

**LENOVO DOCK MANAGER APPLICATION**

# **User Manual**

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## 1 Introduction

Dock Manager is designed for Lenovo Enterprise customers who are using Lenovo Dock Devices to: aid with updating the firmware of their Lenovo Dock Devices, run automatic firmware check and download, and provide user friendly prompts for update execution upon firmware download completion. This document demonstrates the transitions within screens along with the actions on how to interact with the application.

## 2 Screen Definitions

In the proceeding sections, different screens are stated along with their respective functionalities. The Dock Manager App currently has 2 existing screens: Dock Device Information Screen and Update History Screen; it also supports system tray behavior and a help button on the title bar for accessibility.

### 2.1 Dock Device Information Screen

The Dock Device Information Screen allows the users to view the information about their dock hardware. The screen also shows the latest firmware version released and allow users to update the firmware manually.

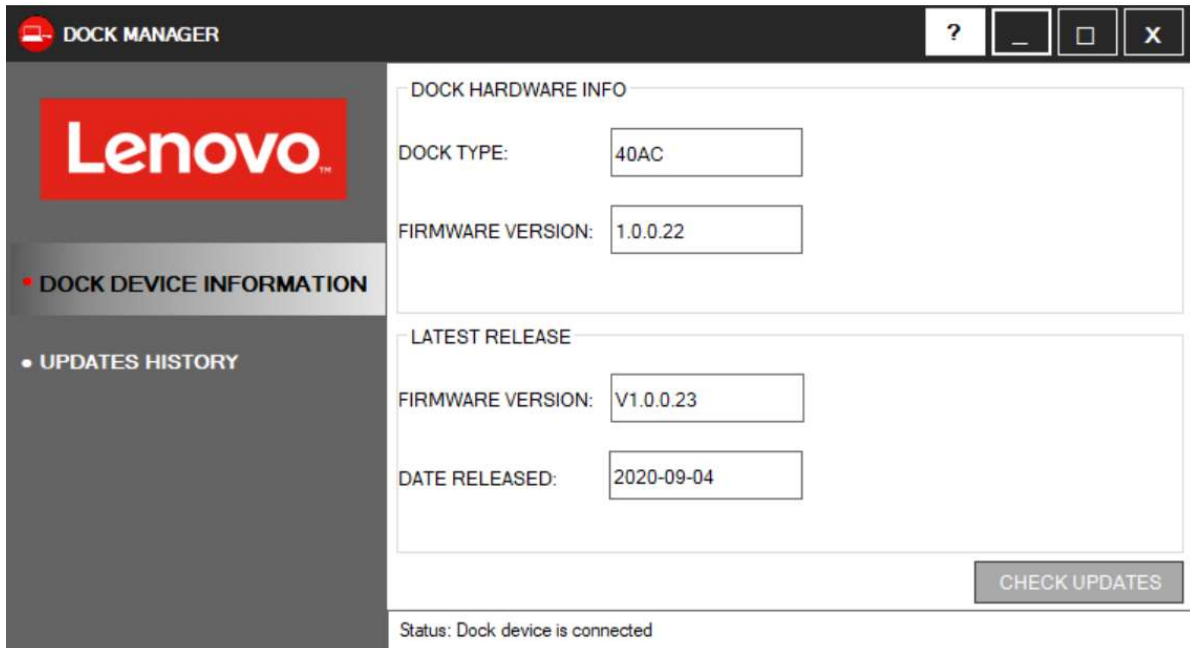


Figure 1. Dock Device Information Screen.

【Check Updates】 button – upon click, will check firmware based on the latest update version.

### 2.2 Update History Screen

The Updates History screen shows all the history of firmware updates executed by the user. History information are also shown through WMI in order for IT Managers to query the list.

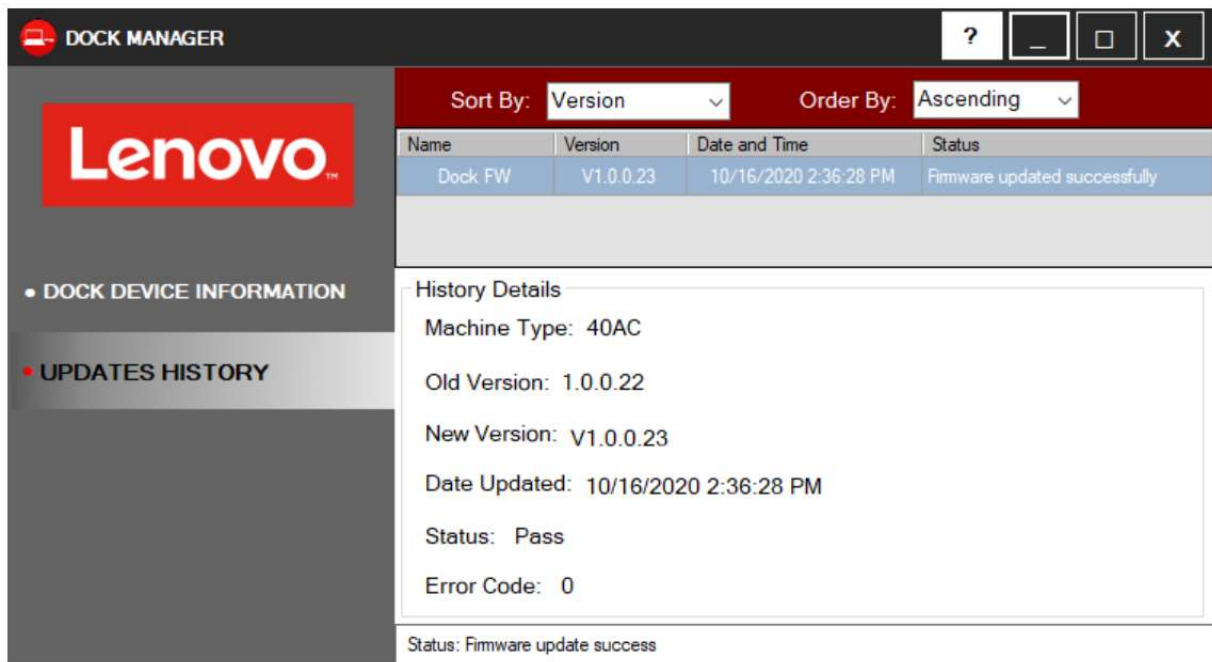


Figure 2. Update History Screen.

