Administrator's Guide*.

Overview

Since its introduction at Windchill 6.0, Windchill Visualization Services (WVS) has provided a framework that allows the publishing of EPMDocuments to create a Representation for visualization. This publishing is accomplished via a worker, and is managed by the CAD Agent.

When Dynamic Documents are stored in Windchill, WVS sends a request to the Arbortext Publishing Engine based on specified publishing rules. These rules specify when the Representation is created, such as upon check-in, and the desired Representation format, such as PDF and HTML. Once the Representations are created, a WTDocument is linked to each Dynamic Document. The new WTDocument can be used as part of a downstream business process.

A new link class (PublishedContentLink) associates the WTDocuments with the Dynamic Document and Representations.

Note: The terms "Dynamic Documents" and "EPMDocuments" are both used in this section. Please note that Dynamic Documents are specific to Arbortext, and are soft types of EPMDocuments.

Configuring the WVS Publisher for the Arbortext Authoring Application

In order for the Arbortext Publishing Engine to download input files from Windchill and subsequently upload the output file, an authentication file is needed. This file is typically called *fileadapterauth.properties*.

Note: The *wvs.properties* file, located in the `%WT_HOME%\codebase\` directory, contains the following property setting, which defines the location of the *fileadapterauth.properties* file. If you change the location of this file, you must edit this property accordingly.

```
publish.cadconvert.ARBORTEXT=com.ptc.wvs.server.publish.CadConvertARBORTEXT,useworkerdownload=$(wt.home)$(wvs.dir.sep)fileadapterauth.properties,types=PDF HTML WEB POSTSCRIPT HTMLHELP RTF XML SGML,defaulttype=PDF,
```

To configure the *fileadapterauth.properties* file, follow these steps:

1. Create the *fileadapterauth.properties* file in your <Windchill> root directory (also known as `%WT_HOME%`) using a text editor of choice
2. Add an authentication variable that includes a user name and password value. This will be the only entry in this file. The syntax is :

```
auth=<username>:<password>
```

3. Replace <username> and <password> with valid values. The user should have enough privileges to read and download all Dynamic Document structures stored in Windchill that need to be published.
4. Save your changes and close the *fileadapterauth.properties* file.
5. In the **publish.cadconvert.ARBORTEXT** property described previously in this section, a default location of `$(wt.home)$(wvs.dir.sep)fileadapterauth.properties` is provided for the *fileadapterauth.properties* file. If you use a different location for this file, be sure to edit this property value to reflect the updated path. You must use the *xconfmanager* utility to make this change:

```
xconfmanager -s  
"publish.cadconvert.ARBORTEXT=com.ptc.wvs.server.publish.CadConvertARBORTEXT,useworkerdownload=$(wt.home)$(wvs.dir.sep)fileadapterauth.properties,types=PDF HTML WEB POSTSCRIPT HTMLHELP RTF XML SGML,defaulttype=PDF" -t <Windchill>\wvs.properties  
-p
```

6. Restart the Windchill servers.

Using Publishing Rules

Publishing Rules provide two basic features:

- The ability to create a first-class business object to expose the generated output from the publish, which is typically only accessible on the Representation generated by a publish job.

For example, if a PDF file is published and added to a Representation, a new WTDocument can be created to contain the PDF file as its primary content, thereby increasing the enterprise manageability of that PDF file. In addition, the new WTDocument is associated with the Representable that holds the Representation, which allows tracing of how the WTDocument was created. This association is called a *PublishedContentLink*. The Publishing Rules enable you to tailor the post-publish behavior to your needs.

- Increased control over what is published. You can specify rules for different scenarios, such as whether publishing is triggered by check-in, a schedule, or a manual creation from Windchill. You can also specify custom behaviors based on the type or number of the object that triggered the publish. Some authoring applications allow multiple output options, and the rules can help define when these particular output types are generated.

Note: It is recommended that you plan around your publishing needs before defining any rules. Currently, the only authoring application that supports publishing rules is Arbortext.

Defining Publishing Rules

When defining your Publishing Rules, you follow this process:

1. Copy the sample PublishRules.XML file from the %WT_HOME%\codebase\com\ptc\wvs\server\xml directory to the new directory you created earlier to store the worker configuration files.
2. Edit the Publishing Rules file to specify what to do when a publish job is triggered.
3. Restart the server.

An example of a publish rules file is shown below. This example below might differ from the sample file that is provided with the software.

```
<?xml version="1.0" ?>

<?xml-stylesheet href="rules2jobs.xsl" type="text/xsl"?>

<rules xmlns="http://www.ptc.com"
  xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
  xsi:schemaLocation="http://www.ptc.com PublishRulesSchema.xsd">

  <!--example of global param-set-->
  <param-set name="basic-post-publish">
    <post-publish name="name">{OUTPUT_TYPE} of EPM {EPM_NUMBER}</post-publish>
    <post-publish name="title">{OUTPUT_TYPE} Using {PARAM_SET_NAME}</post-publish>
    <post-publish name="description">Document created During Post Publishing</post-publish>
    <post-publish name="content-description">Content created by {AUTHORING_APP} worker</post-publish>
    <post-publish name="published-content-link">create</post-publish>
  </param-set>

  <!--example of global param-set with soft-type-->
  <param-set name="typed-post-publish">
    <include param-set="basic-post-publish"/>
  </param-set>
</rules>
```

```

    <post-publish name="type">wt.doc.WTDocument|com.ptc.CustomDocument</post-publish>
    <iba name="myAttrib1">true</iba>
    <iba name="myAttrib2">value of myAttrib2</iba>
  </param-set>

<authoring-application name="ARBORTEXT">

  <param-set name="basic-arbortext-worker">
    <!-- The following is an example of passing additional parameters to APE
    <worker name="stylesheet">$acme::stylesheetsdir/mydoctype.style</worker>
    -->
  </param-set>

  <param-set name="basic-arbortext-job">
    <include param-set="basic-arbortext-worker"/>
    <include param-set="basic-post-publish"/>
    <!-- Illustrate override of Parameter. The following takes precedence. -->
    <post-publish name="name">{OUTPUT_TYPE} of Arbortext Document {EPM_NUMBER}</post-publish>
  </param-set>

  <epm-number number="0000100.XML">
    <param-set name="special-job">
      <include param-set="basic-arbortext-job"/>
      <post-publish name="name">Company Product Catalog</post-publish>
    </param-set>
    <publish on="checkin" output="PDF" param-set="special-job"/>
    <publish on="schedule" output="PDF" param-set="special-job"/>
    <publish on="create-representation" output="PDF" param-set="special-job"/>
  </epm-number>

  <epm-type type="wt.epm.EPMDocument|com.ptc.DynamicDocument|com.ptc.CustomDynamicDocument">
    <publish on="create-representation" output="PDF" param-set="typed-post-publish"/>
    <publish on="create-representation" output="HTML" param-set="basic-arbortext-job"/>
  </epm-type>

  <publish on="checkin" output="PDF" param-set="basic-post-publish"/>
  <publish on="checkin" output="HTML" param-set="basic-post-publish"/>
  <publish on="checkin" output="WEB" param-set="basic-post-publish"/>

</authoring-application>
</rules>

```

Defining General Post-Publishing Behavior

Global param-sets are used to define general post-publishing parameters.

In the sample publishing rules file shown in the previous section, there is a global param-set `<param-set name="basic-post-publish">`. This param-set contains an example that defines how WTDocuments are created as part of the post-publishing process.

Below is a list of the available post-publish parameters.

- **name** – Name of the WTDocument to be created/iterated. If this value is not specified or if an empty string, a WTDocument is not created.
- **number** – Number of the WTDocument to be created. If this value is not specified, Windchill assigns one.
- **type** – Soft Type of the WTDocument to be created. If this value is not specified, a simple WTDocument is created.
- **title** – Title of the WTDocument.
- **description** – Description of the WTDocument.

- department – Department to associate with the WTDocument. If this value is not specified, Windchill uses the default value. If this value is specified, the Department must be currently defined.
- container-oid – The Object Identifier String in which the WTDocument is to be contained. If this value is not specified, the WTDocument is placed in the same Container as the EPMDocument being published.
- folder – The Name of the Folder (relative to the Container) for the WTDocument.
- content-description – A description for the Content of the WTDocument.
- lifecycle-template – The Lifecycle Template to associate with the WTDocument.
- lifecycle-state – The Lifecycle State to assign to the WTDocument's LifeCycle.
- create-published-content-link – Specifies if a PublishedContentLink is to be established between the Representable (the EPMDocument) and the WTDocument. The link is established if the element value is 'true', 'yes', or 'create.' If any other value is specified, the link is not created.

If you want to create a soft-typed WTDocument or set IBA values as a result of post-publishing, refer to the example `<param-set name="typed-post-publish">`, which uses some of the parameters that are defined above and are not included in the “basic-post-publish” example. This example also shows how you can include one param-set within another, using the `<include param-set="basic-post-publish"/>` parameter.

The post-publish tags contain some substitution flags, which can be used to help provide information such as names and descriptions of items. These substitution flags are listed below:

- EPM_NAME – Name of the EPMDocument being published.
- EPM_NUMBER – Number of the EPMDocument being published.
- EPM_TYPE – The EPMDocument's Soft Type.
- AUTHORING_APP – The EPMDocument's Authoring Application.
- OUTPUT_TYPE – The type of data to be produced.
- PARAM_SET_NAME – Name of the 'param-set' being published.

Defining Application-Specific Post-Publishing Behavior

You can define publishing parameters for a specific authoring application. The previous example shows the authoring-application tag, which is ARBORTXT.

Using the authoring-application tags, you can define application-specific post-publish parameters. This is illustrated by the two param-sets in the example: `<param-set name="basic-arbortext-job">` and `<param-set name="basic-arbortext-`

worker">. **Note:** Param-set names must be unique, and keep in mind that XML is generally case-sensitive.

- The “basic-arbortext-job” demonstrates how you can include other param-sets. This can include param-sets defined both inside and outside the authoring-application tags.
- The “basic-arbortext-worker” param-set, shown in the previous sample file, illustrates the correct syntax. If you need to add parameters, consult the "f=convert" section of the Programmers' Guide documentation for the Arbortext Publishing Engine.

Defining Publishing Behavior for an Application

Publishing behavior is defined by attempting to match the number or type of the object being requested for publishing. The first level is to search for a matching EPMNumber. If there is no number match, the second level is to search for a matching EPMTYPE. Both of these matches are described next.

Note: You can define multiple “epm-number” tag and "epm-name" sets.

- **“epm-number” Match** - The sample file above shows the number <epm-number number="0000100.XML">. If the object requested for publishing matches this number, “0000100.XML”, this rule will be used and no other matches will be processed.

This example shows that you can define a param-set, and include another predefined param-set to override a specific parameter; in this case, “name” is being overridden from the “basic-arbortext-job” param-set.

- **“epm-type” Match** - If there is no EPMNumber match, the next step is a search for matching EPMTYPES. The sample file shows the type <epm-type type="wt.epm.EPMDocument|com.ptc.DynamicDocument|com.ptc.CustomDynamicDocument">. If the object requested for publishing is of the type "CustomDynamicDocument", this rule will be used and no other match will be processed.

Note: The soft-type used by a Dynamic Document created with the Arbortext Editor is determined by the associated burst configuration file. Please consult the "Windchill Connection" section of the Arbortext Editor documentation for more information about configuring burst configuration files.

Note: The custom soft-type must be preceded by all of its parent types all the way up to wt.epm.EPMDocument.

After searching for a match, one of the following results occurs:

- If a match is found, tags shown below will display between the “epm-number” or “epm-type” tags in the Publish Rules file:

```
<publish on="checkin" output="PDF" param-set="special-job"/>
<publish on="schedule" output="PDF" param-set="special-job"/>
```

```
<publish on="create-representation" output="PDF" param-  
set="special-job"/>
```

These tags have the following attributes:

- **on** – the reason the publish processing was started, which can be any of the following:
 - checkin – a checkin was performed
 - schedule – a scheduled job started
 - create-representation – a manual creation of a representation was performed
- **output** – defines the output type for the worker to produce. The legitimate values are different for each worker. Available values are:
 - PDF
 - HTML
 - WEB
 - POSTSCRIPT
 - HTMLHELP
 - RTF
 - XML
 - SGML

Note: Please refer to the most current Arbortext Publishing Engine (APE) documentation for information on supported file formats. The HTMLHELP output format is only supported if APE is running on Windows and the "HTML Help Workshop" has been installed on the APE server.

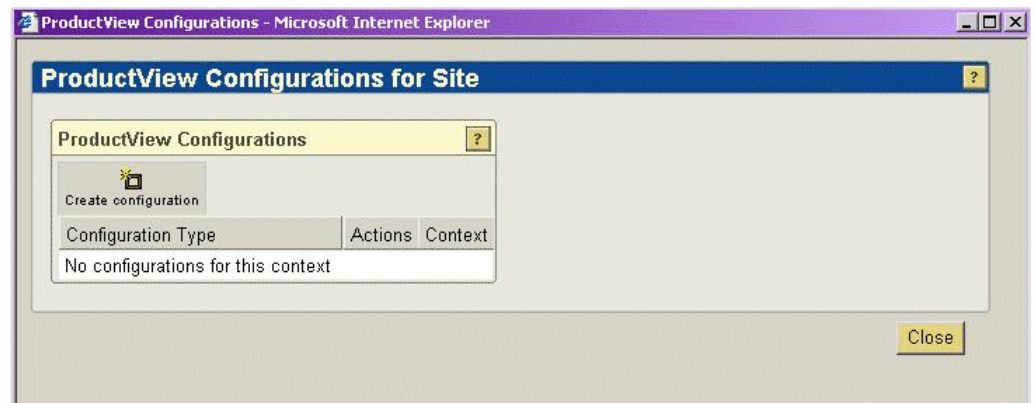
- **param-set** – the param-set to be used for this publish. This value can be the param-set defined in the current match (epm-number or epm-type), the current authoring application, or one of the global param-sets.
- If the epm-number or epm-type rules are not matched, WVS checks for general publish rules.

Caution: Although general publish rules can be specified, it is recommended that you do not use them. For example, if you set a general publish rule to create a PDF representation on check-in, every time any DynamicDocument object is checked in, the PublishRules file will be processed and a PDF will be created for any objects not matching the epm-number or epm-type rules. If one of the objects you check in contains dependant objects, a PDF representation will be created for each of the dependant objects as well, assuming they do not contain matching epm-numbers or epm-types.

