PURESTORAGE®

PURE STORAGE CERTIFIED

FLASHARRAY™
IMPLEMENTATION PROFESSIONAL
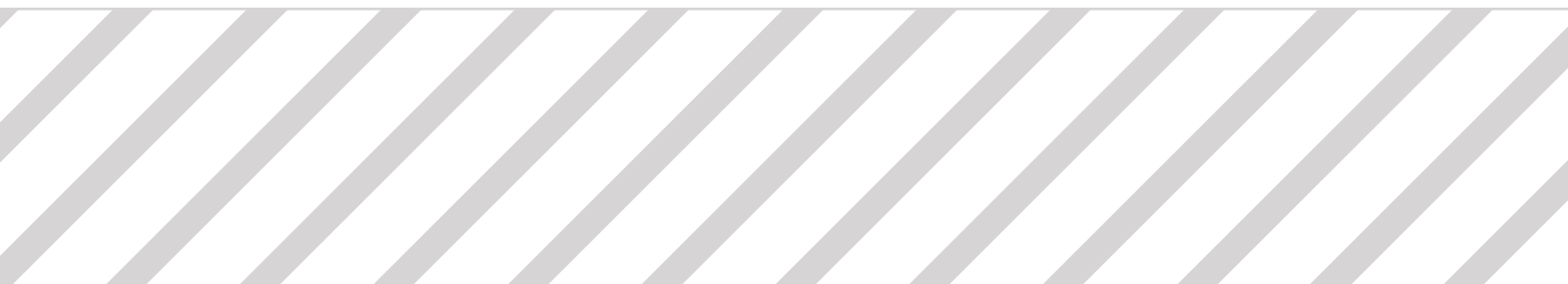# EXAM GUIDE

EXAM NUMBER: FAIP_002

PURESTORAGE®

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ABOUT PURE STORAGE CERTIFIED EXAMS

To be a Pure Storage Certified Implementation Professional - FlashArray is to demonstrate expertise in delivering fast and reliable solutions that unlock business value and eliminate deployment risk. Pure Storage's Certification exams have been developed following industry best practices to strive for reliable and valid test score interpretations.

This guide has two purposes:

1. to provide you with the recommended preparations for the Pure Storage FlashArray Implementation Professional Exam, and

2. to help you determine if you are ready to sit for the exam.

This guide outlines the knowledge, skills, and abilities required of a "minimally qualified candidate" for a specific job role, which will be evaluated in the exam.

SECTION 1: EXAM REGISTRATION INSTRUCTIONS

1.1. EXAM REGISTRATION INFORMATION

- Exam name: Pure Storage FlashArray Implementation Professional

- Exam number: FAIP_002

- Exam cost: $200 (US Dollars)

1.2 CREATING AN ONLINE ACCOUNT

1. Go to www.examslocal.com

2. Type "Pure Storage" in the search box.

3. Either confirm the scheduling process or sign in. The system will automatically recognize if you are eligible and will allow you to move forward.

4. Select the date and time you want to take the exam. Please note that exams require a 24-hour leadtime to schedule. The earliest date you will be able to make a reservation will be the next business day. The time you select for your exam will be based on the time zone that is set on your web browser.

5. Complete a compatibility check by visiting: www.examslocal.com/ScheduleExam/Home/ CompatibilityCheck, and agree to the terms and conditions in order to schedule your exam. The time you select for your exam is based on the time zone that is set on your web browser.

1.3 ONLINE EXAM COMPUTER REQUIREMENTS

Your computer must meet the minimum requirements of PSI/Innovative Exams including:

- A stable broadband Internet service with a bandwidth of at least 512 Kbps down and 256 Kbps up

- Chrome or Chromium web browser

- Webcam

- Microphone

To check if your computer meets the minimum requirements of the exam provider, visit http://www. examslocal.com/ScheduleExam/Home/CompatibilityCheck. Otherwise, no software installations are required.

We do not install any software on your computer for this exam and, therefore, we do not have any access to your computer or its contents. The only access the proctor has to your computer is the webcam and desktop sharing facilitated by your web browser. You will experience a virtual lockdown browser system that utilizes secure communications and encryption. Upon the completion of the exam, all proctor "view-only access" is automatically removed. PSI/Innovative Exams is our partner that helps us to proctor and deliver the exam.

1.4 DAY OF THE EXAM

Requirements:

- You must provide one form of government-issued photo ID (e.g., driver's license, passport).