### 2.3 System Tray Behavior

The system tray provides a convenient way to: open the Dock Manager Application when minimized, click help to access the User Manual, and click about to open the about page.

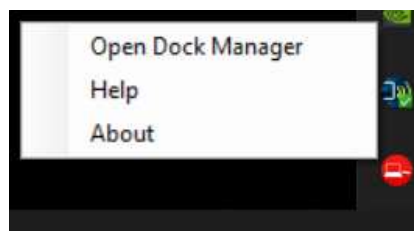


Figure 3. System Tray Help Menu

【Open Dock Manager】 button – upon click, will maximize the Dock Manager application.

【Help】 button – upon click, will show the user manual of the Dock Manager application

【About】 button – upon click, will show the about page.

### 2.4 Title Bar Help Button

The title bar help button is an in-app method to access the: Help section to view the User Manual; and the About section to open the about page.



Figure 4. Title bar Help Button Menu

【Help】 button – upon click, will show the user manual of the Dock Manager application

**[About]** button – upon click, will show the about page.

### 3 WMI Queries

This section provides WMI queries to access WMI classes via PowerShell; created by the Dock Manager Application and Service. The WMI classes created include: *Dock Device* for the attached devices; *DockDeviceUSB* for USB device attached on the dock; *DockDeviceDisplay* for display device also attached on the dock; and *DockManager* for the Update History.

#### 3.1 *DockDevice Class*

DockDevice Class is created when a supported dock is attached. Properties query-able inside the class include: Machine Type, Serial Number and Firmware Version.

```
GENUS           : 2
CLASS           : DockDevice
SUPERCLASS     : 
DYNASTY        : DockDevice
RELPATH        : DockDevice.InstanceId="3841",ProcessId="96f87ef6-79ae-4cf1-94ef-f1015ccd7a40"
PROPERTY_COUNT : 6
DERIVATION     : {}
SERVER        : LAPTOP-SKHNV3TM
NAMESPACE     : root\Lenovo\Dock_Manager
PATH          : \\LAPTOP-SKHNV3TM\root\Lenovo\Dock_Manager:DockDevice.InstanceId="3841",ProcessId="96f87ef6-79ae-4cf1-94ef-f1015ccd7a40"
FWVersion     : v1.0.1.1
InstanceId    : 3841
MACAddress    : 3CE1A1C2427E
MachineType   : 40AV
ProcessId     : 96f87ef6-79ae-4cf1-94ef-f1015ccd7a40
SerialNumber  : 1540AVZQZ0005Q
PSComputerName : LAPTOP-SKHNV3TM
```

Figure 5. Dock Device Class

##### 3.1.1 PowerShell Query

- o `Get-WmiObject -Namespace "root\Lenovo\Dock_Manager" -Query "SELECT * FROM DockDevice" | Format-List -Property MachineType,MacAddress,SerialNumber,FWVersion`

- Sample Result:

```
MACAddress      : 3CE1A1C2427E
FWVersion      : v1.0.1.1
MachineType    : 40AV
SerialNumber   : 1540AVZQZ0005Q
```

Figure 6. DockDevice Sample Query Result

#### 3.2 *DockDeviceUSB Class*

DockDeviceUSB class is created when a USB device is inserted in a supported dock. Properties query-able inside the class include: Device Type, USB PID, USB VID, and USB Device Manufacturer Name.

```

__GENUS           : 2
__CLASS           : DockDeviceUSB
__SUPERCLASS      :
__DYNASTY         : DockDeviceUSB
__RELPATH         : DockDeviceUSB.InstanceId="3846",ProcessId="77f99424-9270-49da-87f9-9d0c981e3cfc"
__PROPERTY_COUNT  : 8
__DERIVATION      : {}
__SERVER          : LAPTOP-SKHNV3TM
__NAMESPACE       : root\Lenovo\Dock_Manager
__PATH            : \\LAPTOP-SKHNV3TM\root\Lenovo\Dock_Manager:DockDeviceUSB.InstanceId="3846",ProcessId="77f99424-9270-49da-87f9-9d0c981e3cfc"
DeviceType        : USB
InstanceId         : 3846
MACAddress         : 3CE1A1C2427E
ProcessId          : 77f99424-9270-49da-87f9-9d0c981e3cfc
SerialNumber       : 1S40AVZQZ0005Q
USB_PID            : PID_0901
USB_VID            : VID_0480
USBDeviceMFGName   : TOSHIBA
PSComputerName     : LAPTOP-SKHNV3TM

```

Figure 7. DockDeviceUSB Class

### 3.2.1 PowerShell Query

- o Get-WmiObject -Namespace "root\Lenovo\Dock\_Manager" -Query "SELECT \* FROM DockDeviceUSB " | Format-List -Property DeviceType,USB\_PID,USB\_VID,USBDeviceMFGName,SerialNumber,MacAddress
  - Sample Result:

```

MACAddress       : 3CE1A1C2427E
SerialNumber     : 1S40AVZQZ0005Q
DeviceType       : USB
USB_PID          : PID_0901
USB_VID          : VID_0480
USBDeviceMFGName : TOSHIBA

```

Figure 7. DockDeviceUSB Sample Query Result

### 3.3 DockDeviceDisplayPort Class

DockDeviceDisplayPort class is created when a display device is inserted in a supported dock. Properties queryable inside the class include: Monitor EDID, Monitor Manufacturer Name, and Monitor Model Name.

```

__GENUS           : 2
__CLASS           : DockDeviceDisplayPort
__SUPERCLASS      :
__DYNASTY         : DockDeviceDisplayPort
__RELPATH         : DockDeviceDisplayPort.InstanceId="3861",ProcessId="77f99424-9270-49da-87f9-9d0c981e3cfc"
__PROPERTY_COUNT  : 9
__DERIVATION      : {}
__SERVER          : LAPTOP-SKHNV3TM
__NAMESPACE       : root\Lenovo\Dock_Manager
__PATH            : \\LAPTOP-SKHNV3TM\root\Lenovo\Dock_Manager:DockDeviceDisplayPort.InstanceId="3861",ProcessId="77f99424-9270-49da-87f9-9d0c981e3cfc"
DeviceID          : DISPLAY\MST0030\48545660808UID224795
DockType          : 40AV
InstanceId         : 3861
MACAddress         : 3CE1A1C2427E
MonitorEDID       : 0,255,255,255,255,255,0,54,116,48,0,1,0,0,0,10,22,1,3,128,115,65,120,10,207,116,163,87,76,176,35,9,72,76,33,8,0,129,128,69,64,97,64,149,0,1,1,1,1,1,1,1,1,2,58,128,24,113,56,45,64,88,44,69,0,196,142,33,0,0,30,102,33,80,176,81,0,27,48,64,112,54,0,196,142,33,0,0,30,0,0,0,252,0,77,83,116,97,114,32,68,101,109,111,10,32,32,0,0,0,253,0,50,75,30,80,23,0,10,32,32,32,32,32,1,241
MonitorMFGName    : (Standard monitor types)
MonitorModelName  : Generic PnP Monitor
ProcessId         : 77f99424-9270-49da-87f9-9d0c981e3cfc
SerialNumber       : 1S40AVZQZ0005Q
PSComputerName     : LAPTOP-SKHNV3TM