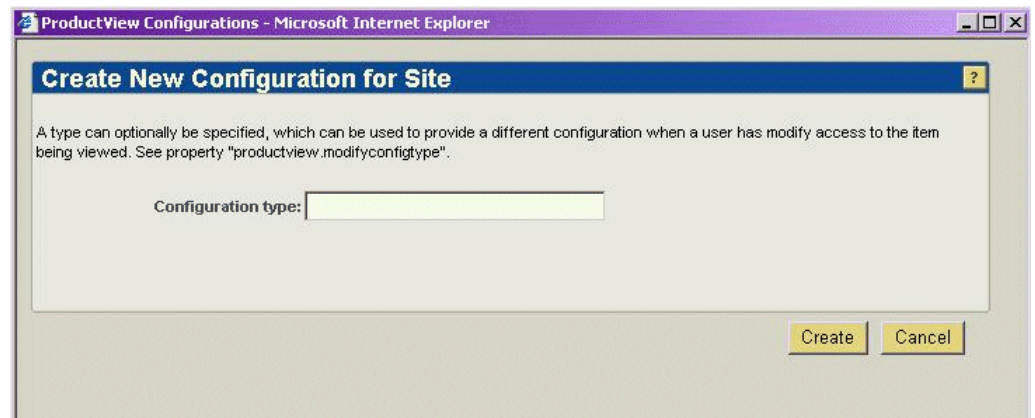
Loading Publishing Rules

Follow these steps to load your Publishing Rules. You must be logged on as a Site Administrator to access the windows shown in this example.

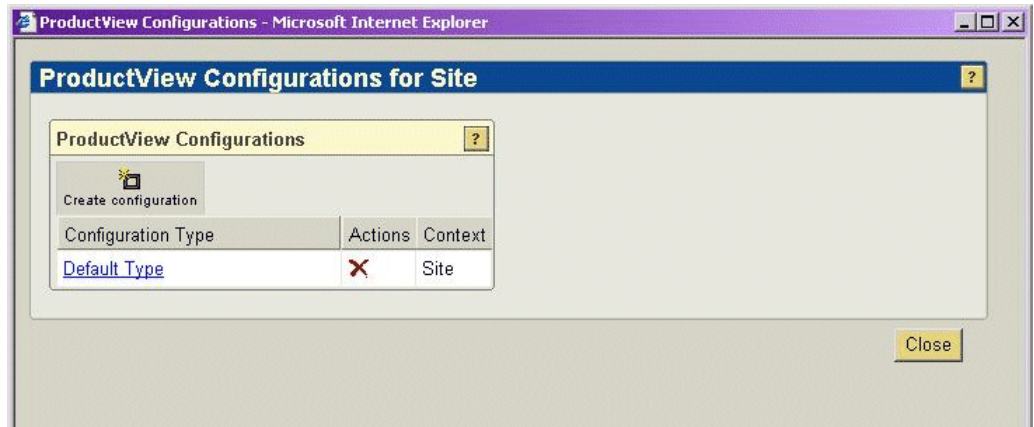
1. From the **Windchill Home** page, go to the **Site > Utilities** tab.
2. Select **ProductView Configuration Administrator**. This displays the **ProductView Configurations for Site** dialog box. This example assumes there are no current configurations defined.



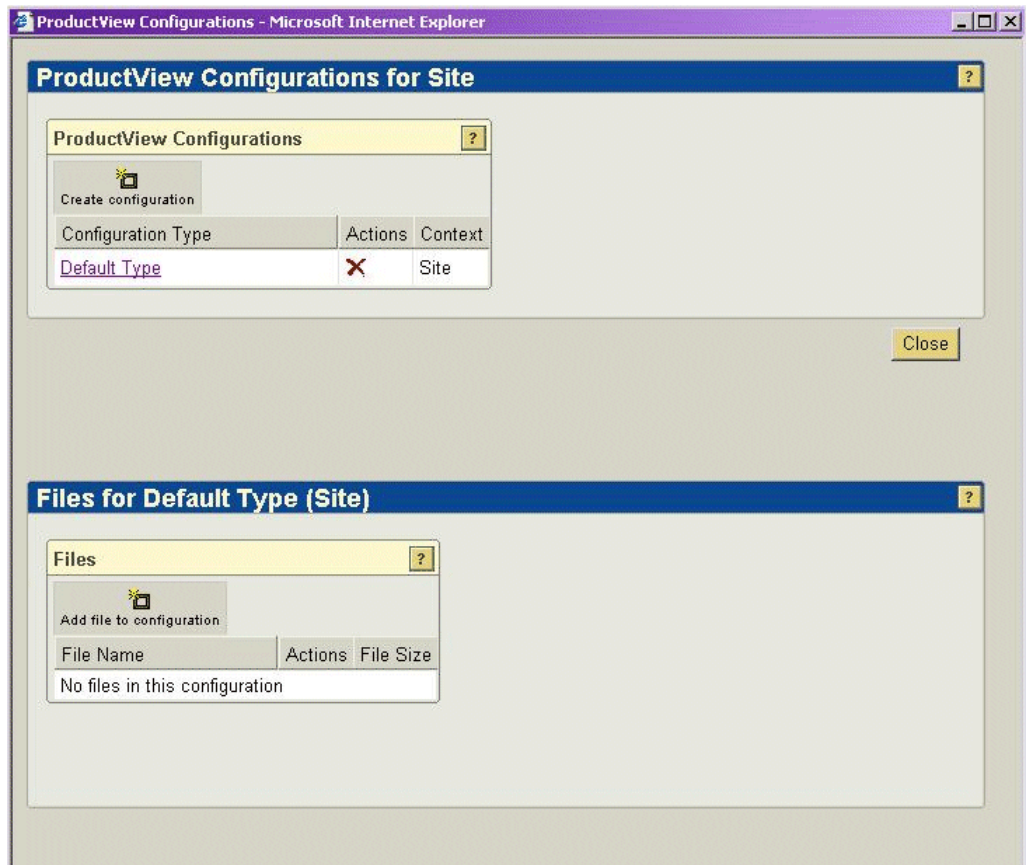
3. Click **Create Configuration** to create a new configuration at the Site level. This displays the **Create New Configuration for Site** dialog box.



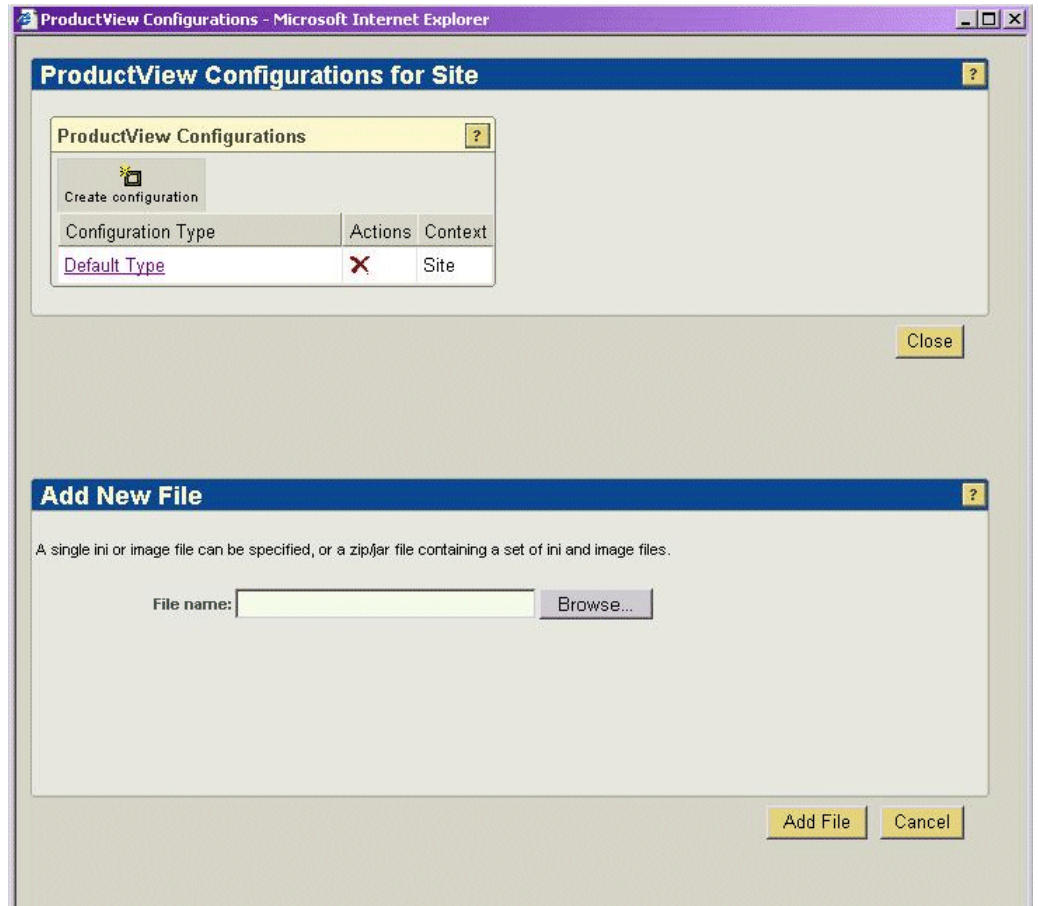
4. Type the name for the configuration you are creating, and click **Create**. In this example, the configuration will be called **Default Type**. The **ProductView Configurations for Site** dialog box displays again, with the new configuration listed in the table.



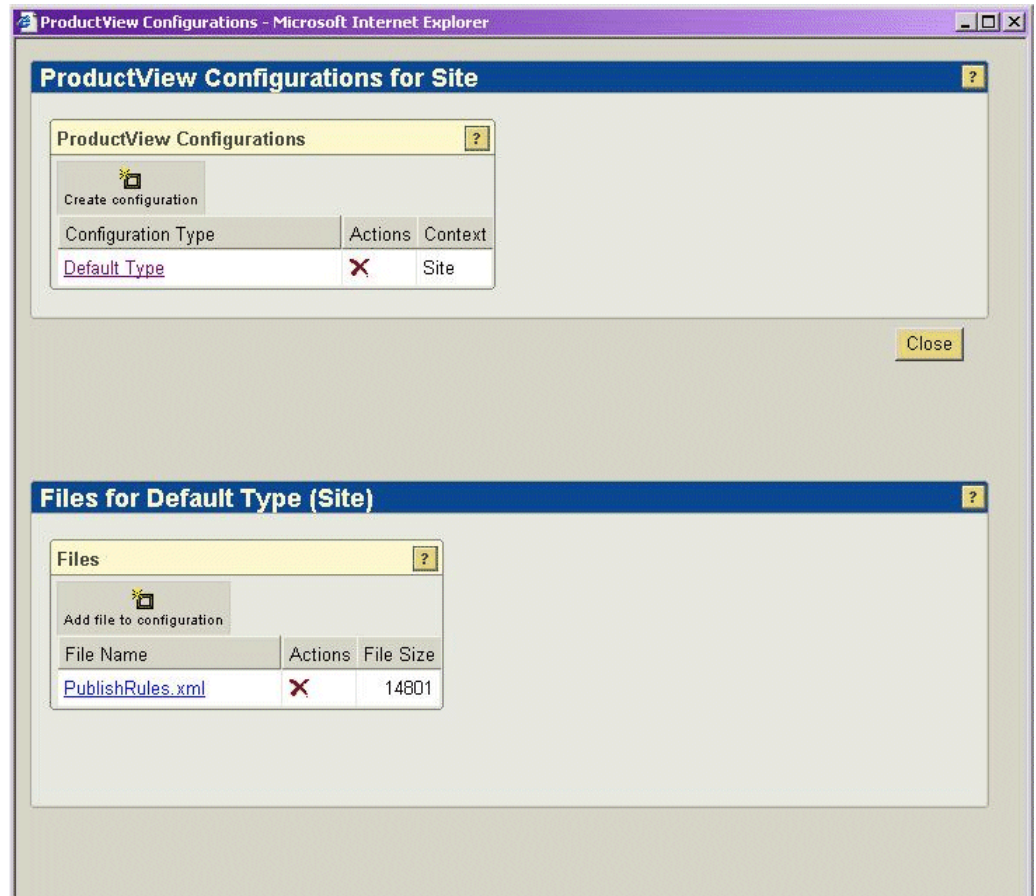
- Under **Configuration Type**, select **Default Type**. This displays the **Files for Default Type** list in the **ProductView Configurations** dialog box. When you first create a configuration, the file list will be empty. The next step is to add a file to the configuration.



- In the **Files for Default Type** box, click **Add File to Configuration**. The **Add New File** dialog box displays.



7. Click **Browse** and select the publishing rules XML file you want to load. Click **Add File** to load the XML file to the configuration.



8. If you change the publishing rules, you must restart the Windchill server. Then, you repeat the steps in the wizard above to load the updated publish rules file. When you see the old file listed in the **Files for Default Type** list shown above, delete it. Then, click **Add file to configuration**, and select the updated file. You must then restart Windchill to apply your changes.

Note: For more advanced configuration, you can override the Site template by adding a template at the Organization level. Or, you can add a template to the Library or Product within the Organization to apply just to those specific areas.

IV

Using Publish Rules

13

Using Publish Rules

This chapter provides an overview of publish rules, along with instructions on enabling, evaluating, and creating publish rules, along with post-publishing.

Topic	Page
About Publish Rules.....	13-2
Enabling Publish Rules	13-2
Evaluating Publish Rules.....	13-3
Post-Publishing.....	13-11
Examples of Publish Rules XML Files	13-15
Creating Publish Rules	13-18

About Publish Rules

Publish Rules provide two basic features:

- The ability to create a first-class business object to expose the generated output from the publish job, which is typically only accessible on the Representation generated by a publish job.

For example, if a PDF file is published and added to a Representation, a new WTDocument can be created to contain the PDF file as its primary content, thereby increasing the enterprise manageability of that PDF file. In addition, the new WTDocument is associated with the Representable that holds the Representation, which allows historical tracking of the WTDocument's primary content. This association is called a *PublishedContentLink*. The Publish Rules allow you to tailor the post-publish behavior to your needs.

