DEVELOP Virtual Machine Guidebook

Your virtual machine (VM) is a NASA-sponsored Amazon Web Services (AWS) Science Data Managed Cloud Environment (SMCE) Elastic Compute Cloud (EC2) instance. Here's a quick guide on getting it started and using some of its helpful features. Navigate to any section directly by clicking on its name in the Table of Contents.

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Troubleshooting note: If you are experiencing any difficulties with your VM, reach out to James (Jim) Davis via Microsoft Teams or email (james.davis@ssaihq.com).

Section 1. Creating your EC2 and starting your VM (for the first time)

Note: If you have already created the EC2 previously, you can skip this section and proceed to Section 2. Starting your VM.

1. Navigate to the Jenkins server login page: https://jenkins.developprogram.org



Welcome to Jenkins!

Username
Password
Sign in
Keep me signed in

Note: If you are logged into a NASA VPN, the page will not load. Disconnect from the VPN and reload the Jenkins server login page. Most participants will not have VPN access, which mainly applies to Fellows.

2. Sign in with the password provided to you by James (Jim) Davis. The username should look something like **firstname.lastname**, and the password will be pretty long!

Note: Passwords are set to expire every 60 days. Refer to Section III on how to check and change your password.

3. Select **AWSDevelop**. This is where you can view the job build history and start a new job.

🏟 Jenkins			Q Search (第+K)	I James Davis × I lo
Dashboard >				
+ New Item	Al +			🖉 Add descriptio
Build History	S W Name↓	Last Success	Last Failure	Last Duration
(항) Manage Jenkins 완 My Views		5 min 7 sec #39,james.davis	19 min #38,james.davis	2 min 17 sec 🕞
Build Queue V	lcon: S M L		Icon legend 🔊 Atom feed for all 🔊 Atom feed for fa	ailures 🔊 Atom feed for just latest build
No builds in the queue.				
Build Executor Status V				
1 Idle				
2 Idle				
3 Idle 4 Idle				
https://jenkins.developprogram.org/job/AWSDevelop/				REST API Jenkins 2

4. On the left-hand panel, select **Build with Parameters**. This is where you will first create your EC2 instance.

🧌 Jenkins		Q Search (#+K)	⑦ L James Davis ~ I log out
Dashboard > AWSDevelop >			
 ↑ Back to Dashboard ⑦ Status ✓ Changes ○ Workspace ▷ Build with Parameters ③ Configure ⑩ Deleto Project ⊘ Rename 	Project AWSDevelop Manage Develop EC2 Instances Permalinks • Last build (#39,james.davis), 5 min 12 sec ago • Last stable build (#39,james.davis), 5 min 12 sec ago • Last stable build (#30,james.davis), 7 min 29 sec • Last stable build (#10,james.davis), 7 min ago • Last unstable build (#10,james.davis), 16 min ago		🖉 Edit description Disable Project
C Build History trend ∨	• Last completed dunic (#35,ames.davis), o min 12 sec ago		
Q Filter builds			
#39.james.davis Sep.9.2022.6:21 PM AWSDevelop job managing Develop AWS EC2s	⊼ •		
#38.james.davis Sep 9, 2022; 6:07 PM AWSDevelop job managing Develop AWS EC2s	•		
#37.james.davis Sep. 9, 2022. 6:01 PM AWSDevelop job managing Develop AWS EC2s			

5. To create your EC2 Instance for the first time, you must select **Create** from the **Operation** dropdown menu. From that, click the blue **Build** button.

r an	Jenkins	
Dash	board > AWSDevelop >	
\uparrow	Back to Dashboard	
Ē	Status	
2</td <td>> Changes</td> <td></td>	> Changes	
E] Workspace	
⊳	Build with Parameters	
6	Configure	
Ŵ	Delete Project	
D	Rename	
ŝ	Build History	trend ~
Q Fi	Iter builds	
).james.davis	
AW	<u>3, 2022, 0:21 PM</u> SDevelop job managing Develop AWS	EC2s
8 #38 Sep	3.james.davis 9. 2022. 6:07 PM	
AW	SDevelop job managing Develop AWS	EC2s
8 #33	5.james.davis 9. 2022, 6:01 PM	
AW	SDevelop job managing Develop AWS	EC2s
	9, 2022, 5:42 PM	

6. Once you click the **Build** button, your job will be submitted into the Jenkins queue. Your **Create** job will always be the first one in the queue. Click on the progress bar of your **Create** job in the queue to view the status in the **Console Output** screen.

🧌 Jenkins		Q Search (#+K)	⑦ L James Davis Y Dog out
Dashboard > AWSDevelop >			
 ↑ Back to Dashboard P Status ✓ Changes → Workspace > Build with Parameters (3) Configure (3) Delete Project 	Project AWSDevelop Manage Develop EC2 Instances Permalinks • Last build (#40), 0.24 sec ago • Last stubie build (#3)james.davis), 5 min 25 sec ago • Last stubie build (#3)james.davis), 5 min 25 sec ago • Last stubie build (#3)james.davis), 5 min 25 sec ago		Citat description Disable Project
🖉 Rename	Last unstable build (#10,developadmin), 24 days ago Last unsuccessful build (#36,james.davis), 20 min ago Last completed build (#39,james.davis), 5 min 25 sec ago		
Build History trand Q. Filter builds 2 #49 36:8:9:2022.8:27 MM 26:8:9:2022.8:27 MM AMSDevelop be managing Develop AVIS EC2s 37:83/amss.starki 37:83/amss.starki			
Sep 9, 2022, 5:07 PM AWSDevelop job managing Develop AWS EC2s #37.james.davis			
Sep 9, 2022, 6:01 PM AWSDevelop job managing Develop AWS EC2s			

7. On the left-hand panel, select **Console Output** The **Console Output** screen will show the status of your **Create** job.



