# TABLE OF CONTENTS

Chapter 1. NVIDIA Volta Deep Learning AMI Overview.......................................................... 1  
Chapter 2. Version 18.11.1............................................................................................... 2  
Chapter 3. Version 18.09.1............................................................................................... 3  
Chapter 4. Version 18.08.0............................................................................................... 4  
Chapter 5. Version 18.07.0............................................................................................... 5  
Chapter 6. Version 18.06.0............................................................................................... 6  
Chapter 7. Version 18.05.0............................................................................................... 7  
Chapter 8. Version 18.04.0............................................................................................... 8  
Chapter 9. Version 18.03.0............................................................................................... 9  
Chapter 10. Version 18.01.0............................................................................................. 10  
Chapter 11. Version 17.10.1............................................................................................. 11  
Chapter 12. Version 17.10.0............................................................................................. 12
Chapter 1.  
NVIDIA VOLTA DEEP LEARNING AMI OVERVIEW

NVIDIA makes available on the Amazon Web Service (AWS) platform a customized Amazon Machine Instance (AMI) optimized for the NVIDIA Volta™ GPU, called the Amazon EC2 P3 Instance. Running NVIDIA® GPU Cloud containers on this instance provides optimum performance for deep learning jobs.

See the NGC AWS Setup Guide for instructions on setting up and using the AMI, including instructions on using the following features:

- Automated login to the NGC container registry.
- Elastic Block Storage (EBS) mounting.
Chapter 2.
VERSION 18.11.1

Image Name
NVIDIA Volta Deep Learning AMI 18.11.1

Contents of the NVIDIA Volta Deep Learning AMI
- Ubuntu Server: 16.04 LTS
- NVIDIA Driver: 410.79
- Docker CE: 18.06.1
- NVIDIA Container Runtime for Docker: (nvidia-docker2) v2.0.3

Key Changes
- Updated the NVIDIA driver to 410.79.

Known Issues
There are no known issues in this release.
Chapter 3.
VERSION 18.09.1

Image Name
NVIDIA Volta Deep Learning AMI 18.09.1

Contents of the NVIDIA Volta Deep Learning AMI
- Ubuntu Server: 16.04 LTS
- NVIDIA Driver: 410.48
- Docker CE: 18.06.1
- NVIDIA Container Runtime for Docker: (nvidia-docker2) v2.0.3

Key Changes
- Updated the NVIDIA driver to 410.48.
- Updated Docker CE to 18.06.1

Known Issues
There are no known issues in this release.
Chapter 4.  
VERSION 18.08.0

Image Name
NVIDIA Volta Deep Learning AMI 18.08.0

Contents of the NVIDIA Volta Deep Learning AMI

‣ Ubuntu Server: 16.04 LTS
‣ NVIDIA Driver: 396.44
‣ Docker CE: 18.06-ce
‣ NVIDIA Container Runtime for Docker: (nvidia-docker2) v2.0.3

Key Changes
‣ Updated the NVIDIA driver to 396.44.
‣ Updated Docker CE to 18.06

Known Issues
There are no known issues in this release.
Chapter 5.
VERSION 18.07.0

Image Name
NVIDIA Volta Deep Learning AMI 18.07.0

Contents of the NVIDIA Volta Deep Learning AMI
- Ubuntu Server: 16.04 LTS
- NVIDIA Driver: 396.37
- Docker CE: 18.03.1-ce
- NVIDIA Container Runtime for Docker: (nvidia-docker2) v2.0.3

Key Changes
- Updated the NVIDIA driver to 396.37.

Known Issues
There are no known issues in this release.
Chapter 6.
VERSION 18.06.0

Image Name
NVIDIA Volta Deep Learning AMI 18.06.0

Contents of the NVIDIA Volta Deep Learning AMI

- Ubuntu Server: 16.04 LTS
- NVIDIA Driver: 396.26
- Docker CE: 18.03.1-ce
- NVIDIA Container Runtime for Docker: (nvidia-docker2) v2.0.3

Key Changes

- Updated the NVIDIA driver to 396.26.