- Increased control over what is published. You can specify rules for different scenarios, such as whether publishing is triggered by check-in, a schedule, or a manual creation from Windchill. You can also specify custom behaviors based on the type or number of the object that triggered the publish. Some authoring applications allow multiple output options, and the rules can help define when these particular output types are generated.

Note: The terms *Dynamic Documents* and *EPMDocuments* are both used in this chapter. Please note that Dynamic Documents are specific to Arbortext, and are soft types of EPMDocuments.

Note: Publish Rules are specified using an XML file. It is assumed the reader of this document has a basic understanding of XML.

Enabling Publish Rules

The Site Administrator must establish that Publish Rules Processing is to be used. This is done by including the names of all Authoring Applications that will use Publish Rules Processing in the WVS Property `publish.usesPublishRules`; for example:

```
publish.usesPublishRules=ARBORTEXT PROE
```

indicates that EPMDocuments authored by ARBORTEXT or PRO/ENGINEER will make use of Publish Rules Processing; all other Authoring Applications will not be affected by Publish Rules in this example.

The process for enabling publish rules is outlined below:

1. An Administrator must load a Publish Rules XML file into a WVS Configuration Template. The Administrator can create WVS Configuration Templates in Product/Project/Library, Organization, or Site Containers.
2. When determining whether to publish an EPMDocument, WVS checks whether the authoring application for the EPMDocument is listed in WVS Property `publish.usesPublishRules`.

3. If WVS finds the authoring application in the publish.usesPublishRule file, the EPMDocument's Product/Project/Library, Organization, and Site Containers are searched hierarchically for a WVS Configuration Template containing a Publish Rules XML file.
 - The first Publish Rules file found during that search will be used during Publish Rules Evaluation.
 - If a Publish Rules file is not found during this search, processing will continue as if the Authoring Application was not configured for Publish Rules Processing.

Evaluating Publish Rules

Events that Trigger Publish Rules Evaluation

Publish Rules Evaluation is triggered by the following events:

- Checkin of the EPMDocument.
- Scheduled publishing of the EPMDocument.
- User selection of the “Create Representation” action on the EPMDocument's Representations List (or its associated WTPart's Representations List).

Evaluating Publish Rules

This section describes the logic of Publish Rules evaluation and includes fragments of Publish Rules files. Unless otherwise stated, the evaluation process uses case-sensitive string comparisons.

The Publish Rules file is a well-formed XML document, with <rules> being its root element.

Keep in mind that this section attempts to provide a high-level overview of the evaluation process. Many of the details you will need to successfully construct your own Publish Rule files are in the sections that follow. There are also specific examples at the end of this chapter.

Note: Parameters and values in the publish rules file are case sensitive.

Step 1: Matching <authoring-application>

The <rules> element should have one <authoring-application> child for each Authoring Application specified in the WVS Property publish.usesPublishRules.

For example, to specify Arbortext and Pro/ENGINEER as authoring applications, these commands would be used:

```
<rules>
  <authoring-application name="ARBORTEXT">
```

```

        *
        *
        *
    </authoring-application>

    <authoring-application name="PROE">
        *
        *
        *
    </authoring-application>
</rules>

```

In general, the concept is:

```

<rules>

    <authoring-application name="MY_AUTH_APP">
        *
        *
        *
    </authoring-application>
</rules>

```

Publish Rules Evaluation searches for the <authoring-application> element with a ‘name’ attribute matching the EPMDocument’s Authoring Application. If a match is not found, no Publish Jobs are generated; otherwise, evaluation proceeds to Step 2.

Step 2: Matching <epm-number>

Evaluation continues by searching the children of the <authoring-application> element matched in Step 1 for an <epm-number> element whose ‘number’ attribute matches the EPMDocument’s Number.

Note: <authoring-application> elements can have children other than <epm-number> elements; those elements are ignored in this step even if they appear in the Publish Rules XML file before <epm-number> elements.

```

<authoring-application name="MY_AUTH_APP">
    <epm-number number="1111">
        *
        *
    </epm-number>
</authoring-application>

```



```

      *

    </epm-number>

    <epm-number number="2222">
      *
      *
      *
    </epm-number>
  </authoring-application>

```

If a match is found, the matched `<epm-number>` element becomes the root for searching for `<publish>` elements, which is described in Step 7; otherwise, evaluation proceeds to Step 3.

Step 3: Matching `<epm-iba>` with ‘value’ attribute present

Evaluation continues by searching the children of the `<authoring-authoring>` element matched in Step 1 for an `<epm-iba>` element corresponding to an IBA Name/Value pair within the EPMDocument.

Note: The ‘value’ attribute of `<epm-iba>` is an optional attribute; Step 3 only considers those `<epm-iba>` elements whose ‘value’ attribute is present. We will discuss what happens when no ‘value’ attribute is present in Step 4.

```

<authoring-application name="MY_AUTH_APP">
  <epm-iba iba="IBA_NAME_1" value="IBA_VALUE_1">
    *
    *
    *
  </epm-iba>

  <epm-iba iba="IBA_NAME_2" value="IBA_VALUE_2">
    *
    *
    *
  </epm-iba>
</authoring-application>

```

If a match is found, the matched `<epm-iba>` element becomes the root for searching for `<publish>` elements, which are described in Step 7; otherwise, evaluation proceeds to Step 4.

Step 4: Matching <epm-iba> without 'value' attribute present

Evaluation continues by searching the children of the <authoring-application> element matched in Step 1 for a <epm-iba> element whose 'iba' attribute matches to an IBA Name within the EPMDocument.

Note: The 'value' attribute of <epm-iba> is an optional attribute; Step 4 only considers those <epm-iba> elements whose 'value' attribute is not present. The <epm-iba> elements that meet this criteria are considered in the order they appear in the Publish Rules XML file.

```
<authoring-application name="MY_AUTH_APP">

  <epm-iba iba="IBA_NAME_1">

    *

    *

    *

  </epm-iba>

  <epm-iba iba="IBA_NAME_2">

    *

    *

    *

  </epm-iba>

</authoring-application>
```

If a match is found, the matched <epm-iba> element becomes the root for searching for <publish> elements, which are described in Step 7; otherwise, evaluation proceeds to Step 5.

Step 5: Matching <epm-type>

Evaluation continues by searching the children of the <authoring-application> element matched in Step 1 for an <epm-type> element with a 'type' attribute matching the EPMDocument's Object Type. The value of the 'type' attribute is the EPMDocument's *Logical Identifier*. Logical Identifiers are defined in the Windchill Type Manager.

Note: For more information about the Windchill Type Manager, refer to the *Windchill Business Administrator's Guide* chapter entitled "Using Types and the Type Manager".

```
<authoring-application name="MY_AUTH_APP">

  <epm-type type="MyLogicalId">

    *

  </epm-type>

</authoring-application>
```

```

        *
        *
    </epm-type>

    <epm-type type="AnotherLogicalId">
        *
        *
        *
    </epm-type>
</authoring-application>

```

If a match is found, the matched <epm-type> element becomes the root for searching for <publish> elements, which are described in Step 7; otherwise, evaluation proceeds to Step 6.

Step 6: Fall-through matching

If evaluation has not found a search root in any of the previous steps, the <authoring-application> element becomes the root for searching for <publish> elements. Publish elements are described in Step 7.

An example of fall-through publishing is provided next:

```

<authoring-application name="MY_AUTH_APP">
    <epm-number number="1111">
        *
        *
        *
    </epm-number>

    <epm-type type="MyLogicalId">
        *
        *
        *
    </epm-type>

    <!-- Begin: Fall-through search root -->
    *
    *

```

```

*

<!-- End: Fall-through search root -->

</authoring-application>

```

In this example, if the EPMDocument's number is not 1111 or does not have the logical identifier "MyLogicalId", the search root becomes the <authoring-application> (as noted between the Begin and End comment lines above).

Note: Using the fall-through matching is not a recommended practice, as you lose control of the ability to bypass publishing on any EPMDocuments for a particular authoring application. Fall-through matching is useful when testing Publish Rules, allowing you to focus only on matching the <authoring-application>.

Step 7: Matching <publish>

Steps 2 through 6 determine a root for searching for <publish> elements. This root can be an <epm-number>, <epm-iba>, <epm-type>, or <authoring-application> element.

A Publish Job will be created for each <publish> element child of the root whose 'on' attribute matches the event that caused Publish Rules Evaluation to be invoked. If no <publish> elements are matched, no Publish Jobs will be created.

```

< ... root for publishing ... >

  <publish on="checkin" param-set="SET1"/>

  <publish on="checkin"/>

  <publish on="schedule" output="VALID_WORKER_OUTPUT" param-
set="SET1"/>

</ ... end of root for publishing ... >

```

For each match, the attributes of the matched <publish> element are processed. The possible attributes are as follows:

on - The possible 'on' values correlate to the triggers described at the very beginning of this section. They are "checkin", "schedule", and "create-representation". (A fourth trigger called "manual-post" is described later in this document.) In the example above, there are three "on" values: two for checkin and one for schedule. If the trigger for Publish Rules evaluation was due to a checkin of an EPMDocument, two publish jobs would be created. If the trigger was due to a scheduled job of an EPMDocument, one publish job would be created. If the trigger was due to the manual create representation wizard from the user interface, no publish jobs would be created.

output - If an 'output' attribute is present (as shown in the third <publish> line above), it will be part of the information in the Publish Job that can be used by the Worker. The use of this attribute is not valid for all Workers.

param-set - If a 'param-set' attribute is present, the Publish Rules XML file is searched for a <param-set> element with a 'name' attribute matching the value of the 'param-set' attribute. Step 8 describes the processing of a matched <param-set> element. In the example above, the param-set value is "SET1".

Step 8: Processing <param-set>

<param-set> elements can appear anywhere between the <rules> tags within the Publish Rules XML file. It is often useful to reference the same <param-set> element from several <publish> elements. The children of a <param-set> element contain information that will be part of the Publish Job. The information is contained in the following elements:

post-publish – These elements are used to pass necessary information to the PostPublishDelegate. Post-publishing is described later in this document.

iba – These elements are also used to pass optional information to the PostPublishDelegate, which is described later.

worker – This element is used to pass extra information to the Worker if the Worker supports it. The worker is determined by the authoring application of the EPMDocument that is being used during the evaluation.

These elements have an identical structure; each has a 'name' attribute to identify the parameter and the text content of the element is the parameter's value.

```
<param-set name="SET1">
    <post-publish name="name1">VALUE1</post-publish>
    <post-publish name="name2">VALUE2</post-publish>
    <iba name="iba_name1">IBA_VALUE1</iba >
    <iba name="iba_name2">IBA_VALUE2</iba >
    <worker name="worker_info_name">WORKER_INFO_VALUE</ worker >
</param-set>
```

A <param-set> element can have any number of <worker>, <post-publish>, and <iba> elements; however, unlike most of the other evaluation steps, the order of appearance is important. When Step 7 matches a <publish> element, the evaluation process constructs an internal table for each element, for example, a table for <worker>, a table for <post-publish>, and a table for <iba>. The children of the <param-set> element are retrieved in the order they appear in the file.

As each child is processed, the tables are populated with name/value pairs. Parameter names must be unique within each table, but are not required to be unique across tables. (For example, you can have the same <post-publish> name and <iba> name, but you can't have two <post-publish> names be the same.)

When a child is processed, if its parameter identifier was previously encountered, its table entry will be updated with a new parameter value, thus replacing previously encountered values for the same name.

A `<param-set>` element can also have `<include>` element children. The `<include>` element adds the parameters associated with a specified `<param-set>` to the tables. This is akin to calling a subroutine.

```
<param-set name="SET1">

    <include param-set="COMMON"/>

    <post-publish name="name">From SET1</post-publish>

</param-set>

<param-set name="COMMON">

    <post-publish name="name">From COMMON</post-publish>

</param-set>
```

In the above fragment, if the SET1 `<param-set>` was referenced in the Publish Rules file, the `<post-publish>` parameter ‘name’ will have the value ‘From SET1’ because the `<include>` element in SET1 appears before the `<post-publish>` element. If the elements were reversed, the value would be ‘From COMMON’.

The `<include>` element effectively allows `<param-set>` elements to be chained together. After the entire chain is processed, processing proceeds to Step 9.

Step 9: Substitution of text values

After the `<param-set>` elements have been processed and the parameter tables of Step 8 have been populated, the parameter values in the tables are scanned for Substitution Keys. A *Substitution Key* is a predefined sequence of characters (always beginning with an opening brace and ending with a closing brace) which, when encountered, is replaced with information shown in the table below.

Substitution Key	Data Substituted
{AUTHORING_APP}	Source EPMDocument’s Authoring Application
{EPM_NAME}	Source EPMDocument’s Name
{EPM_NUMBER}	Source EPMDocument’s Number
{EPM_TYPE}	Source EPMDocument’s Type
{OUTPUT_TYPE}	Value of ‘output’ attribute of <code><publish></code> element
{PARAM_SET_NAME}	Value of ‘param-set’ attribute of <code><publish></code> element

For example, if the following element were encountered in a `<param-set>`:

```
<post-publish name="name">{EPM_NUMBER} authored by  
{AUTHORING_APP}</post-publish>
```

The Name of the target Object would be something like the following. (In this example, the number of the EPMDocument is 000047.)

```
000047 authored by MY_AUTH_APP
```

Once all substitutions have been made, the parameter tables are associated with the Publish Job and evaluation returns to Step 7 to search for additional <publish> elements.

Step 10: Evaluation Complete

After the Publish Rules are evaluated, you will have zero to many publish jobs for a single EPMDocument. Additionally, you may have defined post-publishing and worker-specific parameters for some or all of the publish jobs that were created.

The publish job creates a Representation; that process is discussed in detail in this guide. Then, you can apply post-publishing to the representation; this process is described next.

Post-Publishing

In the previous section, post-publishing was mentioned, but not explained. Post-publishing is the process of executing delegated code after a representation has been successfully created and stored. The code that executes is called a *PostPublishDelegate*.

There are currently two *PostPublishDelegate* classes that exist: *DefaultPostPublishDelegate* and *EPMPostPublishDelegate*.

Note: The <iba> elements are only used when the Object the delegate creates has an Instance Based Attribute defined. The Administrator must have previously defined the Instance Based Attributes for the Object Type being created or iterated.

DefaultPostPublishDelegate

The *DefaultPostPublishDelegate* is specific to ARBORTEXT authored DynamicDocuments (EPMDocuments).