Console Output

8. The first time you create your EC2 instance may take a while, so be patient and let it run until the job status indicates "Finished: SUCCESS."

Dashboard > AWSDe	evelop > #40,james.davis	
		14:27:07 SSH: EXEC: channel open
		14:27:07 SSH: EXEC: STDOUT/STDERR from command [/usr/bin/python2 SGARA_Create.py SMCE-Develop-"james.davis"]
Timestamps	View as plain text	14:27:07 SSH: EXEC: connected
		14:51:32 Sep 09 2022 06:27 FM: Running SGARA_Create.py SMCE-Develop-james.davis
System clock time		14:51:32 Sep 09 2022 06:27 PM: /home/ec2-user/SGARA_Functions.pyc made=SMCE-Develop-SMCE-Develop-james.davis, instanceId=i-0f81d4b9c225f2aee, ipAddr=117, Type=t3.xlarge
🗹 Use browser timezo	one	14:51:32
O Elapsed time		1919192
		191122 app 07 022 05:20 FT: Instance name = 5Kcs-Develop-james.davis, command_line = aws ecz associate-iam-instance-profile =-imstance-id 1-01010405022512000 =-iam- instance profile Norma-10000 = 0000000000000000000000000000000
⊖ None		Allocative Textile Name - unte_outrigett
		Aviana dey of 2022 Voice fra instance name - anta-beteiny-pamestavas, comman_inte - avs etz antotate-auntess
		14:51:12 "einelloca09909730652eb9d"
		14:51:32 Sep 09 2022 06:28 PM: instance name = SMCE-Develop-james.davis, command_line = aws ec2 associate-addressinstance-id i-0f81d4b9c225f2aeeallocation-id *eipalloc-
		099099730e524eb9d"
		14:51:32 Sep 09 2022 06:28 PM: instance name = SMCE-Develop-james.davis, command_line = aws ec2 create-tagsresources "eipalloc-099099730e524eb9d"tags
		Key=Name,Value=SMCE-Develop-james.davis
		14:51:32 Sep 09 2022 06:48 PM: instance name = SMCE-Develop-james.davis, command_line = aws ec2 describe-instance-statusinstance-id i-0f81d4b9c225f2aee
		14:51:32 Sep 09 2022 06:48 PM: instance name = SNCE-Develop-james.davis, command_line = aws cloudwatch put-metric-alarmalarm-name cpu-mon-SNCE-Develop-james.davisalarm-
		description "Idle CPU Monitor Alarm when CPU remains under 5 percent for 2 hour"metric-name CPUUtilizationnamespace AMS/EC2statistic Averageperiod 900threshold
		5comparison-operator LessThanThresholddimensions "Name=InstanceId,Value= i-0f81d4b9c225f2aee"evaluation-periods 8alarm-actions arn:aws:automate:us-east-1:ec2:stop
		unit Percenttreat-missing-data notBreaching
		14:51:32 Sep 09 2022 06:51 PM: instance name = SMCE-Develop-james.davis, command_line = aws ec2 describe-instance-statusinstance-id i-0f8ld4b9c225f2aee
		14:51:32
		14:51:32
		14:51:32 If you cannot login to your EC2, wait an additonal 5 minutes to allow the EC2 to finish joining the Active Directory domain.
		14:51:32
		14:51:32 SSH: EXEC: completed after 1,465,302 ms
		14:51:32 SSH: Disconnecting configuration [Automation]
		14:51:32 SSH: Transferred 0 file(s)
		14:51:32 Build step 'Send files or execute commands over SSH' changed build result to SUCCESS
		14:51:33 New run name is '#40, james.davis'
		14:51:35 New run description is 'AMSDevelop job managing Develop AMS EC2s'
		+ 14:51:35 Finished: SUCCESS
		REST API Jenkins 2,361.1

9. You are going next want to go back to the **Project AWSDevelop** screen to get the status of your build. Click on the **AWSDevelop** link on the upper left of the screen.