```

Figure 8. DockDeviceDisplayPort Class

### 3.3.1 PowerShell Query

- o Get-WmiObject -Namespace "root\Lenovo\Dock\_Manager" -Query "SELECT \* FROM DockDeviceDisplayPort" | Format-List -Property MonitorEDID,MonitorMFGName,MonitorModelName
  - Sample Result:

```

MACAddress       : 3CE1A1C2427E
SerialNumber     : 1S40AVZQZ0005Q
MonitorEDID      : 0,255,255,255,255,255,0,54,116,48,0,1,0,0,0,10,22,1,3,128,115,65,120,10,207,116,163,87,76,176,35,9,72,76,33,8,0,129,128,69,64,97,64,149,0,1,1,1,1,1,1,1,1,2,58,128,24,113,56,45,64,88,44,69,0,196,142,33,0,0,30,102,33,80,176,81,0,27,48,64,112,54,0,196,142,33,0,0,30,0,0,0,252,0,77,83,116,97,114,32,68,101,109,111,10,32,32,0,0,0,253,0,50,75,30,80,23,0,10,32,32,32,32,32,1,241
MonitorMFGName   : (Standard monitor types)
MonitorModelName : Generic PnP Monitor

```

Figure 9. DockDeviceDisplayPort Sample Query Result

### 3.4 DockManager Class

DockManager class is created when user performs an update on through the Dock Manager Application. Properties query-able inside the class include: Dock ID, Firmware Update Date, New Version, Old Version, and Update Status.

```
__GENUS           : 2
__CLASS           : DockManager
__SUPERCLASS     :
__DYNASTY        : DockManager
__RELPATH        : DockManager.InstanceId="3869",ProcessId="77f99424-9270-49da-87f9-9d0c981e3cfc"
__PROPERTY_COUNT : 10
__DERIVATION     : {}
__SERVER         : LAPTOP-SKHNV3TM
__NAMESPACE     : root\Lenovo\Dock_Manager
__PATH           : \\LAPTOP-SKHNV3TM\root\Lenovo\Dock_Manager:DockManager.InstanceId="3869",ProcessId="77f99424-9270-49da-87f9-9d0c981e3cfc"
DockId           : 1S40AVZQZ0005Q
FWUpdateDate    : 8/20/2020 12:05:10 PM
InstanceId       : 3869
MACAddress       : 3CE1A1C2427E
MachineType     : 40AV
NewVersion       : v1.0.1.2
OldVersion       : v1.0.1.1
ProcessId        : 77f99424-9270-49da-87f9-9d0c981e3cfc
SerialNumber     : 1S40AVZQZ0005Q
UpdateStatus     : True
PSComputerName  : LAPTOP-SKHNV3TM
```

Figure 10. DockManager Class

#### 3.4.1 PowerShell Query All Update History

- `Get-WmiObject -Namespace "root\Lenovo\Dock_Manager" -Query "SELECT * FROM DockManager" | Format-List -Property DockId,FWUpdateDate,NewVersion,OldVersion,UpdateStatus`
  - Sample Result:

```
MACAddress       : 3CE1A1C2427E
SerialNumber     : 1S40AVZQZ0005Q
DockId           : 1S40AVZQZ0005Q
FWUpdateDate    : 8/20/2020 12:05:10 PM
NewVersion       : v1.0.1.2
OldVersion       : v1.0.1.1
UpdateStatus     : True
```

Figure 11. DockManager Sample Query Result

#### 3.4.2 PowerShell Query Specific Dock's Update History

- Select a DockId of a specific dock. (Example: 'VID\_8086&PID\_9D2F')
- `Get-WmiObject -Namespace "root\Lenovo\Dock_Manager" -Query "SELECT * FROM DockManager WHERE DockId='VID_8086&PID_9D2F'" | Format-List -Property DockId,FWUpdateDate,NewVersion,OldVersion,UpdateStatus`

### 3.5 DockInfo Class

DockInfo is a newly WMI information being managed by DockManager application. Properties that can be queried inside the class include: MacAddress, SerialNumber, Date, Machine Type, FW Version, Last Update on, Last Update from, Latest FW, Available FW version, array of USB Devices Info, and array of display devices info.



```

GENUS : 2
CLASS : DockInfo
SUPERCLASS :
DYNASTY : DockInfo
RELSPATH : DockInfo.InstanceId="3839",ProcessId="77f99424-9270-49da-87f9-9d0c981e3cfc"
PROPERTY_COUNT : 13
DERIVATION : {}
SERVER : LAPTOP-SKH#W3TM
NAMESPACE : root\Lenovo\Dock_Manager
PATH : \\LAPTOP-SKH#W3TM\root\Lenovo\Dock_Manager:DockInfo.InstanceId="3839",ProcessId="77f99424-9270-49da-87f9-9d0c981e3cfc"
AvailableFWVersion : v1.0.1.2
Date : 8/20/2020 12:05:09 PM
DisplayDevices : {(Standard monitor types)}
FWVersion :
InstanceId : 3839
LastUpdateFrom : 8/20/2020 11:10:24 AM
LastUpdateOn : 8/20/2020 12:05:10 PM
LatestFirmwareFlag : True
MACAddress : 3CE1A1C2427E
MachineType : 40AV
ProcessId : 77f99424-9270-49da-87f9-9d0c981e3cfc
SerialNumber :
USBDevices : {TOSHIBA }
PSComputerName : LAPTOP-SKH#W3TM