Once the publishing of a DynamicDocument is complete and a representation is stored, the *DefaultPostPublishDelegate* copies the content of the representation to a WTDocument. This is done to give enterprise control and visibility of the published content separately from the DynamicDocument structure, while maintaining a record of the association through a *PublishedContentLink*. Additionally, if the WTDocument already exists, the delegate code will iterate the WTDocument, thus providing a means to track the history through the iteration history of the WTDocument.

The table below lists the valid <post-publish> parameter names for the DefaultPostPublishDelegate and describes how each parameter is used.

Required Parameters

The following parameters are required for the DefaultPostPublishDelegate class.

Parameter Name	Definition
delegate	Must be com.ptc.wvs.server.publish.DefaultPostPublishDelegate
name	The Name of the Object that the PostPublishDelegate is to create/iterate. The Name must be unique among all Objects of its Type in order to guarantee that the delegate finds the right Object to iterate.

Optional Parameters

The following parameters are optional for the DefaultPostPublishDelegate class.

Parameter Name	Definition
numbered	The Number of the Object that the PostPublishDelegate is to create/iterate. If specified, the Number must be unique among all Windchill Objects of this Type. If not specified, the Number is automatically generated.
type	The Type of Object that the PostPublishDelegate is to create. If specified, the Type can be specified by its Logical Identifier and must be a soft-type of wt.doc.WTDocument. If not specified, the DefaultPostPublishDelegate creates a wt.doc.WTDocument.
title	Title of the WTDocument.
description	Description of the WTDocument.
container-oid	The Object Identifier String in which the WTDocument is to be contained. If this value is not specified, the WTDocument is placed in the same Container as the EPMDocument being published.

Parameter Name	Definition
folder	The Name of the Folder (relative to the Container) for the WTDocument.
content-description	A description for the Content of the WTDocument.
lifecycle-template	The Lifecycle Template to associate with the WTDocument.
lifecycle-state	The Lifecycle State to associate with the WTDocument.
published-content-link	The create Published Content Link indicator. If true, yes, or create, a Published Content Link is created. If not specified or any other value, a Published Content Link is not created.

EPMPostPublishDelegate

The EPMPostPublishDelegate will generically handle any CAD authoring application.

Once publishing of an EPMDocument is complete and a representation is stored, the EPMPostPublishDelegate creates a ProductView archive file (EDZ) of the representation's content and stores the archive to a new EPMDocument. This provides the ability to insert the new EPMDocument into an Arbortext DynamicDocument structure and view the lightweight CAD data in the Arbortext Editor.

Additionally, any markups and annotations can be used in the Editor and subsequently published to provide tightly controlled, lightweight figures/illustrations in technical publications that are tied to real modeled CAD data. Similar to the DefaultPostPublishDelegate, a PublishedContentLink is maintained between the CAD data and the lightweight data objects for use with Arbortext Editor.

The table below lists the valid <post-publish> parameter names for the EPMPostPublishDelegate and describes how each parameter is used.

Required Parameters

The following parameters are required for the EPMPostPublishDelegate class.

Parameter Name	Definition
delegate	Must be com.ptc.wvs.server.publish.EPM PostPublishDelegate

Parameter Name	Definition
name	The Name of the Object that the PostPublishDelegate is to create/iterate. The Name must be unique among all Objects of its Type in order to guarantee that the delegate finds the right Object to iterate.
cad-authoring-application	The Authoring Application to associate with the EPMDocument to be created.

Optional Parameters

The following parameters are optional for the EPMPublishDelegate class.

Parameter Name	Definition
numbered	The Number of the Object that the PostPublishDelegate is to create/iterate. If specified, the Number must be unique among all Windchill Objects of this Type. If not specified, the Number is automatically generated.
type	The Type of Object that the PostPublishDelegate is to create. If specified, the Type can be specified by its Logical Identifier and must be a soft-type of wt.doc.WTDocument. If not specified, the EPMPublishDelegate creates a wt.epm.EPMDocument.
description	Description of the EPMDocument.
container-oid	The Object Identifier String in which the EPMDocument is to be contained. If this value is not specified, the EPMDocument is placed in the same Container as the source EPMDocument.
folder	The Name of the Folder (relative to the Container) for the EPMDocument.
content-description	A description for the Content of the EPMDocument.
lifecycle-template	The Lifecycle Template to associate with the EPMDocument.

Parameter Name	Definition
lifecycle-state	The Lifecycle State to associate with the EPMDocument.
cad-type	If not specified, the EPMPublishDelegate uses the value PUB_CADVIEWABLE. Note: This parameter is for advanced users only.
published-content-link	The create Published Content Link indicator. If true, yes, or create, a Published Content Link is created. If not specified or any other value, a Published Content Link is not created.

Manual Post Publishing

It is also possible to execute only the post-publishing portion of the Publish Rules. This extra flexibility allows you to separately control publishing and the execution of a PostPublishDelegate.

Step 7 in the previous section mentioned that there is a fourth value for the ‘on’ attribute called “manual-post”. Creating a <publish> element that uses “manual-post” will specify what EPMDocuments can have manual post-publishing of their representations invoked. For example:

```
< ... root for publishing ... >
  <publish on="checkin"/>
  <publish on="manual-post" param-set="MY_PARAM_SET"/>
</ ... end of root for publishing ... >
```

When the Representations Listing is displayed for an EPMDocument (or associated WTPart), the Publish Rules are evaluated for a match on the EPMDocument and a manual-post publish element. If the evaluation yields Publish Job(s), the Post Publish action is enabled in the Representation Listing. If the User selects the action, the PostPublishDelegate for each Publish Job is executed.

Note: A Worker is not involved in this interaction.

Examples of Publish Rules XML Files

This Section contains complete Publish Rules XML File examples.

Simple Arbortext Publishing

This example publishes all ARBORTEXT authored EPMDocuments when they are checked in, when a user creates a representation via the Create Representation

Wizard, or when the EPMDocument is included in scheduled publishing. A PDF file will be created by the Worker and stored as part of the Representation. The DefaultPostPublishDelegate will be invoked when the Worker completes to create/iterate a WTDocument whose content will be the PDF created by the Worker.

Highlights

- The use of Substitution Keys to define the Name of the WTDocument that will be created/iterated.
- Several <publish> elements make use of the same <param-set>.

```
<rules xmlns="http://www.ptc.com"
      xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
      xsi:schemaLocation="http://www.ptc.com PublishRulesSchema.xsd">
  <authoring-application name="ARBORTEXT">
    <param-set name="Share with WTDocument">
      <post-publish
name="delegate">com.ptc.wvs.server.publish.DefaultPostPublishDelegate</post-
publish>
      <post-publish name="name">{OUTPUT_TYPE} {AUTHORING_APP} {EPM_NUMBER}</post-
publish>
      <post-publish name="published-content-link">create</post-publish>
    </param-set>
    <publish on="checkin" output="PDF" param-set="Share with WTDocument"/>
    <publish on="create-representation" output="PDF" param-set="Share with
WTDocument"/>
    <publish on="schedule" output="PDF" param-set="Share with WTDocument"/>
  </authoring-application>
</rules>
```

Creating Arbortext Documents from CAD Documents

This examples publishes PRO/ENGINEER and SolidWorks authored EPMDocuments. If the EPMDocument has an IBA named PUBLISH TO ARBORTEXT or if a user manually invokes Post Publishing on an existing Representation, the EPMPublishDelegate will be invoked to create/iterate an ARBORTEXT authored Dynamic Document.

Highlights

- Multiple Authoring Applications are making use of a single <param-set>.

- All PRO/ENGINEER and SolidWorks authored EPMDocuments will be published, but the EPMPublishDelegate will only be invoked for those that have the specified IBA (its value is not considered).
- The EPMPublishDelegate can be invoked by the user for any Representation previously published by these Authoring Applications.

```
<rules xmlns="http://www.ptc.com"
      xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
      xsi:schemaLocation="http://www.ptc.com PublishRulesSchema.xsd">
  <param-set name="Share with Arbortext">
    <post-publish
name="delegate">com.ptc.wvs.server.publish.EPMPublishDelegate</post-publish>
    <post-publish name="type">DynamicDocument</post-publish>
    <post-publish name="cad-authoring-application">ARBORTEXT</post-publish>
    <post-publish name="cad-type">PUB_CADVIEWABLE</post-publish>
    <post-publish name="name">GDD from {AUTHORING_APP} {EPM_NUMBER}</post-publish>
    <post-publish name="published-content-link">create</post-publish>
  </param-set>

  <authoring-application name="PROE">
    <epm-iba iba="PUBLISH TO ARBORTEXT">
      <publish on="checkin" param-set="Share with Arbortext"/>
      <publish on="create-representation" param-set="Share with Arbortext"/>
      <publish on="schedule" param-set="Share with Arbortext"/>
    </epm-iba>

    <publish on="checkin"/>
    <publish on="create-representation"/>
    <publish on="schedule"/>
    <publish on="manual-post" param-set="Share with Arbortext"/>
  </authoring-application>

  <authoring-application name="SOLIDWORKS">
    <epm-iba iba="PUBLISH TO ARBORTEXT">
      <publish on="checkin" param-set="Share with Arbortext"/>
    </epm-iba>
  </authoring-application>
</rules>
```

```

    <publish on="create-representation" param-set="Share with Arbortext"/>
    <publish on="schedule" param-set="Share with Arbortext"/>
</epm-iba>

<publish on="checkin"/>
<publish on="create-representation"/>
<publish on="schedule"/>
<publish on="manual-post" param-set="Share with Arbortext"/>

</authoring-application>

</rules>

```

Creating Publish Rules

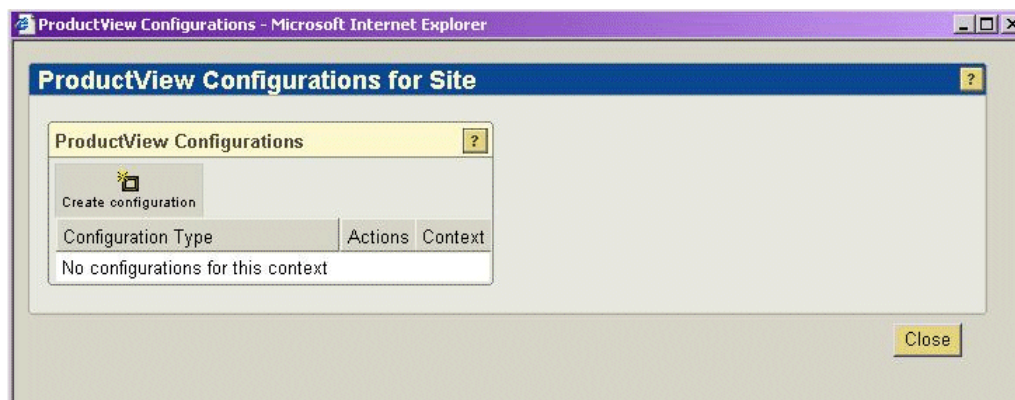
Once you have read and understood the previous sections, you are ready to create your own Publish Rules. To do this, you can use the sample file in the %WT_HOME%\codebase\com\ptc\wvs\server\xml directory. Copy this file to another location before editing.

Loading the Publish Rules XML File

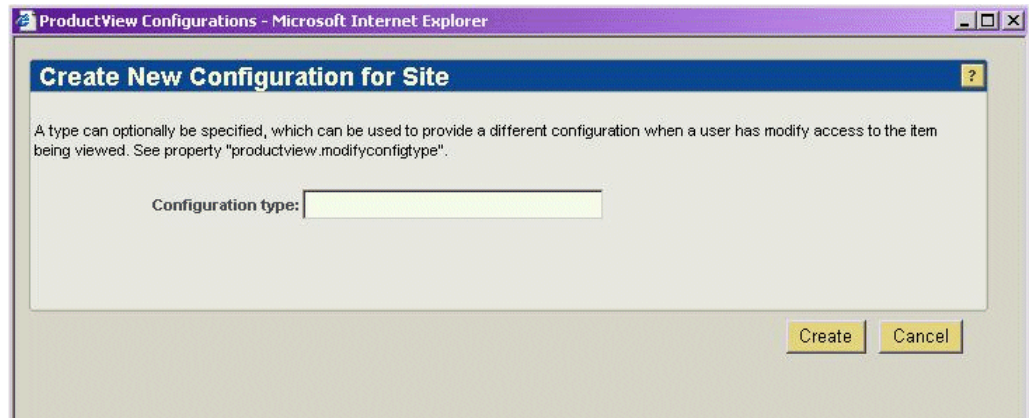
Follow these steps to load the Publish Rules XML file. You must be logged on as a Site Administrator to access the windows shown in this example.

1. From the **Windchill Home** page, go to the **Site > Utilities** tab.
2. Select **Visualization Configuration Administrator**. This displays the **ProductView Configurations for Site** dialog box.

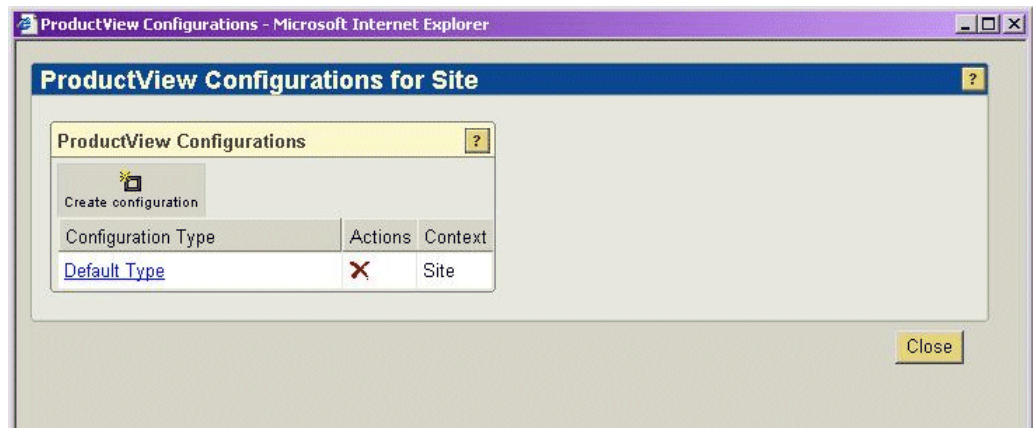
This example assumes there are no current configurations defined.