餐 Jenkins		Q Search (#+K)	⑦ L James Davis ~	∃ log out
Dashboard > AWSDevelop > #40,james.dav	is			
↑ Back to Project	Console Output			
Changes	14:27:02 Started by user James Davis			
Console Output	14:27:02 Building in workspace /var/lib/jenkins/workspace/AWSDevelop			
View as plain text	14:27:05 New run description is 'ANSDevelop job managing Develop ANS EC2s' 14:27:07 SN: Connecting from host (in-10-0-0-106.developmrogram.org)			
Edit Build Information	14:27:07 SSH: Connecting with configuration [Automation] 14:27:07 SSH: Creating session: username [ec2-user], bostname [10.0.0.197], bort [22]			
Parameters	14:27:07 SSH: Connecting session 14:27:07 SSH: Connected			
← Previous Build	14:27:07 SSH: Opening exec channel 14:27:07 SSH: EXEC: channel open			
Timestamps View as plain text	14:27:07 SSH: EXEC: STDOUT/STDERR from command [/usr/bin/python2 SGARA_Create.py SMCE-Develop-"james.dat 14:27:07 SSH: EXEC: connected	vis"]		
System clock time	14:51:32 Sep 09 2022 06:27 PM: Running SGARA_Create.py SMCE-Develop-james.davis 14:51:32 Sep 09 2022 06:27 PM: /home/ec2-user/SGARA_Punctions.pyc made=SMCE-Develop-SMCE-Develop-james.	davis, instanceId=i-0f81d4b9c225f2a	wee, ipAddr=117, Type=t3.xlars	3 0
Use browser timezone	14:51:32 14:51:32			
O Elapsed time	14:51:32 Sep 09 2022 06:28 PM: instance name = SMCE-Develop-james.davis, command_line = aws ec2 associationstance-profile Name="SMCE SSNDpent"	te-iam-instance-profileinstance-	id i-Of81d4b9c225f2aeeiam-	-
○ None	14:51:32 Sep 09 2022 06:28 PM: instance name = SMCE-Develop-james.davis, command_line = aws ec2 allocat: 14:51:32 ('%hllocationId': "eipalloc-099099730e524eb9d", '\n')	e-address		
	14:51:32 "eipalloc-099099730e524eb9d" 14:51:32 Sep 09 2022 06:28 PM: instance name = SMCE-Develop-james.davis, command_line = avs ec2 associa	te-addressinstance-id i-0f81d4b9	c225f2aeeallocation-id "«	eipalloc-
	099099730e524eb9d ⁺ 14:51:12 Sep 09 202:06:28 PM: instance name = SMCE-Develop-james.davis, command_line = avs ec2 create- Key+Mane,Value-SMCE-Develop-james.davis	tagsresources "eipalloc-0990997	30e524eb9d"tags	
	14:51:32 Sep 09 2022 06:48 PM: instance name = SMCE-Develop-james.davis, command_line = aws ec2 describ 14:51:32 Sep 09 2022 06:48 PM: instance name = SMCE-Develop-james.davis, command_line = aws cloudwatch	e-instance-statusinstance-id i- put-metric-alarmalarm-name cpu-m	0f8ld4b9c225f2aee mn-SMCE-Develop-james.davis ·	alarm-
https://jenkins.developprogram.org/job/AWSDevelop/	description 'Idle CPU Monitor Alarm when CPU remains under 5 procent for 2 hour"setric-name CPUUilli 5commarians-non-non-start Exectlanthorabuilddimensions "Assessing and Alarmanand	zationnamespace AMS/EC2statis valuation-periods &alarm-actions	tic Averageperiod 900th	reshold

10. On the left-hand panel, select **Build with Parameters**.



11. Select **Status** from the **Operation** dropdown menu. From that, click the blue **Build** button.

3

🏘 Jenkins		Q Search (#+K)	⑦ James Davis Y log o
Dashboard > AWSDevelop >			
↑ Back to Dashboard	Project AWSDevelop		
🗐 Status	This build requires parameters:		
Changes	Operation		
Workspace	Status - Determines the current state of the EC2 defined by the user Start - Launches EC2 defined by user		
Duild with Parameters	Stop - Stops the EC2 defined by user Reboot - Reboots the EC2 defined by user		
Configure	Create - Generates the VM into existence Term - Terminites(Deletes) the VM - This is permanent!		
Delete Project			
🖉 Rename			
△ Build History trend ∨			
Q Filter builds			
#40.iames.davis Sen 9, 2022, 6-27 PM			
AWSDevelop job managing Develop AWS EC2s			
#39.iames.davis Sep 9.2022.6:21 PM AWSDevelop job managing Develop AWS EC2s			
#38.james.davis Sep 9.2022.6:07 PM AWSDevelop job managing Develop AWS EC2s			
#37.james.davis Sep 9, 2022, 6:01 PM			

12. Click on the progress bar of your **Status** job in the queue to view the status in the **Console Output** screen.



13. On the left-hand panel, select **Console Output**. The **Console Output** screen will show the status of your **Status** job.

Console Output	
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14. Allow the **Status** job to complete until the job status indicates "Finished: SUCCESS."

Once complete, locate the header in the Console Output log indicated by Owner/State/ImageId/Ip Addr/InstanceId/Type/Purpose/PublicIp.

Note and write down the **PublicIp**; This will be the IP address you will use to login remotely to your VM.

Dashboard > AWSDevelop > #41james.davis	14:52:48 New run description is 'ANSDevelop job managing Develop ANS EC2a' 14:52:50 SSN: Connecting trom host [10-10-0-0-136.developprogram.org] 14:52:50 SSN: Connecting with configuration [Automation] 14:52:60 SSN: Connecting essenting essent [ec2-user], hostname [10:0.0.197], port [22] 14:52:50 SSN: Connecting essent 14:52:50 SSN: Connecting essent channel	
Timestamps View as plain text ® System clock time Is browser timezone	14452:50 SBH: EXEC: STOOUT/STOERE from command [/usr/bin/gython2 SGABA_Status.py SMCE-Develop-"james.davis"] 14:52:56 14:52:56 14:52:56 Status as of: Sep 09 2022 06:52 PM:	
○ Elapsed time ○ None	14:52:56 	pose
	11232165 LINET General-SHCE-Develop-James.davis running ami-079599bbbddbfec94f 117 1-0f81d4b9c225f2aee Sep 09 2022 06:27 PM t3.ularge Summ 14:32:56 14:32:56 14:32:56 14:52:57 SMS: Disconneting configuration [Automation] 14:52:47 SMS: Transformed of file(s) 14:52:47 SMS: Transformed of file(s) 14:52:57 Nor run name is '441,james.davis' 14:52:57 Nor run description is 'ANBOvelop job managing Develop ANS EC2s' 14:52:59 Nor run description is 'ANBOvelop job managing Develop ANS EC2s' 14:52:59 Finished: SUCCESS	mer2022
	REST API Je	enkins 2.3(