```

Figure 10. DockManager Class

### 3.5.1 PowerShell Query (Truncated DockInfo List)

- To get the DockInfo instances along with the truncated usb and display devices:

```

Get-WmiObject -Namespace "root\Lenovo\Dock_Manager" -Query "SELECT * FROM DockInfo" | Sort-Object
{$_ .Date -as [datetime]} -Descending | Format-List -Property
AvailableFWVersion,Date,DisplayDevices,FWVersion,LastUpdateFrom,LastUpdateOn,LatestFirmwareFlag,M
ACAddress,MachineType,SerialNumber,USBDevices

```

```

AvailableFWVersion : v1.0.1.2
Date : 8/20/2020 12:05:09 PM
DisplayDevices : {(Standard monitor types)}
FWVersion :
InstanceId : 3839
LastUpdateFrom : 8/20/2020 11:10:24 AM
LastUpdateOn : 8/20/2020 12:05:10 PM
LatestFirmwareFlag : True
MACAddress : 3CE1A1C2427E
MachineType : 40AV
SerialNumber :
USBDevices : {TOSHIBA }

```

Figure 11.1 DockInfo Sample Query Result

### 3.5.2 PowerShell Query

- To get the DockInfo instances along with the usb and display devices:

```

$infos = Get-WmiObject -Namespace "root\Lenovo\Dock_Manager" -Query "SELECT * FROM DockInfo" |
Sort-Object {$_.Date -as [datetime]} -Descending | Select-Object
foreach ($info in $infos) {
    Select-Object -InputObject $info -Property
    AvailableFWVersion,Date,FWVersion,LastUpdateOn,LastUpdateFrom,LatestFirmwareFlag,MACAddress,Mac
    hineType,SerialNumber;
    For ($i=0;$i -lt $info.DisplayDevices.Length;$i++) {
        Write-Host 'Display'($i+1);
        Select-Object -InputObject $info.DisplayDevices[$i] -Property
        DeviceID,DockType,MACAddress,MonitorEDID,MonitorMFGName,MonitorModelName,SerialNumber;
    }
    For ($i=0;$i -lt $info.USBDevices.Length;$i++) {
        Write-Host 'USB'($i+1);
        Select-Object -InputObject $info.USBDevices[$i] -Property
        MACAddress,SerialNumber,DeviceType,USB_PID,USB_VID,USBDeviceMFGName;
    }
}

```



```
}  
}
```

```
AvailableFwVersion :  
Date : 8/27/2020 1:54:11 PM  
FwVersion :  
LastUpdateOn :  
LastUpdateFrom : 8/27/2020 1:56:25 PM  
LatestFirmwareFlag : False  
MACAddress : 0050B68E28B1  
MachineType : 40AF  
SerialNumber :  
  
AvailableFwVersion : v1.0.1.2  
Date : 8/27/2020 1:59:13 PM  
FwVersion : v1.0.1.2  
LastUpdateOn :  
LastUpdateFrom : 8/27/2020 1:59:51 PM  
LatestFirmwareFlag : False  
MACAddress : 3CE1A1C2427E  
MachineType : 40AV  
SerialNumber : 1S40AVZQZ0005Q  
  
Display 1  
DeviceID : DISPLAY\ACR0326\4&54566B8&0&UID200195  
DockType : 40AV  
MACAddress : 3CE1A1C2427E  
MonitorEDID : 0,255,255,255,255,255,0,4,114,38,3,223,95,81,50,25,23,1,3,128,43,24,120,202,44,197,164,86,80,161,40,15,80,84,191,239,128,  
113,79,129,192,129,0,1,1,1,1,1,1,1,1,1,48,42,64  
,200,96,132,100,48,24,80,19,0,176,239,16,0,0,30,0,0,0,253,0,56,76,31,83,17,0,10,32,32,32,32,32,0,0,0,252,0,83,50,48,48,72,  
81,76,32,32,32,32,32,32,0,0,0,255,0,76,88,70,83,8  
3,48,48,49,56,53,49,49,10,0,141  
MonitorMFGName : (Standard monitor types)  
MonitorModelName : Generic PnP Monitor  
SerialNumber : 1S40AVZQZ0005Q  
  
USB 1  
MACAddress : 3CE1A1C2427E  
SerialNumber : 1S40AVZQZ0005Q  
DeviceType : Mouse  
USB_PID : PID_6001  
USB_VID : VID_0458  
USBDeviceMFGName : Microsoft
```

Figure 11.2 DockInfo Sample Query Result

## 4 Firmware Download and Update Behavior

The proceeding section presents illustrations that shows the notification flow when the Dock Manager Application is hidden in the system tray. Illustrated are three types of expected behaviors: Default Behavior, No User Confirmation, and Silent Mode.

### 4.1 Default Behavior

The default behavior flow notifies the user to update the firmware when download is complete. The flow is illustrated below (see Figure 12. Default Behavior Flow)



Figure 12. Default Behavior Flow

#### 4.2 No User Confirmation

When AskBeforeFirmwareUpdate is set to NO in the registry; upon firmware download completion, the downloaded firmware update will proceed to execute without prompting the users. (see Figure 13. No User Confirmation)