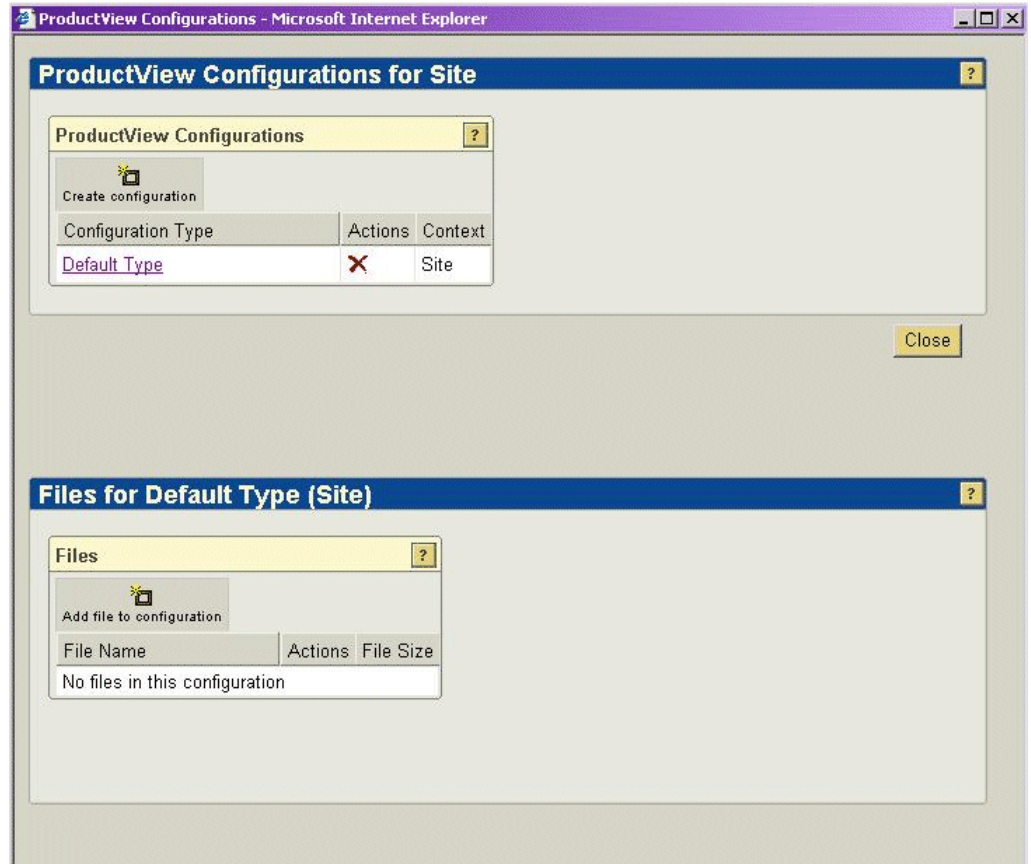
3. Click **Create Configuration** to create a new configuration at the Site level. This displays the **Create New Configuration for Site** dialog box.



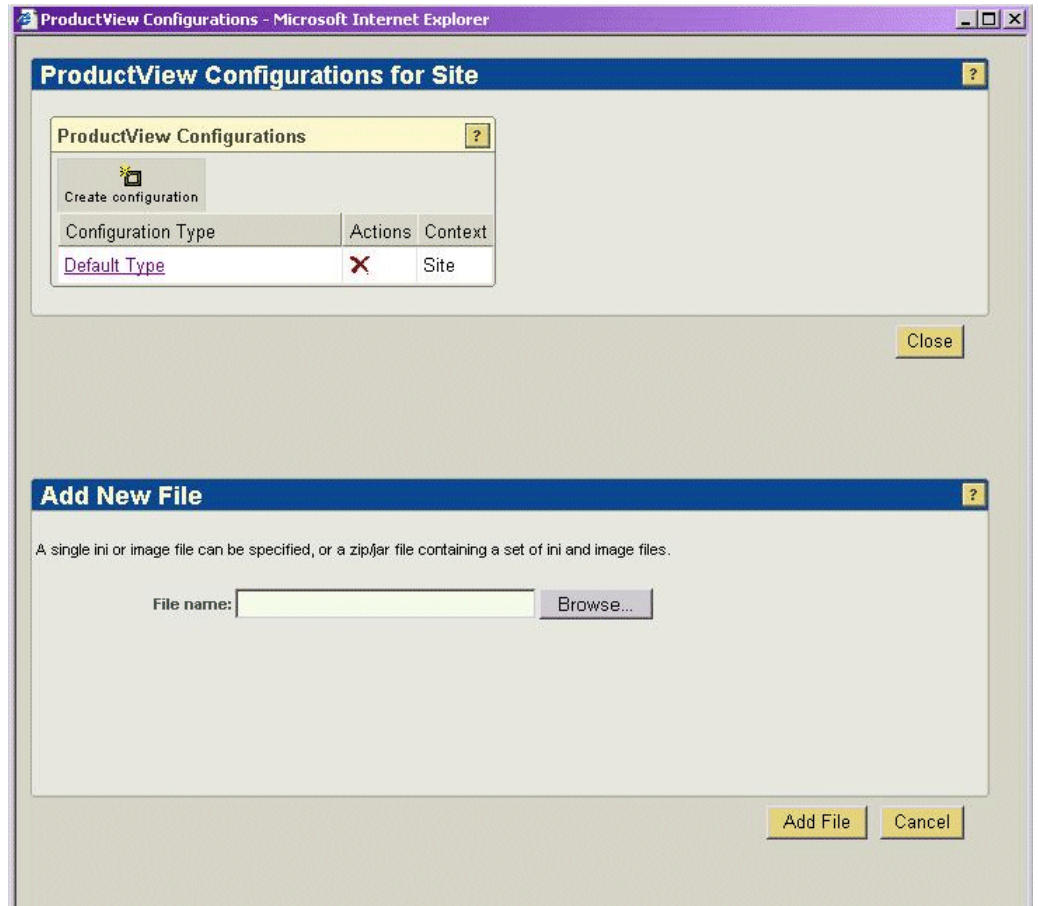
4. Type the name for the configuration you are creating, and click **Create**. In this example, the configuration will be called **Default Type**. The **ProductView Configurations for Site** dialog box displays again, with the new configuration listed in the table.



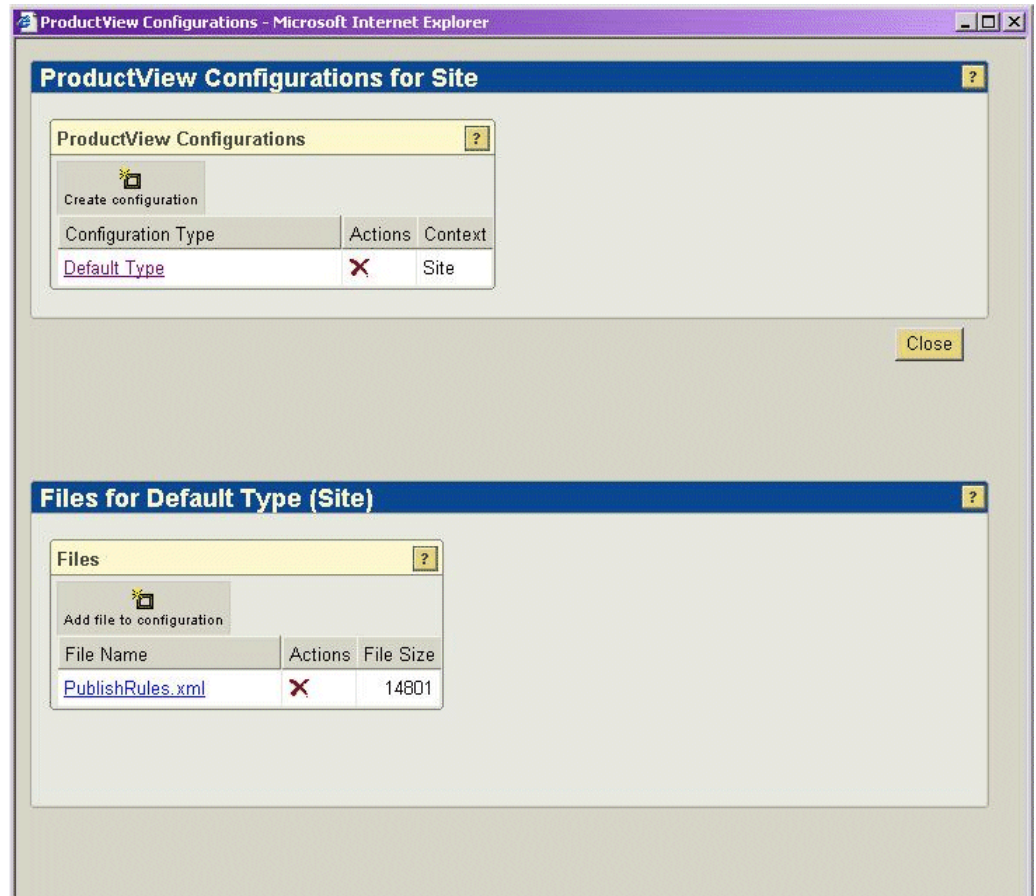
5. Under **Configuration Type**, select **Default Type**. This displays the **Files for Default Type** list in the **ProductView Configurations** dialog box. When you first create a configuration, the file list will be empty. The next step is to add a file to the configuration.



6. In the **Files for Default Type** box, click **Add File to Configuration**. The **Add New File** dialog box displays.



7. Click **Browse** and select the publish rules XML file you want to load. Click **Add File** to load the XML file to the configuration.



8. If you wish to change the Publish Rules, repeat the steps in the wizard above to load the updated Publish Rules file. When you see the old file listed in the **Files for Default Type** list shown above, delete it. Then, click **Add file to configuration**, and select the updated file.

Note: Changes will be realized immediately after you load the new file.

For more advanced configuration, you can override the Site template by adding a template at the Organization level. Or, you can add a template to the Library, Project or Product within the Organization to apply just to those specific areas.

V

Appendixes

A

About Properties Files

This appendix contains information about the Windchill Visualization properties file.

Topic	Page
About the wvs.properties.....	A-2

About the wvs.properties

The runtime property settings for Visualization Services are defined in the wvs.properties file. The wvs.properties file is located in the Windchill codebase directory. By default, the variable values are set for a standard configuration and the wvs.enabled variable is set to true. The wvs.enabled variable controls the starting and stopping of the Visualization Service. By default, the Visualization Service is set to true so that when Windchill is installed Visualization Services is enabled.

The wvs.properties file can be read or edited by using the System Configurator application, which allows you to add properties and values, delete properties, and save your changes to the properties file, for implementation when you restart the Windchill system. The wvs.properties file can also be edited using the xconfmanager utility. When changes are made to the wvs.properties files, the Windchill method server must be restarted for the changes to be effective. The wvs.properties file includes descriptions of the variables and the default settings. Refer to these descriptions to gain an understanding of the use of the variables.

B

Troubleshooting the CAD Agent

This chapter provides information you can use to analyze and resolve issues that may arise with the Visualization Services CAD Agent.

Topic	Page
Common CAD Agent Problems.....	B-2
Troubleshooting the CAD Agent	B-2

Common CAD Agent Problems

Several types of CAD Agent problems can occur, including:

- Connectivity
- Starting the worker: local worker, remote Windows worker, and remote UNIX worker.

To resolve problems involving the Distributed CAD Agent (DCA), all of the techniques for troubleshooting the CAD Agent still apply. Additional troubleshooting techniques are provided to address problems you may encounter when configuring a Distributed CAD Agent.

Note: For additional information about troubleshooting visualization services, see the Administering Visualization Services chapter in the *Windchill Business Administrator's Guide*.

On Windows systems, be sure to read the information that is logged in the DOS window running the Worker Daemon executable. Errors generated when starting the worker are logged in this window.

Troubleshooting the CAD Agent

The configuration of the CAD workers to the CAD Agent can prove difficult. It does require that files are configured correctly, and when CAD workers are on a remote system, that the network connectivity between machines is correct.

The CAD Agent will usually run as a service, defined in the wt.properties file as:

```
wt.services.service.nn=com.ptc.wvs.server.cadagent.  
CadAgentService/com.ptc.wvs.server.cadagent.  
StandardCadAgentService
```

It can run as a standalone executable, as described in the Local Windows section.

The CAD Agent reads configuration settings from a file. The name of the file is defined in wvs.properties by the entry:

```
cadagent.inifile=$(wt.home)\\codebase\\agent.ini
```

Settings in this file should only be altered using the CAD Agent Configuration Wizard that, as an Administrator, can be accessed from the CAD Agent Monitor by selecting the Configure button.

The CAD Agent listens on a port for requests; the port number is defined in the agent.ini file. As shipped, the port is set to 5600. Should there be some other process on the system using this port, the CAD Agent will fail to initialize. In this case, manually editing the file is the only way to change this port value.

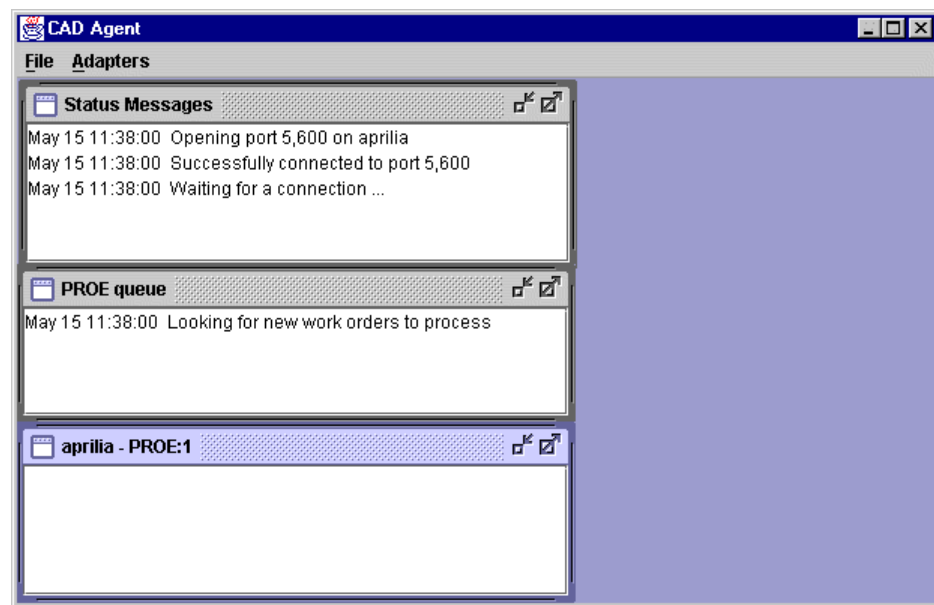
Running the CAD Agent in debug mode

If there are problems in configuring the CAD Agent and getting a CAD worker to connect, it is best to start the CAD Agent in debug mode.