15. At this point, you can log out of Jenkins and proceed to Section 3. Remote into Your VM.

Jenkins			Q. Search (#+K)	⑦ ▲ James Davis ~ → logout
+ New Item 윤 People B Build History	All +			🖉 Add description
Manage Jenkins	S W Name↓	Last Success	Last Failure	Last Duration
옷을 My Views	AWSDevelop	26 sec #41,james.davis	46 min #38,james.davis	14 sec D
Build Queue V	Icon: S M L		Icon legend 💦 Atom feed for all 💦 Atom feed for fails	res 🔉 Atom feed for just latest builds
No builds in the queue.				
Build Executor Status				
1 Idle				
2 Idle				
3 Idle				
4 100				
https://jenkins.developprogram.org/logout				REST API Jenkins 2.361.1

Section 2. Starting your VM

1. Navigate to the Jenkins server login page: https://jenkins.developprogram.org



- 2. Sign in with the password provided to you by James (Jim) Davis. The username should look something like **firstname.lastname**, and the password will be pretty long!
- 3. Select **AWSDevelop**. This is where you can view the job build history and start a new job.

🏘 Jenkins			Q Search (第+K)	⑦ ▲ James Davis × → log out
Dashboard >				
+ New Item	AI +			🖉 Add description
Manage Jenkins	S W Name↓	Last Success	Last Failure	Last Duration
윤 My Views		5 min 7 sec #39,james.davis	19 min #38,james.davis	2 min 17 sec 🕞
Build Queue V	lcon: S M L		Icon legend 💦 Atom feed for all 💦 Atom feed for faile	res 🔊 Atom feed for just latest builds
No builds in the queue.				
Build Executor Status				
1 Idle				
2 Idle				
3 Idle				
https://ienkins.developprogram.org/iob/AWSDevelop/				REST API Jenkins 2.361.1

4. On the left-hand panel, select **Build with Parameters**. This is where you will start your EC2 instance.

🏘 Jenkins		Q Search (#+K)	⑦ James Davis Y I log out
Dashboard > AWSDevelop >			
↑ Back to Dashboard	Project AWSDevelop		
🗐 Status	Manage Develop EC2 instances		
Changes			Edit description
Workspace			Disable Project
Build with Parameters	← Permalinks		
Configure	Last build (#39.james.davis), 5 min 12 sec ago		
Delete Project	Last statute Julia (#39,james.davis), 5 min 12 sec ago Last successful build (#39,james.davis), 5 min 12 sec ago Last failed huild (#38,james.davis), 5 min 12 sec ago		
🖉 Rename	Last unstable build (#04gent-touten); // Orm eggs ago Last unstable build (#10,developadmin); 24 days ago Last unsuccessful build (#28,james,davis); 19 min ago Last completed build (#3,james,davis); 10 min 2 gec ago		
Build History trend ~			
Q Filter builds			
#39.james.davis Sep.9.2022.6:21 PM AWSDevelop lob managing Develop AWS EC25	⊼		
× #38.james.davis			
Sep 9, 2022, 6:07 PM AWSDevelop job managing Develop AWS EC2s			
#37.james.davis Sep 9. 2022. 6:01 PM AWSDevelop job managing Develop AWS EC2s			
#36.james.davis Sep 9. 2022.5:42 PM			

5. To start your EC2 Instance, select **Start** from the **Operation** dropdown menu. From that, click the blue **Build** button.

🧌 Jenkins	
Dashboard > AWSDevelo	op >
↑ Back to Dashboard	
🖹 Status	
Changes	
Workspace	
Build with Parameter	ers
Configure	
Delete Project	
🖉 Rename	
Build History	trend v
Q. Filter builds	
#42.james.davis	
Sep 9. 2022, 6:57 PM AWSDevelop job managing Dev	velop AWS EC2s
Sep 9, 2022, 6:52 PM AWSDevelop job managing Dev	velop AWS EC2s
#40.james.davis	
AWSDevelop job managing Dev	velop AWS EC2s

6. Once you click the **Build** button, your job will be submitted into the Jenkins queue. Your **Start** job will always be the first one in the queue. Click on the progress bar of your **Start** job in the queue to view the status in the **Console Output** screen.

🏘 Jenkins		Q Search (#+K)	⑦ James Davis ✓ → log out
Dashboard > AWSDevelop >			
↑ Back to Dashboard F Status	Project AWSDevelop Manage Develop EC2 Instances Permalinks • Last stubid (#40), 0.2.4 sec ago • Last stubie build (#30)jumes.davia), 5 min 25 sec ago • Last stubie build (#30)jumes.davia), 5 min 25 sec ago		Edit description Disable Project
Rename	Last failed built (#38,james.davis), 20 min ago Last traited built (#38,james.davis), 20 min ago Last unsuccessful built (#38,james.davis), 20 min ago Last unsuccessful built (#38,james.davis), 20 min 25 sec ago		
O Build History trand Q. Filter builds Page Page 9:89.1.2022, 6:27 PM Page Page Standsmostandin Standsmostandin Standsmostandin AvdStoveko poko phrmanging Develop AVIS EC2s Page Page			
(e) 838 James davis Sea 9. 2022. 6:07 PM AWSDevelop job managing Develop AWS EC2s (e) 823 James davis Sea 9. 2022. 6:01 PM AWSDevelop homanging Develop AWS EC2s			

7. On the left-hand panel, select **Console Output**. The **Console Output** screen will show the status of your **Start** job.

