SOLIDWORKS Certification Exam Guide & Practice Test

PROFESSIONAL API

3S SOLIDWORKS

CSWP-API: Certified SOLIDWORKS Professional API

Contents

About This Guide

This guide contains information, advice, and practice for obtaining your professional certification in SOLIDWORKS API. Here, you will find:

- An overview of SOLIDWORKS Certifications
- Details about the CSWP-API Exam
- Advice on preparing for and taking the CSWP-API Exam
- A Practice CSWP-API Exam and answer key
- Directions to useful SOLIDWORKS websites

The CSWP-API Certification

SOLIDWORKS Certifications are a benchmark to measure your knowledge and competency with SOLIDWORKS software. A certification helps you stand out from the crowd and showcases your expertise to businesses and professionals alike—a valuable asset in a competitive job market.

A few popular SOLIDWORKS Certifications include:
- CSWA: Certified SOLIDWORKS Associate
- CSWP: Certified SOLIDWORKS Professional
- CSWPA: Certified SOLIDWORKS Professional Advanced:
  - Sheet Metal
  - Weldments
  - Surfacing
  - Mold Making
  - Drawing Tools
- CSWE: Certified SOLIDWORKS Expert
- CPAP: Certified PDM Administrator Professional

Why take the CSWP-API Exam?

The API certification is an exam that sets you apart as a person who has successfully demonstrated their ability to use VBA programming with SOLIDWORKS. For hiring managers, it acts as a valuable assessment to attest for an individual's competency, thereby reducing the amount of time and energy required to research prospective candidates.

There is no prerequisite for taking this exam to become an API Certified SOLIDWORKS Professional.

All candidates receive an electronic certificate, business card logo, and personal listing in the CSWP directory when they pass.

CSWP-API Exam Details

The CSWP-API features 18 hands-on questions in most of these areas where you will be asked to automate a task. These areas include but not limited to:

- Understanding the API Object Model
- Troubleshooting
- Part design automation
- Drawing Automation
- Assembly automation
- Adding sketch entities and dimensions
- Feature creations such as extrudes and cuts
- Selection and traversal techniques
- Hide/Suppress/Resolve components
- Creation of drawings
- Insert drawing views
- Insert a BOM
- Save drawings in different file formats
- Add custom properties
- Save and close documents

There are also 10 multiple choice questions to test your knowledge on the SOLIDWORKS API Object Model, programming capabilities with SOLIDWORKS, and your familiarity with VBA programming essentials.

Total Questions: 28
Total Points: 100
Points Needed to Pass: 70
Maximum Time: 120 minutes (2 hrs)

How to Prepare for the Exam

Don't let the exam questions take you by surprise! We recommend that you practice the skills in the "CSWP-API Exam Details" section above, and that you ask for help from experienced SOLIDWORKS API programmers.

No details to the solutions for either this sample exam or the real test will be shared by the SOLIDWORKS Certification team. Please consult your SOLIDWORKS reseller, your local user group, or the on-line SOLIDWORKS forums at forum.solidworks.com to review any topics on the CSWP-API exam.

A great resource is the SOLIDWORKS website (SOLIDWORKS.com).
- For training courses, go to **Home > Support > Training > SOLIDWORKS Courses**.
- To download models to practice on, go to **Home > Support > Training > SOLIDWORKS Training Files**
- You'll find a wealth of access to videos, tutorials, blogs, events, and fellow users in the SOLIDWORKS Community at **Home > Resource Center**

You can also log into **my.solidworks.com** to browse lessons, forums, models, and much more.

Last but not least, make use of this exam guide to review realistic exam questions, look over important topics, and familiarize yourself with the exam procedure.

How to Take This Practice Exam

1. You must be running SOLIDWORKS on the computer, both for the practice and actual test. SOLIDWORKS can only be installed with the Windows operating system.
2. To simulate real conditions, it is best NOT to print this exam.
    In the real test, the VirtualTester client window runs concurrently with SOLIDWORKS, requiring you to switch between applications. Keep this document open and consult it while running SOLIDWORKS.
3. After each question, save a version of your model in a different file for later reference. This may also help you fix errors later on in the test.
4. The multiple choice will help you check that your model is on the right track. If your answer is not listed in the selections offered, it is likely that there is something wrong with your model.
5. This guide includes an answer key after the practice exam.
6. If you can complete this exam correctly in less than 30 minutes, you should be ready to take the real exam.

The practice exam begins on the next page.

Sample Exam Questions

Question 1.