1. Stop the Method Server if it is already running
2. Start the CAD Agent.
3. From the windchill shell (for more information, see [About the windchill Command](#)), execute the command:

```
java com.ptc.wvs.server.cadagent.CadAgent -d
```

4. The following window opens:

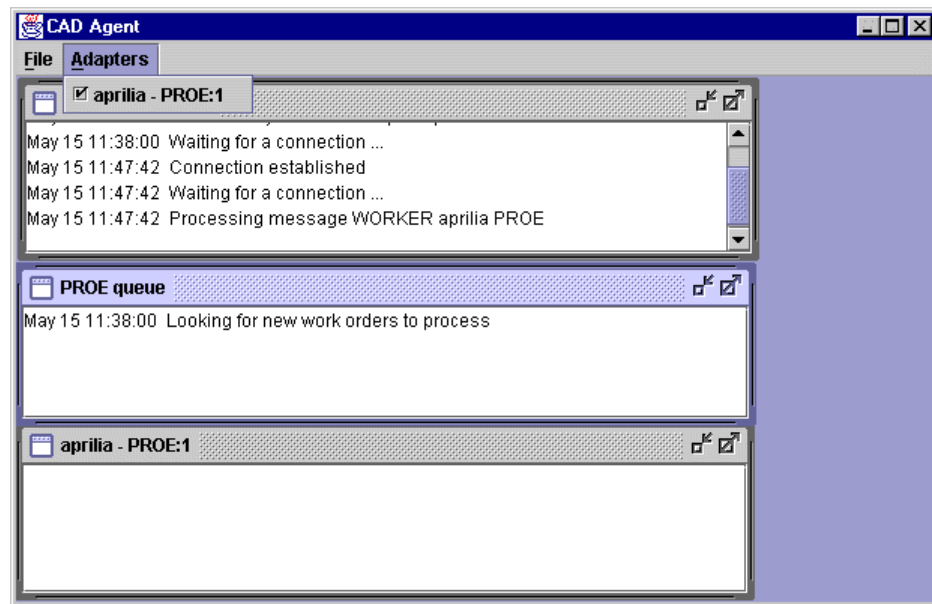


The number of sub panes displayed will depend on the numbers and types of configured workers. The **Status Message** pane shows the requests being processed by the CAD Agent on the listening port (5600). For each type of CAD worker (PROE, CADDs, CATIA UG, and so on) there will be a pane showing the state of the Queue. Then each worker will have its own pane that will log its transactions. In this case, there is a single PROE worker configured, which is in fact local to the server on which the CAD Agent is executing.

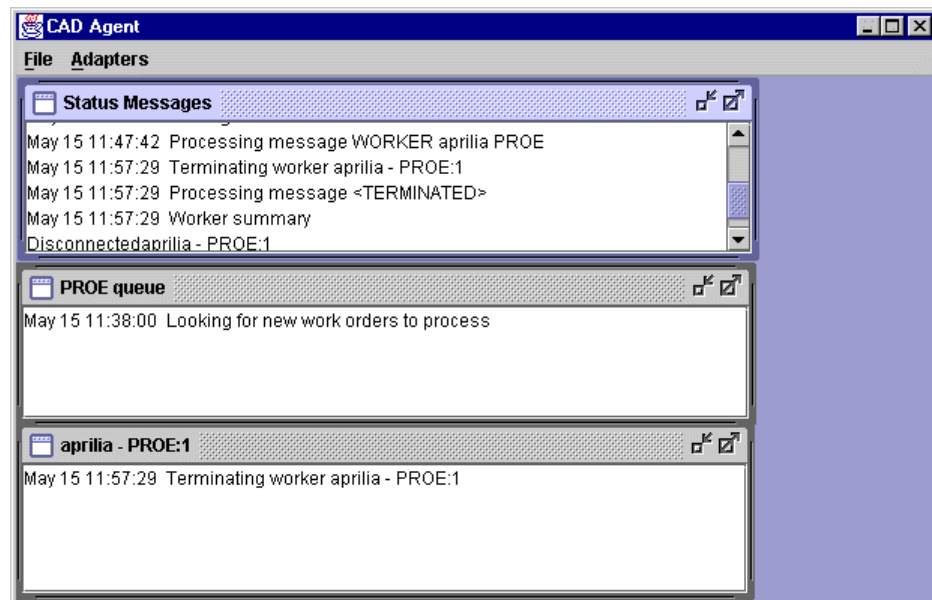
Manually Starting CAD Workers

Next, start the CAD worker, by going to the system on which it is configured, and executing the BAT file or shell script that has been configured as the execute command to start the worker.

If this successfully connects, messages will be displayed in the **Status Messages** pane, and if under the Adapters drop down list, the entry for the worker will be checked.



To stop the worker, select the checked adapter entry, and this will send a message to stop the running worker.



If the CAD worker fails to connect to the CAD Agent, then no activity will be observed in the CAD Agent windows. The CAD worker may stay running, or exit after a period of time. This problem is most likely due to incorrect setting in the CAD worker configuration file.

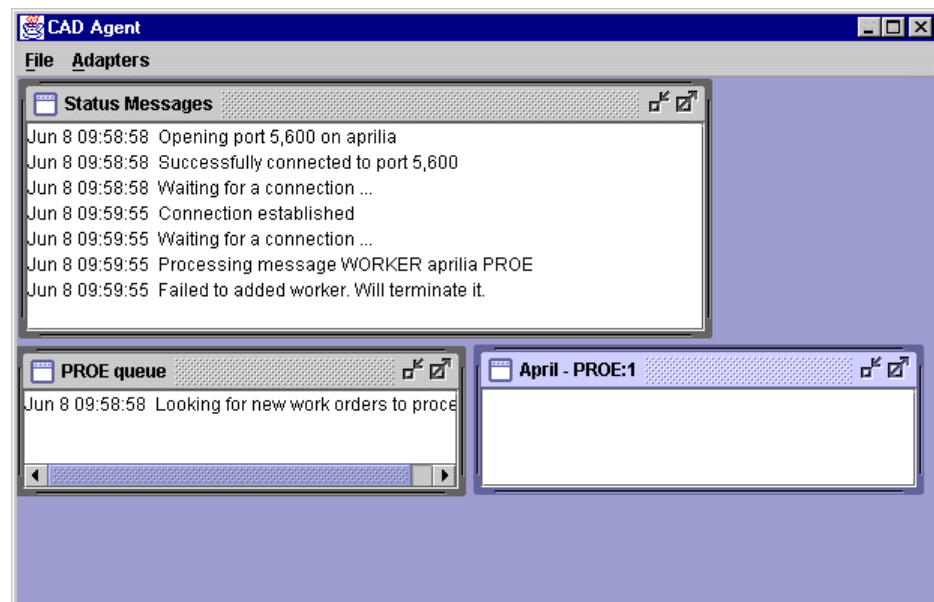
For example, for PROE ensure that the prowoker.ini file correctly specifies the HOST (where the CAD Agent is running) and PORT as defined in the agent.ini file (default 5600). On UNIX, the worker configuration file should be called .prowoker.ini and be located in the users home directory. On Windows, the worker configuration file is called ProWorker.ini and is located in the directory that the worker is started from.

Also, if the CAD worker is running on a different host to the CAD Agent, ensure that the CAD worker host can communicate with the CAD Agent host, as the name specified in the CAD worker configuration file.

In the case of remote UNIX workers, it is important that the network addressing is correct. It should be possible to use ping, ftp and telnet (no telnet required to remote Windows) to the remote CAD worker machine specifying the actual hostname, and ping back from the remote worker to the CAD Agent server by hostname.

If manually starting the worker causes the following message to be displayed in the **Status Messages** pane:

```
Processing message WORKER <hostname> <CADTYPE>  
  
Failed to add worker. Will terminate it.
```



Then, this is due to a request being made from a worker that is not recognized as being configured in the agent.ini file. The hostname that is specified in the

message must be the hostname that is specified in the agent.ini file. In this case, it is looking for a hostname of aprilia, where as the host of April is set in the agent.ini file. In this case, the CAD Agent will send a message back to the worker to stop it.

Generally you will find when using DNS that the hostname sent from the worker will be the fully qualified name, for example Aprilia.ptc.com, and the fully qualified name should also be used in the agent.ini file. With Windchill, the CAD Agent will attempt to locate the entry in the agent.ini file both with and without the domain name. Windchill requires an exact match.

Starting CAD Workers from the CAD Agent

When the CAD worker has successfully been able to connect to the CAD Agent using a manual start of the worker. Attempt to start it by selecting the entry in the Adapter drop down list. When the entry is selected, the menu will stay selected, until the startup timeout is exceeded, or a connection from the worker is achieved.

If this fails, check the command specified to execute it is in fact correct.

Local Windows

In the case of a local worker on Windows, it is worth trying to run the command using cmd.exe. For example a PROE worker can be started as:

```
cmd.exe /C start "PROEWORKER" /MIN D:\PTC\GraphicsServer\
ObjectAdapters\Proe\Worker\
startup.bat
```

Remote Windows

Workers that are running on a remote Windows client must be started using the Worker Daemon, as there is no telnet server available. Early copies of the WorkerDaemon.exe shipped with Windchill require that the WorkerDaemon.exe be started manually or from the Windows startup. This also required that the command sent to it start "RUN" (and the case is important). For example a remote PROE worker would be started with

```
RUN D:\\PTC\\GraphicsServer\\ObjectAdapters\\Proe\\Worker\\
startup.bat
```

The WorkerDaemon.exe shipped with Windchill will install and run as a service. Windchill Visualization Services has been modified so as to not need the RUN prefix, and you can also use a single backslash.

Remote UNIX

For remote UNIX workers specifying nohup and putting the task in background is required. For example, a remote CADDS5 worker:

```
nohup cv201/codebase/cv201 -w aprilia 5600 &
```

Also, telnet is used to connect to the remote worker. To test, use Telnet from the CAD Agent host, to the worker host. Specify the hostname, username and password defined (in the agent.ini file) during the configuration of the worker. Assuming a successful connection, it is important that the system prompt (for that user) should not change. Manually executing the specified worker command from this environment should create a connection to the CAD Agent. If not, then there is probably a difference in the environment used by Telnet and that the default user login. Adjust the environment to ensure that the command causes a connection via telnet, look for things like DISPLAY, path, and shell type. The CAD Agent should then be able to start the worker.

Using the CADAgent Monitor

The CADAgent Monitor provides various troubleshooting options. From this window, you can start and stop CAD workers, test whether a worker is set up properly, view worker log files, and start verbose workers.

Follow these steps to open the CADAgent Monitor:

1. Go to the **Windchill Visualization Home** page.

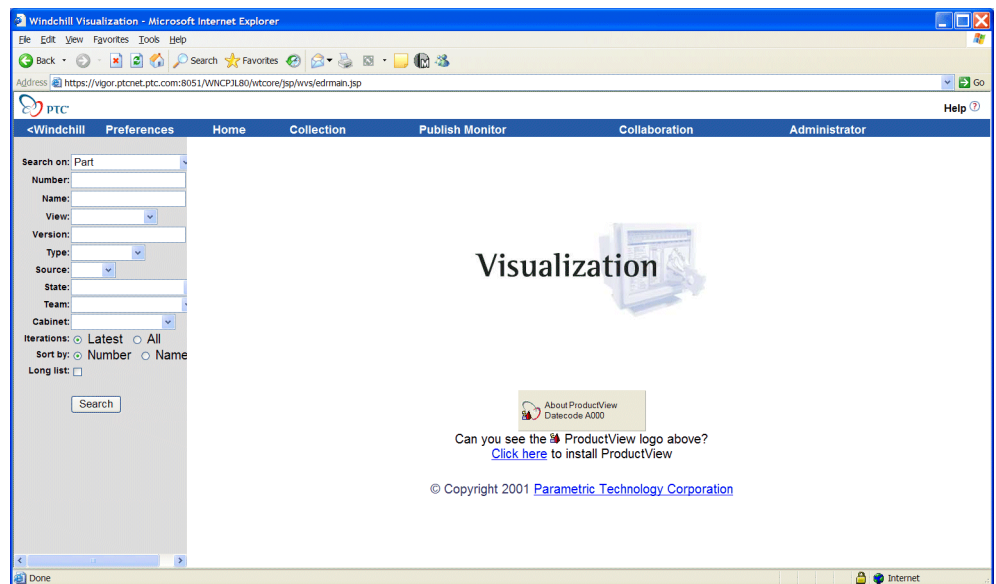


Figure B-1 Windchill Visualization Home Page

2. Select the **Administrator** link. This displays the **Administration Tasks** window.

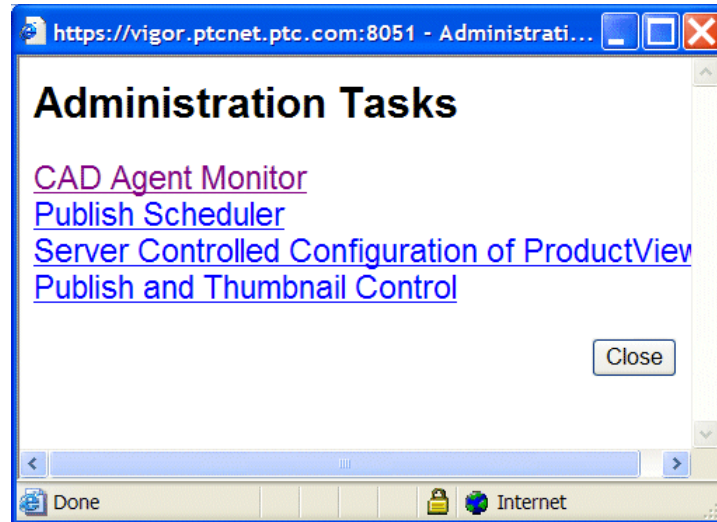


Figure B-2 Administration Tasks Window

3. Select the **CAD Agent Monitor** link to display the **CADAgent Administration** window.

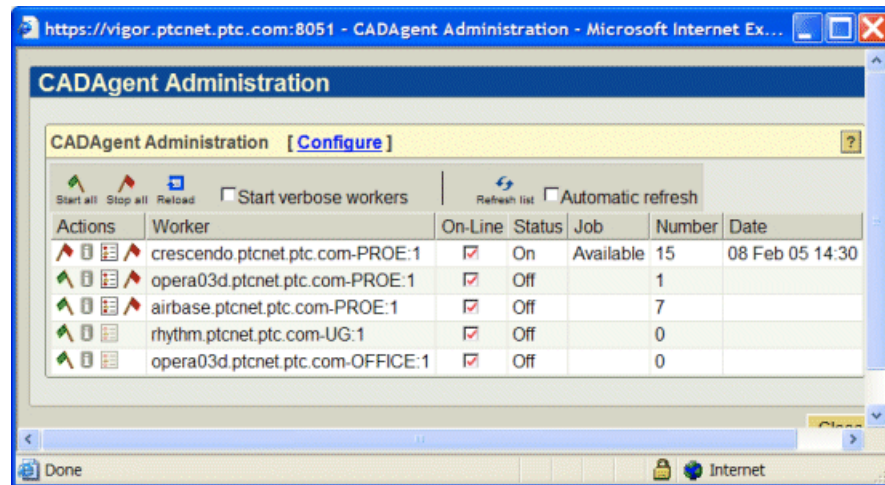



Figure B-3 CADAgent Administration Window

The next sections explain the features available in the CAD Agent Monitor.