Console Output

8. Starting your EC2 instance may take a while, so be patient and let it run until the job status indicates "Finished: SUCCESS."

Dashboard > AWS	Develop > #40,james.davis	
		14:27:07 SSH: EXEC: channel open
		14:27:07 SSH: EXEC: STDOUT/STDERR from command [/usr/bin/python2 SGARA_Create.py SMCE-Develop-"james.davis"]
Timestamps	View as plain text	14:27:07 SSH: EXEC: connected
		14:51:32 Sep 09 2022 06:27 FM: Running SGARA_Create.py SMCE-Develop-james.davis
System clock time		14:51:32 Sep 09 2022 06:27 PN: /home/ec2-user/SGARA_Functions.pyc made=SMCE-Develop-SMCE-Develop-james.davis, instanceId=i-0f81d4b9c225f2aee, ipAddr=117, Type=t3.xlarge
🗹 Use browser time	zone	14:51:32
O Elapsed time		14:51:32 14:51:32 Sen 09 2022 06:28 EW: instance name = SMCE_Develon_iames davis, command line = avs er2 associate_iam_instance_profileinstance_id in/f8/d400:22572aeeiam_
None		instance-profile Name="SKCE SSRAgent"
Onone		14:51:32 Sep 09 2022 06:28 PN: instance name = SHCE-Develop-james.davis, command_line = aws ec2 allocate-address
		14:51:32 ('"AllocationId": "eipalloc-099099730e524eb9d"', '\n')
		14:51:32 "eipalloc-099099730e524eb9d"
		14:51:32 Sep 09 2022 06:28 PM: instance name = SMCE-Develop-james.davis, command_line = avs ec2 associate-addressinstance-id i-0f81d4b9c225f2aeeallocation-id *eipalloc- 099099730e524eb3d*
		14:31:12 Sep 09 2022 06:28 FM: instance name = SMCE-Develop-james.davis, command_line = avs ec2 create-tagsresources "eipalloc-099099730e524e59d"tags
		NY-ame,value-sw.e-uevello-jamma.tavis
		A STATE BY OF AVE VITO IN ANOTHER DIMONSTRATES AND A STATE
		described voi net who have she could be and the second of the second sec
		5
		unit Percenttreat-missing-data notBreaching
		14:51:32 Sen 09 2022 06:51 PN: instance name = SNCE-Develon-iames.davis. command line = aws ec2 describe-instance-statusinstance-id i-0f81d4b9c225f2aee
		14:51:32
		14:51:32
		14:51:32 If you cannot login to your EC2, wait an additonal 5 minutes to allow the EC2 to finish joining the Active Directory domain.
		14:51:32
		14:51:32 SSH: EXEC: completed after 1,465,302 ms
		14:51:32 SSH: Disconnecting configuration [Automation]
		14:51:32 SSH: Transferred 0 file(s)
		14:51:32 Build step 'Send files or execute commands over SSB' changed build result to SUCCESS
		14:51:33 New run name is '#40,james.davis'
		14:51:35 New run description is 'AMSDevelop job managing Develop AMS EC2s'
		14:51:35 Finished: SUCCESS
		REST API Jenkins 2.361.1

9. You are going next want to go back to the **Project AWSDevelop** screen to get the status of your build. Click on the **AWSDevelop** link on the upper left of the screen.

🏟 Jenkins	Q Sea	arch (#+K)	Lames Davis ∨ 🕣 log out
Dashboard > AWSDevelop > #40,james.da	avis		
↑ Back to Project F Status	Console Output		
> Changes	14:27:02 Started by user James Davis		
Console Output	14:27:02 Kunning as SYSTEM 14:27:02 Building in workspace /var/lib/jenkins/workspace/AWSDevelop		
View as plain text	14:27:07 SSH: Connecting from host [1p-10-0-196.developprogram.org]		
C Edit Build Information	14:27:07 SSH: Connecting with configuration [Automation] 14:27:07 SSH: Creating session: username [ec2-user], hostname [10.0.0.197], port [22]		
Parameters	14:27:07 SSH: Connecting session 14:27:07 SSH: Connected		
← Previous Build	14:27:07 SSH: Opening exec channel 14:27:07 SSH: EXEC: channel open		
Timestamps View as plain text	14:27:07 SSH: EXEC: STDOUT/STDERR from command [/usr/bin/python2 SGARA_Create.py SMCE-Develop-"james.davis"] 14:27:07 SSH: EXEC: connected		
Sustam clock time	14:51:32 Sep 09 2022 06:27 PM: Running SGARA_Create.py SMCE-Develop-james.davis		ddeelli meeseki oleene
Villee browser timezone	14:51:32 Sep 09 2022 06:27 PM: /nome/ecz-user/Sokiok_runctions.pyc made-secz-userlop-secz-userlop-james.davis, insta 14:51:32	inceid-1-oreid4b9c22512aee, ipw	ddr=117, Type=c3.xlarge
Classed time	14:51:32		
O Nucc	14:51:32 Sep 09 2022 06:28 PM: instance name = SMCE-Develop-james.davis, command_line = aws ec2 associate-iam-insta instance-profile Name="SMCE.SSMAgent"	ince-profileinstance-id i-Of	81d4b9c225f2aeeiam-
OINOR	14:51:32 Sep 09 2022 06:28 PM: instance name = SMCE-Develop-james.davis, command_line = aws ec2 allocate-address		
	14:51:32 ('"AllocationId": "eipalloc-099099730e524eb9d"', '\n')		
	14:51:32 [eipalloc-099099730e524eb9d] 14:51:32 Son 09 2022 06:22 DM: instance name = SMCE-Develop-ismes davis command line = see ac2 associate_address -	instance-id i-0f81d4b9c225f2a	essllocation-id "sinalloc-
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	14:51:32 Sep 09 2022 06:28 PM: instance name = SMCE-Develop-james.davis, command_line = aws ec2 create-tagsresou Key=Name,Value=SMCE-Develop-james.davis	irces "eipalloc-099099730e524e	b9d"tags
	14:51:32 Sep 09 2022 06:48 PM: instance name = SMCE-Develop-james.davis, command_line = aws ec2 describe-instance-s	statusinstance-id i-Of81d4b	9c225f2aee
	14:51:32 Sep 09 2022 06:48 PM: instance name = SMCE-Develop-james.davis, command_line = aws cloudwatch put-metric-a	alarmalarm-name cpu-mon-SMCE	-Develop-james.davisalarm-
https://jenkins.developprogram.org/job/AWSDevelop/	<pre>description "Idle CPU Monitor Alarm when CPU remains under 5 percent for 2 hour"metric-name CPUUtilizationnam 5 -=comparison=cmetrator.LessThanThresholddimensions_"Name=InstanceId.Values i=0f8ld&b9c225f2aee" -=evaluation=net </pre>	espace AMS/EC2statistic Ave	rageperiod 900threshold