- If you do not provide acceptable proof of identification via webcam to the proctor prior to the exam, you will not be allowed to take the exam. No refund or rescheduling is provided when an exam cannot be started due to failure to provide proper identification.

- You must also consent to having your photo taken. The ID will be used for identity verification only and will not be stored.

- You must be alone in a quiet environment such as a conference room or home office.

- The proctor will ask you to show your desk and surroundings before your exam can start.

- You cannot consult notes or books during the exam. The proctor will not allow use of documents, materials, or websites during the exam.

Log on to Launch the Exam

To launch the exam, visit http://www.examslocal.com/

1. Click "Sign In" and enter login credentials.

2. Click "My Exams".

3. Click the green "Launch" button.

NOTE: The timer for your exam does not start until the Innovative Exams' proctor has launched the exam. You will have 120 minutes to complete the exam. You may start your exam any time between 15 minutes before and 15 minutes after your scheduled start time. However, if you do not start your exam within this 30-minute timeframe, the system will automatically mark you as a No-Show and you will not be able to take your exam.

Special Considerations

- How to reset a forgotten password: Visit www.examslocal.com/Account/LostPassword. Once you've reset your password you can sign in via: www.examslocal.com then navigate to "Sign In".

- What to do if www.examslocal.com says you are not eligible for the exam: Verify that you have registered and paid for the exam (or have used an eCredit) at www.examslocal.com. Check your inbox for a confirmation email from Do_Not_Reply@innovativexams.com. If you are still listed as ineligible for the exam, please email Innovative Exams at examsupport@examslocal.com, or call 888-504-9178 / 312-612-1049 for additional support. For any additional questions or concerns, please contact the Pure Storage certification team at certadmin@purestorage.com.

1.5 EXAM SCORING

- One point is awarded for each correct answer to a single-response or multi-response question.
- No points are awarded for either incorrectly answered or unanswered single- or multi-response questions.

1.6 AFTER THE EXAM

Your candidate record will be updated with the results of your exam 24-48 hours following the exam. Please see section 1.8 of this exam guide for instructions on how to review your candidate record.

If You Pass

Your candidate record will have an eCertificate when you achieve a certification, as well as a Pure Storage certification logo for this exam. A certification is valid for two years. Upon expiration, you must take the exam again.
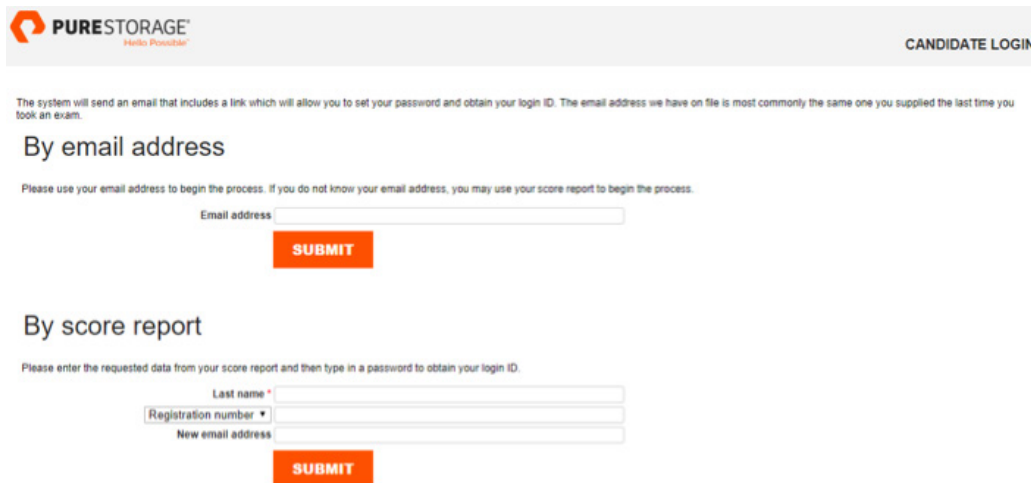
If You Fail

You will need to wait 72 hours to re-schedule the exam.

1.7 YOUR CANDIDATE RECORD

To access your candidate record, visit https://www.certmetrics.com/purestorage/login.aspx. From here you will be able to access your score report(s).