Starting and Stopping CAD Workers using the Monitor

With the CAD Agent still running in debug mode, but with the workers disconnected, you can view the status of the workers in the CAD Agent Monitor.

1. To start a worker, select the green flag icon  in the **Actions** column of the CAD Agent Monitor. This sends a message to the CAD agent to start the worker. The **Status** column in the **CAD Agent Monitor** shows that the worker is **On**, and the icon in the **Action** column changes to a green flag icon.

In the **CAD Agent Status Message** pane, messages indicate that the Agent has received the request, and has attempted to start the worker. A flag should appear against the Adapter menu entry for the worker.

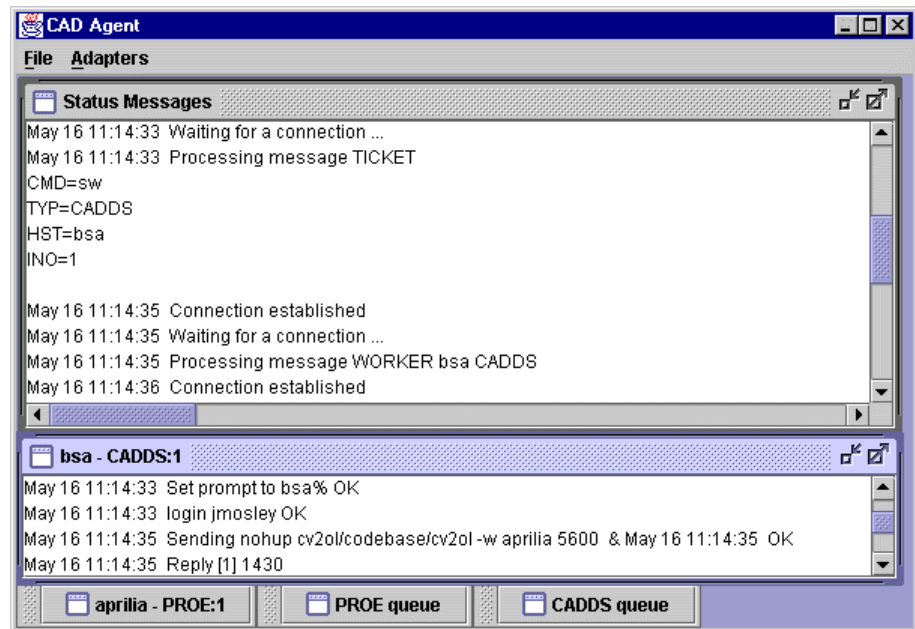



Figure B-4 CAD Agent Status Message Pane

- To stop the worker, select the red flag icon .

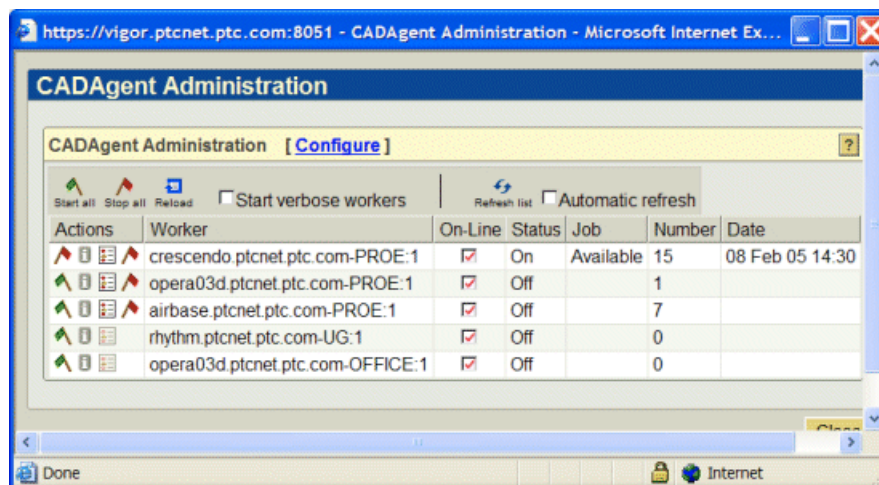


Figure B-5 CAD Agent Monitor


If the CAD Agent shows that the worker has successfully connected, but the status in the CAD Agent Monitor still says **Off**, select the **Automatic Refresh** option in the CAD Agent Monitor. If the worker then shows that it is **On**, this indicates that the start time specified for the worker is set too low. Select the **Configure** link at the top of the CAD Agent Monitor window to invoke the CAD Agent Configuration wizard, where you can change this setting.

It is important that the worker starts within the specified timeout period. When the system is fully running, the worker should start automatically. If the timeout is set too low, the CAD Agent will make up to 3 attempts to start the worker, and if it does not achieve a connection, the worker will be marked as unable to start.

Testing a Worker

You can also test workers using the CAD Agent Monitor. This process ensures that the basic CAD Agent worker setup was successful. It determines whether the worker is responding, and runs a test conversion of data that is not stored in Windchill to ensure that it is being properly converted. Test files for each worker can be installed from the Visualization Support CD.

Note: Before you can test a worker, you must start the worker, and it must be offline (uncheck the **On-Line** option).

To test a publishing job, click the **Test Worker** icon  in the **Actions** column of the CAD Agent Monitor. This displays the CAD Agent Worker Test Window, shown below

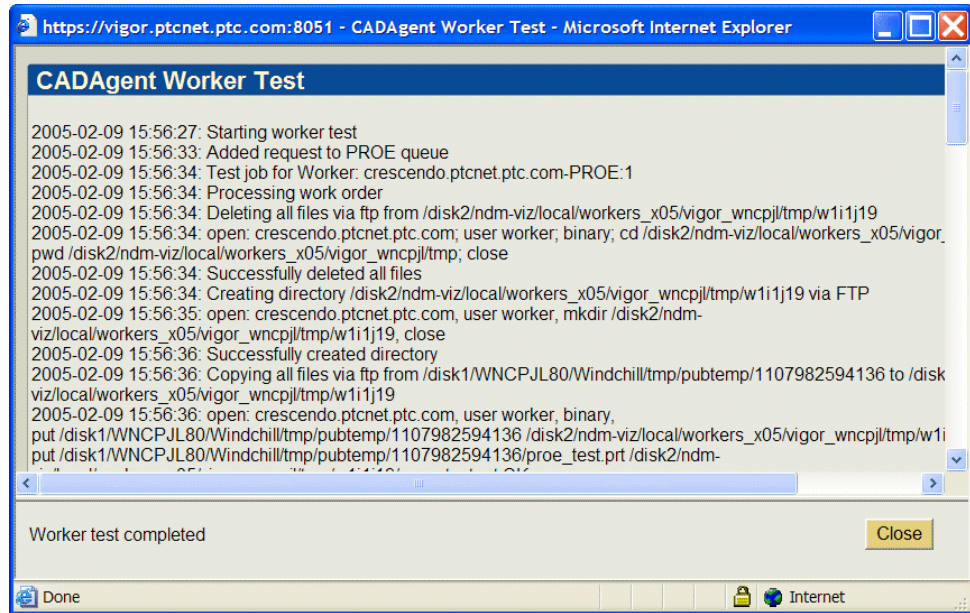



Figure B-6 CAD Agent Worker Test Window

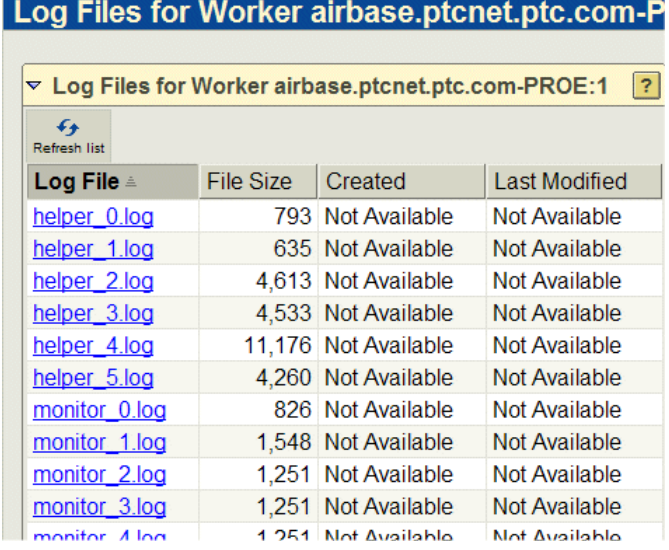
The **CAD Agent Worker Test** window displays messages logged by the CAD Agent during the publication test process, including all files created by the worker, file size, and any failure or errors that occur. This information can be used for debugging purposes

Viewing Log Files

In the CAD Agent Monitor, you can access a list of log files and view any log file in detail. Follow these steps to view log files:

1. Click the **View Worker Log Files** icon  in the **Actions** column. This displays a list of available log files on the worker machine, as shown below. You can view monitor, helper, and worker log files. The file names help identify whether the log file pertains to a monitor, helper, or worker. A sample list of log files is shown below.

Note: Each publish job in the Publish Monitor displays the name of the worker log file that is being used.



Log File	File Size	Created	Last Modified
helper_0.log	793	Not Available	Not Available
helper_1.log	635	Not Available	Not Available
helper_2.log	4,613	Not Available	Not Available
helper_3.log	4,533	Not Available	Not Available
helper_4.log	11,176	Not Available	Not Available
helper_5.log	4,260	Not Available	Not Available
monitor_0.log	826	Not Available	Not Available
monitor_1.log	1,548	Not Available	Not Available
monitor_2.log	1,251	Not Available	Not Available
monitor_3.log	1,251	Not Available	Not Available
monitor_4.log	1,251	Not Available	Not Available

Figure B-7 List of Log Files

- To view a specific log file, click the filename link in the **Log File** column. A sample worker log file is shown below.

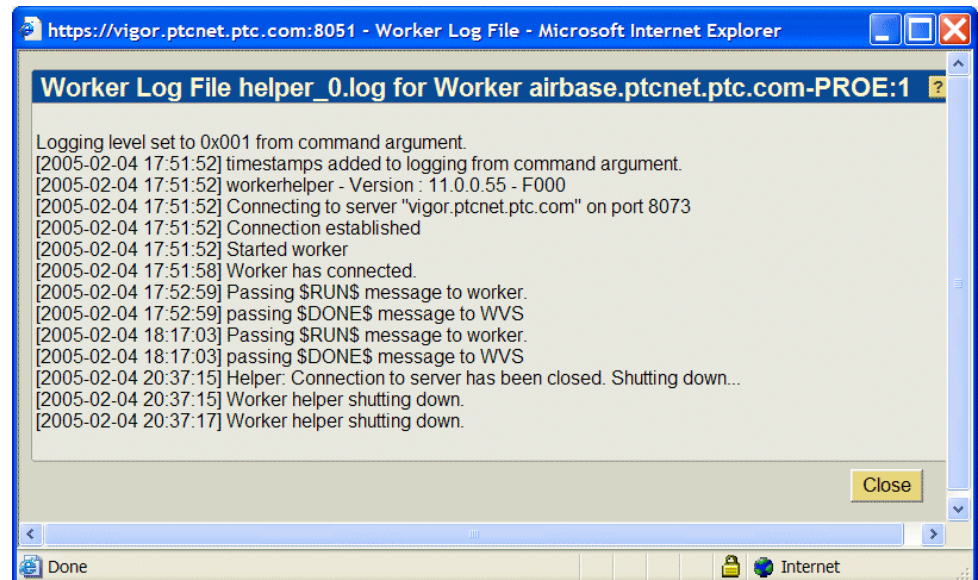


Figure B-8 Detailed Sample Worker Log File

Overview of Worker, Helper, and Monitor

Monitor log files

- The Monitor controls communication between the CAD Agent and the worker machine. It allows the server to communicate with the worker machine, regardless of whether or not the worker is actually running. This allows the server to view log files from each of the applications (monitor, helper, and worker) even when the worker fails to start. The Monitor also receives the start command from the server when the worker needs to start.
- The worker scripts start the “workermonitor” process when they are configured to work with a V8 or later server. The config tools allow a worker to be configured to work with a pre-v8.0 server (either Windchill or DIVISION Graphics Server). In this case, the “xxxworker” scripts will be written to launch the “workerhelper” script directly, when then communicates with the server in the same way as a v7 adapter.
- If multiple instances of a worker are required, there will be only one “workermonitor” process, which starts a new instance of the worker for each instance required.
- The monitor starts, then WVS requests that the monitor start the worker. The monitor then starts the helper, which in turn starts the worker.

Helper log files

- The Helper acts as a command center for the worker, supervising the CAD worker.
- The helper log file provides information such as whether the worker is up or down, how the publish job is proceeding, and overall worker behavior.
- The workerhelper monitors communication between the server and the worker and can implement the timeouts locally. If a problem occurs or the worker needs to be shut down, the Helper ensures that the worker is shut down completely and cleans up any processes or files that remain.