- 10. On the left-hand panel, select Build with Parameters.
 - ▷ Build with Parameters
- 11. Select **Status** from the **Operation** dropdown menu. From that, click the blue **Build** button.

🏘 Jenkins		Q Search (#+K)	I James Davis Y I log out
Dashboard > AWSDevelop >			
↑ Back to Dashboard	Project AWSDevelop		
🖹 Status	This build requires parameters:		
Changes	Operation		
Workspace	Status - Determines the current state of the EC2 defined by the user Start - Launches EC2 defined by user		
Build with Parameters	Stop - Stops the EC2 defined by user Reboot - Reboots the EC2 defined by user		
Configure	Create - Generates the VM into existence Term - Terminites(Deletes) the VM - This is permanent!		
Delete Project	[Status ▽] ◀───── 1		
🖉 Rename			
△ Build History trend ∨			
Q. Filter builds			
#40.james.davis			
AWSDevelop job managing Develop AWS EC2s			
#39.james.davis Sep 9. 2022. 6:21 PM AWSDevelop job managing Develop AWS EC2s			
#38.james.davis Sep 9, 2022, 5:07 PM AWODevelop ich managion Davelop AWS 572-			
Bit State Bit State <t< th=""><th></th><th></th><th></th></t<>			

12. Click on the progress bar of your **Status** job in the queue to view the status in the **Console Output** screen.



13. On the left-hand panel, select **Console Output**. The **Console Output** screen will show the status of your **Status** job.



14. Allow the **Status** job to complete until the job status indicates "Finished: SUCCESS."

Once complete, locate the header in the Console Output log indicated by Owner/State/ImageId/Ip Addr/InstanceId/Type/Purpose/PublicIp.

Note and write down the **PublicIp**; This will be the IP address you will use to login remotely to your VM.

Dashboard > AWSDe	evelop > #41,james.davis									
View as plain	text	14:52:48 New run description is 'A	NSDevelop job m	nanaging Develop	AWS EC2s'					
「 Edit Build Inform	nation	14:52:50 SSH: Connecting With conf	iguration [Auto	omation]	1.0131					
0		14:52:50 SSH: Creating session: us	ername [ec2-use	er], hostname [1	0.0.0.197], port [22]					
Parameters		14:52:50 SSH: Connecting session . 14:52:50 SSH: Connected								
← Previous Build		14:52:50 SSH: Opening exec channel								
		14:52:50 SSH: EXEC: channel open 14:52:50 SSH: EXEC: STDOUT/STDERR	from command [/	/usr/bin/python2	SGARA Status.pv SMCE-Dev	lop-"james.	davis"l			
Timestamps	View as plain text	14:52:50 SSH: EXEC: connected					,			
System clock time		14:52:56								
Use browser timezo	ne	14:52:56 Status as of: Sep 09 2022	06:52 PM:							
C Elapsed time		14:52:56								
O None										
		14:52:56 Owner		State	ImageId	Ip Addr	InstanceId	LaunchTime	туре	Purpose
		PublicIp 14:52:56								
		14:52:56 SMCE-Develop-SMCE-Develop	-james.davis	running	ami-079b90bb4dbfec94f	117	i-0f81d4b9c225f2aee	Sep 09 2022 06:27 PM	t3.xlarge	Summer2022
		→ 52.70.232.138	•							
		14:52:56								
		14:52:56								
		14:52:57 SSH: EXEC: completed after	r 6,607 ms							
		14:52:57 SSH: Disconnecting config	uration [Automa	ation]						
		14:52:57 Build step 'Send files or	execute comman	nds over SSH' ch	anged build result to SUC	ESS				
		14:52:57 New run name is '#41,jame	s.davis'							
		14:52:59 New run description is 'A	NSDevelop job m	managing Develop	AWS EC28'					
		14:52:59 Finished: SUCCESS								