Known Issues

There are no known issues in this release.
Chapter 7.
VERSION 18.05.0

Contents of the NVIDIA Volta Deep Learning AMI

- Ubuntu Server: 16.04 LTS
- NVIDIA Driver: 384.125
- Docker CE: 18.03.1-ce
- NVIDIA Container Runtime for Docker: (nvidia-docker2) v2.0.3

Key Changes

- Includes Ubuntu 16.04 security updates
- Updated Docker CE to version 18.03.1-ce

Known Issues

There are no known issues in this release.
Chapter 8.
VERSION 18.04.0

Contents of the NVIDIA Volta Deep Learning AMI

- Ubuntu: 16.04 LTS
- NVIDIA Driver: 384.125
- Docker CE: 18.03.0-ce
- NVIDIA Container Runtime for Docker: (nvidia-docker2) v2.0.3

Key Changes

- Updated the NVIDIA Driver to version 384.125
- Updated Docker CE to version 18.03.0-ce

Known Issues

There are no known issues in this release.
Chapter 9.
VERSION 18.03.0

Contents of the NVIDIA Volta Deep Learning AMI

‣ Ubuntu: 16.04 LTS
‣ NVIDIA Driver: 384.111
‣ Docker CE: 17.12.1-ce
‣ NVIDIA Container Runtime for Docker: (nvidia-docker2) v2.0.3

Key Features and Enhancements

‣ Installs available Ubuntu updates at boot.
‣ Updated the NVIDIA Driver to version 384.111
‣ Updated Docker CE to version 17.12.0-ce
‣ Updated the NVIDIA Container Runtime for Docker (nvidia-docker2) to v2.0.3

Known Issues

There are no known issues in this release.
Contents of the NVIDIA Volta Deep Learning AMI

NVIDIA is providing updates to help mitigate the Intel CPU security issues and maintain compatibility with recent Linux updates for these security issues.

‣ Ubuntu: 16.04 LTS
‣ NVIDIA Driver: 384.111
‣ Docker CE: 17.12.0-ce
‣ NVIDIA Container Runtime for Docker (nvidia-docker v2.0)

For details on the vulnerability, refer to Security Bulletin 4611 for more information. To see NVIDIA security bulletins, subscribe to security bulletin notifications, or learn more about NVIDIA's product security management process, go to NVIDIA Product Security.

Key Features and Enhancements

‣ Installs available Ubuntu updates at boot.
‣ Updated the NVIDIA Driver to version 384.111
‣ Updated Docker CE to version 17.12.0-ce
‣ Updated to the NVIDIA Container Runtime for Docker (nvidia-docker2 v2.0)

Known Issues

There are no known issues in this release.
Chapter 11.
VERSION 17.10.1

Contents of the NVIDIA Volta Deep Learning AMI

- Ubuntu: 16.04.3
- NVIDIA Driver: 384.81
- Docker CE: 17.09.0-ce
- Docker Engine Utility for NVIDIA GPUs: 1.0.1

Key Features and Enhancements

- Installs available Ubuntu updates at boot.
- Provided a new MNIST example script with correct container image tags.
  - Removed the mnist_tensorflow.sh and mnist_pytorch.sh scripts.
  - Added the mnist_example.sh script.

Known Issues

There are no known issues in this release.
Chapter 12.
VERSION 17.10.0

Contents of the NVIDIA Volta Deep Learning AMI

- Ubuntu: 16.04.3
- NVIDIA Driver: 384.81
- Docker CE: 17.09.0-ce
- Docker Engine Utility for NVIDIA GPUs: 1.0.1

Key Features and Enhancements

- Installs available Ubuntu updates at boot.

