

# Save money by using Azure Automation to deallocate VMs.

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# Document information

#### History

Date	Author	Version	Reason for change
2014-12-15	Bjørn Stusdgaard Voss	1.0	N/A

#### Review

Date	Author	Version	Date for change



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Remarks - Using script or functions explained in this guide is considered to be at your own risk. Cortech A/S cannot be held reliable for any errors or misconfigurations.

Please use with caution and never run scripts or programs, if you don't have the complete understanding of what is being executed.

We recommend that all scripts are tested in a closed environment before being used in any production environments.



## Requirements.

#### Following information are needed to complete this guide.

- Identify Azure Subscription Name.
- Name of CloudService containing VMs. (Guide will not explain how to identify this, should be self-explanatory)
- Names of VMs that should be automatically deallocated. (Guide will not explain how to identify this, should be self-explanatory)

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	Carto- Service Manager	50005-055-08-629-0679110-5	toolicowitch de	Control AS Control Man
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MANAGEMENT SERVICES				
SETTINGS				Coretech.dk

Azure Subscription Name can be found on the SETTINGS page.

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## Create Azure Automation account.

#### First step is to create an Automation account.

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	automation	
	You have no automation accounts. Create one to get started!	
	CREATE AN AUTOMATION ACCOUNT 🕘	
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	AATION "	

Choose "AUTOMATION" page and "CREATE AN AUTOMATION ACCOUNT".

Add a Nev	w Automation	Account
ACCOUNT NAME		_
Automation		<b>S</b>
REGION		_
West Europe		$\checkmark$

Type "Automation" in the ACCOUNT NAME.

Choose your closest region (Currently only 3 available).



# Create PowerShell Login Credentials.

PowerShell login is needed to provide Azure access for the runbook.

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	automation	ETS SCALE		
Automation	NAME	ТҮРЕ	↑ LAST UPDATE	Q
<i>*</i>	Azure	→ Module	12/3/2014 1:32:50 AM	
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<b>-</b> ∎• NEW	м			1 🔍 12 🗾 🕜 Coretech die
Go to "Automat	ion" Page.			

Choose account "Automation". Choose "ASSETS". Choose "ADD SETTINGS".

ADD SETTING	×
Select the type of setting you want to add	
ADD CREDENTIAL	
Add schedule	
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#### Choose "ADD CREDENTIAL".

ADD CREDENTIAL	×
Define Credential	
CREDENTIAL TYPE	
Windows PowerShell Credential	
AzureAutoLogin	
DESCRIPTION	

Choose "Windows PowerShell Credential" in CREDENTIAL TYPE. Enter "AzureAutoLogin" in NAME and press "->".



	add credential Define Credential	×
	USER NAME bsv@cartecki.dk	
	PASSWORD CONFIRM PASSWORD	
	••••••	
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Enter Azure Subscription login in USER NAME. Enter Password in PASSWORD and press complete.

(Remark, best practice might in some organizations dictate that a dedicated Azure Service Account should be used instead)

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# Create PowerShell Variables.

# Azure Automation stores variables in ASSETS. This gives the flexibility to reuse them in multiple runbooks.

As mentioned in requirements. 3 variables are needed in this automation. (Variables should be named as shown below)

- "SubscriptionName" Name of your subscription.
- "CloudServiceName" Name of your cloudservice.
- "VMNames" Name of your VMs.

#### How to create a variable

Microso	oft Azure 🛛 🗸 🗸				Subscriptions 🍸	🌐 manasarah 🕅
	$\langle \boldsymbol{\leftarrow} \rangle$	automation	ETS SCALE			
	Automation	NAME	TYPE	ŕ	LAST UPDATE	Q
<i>**</i> >		Azure	→ Module		12/3/2014 1:32:50 AM	
• ∎• №	IEW	ІМ	PORT MODULE ADD SETTING DEL	D LETE		1 🔍 12 🚍 📀 Coretech dk

1- Again choose "ADD SETTINGS"

ADD SETTING	×
Select the type of setting you want to add	
ADD CONNECTION	
<ul> <li>→ ADD VARIABLE</li> <li>→ ADD SCHEDULE</li> </ul>	
	Coretech.dk

2- Choose "ADD VARIABLE".

	add variable * Define Variable	
	String	
	NAME SubscriptionName	
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- 3- Choose "String" in VARIABLE TYPE.
- 4- Type "SubscriptionName" in NAME and press "->"

	ADD VARIABLE	×
	Define Variable Value	
	Included and Subaccipation - BSV	
	VES NO	
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5- Type in "\*Your subscription name" in VALUE and press complete.