15. At this point, you can log out of Jenkins and proceed to Section 3. Remote into Your VM.

A . I.									
🧛 Jenkins						Q Search (#+K) (?)	👱 James Davis	→ log_out
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29 People		All +							
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Build History		с ж	Name 1	Last Current	1	allure.		Last Duration	
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Build Queue	~	lcon: S M	L		Icon legend	Atom feed for all	Atom feed for failures	Atom feed for j	ust latest builds
No builds in the queue.									
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1 Idle									
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3 Idle									
4 Idle									
								REST API	Jenkins 2.361.1
								REST API	Jenkins 2.361.1

Section 3. Remote into Your VM

1. You will need a remote desktop client.

For Windows:

The **Remote Desktop Connection** client is provided as part of the Windows operating systems. Use the Windows Start menu and search for "remote" and the **Remote Desktop Connection** client is usually the first application listed.

For macOS:

macOS users will need to download/install the **Microsoft Remote Desktop** app from the Mac App Store. In the Mac App Store do a search for "Microsoft Remote Desktop."

- 2. Launch remote desktop client. Enter the IP address (**IPAddr**) you wrote down in Step 14 from Section 1. or Section 2.
 - a. On Windows
 - 1) Populate the IP address in the **Computer** field:



- 2) Click **Connect**.
- 3) Enter your login information. Your username is develop\firstname.lastname, and the password is the same you used to get into the Jenkins server in Section 2., Step 2 You may need to select Use a different account to login using the develop domain.

Windows S	ecurity		×
Enter y	our credentials		
These cre	dentials will be used to	connect to 100.26.80.117.	
develop	\erica.carcelen		
•••••			
Domain:	develop		
More cho	ices		
Я	Carcelen, Erica C (US JPL\carcelen	329B-Affiliate)	
8	Erica Carcelen (affiliat ecarcele@ndc.nasa.go Smart card credential	e) ov	
	Connect a smart card		
8	Use a different accou	nt	
	ОК	Cancel	1

- 4) Click or.
- b. On macOS:
 - 1) Populate the IP address in the **PC Name** field:

		Microsoft Remote Desktop
6		
	Add PC	
	PC name:	Host rume or IP address
54.22	User account:	Ask when required
	General	Display Devices & Audio Folders
	Friendly name:	
	Group:	Saved PCs
	Gateway:	No gateway
		Reconnect if the connection is dropped
		Connect to an admin session
		awap mouse buttons

- 2) Click the **Add** button, then double-click on the PC you just added.
- You may get a pop-up about the validity of certificate like the example below. Click **Continue**, as this is normal for remote desktop connections to EC2 instances.



3. You should be greeted with your VM desktop!



Section 4. Shutting down your VM

You **<u>MUST</u>** shut down your VM every single time you are done using it! Failure to do so will waste energy and money on an unused, idle virtual machine.

1. If you are remotely logged into your VM, bring up the **Start** menu by pressing the Win key on your keyboard or by clicking the Win button on the lower left corner of the Windows desktop, then click the **Power** button, and then click **Shut down**.



Wait until your VM completely shuts down and returns to your remote desktop client.

2. Once you have returned to you remote desktop panel, you know that your VM has shut down and stopped, and you are good to log off for the night. At this point, you can quit your remote desktop client.

Section 5. Storing Files

At DEVELOP, there are several resources available to store your files, which are detailed below. Discuss these options with your Fellow, who may have preferences for the node or suggestions for what would work best for your team!

Local Storage (C:)

The **C: drive** on your virtual machine is your local drive, meaning any files stored here are only accessible on your virtual machine. If you start running low on space in your **C: drive**, work with your Fellow to request an increase in space from IT. Files stored on your **C: drive** will be lost at the end of the term, so make sure you have sent files to your Fellow or uploaded them to the shared drive. These should only be files that cannot be re-downloaded or files that are being sent to your partners. Use a **README** to document your folder's content and structure!



Shared Drive (D:)

The program's shared drive is accessible through the Virtual Machine and is already mapped to the **D: drive**, no additional steps are needed to connect to it. Because this folder is accessible by everyone in the program, you can use it to transfer files among your team members or back-up your work. Please keep your files organized in a team folder with the following naming format:

YearTerm_Node_ProjectShortTitle

Remember that this is a shared space for the program, so be mindful of the amount of space you are using.

If you have several large files that need to be shared with your team members, contact IT about options to set-up a server for easy transfer!



AWS WorkDocs

AWS WorkDocs is a cloud-based file-sharing platform that can be accessed both inside and outside the Virtual Machine. It is a great option for teams that are not requesting Virtual Machines and need space to share files outside of Office 365.

Please access AWS WorkDocs through the browser only, <u>do not download</u> and install the app on your virtual machine.

1. Navigate to the AWS WorkDocs page:

https://developprogram.awsapps.com/workdocs/loginv2/index.html#/emailSelect?sitename =developprogram

 Login with the username (firstname.lastname) and password that Jim Davis sent you. The username should be formatted as username@develop.environments.com. It should be the same username and password used for Jenkins and GitLab.

am	azon	NorkDocs
V	VorkDocs	Please log in with your developprogram credentials
Let	's get started	erica carcelen@develop.environments.cor
eri	ra carcelen@develon environment	Remember username
	.og in >	
		Sign In
Lea	rn more about Amazon WorkDocs	
Dor	vnload clients	By continuing, you agree to the AWS Customer Agreement other agreement for AWS services, and the Privacy Notice. This site uses essential cookies. See our Cookie Notice for more information.
10	100 Mar	Forgot Password?
6 Mg		

3. The home page defaults to MyDocs, which are the folders and files you have uploaded to AWS WorkDocs. If this is your first-time logging in, there should be no files since you have not added any files yet! Navigate to Collaborate to see folders shared among other users in DEVELOP's AWS WorkDocs and Activity to see recent actions taken in your files.