Imagine that you want to select the largest face in a part programmatically. How would you begin writing a macro like this from scratch? Use the API Help to find the interface for this API call.

What is the interface for this API call?
    A) IFace
    B) IFace2
    C) IPartDoc
    D) ISketch

Question 2.
Continuing from the last question.

What is the member name for this API call?
    A) GetLargestFace
    B) GetLargestArea
    C) GetArea
    D) None of the above

Question 3.

Imagine you want to force a rebuild of all features in a model. Which of the following API calls would accomplish this?

A) RebuildAllFeatures3
B) EditRebuild3
C) Rebuild
D) ForceRebuild3

Question 4.

Which of the following statements is true about the API call highlighted below?

ISketchManager::AddToDb

A) This API call can enable sketch entities to be added directly to the SOLIDWORKS database.
B) This API call is obsolete and is superseded ISketchManager::AddToDb3
C) Setting this API call to false will avoid grid and entity snapping.
D) All of the above is true.

END OF TEST

Answer Key

1) B
2) C
3) D
4) A

Frequently Asked Questions

Below is a series of common questions regarding SOLIDWORKS Certifications. To peruse more FAQs, please visit the SOLIDWORKS Certification FAQ page under **Home > Support > Certification > FAQ**.

1. What is the Certified SOLIDWORKS Professional API (CSWP-API) exam?

The CSWP-API exam is a comprehensive, non-proctored online exam that tests an individual's ability to automate SOLIDWORKS using VBA programming.

2. What resources do I need to take the CSWP-API?

The CSWP-API test is an online test that can be taken on any computer that has SOLIDWORKS running and a connection to the Internet. **You are responsible for providing your own working copy of SOLIDWORKS. A commercial license of SOLIDWORKS or the SOLIDWORKS Student Edition will be adequate for the exams.**

The test runs in its own client window separate from SOLIDWORKS. You can either run the exam software on the same computer as your SOLIDWORKS software or in a separate computer next to the one running SOLIDWORKS. Please note that if you are taking the test on a separate computer that you have some means to transfer files from the computer running the testing client to the computer running SOLIDWORKS. Dual monitors are recommended but not required.

As stated above, an internet connection is required for the exam. At this point there are no provisions for a stand-alone exam.

3. What is the policy on retaking the CSWP-API exam?

There is a 14-day waiting period before retaking the CSWP-API exam. The user will also be required to purchase another exam credit to retake the test.

4. What do I receive when I pass the exam?

You will receive certificates for each exam that you pass. You receive an email that directs you to our electronic certificate access page. There you can login and download your electronic certificate(s) and electronic business card logo(s); CSWPs also receive discounts to partner products and SOLIDWORKS World events. For more information refer to www.solidworks.com/cswp.

5. Can the exam be paused?

No. Once started, exams cannot be paused.

6. I took the exam and my Internet connection failed when the test ended. How do I report my results now?

The tester software will retry to connect for ~2 minutes. If the connection is still not available, an error message will be displayed and a TXT file will be saved on your desktop. The name of the file is: Tangix_TesterPro_Error_Date_Time.
Please send this file to certification@solidworks.com

7. Will my answers be lost if my computer crashes? Will I lose my testing credit/have to pay again if my computer crashes?

You will have to start the examination over and no refund will be available. Once you click 'take exam' your exam credit will be redeemed and we cannot refund your payment or voucher. If your computer crashes, your answers are not recoverable.

8. Which commercial version of the software should I use to take the CSWP-API exam?

For all exams, the minimum version necessary is listed on the information page of that exam. Please go to http://www.solidworks.com/certification and click on the individual exam information page links.

9. Will a certificate be mailed out to me once I pass an exam?

SOLIDWORKS no longer mails out certificates to individuals who have passed an exam. We have made it a simple download that you can print from your computer so you no longer have to wait to receive it. To print your certificate, simply visit www.virtualtester.com/solidworks/user.php. On that page, simply click the "Print My Certificate" button and follow the on-screen instructions. Please note that not all exams have printable certificates.

Helpful Sites

SOLIDWORKS Home:

www.SOLIDWORKS.com

SOLIDWORKS Resource Center:

http://www.SOLIDWORKS.com/sw/resources.htm

SOLIDWORKS YouTube Channel:

https://www.youtube.com/user/SOLIDWORKS

MySOLIDWORKS:

my.SOLIDWORKS.com

Training Pages:

http://www.SOLIDWORKS.com/sw/support/software-training-certification.htm