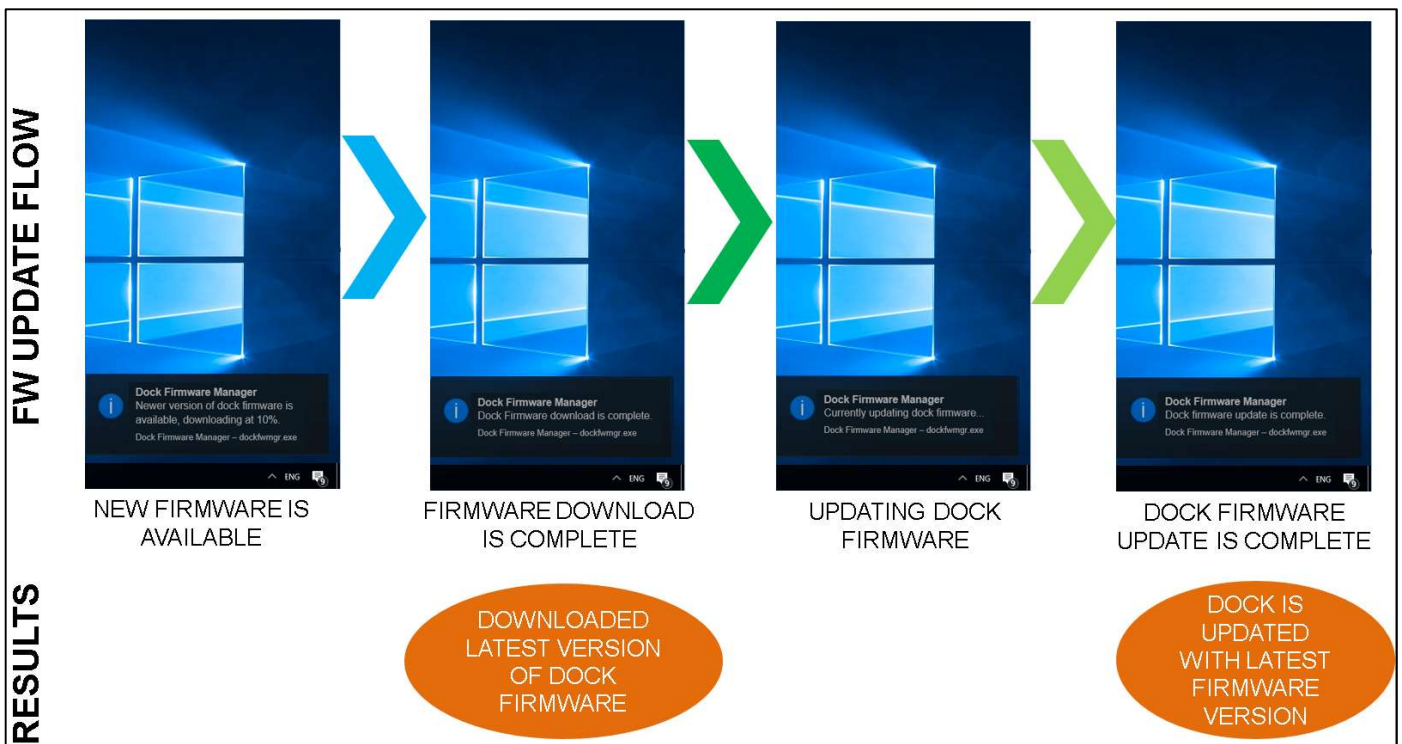


Figure 13. No User Confirmation

### 4.3 Silent Mode

When AskBeforeFirmwareUpdate and EnableNotifications is set to NO in the registry, the firmware update flow will proceed to download and execute update in the background without notifications and prompts for the user.

## 5 Group Policy

This section is used by Administrators to enable easy configuration of the registry keys through local group policy editor; the configurations include: the Repository Location for retrieving which repository to access the firmware updates; Application configuration to edit the AskBeforeFirmwareUpdate and EnableNotifications value for changing the behaviors upon Firmware Download and Update; Managing the Logs for the max log file size and days to clean up; and for configuring the Task Scheduler to set when the next scheduled task is to be executed.

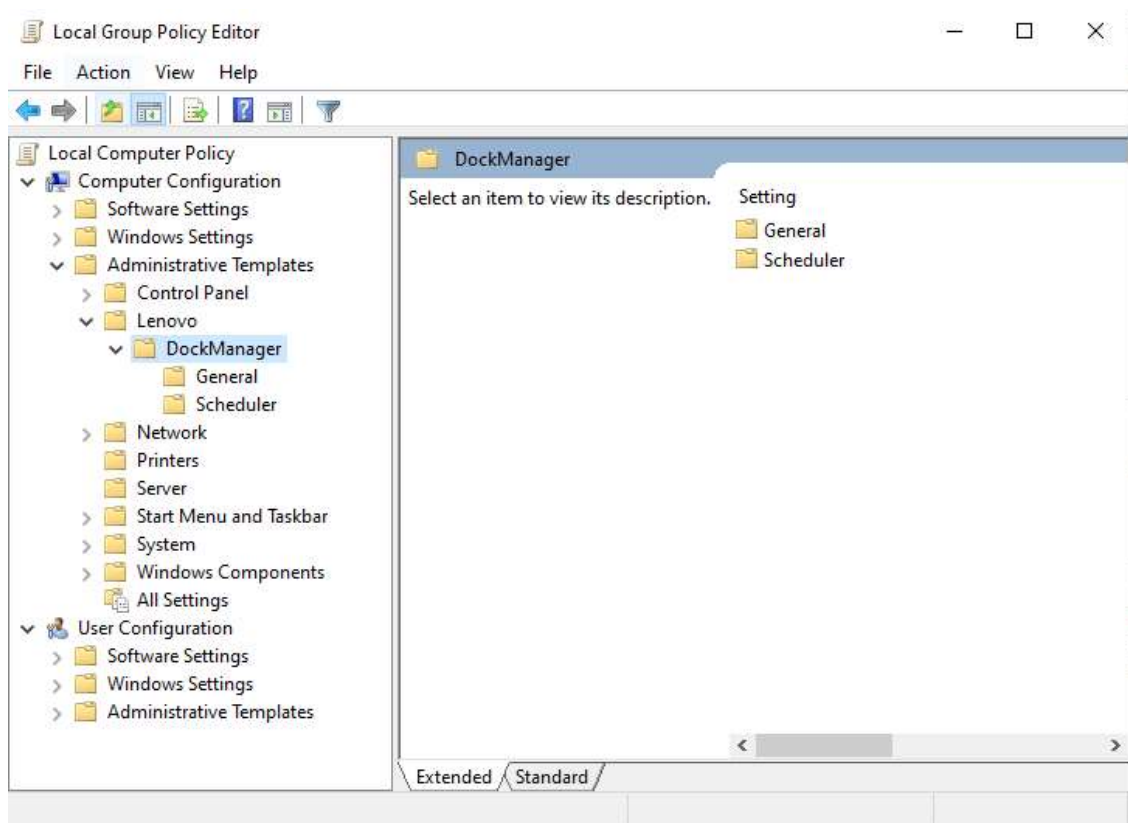


Figure 14. Local Group Policy Editor

### 5.1 Setup Policy Settings for Lenovo DockManager application

Before accessing the group policy, make sure to check if the IT Administrator pushed the policy settings to user's laptop.

#### 5.1.1 Changing the Group Policies

- In order to import the group policies and enable easy configuration:
  - Make sure that you are accessing the computer as an administrator.
  - On start, search for "gpedit.msc" and press enter.
  - The local group policy editor will then open and load all the created policies.
  - Locate the Dock Manager Policies inside:  
`Computer Configuration\Administrative Templates\Lenovo\Dock Manager`

- Inside are two categories: General and Scheduler.