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0 0 0 80%s,A,(Kennel)) 6/9/01238/94 8-6 Faller						
C	1 8/20/21 2.28 PM 28/118 Nytee						

4. To create a new folder, use the **Create** button at the top right. Once you're ready to upload files to your folder, navigate to the folder and use the blue **Upload** button to upload folders or individual files.

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Mydian Nacycle teo Fasorites		
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D 0 D 200Ma, PL, Manuala	1 9/10/21 12:00 Per II 8 Hanne	
C () D Bitter, P., Nyelwerkee	1 sk/sacht 2,00 PM 20 hills have	

5. If you'd like to share the folder with your teammates via AWS WorkDocs, select the file or folder you'd like to share. Click the **Share** button that becomes available on the top right, near the blue **Upload** button.

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C El Ante	5 10/20/2111/28-AM 1.41-68 Husley	Ċ.	
C District Accesses	1 9/9/21123874 8-8 Autor	2	
Billion, PL, Supervision	1 8/96/11239-Net 2011-08 Hatter		
1			

6. You can create a link by selecting the Share a link option and selecting the appropriate option.



You can also add people to the folder by selecting Invite people and entering their emails (typically **firstname.lastname@ssaihq.com**). Any folders shared with you will show up in the **Collaborate** tab.

scott.cunningham@ssaihq.com	Contributor 🗸
scott.cunningham@ssaihq.com Please enter a valid username or email address.	
britnay.beaudry@ssaihq.com	Contributor 🗸
hayley.pippin@ssaihq.com	Contributor 🗸

Note: Only those with access to DEVELOP's AWS WorkDocs can be added or view these folders. If you need to share a folder or file externally, discuss any limitations and options with your Fellow and IT.

7. When you select a file or folder, the **Actions** drop-down menu also becomes available. Use this drop-down to download, edit, or delete the item.

WorkDocs Make Calabase Anna Q Jaco	NAME OF TAXABLE PARTY OF TAXABLE PARTY.	
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Section 6. SMCE Passwords

For security reasons, your SMCE account password expires every 90 days. *Please keep track of when your password expires, and remember to change it before its expiration date!*

- 1. If you did not request a VM for the term and needed to change your password before it expires to access GitLab or AWS WorkDocs, send a message to Jim Davis to request that your password be reset.
- 2. To check your password expiration date before your password expires, follow the steps in the subsection **Check your password expiration**.
- 3. To change your password before your password expiration date, follow the steps in the subsection **Changing your password**.

Check your password expiration

When you remotely log into your VM, a dialog box should appear within 10 days of an expiration with a warning that your password will expire soon. You can, however, check the expiration date anytime.

1. To check the expiration date of your password, open the **Command Prompt** application on your VM by pressing the Windows key, and on the search field, type "command prompt" to locate the **Command Prompt** application.

In the **Command Prompt** application, type **net user <your_login> /domain** replacing **<your_login>** with your AWS username (typically **firstname.lastname**) and hit **Enter**. Make sure there is a space between your **<your_login>** and **/domain**.



2. A report will then show up with information about your account. Refer to the "Password expires" field for the exact day your current password is set to expire.



Changing your password

If you attempt to remotely log into your VM <u>after your password has expired</u>, you will not be able to log in and will need to message Jim Davis <u>james.a.davis@ssaihq.com</u>, to reset your password.

To update your password, you must connect to the **Change Password Host** (IP address 52.203.105.43) from your VM between NOON and 6 PM Eastern (9 AM and 3 PM Pacific). The **Change Password Host** will only be available at those times and can only be used by one person at a time, so be patient during peak hours.

- 1. To change your password before its expiration date, open the **Command Prompt** application on your VM by pressing the Windows key, and on the search field, type "command prompt" to locate the **Command Prompt** application.
- 2. In the **Command Prompt** application, type **osk** and hit **Enter**.
- 3. A virtual keyboard will appear. On your local keyboard, press the **Ctrl-Alt** keys (these should turn blue on the virtual keyboard) and then click on the **Del** key on the virtual keyboard.

Make sure you click on the **Del** key on the virtual keyboard and <u>do not</u> press **Del** on your local keyboard. If you press **Del** on your local keyboard instead of clicking **Del** on the virtual keyboard, you may change the password on your local machine, not the VM!

																							Instance	5:26:134	-surge	
Command P	Prompt																							- 0	3 X	
C) 2018 M	rindows	[Vers	ion	10	0.1	776 11	11	6791 615		rved																^
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	Caps		а		5		d		f	9		h		j.		k j	1				Enter			Insert	Pause	My Dn
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- 4. Select **Change a password** and fill out the sections accordingly. Passwords must meet the following requirements:
 - at least 15 characters
 - 1 upper case
 - 1 lower case
 - 1 special character,
 - 1 numeric character

Lock Sign out	8
Change a password	Change a password
Task Manager	DEVELOP\erica.carcelen
Cancel	Did password New password

The same character cannot be repeated more than 3 times in a row.

5. Once you click on the **Confirm password** button, your password is set for the next 90 days!