Note: The new “workerhelper” cannot guarantee a 100% recovery from errors on the CAD worker. In some cases a re-boot may be required, or processes will need to be ended manually.

Worker log file

- The Worker log file displays the publish conversion process. If a publish job fails, this file contains the debugging information for the conversion. You can set the debug option when publishing to specify what information recorded in this log file, using the debug options text file in the setup directory specified during configuration.

Starting Verbose Workers

Using the option to **Start verbose workers**, you can dynamically change the level of debugging verbosity to restart the worker. This option applies to workers manually started from the user interface. Selecting this option instructs the worker to use the command line options specified in the debug_options.txt file, located in the worker setup directory specified during the object adapter configuration.

1. To troubleshoot workers, select the **Start verbose workers** option in the **CADAgent Administration** window.
2. Check the green flag icon in the **Actions** column to start the worker.

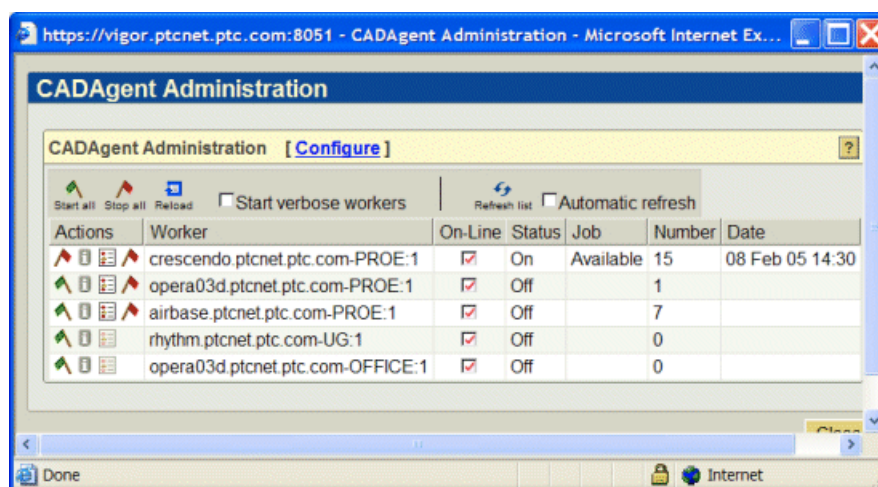



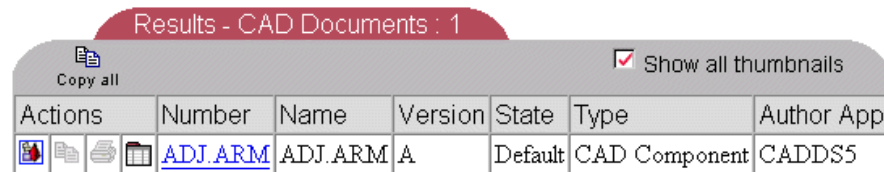
Figure B-9 CAD Agent Administration Window





Manually Publishing a CAD Document

With the CAD worker connected to the CAD Agent, the next step is to publish data. It is recommended that, even if Windchill is installed, the first test is performed from the Visualization portal page.

In the case of Windchill, the Visualization portal can be located from com/ptc/wvs/client/jsp/edrmmain.jsp. It is important that this page is authenticated. Verify that the list in the query portion of the page is populated. If it is not, and valid data does exist in the database, the page is not authenticated.

Locate a CAD Document stored in the database. From the list, select the Visualization icon .



Actions	Number	Name	Version	State	Type	Author App
   	ADJ.ARM	ADJ.ARM	A	Default	CAD Component	CADD55

The **Visualization – ProductView – Netscape** window displays.



The first time the Visualization portal displays, these Processing Queues are created in Windchill: PublisherQueueL (low priority), PublisherQueueM (medium priority), and PublisherQueueH (high priority).

This can be checked using the Queue Manager (java wt.queue.QueueManager). These queues are Processing Queues. All of them should exist, and be active.

From the Visualization portal, you can access the Publish Monitor, which is described next.

Using the Publish Monitor

The Publish Monitor provides a set of tools to help assess the ongoing health of the publishing sub-system. This information includes:

- Number of jobs for each worker which have been processed
- Number of failed jobs
- Time and date for each job
- Priority of queue
- Submission, start, and end times
- Event that initiated the publishing job

To display the Publish Monitor, select the **Publish Monitor** link in the Visualization portal window or from the Windchill Visualization home page. The Publish Monitor contains two windows: Publish Job Summary and Publish Job Details.

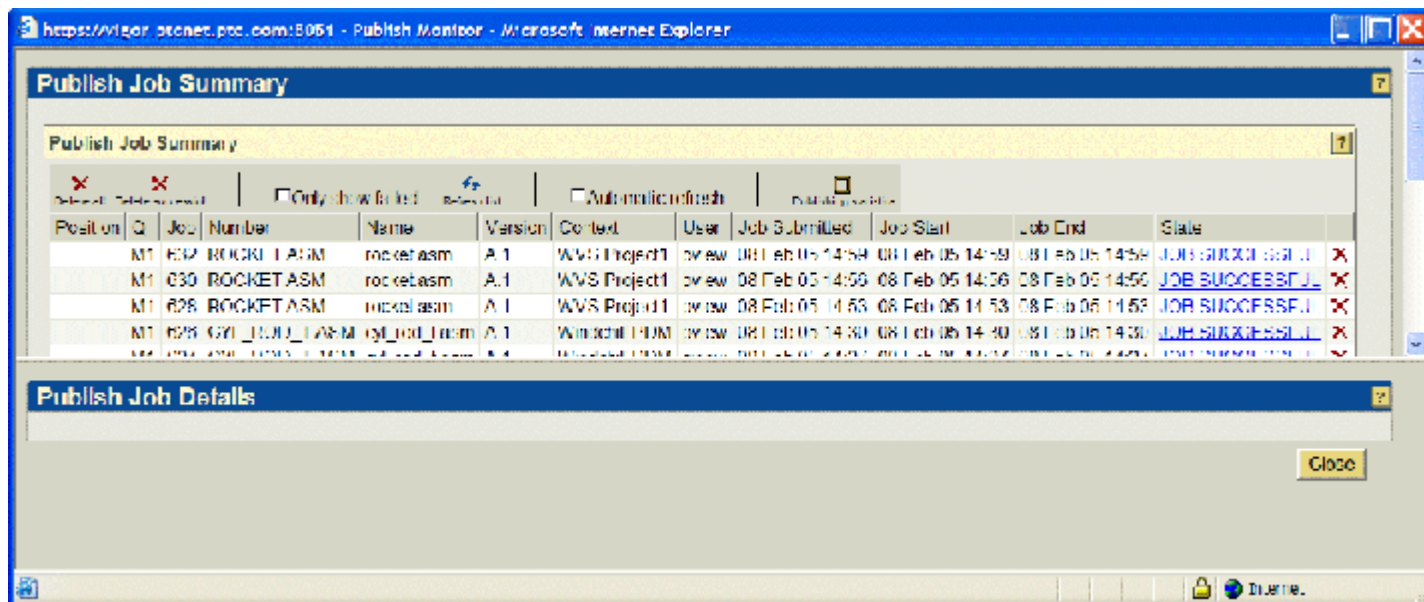



Figure B-10 Publish Monitor

- To display the detail for a specific job, select the link in the **Status** column.

- To display publishing statistics, select the  icon in the **Publish Job Summary** area of the Publish Monitor.

The Publish Job Statistics window, shown next, displays information including the CAD authoring tool, worker name, number of jobs, both failed and successful, and the overall percentage of failed and successful jobs for each entry. This information helps you diagnose the overall system health.

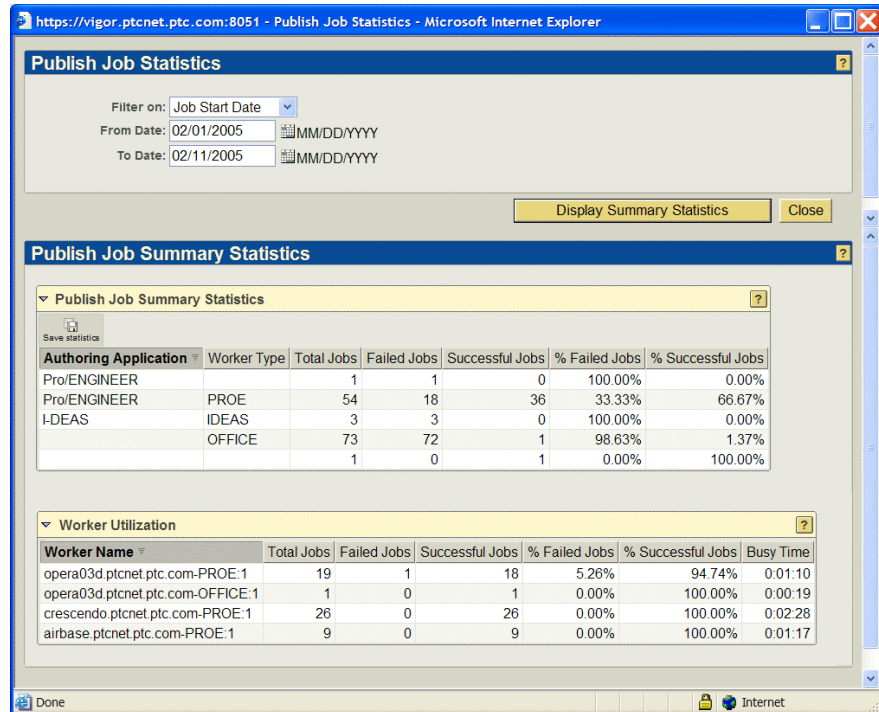


Figure B-11 Publish Job Statistics Window

- Below the **Publish Job Statistics** area, there is a **Worker Utilization** summary table, which displays the same publishing statistics, organized by worker, and tells you the busy time for each worker as well.
- You can click the **Save Statistics** button to save the publishing job statistics to a CSV (comma-separated value) file, which can be read into applications such as Microsoft Excel. This information includes more detail than the summary window.

Troubleshooting the Publish Monitor

If the **Publish Monitor** window is empty (for example, there is no Job Summary table heading), the WVS jsp pages might not be correctly authenticated.

If no entries appear in the Status panel, or they appear and then disappear once completed, ensure that the following settings are in wt.properties:

- For each PublisherQueue, keep the entries so that the log may be seen in the publisher.

```
wt.queue.removeCompleted.PublisherQueue1=false
```

- As extra queues get created, entries must be added here also:

```
wt.queue.removeCompleted.PublisherQueue2=false
```

Initially, all publish jobs are set to PublisherQueueL, PublisherQueueM, and PublisherQueueH (Low, Medium, and High priorities), depending on the way the job was submitted and the type of data. This process is controlled by property settings in `wvs.properties`. For details, see `publish.publishqueue.priorities.0.0` in `wvs.properties.xconf`.

Only one job will be executing in the queue, and the remaining entries will be READY. The executing job in the PublisherQueueL/PublisherQueueM/PublisherQueueH is looking for an available queue with a name in the form of PublisherQueue'n', where 'n' is an integer. When it finds an available queue, it submits the publish job to that queue, which will immediately execute it. Completed jobs in the other queue need to be kept, as they contain the actual publish job, which contains within it all the logging information.

Additional queues can be added in order that the solution scales. For each additional queue the appropriate `wt.queue.removeCompleted.PublisherQueue'n'=false` entry must be added to the `wt.properties` file.

Note: The queue content is displayed to all users, but only the detail of a user's job is available.

When the job completes, the details indicate success or failure. The messages indicate any error that caused the failure.

Index

A

Adobe Acrobat, 9-2

C

CAD agent

troubleshooting, B-2

CAD application license, 3-4

CAD license, 10-8

CAD worker, 3-5, 3-6

CADAgent wizard, 10-4

Command line parameter

port number, 10-13

Common File

common path GS machine & UNIX, 10-14

system directory location, 10-9

UNIX, 10-14

D

Document Support object adapter, 9-2

Document Support viewer, 9-2

Documentation conventions, xxi

Download files, Pro/ENGINEER, 11-2

E

ECAD object adapter, 7-2

ECAD viewer, 7-2

Editing wvs.properties for the JT Object Adapter, 9-9

F

FTP user name, 10-11

FTP, UNIX, 10-14

I

InstallAnywhere

installing Windchill products, 4-2

JRE for installers, 4-4

language settings, 4-2

log files, 4-11

troubleshooting, 4-12

Installing

language setting for InstallAnywhere, 4-2

Windchill products, InstallAnywhere utility, 4-2

installing

Adobe Distiller, 9-8

Document Support, 9-3

ECAD object adapter, 7-3

ECAD viewer, 7-3

ProductView SE, 5-2

Windchill Support, 6-2

J

JRE for installers

InstallAnywhere, 4-4

L

LANG environment variable

setting on install, 4-2

Language support

InstallAnywhere install, 4-2

M

MCAD batch import adapters, 8-2

MCAD object adapter, 8-2

P

Pro/ENGINEER object adapter configuration, 11-1

ProductView Client, 5-1

Publishing Wildfire Assemblies as "Positioning Assemblies", 11-4

R

Read This First

known problems at release, xix

REALIZER mode, 5-9

S

- Security
 - shared directory login, 10-10
- Shared file directory, 10-9
- software matrices, 3-4
- System account
 - workerdaemon, 10-12
- system administration information, 4-1

T

- TAN
 - technical application note example, 10-16
- Technical Application Note, 10-16
- Technical support, xx
- Traffic Light icon, 10-18
- Troubleshooting
 - InstallAnywhere, 4-12

U

- UNIX
 - loading and mounting the CD-ROM, 4-7

V

- version.pvm file, 5-9
- Visualization - Document Support, 9-1
- Visualization - ECAD Support, 7-1
- Visualization - MCAD Support, 8-1
- Visualization - ProductView Client, 5-1
- Visualization - Windchill Support, 6-1
- Visualization server, 10-1

W

- Windchill Support, 6-2
- Worker overview, 10-2
- WorkerDaemon.exe, 10-9
- workerwaemon.log, 10-12
- wvs.properties
 - runtime settings, A-2

X

- xconfmanager, 2-2