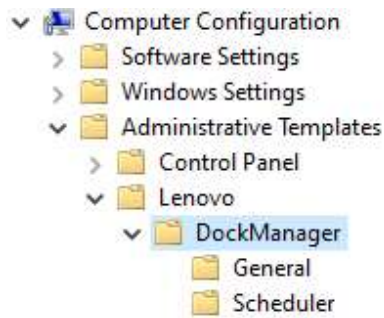


Figure 15. Dock Manager Policies Path

## 5.2 *Configuring the Firmware Download and Update Behavior*

To configure the download and update behavior as stated in Section 5, AskBeforeFirmwareUpdate and EnableNotification are located inside the General Category inside the Dock Manager Group Policies.

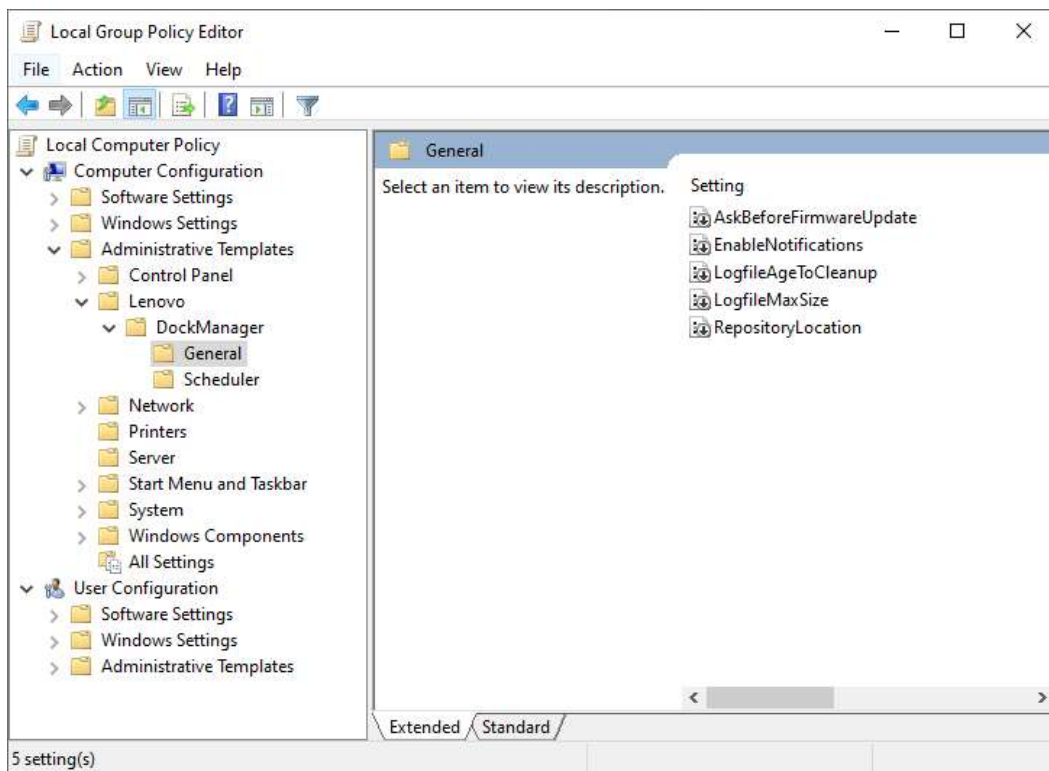


Figure 16. Dock Manager General Policies

### 5.2.1 Enable No User Confirmation

- To enable no user confirmation:
  - Ensure that "EnableNotifications" policy is set to "Not Configured" or "Enabled"
  - Select "AskBeforeFirmwareUpdate" policy and set to "Disabled".

### 5.2.2 Enable Silent Mode

- To enable silent mode:
  - Select "EnableNotifications" policy and set to "Disabled".

- Select “AskBeforeFirmwareUpdate” policy and set to “Disabled”.

### 5.3 Configure Log Settings

To configure Log Setting, all policies can be located inside the General category inside the Dock Manager Policies. (Refer to Figure 16. Dock Manager General Policies)

#### 5.3.1 Change Number of Days Before Log Files are Deleted

This configuration will delete all the Log files inside “C:\ProgramData\Lenovo\DockManager\Logs\” which were modified before a number of days. (E.g. All logs modified on 6/22/2020 or before will be deleted on 6/27/2020 when the days is set to 7.)

- To change the number of days before log files are deleted:
  - Select “LogfileAgeToCleanup” and set to “Enabled”.
  - Enter the number of days inside textbox in the options panel. (Default: “90”)

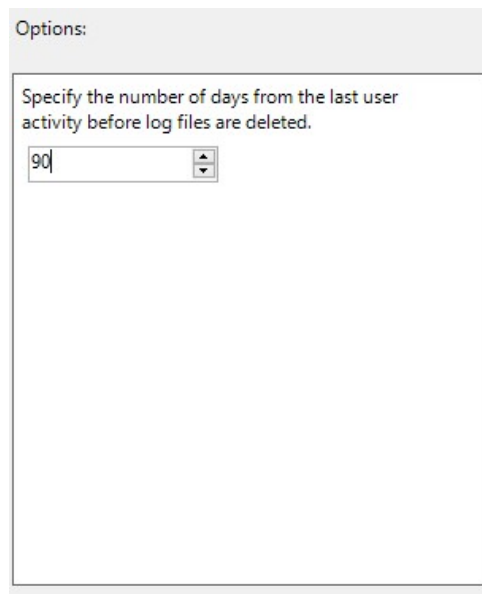


Figure 19. Number of Days Input

#### 5.3.2 Configure Log File Max Size Before Creating a New Log File

This configuration will create a new Log file inside “C:\ProgramData\Lenovo\DockManager\Logs\” based on the max file size set. Old log files will have their Log filenames appended with the current date and a new Log file will be created.