Known Issues

- Container Tags in Example Scripts are Incorrect
  
  **Description**
  
  Two example scripts are provided as part of the AMI to show how to run NGC Deep Learning containers. These scripts are in the Ubuntu home directory, named mnist_pytorch.sh and mnist_tensorflow.sh. These scripts reference container tags 17.09 instead of 17.10.

  **Workaround**

  Edit 17.09 to 17.10 in both scripts before running them. This issue will be fixed at the next release of the NVIDIA Volta Deep Learning AMI.
Notice

THE INFORMATION IN THIS GUIDE AND ALL OTHER INFORMATION CONTAINED IN NVIDIA DOCUMENTATION REFERENCED IN THIS GUIDE IS PROVIDED “AS IS.” NVIDIA MAKES NO WARRANTIES, EXPRESSED, IMPLIED, STATUTORY, OR OTHERWISE WITH RESPECT TO THE INFORMATION FOR THE PRODUCT, AND EXPRESSLY DISCLAIMS ALL IMPLIED WARRANTIES OF NONINFRINGEMENT, MERCHANTABILITY, AND FITNESS FOR A PARTICULAR PURPOSE. Notwithstanding any damages that customer might incur for any reason whatsoever, NVIDIA’s aggregate and cumulative liability towards customer for the product described in this guide shall be limited in accordance with the NVIDIA terms and conditions of sale for the product.

THE NVIDIA PRODUCT DESCRIBED IN THIS GUIDE IS NOT FAULT TOLERANT AND IS NOT DESIGNED, MANUFACTURED OR INTENDED FOR USE IN CONNECTION WITH THE DESIGN, CONSTRUCTION, MAINTENANCE, AND/OR OPERATION OF ANY SYSTEM WHERE THE USE OR A FAILURE OF SUCH SYSTEM COULD RESULT IN A SITUATION THAT THREATENS THE SAFETY OF HUMAN LIFE OR SEVERE PHYSICAL HARM OR PROPERTY DAMAGE (INCLUDING, FOR EXAMPLE, USE IN CONNECTION WITH ANY NUCLEAR, AVIONICS, LIFE SUPPORT OR OTHER LIFE CRITICAL APPLICATION). NVIDIA EXPRESSLY DISCLAIMS ANY EXPRESS OR IMPLIED WARRANTY OF FITNESS FOR SUCH HIGH RISK USES. NVIDIA SHALL NOT BE LIABLE TO CUSTOMER OR ANY THIRD PARTY, IN WHOLE OR IN PART, FOR ANY CLAIMS OR DAMAGES ARISING FROM SUCH HIGH RISK USES.

NVIDIA makes no representation or warranty that the product described in this guide will be suitable for any specified use without further testing or modification. Testing of all parameters of each product is not necessarily performed by NVIDIA. It is customer’s sole responsibility to ensure the product is suitable and fit for the application planned by customer and to do the necessary testing for the application in order to avoid a default of the application or the product. Weaknesses in customer’s product designs may affect the quality and reliability of the NVIDIA product and may result in additional or different conditions and/or requirements beyond those contained in this guide. NVIDIA does not accept any liability related to any default, damage, costs or problem which may be based on or attributable to: (i) the use of the NVIDIA product in any manner that is contrary to this guide, or (ii) customer product designs.

Other than the right for customer to use the information in this guide with the product, no other license, either expressed or implied, is hereby granted by NVIDIA under this guide. Reproduction of information in this guide is permissible only if reproduction is approved by NVIDIA in writing, is reproduced without alteration, and is accompanied by all associated conditions, limitations, and notices.

www.nvidia.com
Trademarks

NVIDIA, the NVIDIA logo, and Volta are trademarks and/or registered trademarks of NVIDIA Corporation in the United States and other countries.

Docker and the Docker logo are trademarks or registered trademarks of Docker, Inc. in the United States and/or other countries.

Other company and product names may be trademarks of the respective companies with which they are associated.

Copyright

© 2018 NVIDIA Corporation. All rights reserved.