Your first time logging in, you will need to create an account. To create an account:

1. Click "Never logged in before?" on the landing page.

2. Enter either your email address or data from your score report, as shown below.

3. You will receive an email with instructions on how to access your account.

Once you have created your account, you will be able to login with your login ID and password.

SECTION 2: FLASHARRAY IMPLEMENTATION PROFESSIONAL EXAM STRUCTURE

- Number of questions: 75

- Question types: Multiple Choice (three or four options, one to two correct answers)

- Time limit: 120 minutes

SECTION 3: FLASHARRAY IMPLEMENTATION PROFESSIONAL EXAM TOPICS

3.1 DOMAIN NAMES

The job tasks measured on the exam are grouped into the following domains of practice:

- Pre-Install
- Pre-Upgrade
- Install
- Upgrade
- Post-Install/Upgrade

3.2 TASK INFORMATION

Within each domain, you should be able to perform specific tasks as a Pure Storage Certified Implementation Professional - FlashArray, including but not limited to:

- **Pre-Install**
  - Validate the implementation workbook data
  - Verify the configuration and environment pre-requisites for installation
  - Verify correct equipment is on-site
- **Pre-Upgrade**
  - Verify correct hardware is on-site
  - Verify environment for cabling
- **Install**
  - Configure software for install
  - Perform hardware installs
- **Upgrade**
  - Perform hardware upgrades
  - Given a set of requirements, perform software-related tasks
  - Perform capacity consolidations
- **Post-Install/Upgrade**
  - Verify successful install/upgrade
  - Perform a high-level product and GUI walkthrough

3.3 DOMAIN DISTRIBUTION

The questions on the exam are distributed as follows for each domain.
(Note: each question carries the same weight and there is no partial credit for any question.)

DOMAINS	PERCENT OF EXAM
Pre-Install	17%
Pre-Upgrade	13%
Install	18%
Upgrade	33%
Post-Install/Upgrade	19%

SECTION 4: THE PURE STORAGE CERTIFIED IMPLEMENTATION PROFESSIONAL - FLASHARRAY JOB ROLE

This exam is designed for individuals who are currently performing or have previous work experience with the job responsibilities of a Pure Storage Certified Implementation Professional - FlashArray.

4.1 THE MINIMALLY QUALIFIED CANDIDATE (MQC)

To pass the exam, you must possess at least the minimum level of knowledge, skills, and abilities required of a Pure Storage Certified Implementation Professional - FlashArray. The MQC is either a partner or employee who has 3-5 years of system administration and/or data center operation experience and 6-12 months of Pure Storage experience.

The Pure Storage Certified Implementation Professional - FlashArray should be able to perform the following tasks without any assistance:

- Prepare and confirm the content for the site preparation survey prior to installation or upgrade

- Install Purity software and FlashArray hardware

- Confirm multipathing and/or I/O balance

- Validate software capabilities/basic knowledge transfer for customers

- Run initial configuration and upgrade commands in the CLI

- Installation of FlashArray: new, upgrades, generational NDU, capacity upgrades and evacuations

The Pure Storage Certified Implementation Professional - FlashArray should be able to participate in the following task with substantial guidance, mentoring, or instruction:

- Assess and configure ActiveCluster

- Understand capacity requirements and limitations

4.2 MQC WORK EXPERIENCE

A minimally qualified Pure Storage Certified Implementation Professional - FlashArray typically has the following work experience:

- Intermediate level role

- 3-5 years of system administration and/or data center operations experience

- 6-12 months of Pure Storage experience

SECTION 5: EXAM PREREQUISITES

There are no prerequisites for the Pure Storage FlashArray Implementation Professional examination.

SECTION 6: DETERMINE EXAM READINESS

Nothing can guarantee that you will pass your test; however, the more practical work experience you have, the better your chances are to pass the test. Use the self-assessment preparation worksheet (below) to evaluate your level of readiness.

6.1 ON-THE-JOB EXPERIENCE

Since Pure Storage exams measure knowledge, skills, and abilities for a specific job role, one of the best ways to prepare for the exam is to ensure you have the minimum work experience, as described in this guide.

6.2 SELF-ASSESSMENT PREPARATION WORKSHEET

Use the following worksheet to review the exam topics, and assess your own readiness. If you need to prepare more for a certain topic, determine if you need training, on the-job-experience, or both.