- To change the max file size before creation of new log file:
  - Select “LogfileMaxSize” and set to “Enabled”.
  - Enter the max file size in kb inside textbox in the options panel. (Default: “5120”)

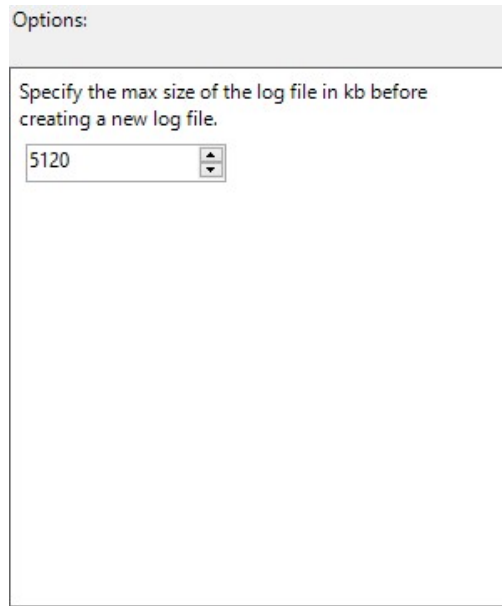


Figure 20. Max File Size Input

#### 5.4 *Configure Repository Location*

This configuration will edit the Lenovo repository location from where the firmware updates will be downloaded. The policy is located in the General category inside the Dock Manager Policies (Refer to Figure 16. Dock Manager General Policies):

- Valid values:
  - C:\FwRepo – For local directory location repository
  - [\\10.11.32.109\FwRepo\](#) - Shared network folder location repository
- To change the repository location:
  - Select “RepositoryLocation” and set to “Enabled”.
  - Enter the repository location inside the textbox in the options panel. (Default: “https://download.lenovo.com/catalog”)



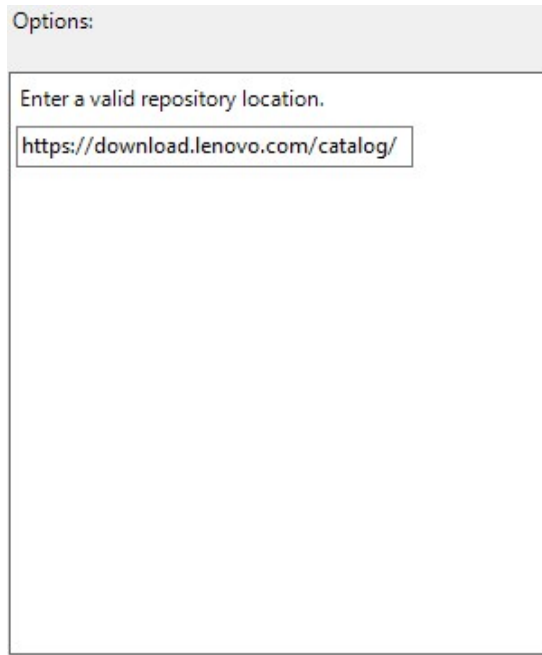


Figure 21. Repository Location Input

### 5.5 Configure Task Scheduler

To configure Task Scheduler Setting, all policies can be located inside the Scheduler category inside the Dock Manager Policies. This configuration can edit the task scheduler to execute firmware check and update on the next scheduled task at a specific time, day, week or month. The scheduled task can be scheduled on different frequencies: DAILY, WEEKLY, and MONTHLY.

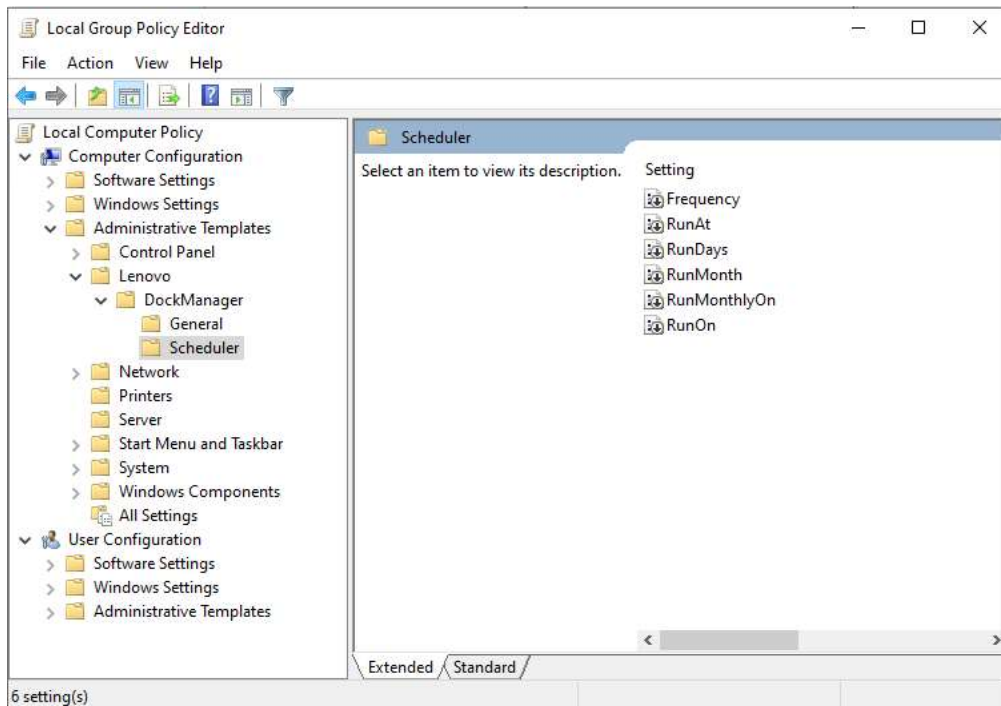


Figure 22. Dock Manager Scheduler Policies



### 5.5.1 DAILY

This configuration will schedule a firmware check daily on a specific time.

- To update the scheduled task daily:
  - Select “Frequency” and set to “Enabled”.
  - Set the value of the dropdown inside the options menu to “DAILY”.