#### Repeat step 1-5 with the following parameters

- In Step 4 type "CloudServiceName" and press "->".
- In Step 5 use "\*Name of your cloud service" and press complete. Example "BSV-Cloud"

#### Repeat step 1-5 with the following parameters

- In Step 4 type "VMNames" and press "->".
- In Step 5 use "\*Name of your Azure VMs" and press complete.
   Example "Server0\*". \* can be used as wildcard to shutdown multiple machines. In this Azure subscription all machines are sequentially numbered. (Server01, Server02, Server03, Server04)



# Create Daily Schedule.

#### Create a schedule

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	automation automation	ASSETS SCALE		
Automation	NAME	ТҮРЕ	↑ LAST UPDATE	Q
<i>—</i>	Azure	→ Module	12/3/2014 1:32:50 AM	
<i>30</i> 2				
<b>■</b> ∎ NEW			1	12 \Xi 🕜 Corelech di

#### Again choose "ADD SETTINGS"

ADD SETTING	×
Select the type of setting you want to add	
ADD CREDENTIAL     ADD CREDENTIAL     ADD CREDENTIAL	
→ ADD SCHEDULE	
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#### Choose "ADD SCHEDULE".

add schedule Configure Schedule	×	
NAME Daily at 5PM		
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Type "Daily at 5PM" in NAME and press "->".



	add schedule Configure Schedule	×
	TYPE ONE TIME HOURLY DAILY	
	START TIME 2014-12-15 17:00	
	SET SCHEDULE EXPIRATION TIME RECUR EVERY (NUMBER OF DAYS)	
1	Coretec	) h.dk

Choose "DAILY" in TYPE. Type "17:00" in START TIME and press complete. (Remark - Automation uses 24 hour clock for timing)

ASSETS should look similar to the screenshot below.

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*	automation	ALE		
Automation	NAME	туре 🔶	LAST UPDATE	Q
the	AzureAutoLogin 🔶	Credential	12/14/2014 10:36:55 PM	
\$Pin <sup>e</sup>	Azure	Module	12/3/2014 1:32:50 AM	
	Daily at 5PM	Schedule	12/14/2014 11:21:05 PM	
$\sim$	SubscriptionName	Variable	12/14/2014 10:43:44 PM	
ക	CloudServiceName	Variable	12/14/2014 11:14:52 PM	
人	VMNames	Variable	12/14/2014 11:15:27 PM	
				Coretech.dk

5 new ASSETS have now been created.



### Create a Runbook.



Press "+ New" in bottom left of the Azure Portal.



Choose "APP SERVICES > AUTOMATION > RUNBOOK > QUICK CREATE". In RUNBOOK NAME type "Machine-Shutdown". In AUTOMATION ACCOUNT choose "Automation". In SUBSCRIPTION choose "\*Your subscription name".

Microsoft Azure 🛛 🗸		Subscriptions 🍸 🌐 🛤 🖬 🕅
Automation	Automation ASHBOARD RUNBOOKS ASSETS SCALE JOB STATUS AI   FROM 2014-12-08   12:00 AM   To The filter is applied when you click the button.	2014-12-15 📰 12:00 AM 👻
<b>™</b>	NAME       AST JOB CREATED LAST JOB STATUS JOBS AUTHORIN	IG TAGS D
	Machine-Shutdown 🔿 None 0 🌞 New	Coretech.dk

Go to "Automation > Automation > RUNBOOKS". Choose "Machine-Shutdown".

Microsoft Azure 🛛 🗸		Subscriptions 🔻	⊕	Kildowiteduk	Ŕ
Machine-Shutdown	machine-shutdown A DASHBOARD JOBS AUTHOR SCHEDULE CONFIGURE PUBLISHED DRAFT 1 workflow Machine-Shutdown 2 3 3				
				Corete	ch.dk

Choose "AUTHOR".

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#### Overwrite the existing script with the following

workflow Machine-Shutdown

{

}

\$AutoPSCred = Get-AutomationPSCredential -Name 'AzureAutoLogin' \$Subscription = Get-AutomationVariable -Name 'SubscriptionName' \$CloudService = Get-AutomationVariable -Name 'CloudServiceName' \$VM = Get-AutomationVariable -Name 'VMNames'

Add-AzureAccount -Credential \$AutoPSCred Select-AzureSubscription -SubscriptionName \$Subscription Stop-AzureVM -ServiceName \$CloudService -name \$VM -force

#### Script should now look as the screenshot below



Press "PUBLISH" and press "YES" to the confirmation.

We recommend that you test the script before publishing. This can be done by using the testing function in Azure Automation. This is not part of this guide.



## Schedule the automatic shutdown

#### Now all left to do is to schedule the script to run daily at 5.00PM using the already created schedule



Press "LINK" and press "Link to an Existing Schedule"

LINK TO AN EXISTING SCHEDU	LE	¥
Select a sched	ule	
SCHEDULES	NAME	DETAILS
All	Daily at 5PM	DESCRIPTION
		TYPE Daily RECUR EVERY (NUMBER OF DAYS) 1 NEXT RUN 12/15/2014 5:00:00 PM SCHEDULE EXPIRES ON Never ENABLED Yes
		Coretech.dk

Press "Daily at 5PM" and press complete.