I can:

TOPIC	YES	NO
Pre-Install		
Given a scenario, determine errors in configuration information from workbook (e.g., determine if required parameters are available for installation)		
Calculate adequate rack space for hardware installation		
Distinguish if a customer's, power, network and SAN cabling is compatible and suitable to enable installation of FA according to best practices and given connectivity requirements		
Identify hardware mismatches or damage that will prevent a FlashArray install from being completed		
Pre-Upgrade		
Verify correct hardware was ordered and on-site		
Run the fuse hwndu_simulate tool to ensure correct hw SKUs are ordered		
Use cabling guide to verify cabling is correct		
Complete cable labeling process		
Install		
Determine appropriate troubleshooting steps during a failure		
Upgrade from external media		
Verify the correct datapacks are installed based on the array being configured		
Confirm DirectMemory modules are inserted in the correct slots		
Upgrade		
Determine whether a component is field upgradeable without interruption to service		
Demonstrate the required steps and commands for upgrading various components including: NVRAM modules, Controllers, Power Supply		
Upgrade/Downgrade Purity as necessary		
Demonstrate the steps and use commands involved in performing a shelf or data pack evacuation		
Identify possible failures that may occur during an evacuation and the effect they will have on the array		

TOPIC	YES	NO
Post-Install/Upgrade		
Verify proper operation once installed		
Determine/Set the required tunables		
Perform knowledge transfer of GUI operations		
Describe available resources		

SECTION 7: PURE STORAGE FLASHARRAY IMPLEMENTATION PROFESSIONAL - EMPLOYEE EXAM SAMPLE QUESTIONS

Review and practice taking exam questions to get a sense for the types of questions on the exam. Please note that **your performance here does not indicate how you will do on the actual exam**. To fully prepare for the exam, closely review the topic areas and objectives in this Exam Guide. The correct answers are at the end of the exam guide.

1. A FlashArray//X has 3 iSCSI cards in each controller.

    What is the maximum number of Ethernet cables that the customer needs to provide for the iSCSI initiators to be connected utilizing all of the ports on both controllers, including the on-board iSCSI ports?)

    a. 12

    b. 16

    c. 20

    d. 24

2. Which upgrade is included in an Evergreen™ Gold Subscription after 3 years?

    a. Capacity

    b. Controllers

    c. 32Gb FC card

    d. 100Gb Ethernet card

3. A customer has purchased a new //X20R3 array and would like to use existing 1g Ethernet switches.

   Which additional components are required to continue using the existing switches and CAT-6 cables on the new array?

   a. 1Gb/s SFP Transceivers

   b. Copper 1Gb/s Transceivers

   c. OM3 cabling

   d. qSFP adapters.

4. A customer sees a performance impact to their host environment during a shelf evacuation.

   Which action should an Implementation Engineer take to identify the cause of this issue?

   a. Check if capacity is above 100%

   b. Check Pure1® to see if the load percentage is above 80%

   c. Check if capacity is above 80%

   d. Check Pure1 to see if the load percentage is above 60%

5. During the upgrade to a FlashArray//X70R3, power feed is discovered to be 120VAC.

   Which step should an Implementation Engineer perform next to complete this upgrade?

   a. Call Support and request a step-up transformer

   b. Continue with the upgrade as planned, ensuring both power supplies are connected

   c. Use the 1600W power supply provided in the NDU kit

   d. Advise the client that the FlashArray//X70R3 must use 208VAC

6. How much rack space is required for a FlashArray chassis install?

   a. 3U

   b. 4U

   c. 7U

   d. 2U

7. Which procedure should an Implementation Engineer follow when a hardware NDU pre-upgrade check shows SAS chains miscabled?

   a. Continue as normal if the array has no other issues

   b. Follow the installation guide to re-cable the array

   c. Contact Support for a re-cabling procedure

   d. Power off the array and re-cable

8. Which step should the Implementation Engineer take to perform firmware component updates and complete the Purity upgrade?

    a. Run command pureboot reboot —offline

    b. Run command pureboot reboot —secondary

    c. Run command hardware_check.py

    d. Run command get_hardware_check.py

9. When creating a volume in Purity GUI, which two options are available? (Choose two.)

    a. Volume name

    b. Thin provisioned

    c. Snapshot schedule

    d. RAID type

    e. Volume size

SECTION 8: ANSWER KEY

Correct answers are shown below in **bold italics**.

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SUPPORT

For information on Pure Storage's certification programs, visit www.examslocal.com. To contact us, please send an email to certadmin@purestorage.com.

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