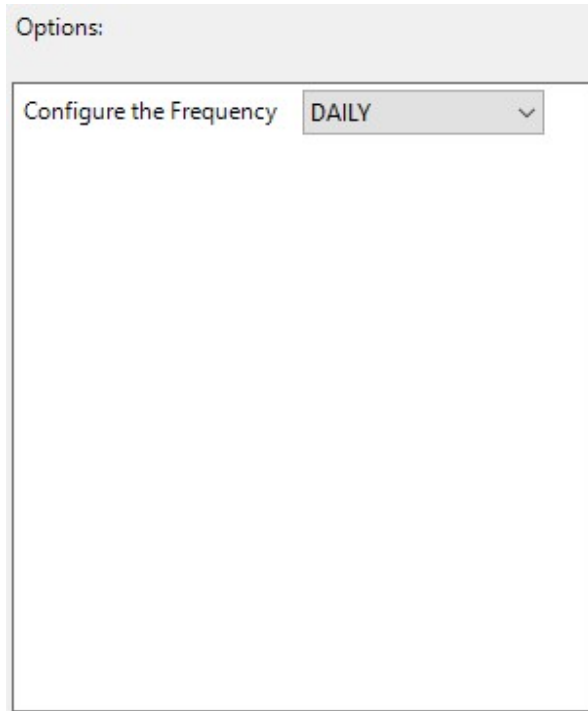


Figure 23. Frequency Dropdown

- Select “RunAt” and set to “Enabled”
- Enter time in 24:MM:SS format inside the textbox in the options panel. (Default: “13:05:30”)

Options:

Enter a valid time for the task scheduler to run.  
(24:MM:SS format)

Figure 24. RunAt Input

- The scheduled task will be updated on (Sample Result: Run every day on 13:05:30) the next scheduled firmware check. To manually update the scheduled task and execute firmware check, open Windows Task Scheduler, locate the Scheduled Task (Lenovo/Dock Manager – Task Scheduler) and run manually.

### 5.5.2 WEEKLY

This configuration will schedule a firmware check weekly on a specific time and day of week.

- To update the scheduled task weekly:
  - Select “Frequency” and set to “Enabled”.
  - Set the value of the dropdown inside the options menu to “WEEKLY”. (Refer to Figure 21. Frequency Dropdown)
  - Select “RunAt” and set to “Enabled”.
  - Enter time in 24:MM:SS format inside the textbox in the options panel. (Refer to Figure 22. RunAt Input)
  - Select “RunOn” and set to “Enabled”.
  - Enter day/s of week inside the textbox in the options panel. (Default: TUESDAY)

Options:

Enter day of week when scheduled task is run.  
(Monday – Sunday or combination of comma separated days)

TUESDAY

Figure 25. RunOn Input

- The scheduled task will be updated on (Sample Result: Run Every Tuesday on 13:05:30) the next scheduled firmware check. To manually update the scheduled task and execute firmware check, open Windows Task Scheduler, locate the Scheduled Task (Lenovo/Dock Manager – Task Scheduler) and run manually.

### 5.5.3 MONTHLY (By RunDay)

This configuration will schedule a firmware check monthly on a specific day/s of a month.

- To update the scheduled task monthly by date:
  - Select “Frequency” and set to “Enabled”.
  - Set the value of the dropdown inside the options menu to “MONTHLY”. (Refer to Figure 21. Frequency Dropdown)
  - Select “RunAt” and set to “Enabled”.
  - Enter time in 24:MM:SS format inside the textbox in the options panel. (Refer to Figure 22. RunAt Input)
  - Select “RunDays” and set to “Enabled”.
  - Enter day/s inside the textbox in the options panel. (Default: 1)

Options:

Enter days when scheduled task is run. (1-31 or combination of comma separated date)

Figure 26. RunDays Input

- Select “RunMonth” and set to “Enabled”.
- Enter month/s inside the textbox in the options panel. (Default: January)

Options:

Enter months when scheduled task is run. (January – December or combination of comma separated months.)

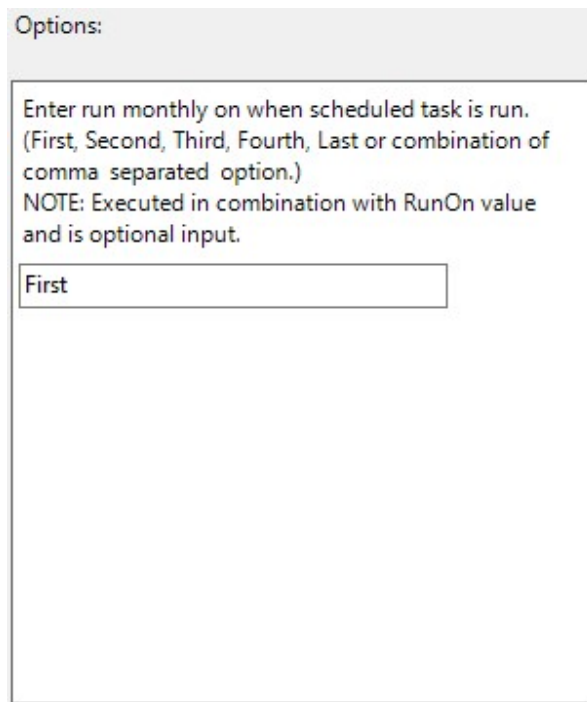
Figure 27. RunMonth Input

- The scheduled task will be updated on (Sample Result: Run Every January 1 on 13:05:30) the next scheduled firmware check. To manually update the scheduled task and execute firmware check, open Windows Task Scheduler, locate the Scheduled Task (Lenovo/Dock Manager – Task Scheduler) and run manually.

#### 5.5.4 MONTHLY (By RunMonthlyOn)

This configuration will schedule a firmware check monthly on a specific order of a month.

- To update the scheduled task monthly by order:
  - Select “Frequency” and set to “Enabled”.
  - Set the value of the dropdown inside the options menu to “MONTHLY”. (Refer to Figure 21. Frequency Dropdown)
  - Select “RunAt” and set to “Enabled”.
  - Enter time in 24:MM:SS format inside the textbox in the options panel. (Refer to Figure 22. RunAt Input)
  - Select “RunMonthlyOn” and set to “Enabled”.
  - Enter order inside the textbox in the options panel. (Default: First)



Options:

Enter run monthly on when scheduled task is run.  
(First, Second, Third, Fourth, Last or combination of  
comma separated option.)  
NOTE: Executed in combination with RunOn value  
and is optional input.

Figure 28. RunMonthlyOn Input

- Select “RunMonth” and set to “Enabled”.
- Enter month/s inside the textbox in the options panel. (Refer to Figure 25. RunMonth Input)
- Select “RunOn” and set to “Enabled”.
- Enter day/s of week inside the textbox in the options panel. (Refer to Figure 23. RunOn Input)
- The scheduled task will be updated (Sample Result: Run Every First Tuesday of January on 13:05:30) on the next scheduled firmware check. To manually update the scheduled task and execute firmware check, open Windows Task Scheduler, locate the Scheduled Task (Lenovo/Dock Manager – Task Scheduler) and run manually.