

使用 Azure 監看 IT 系統狀態

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公司 IT 系統運作最害怕遇到系統停機或者出狀況,系統一旦 出狀況就非常容易影響到公司正常營運,所以監控整個 IT 系統的 健康狀態對公司的系統管理人員來說是非常重要的一件事情,透 過 Azure Log Analytics 可以很容易地將地端及雲端所有系統的 LOG 及資源使用狀況蒐集起來,並做即時分析及告警,遇到問題 的時候也可以迅速透過Azure 平台查找錯誤訊息。此外並可整合 Power BI 功能,產出各式系統資源及狀態之統計分析圖表。

● 以下是 Log Analytics 的方塊流程,可以看出 Azure Log Analytics 服務提供 非常多樣的 Input 來源及 Output 方式





● Log 分析完整工作流程



● Log Analytics 支援主機平台



● Log Analytics 警示通報方式



● Power BI 功能概觀



如上圖所示, Power BI 可以從多個資料來源取得資料, 再將取得的資料加以整理,透過視覺化圖像的方式呈現, 最後可以透過 Web、Mobile App 做查看。



實戰規劃架構說明

下圖為規劃的架構圖示,提供兩種 Log 資料收集方式,分為方法 A 及方法 B。



方法A

- 所有虛擬機安裝 Agent, 並透過 Internet 將資訊上傳至 Log Analytics。

方法B

- 所有虛擬機安裝 Agent 並且將資訊傳到已安裝 Gateway 的系統,透過已 安裝 Gateway 的系統連線至 Internet 將資訊上傳至 Log Analytics。

方法A與B兩者的差別為

- A 需開放全部的機器對 Azure 服務連線。
- B則只需開放安裝 Gateway 的系統對 Azure 服務連線就可以。

接下來就依據規劃的架構,一步一步來進行實戰建置說明。



Log Analytics 的建置過程

1. 建立 Log Analytics 資源

登入 Azure Portal 並且 Create Log Analytics 資源。



配置完成呈現 Validation passed 則表示驗證功過可以創建。



2. 連線被監控主機

● 方法 A

開啟 Log Analytics 資源,進到 Virtual machines,選擇要連線的機器進行連線。



| = | Microsoft Azure | \mathcal{P} Search resources, services, and docs | (G+/) | | | Σ | Ģ | Φ | ÷ | ? | ٢ |
|---|--|--|--------------------------|--------------|-------------------------|---------|------|---------|-------|---|---|
| Hon | ne > Log Analytics workspaces > POOL1 | | | | | | | | | | |
| » POOL1 Virtual machines Log Analytics workspace | | | | | | | | | | | |
| | | | | | | | | | | | |
| | = Workspace summary | Filter by name | 8 selected V | 2 selected V | Microsoft Azure | ~ | 2 50 | elected | | | |
| | Workbooks | Name | Log Analytics Connection | os | Subscription | | Re | esource | group | | |
| | 🧬 Logs | 🛒 test | Not connected | Linux | 4554a04d-c31b-4e0b-a196 | 9267a23 | 2 RC | 5.WVD | | | |
| | P Solutions | 🐺 Windows | This workspace | Windows | 4554a04d-c31b-4e0b-a196 | 9267a23 | 2 RC | G.LogTe | st | | |
| | O Usage and estimated costs | WVD2-VM-0 | Not connected | Windows | 4554a04d-c31b-4e0b-a196 | 9267a23 | 2 RC | s.wvd | | | |
| | 11 Properties | 🛒 WVD2-VM-1 | Not connected | Windows | 4554a04d-c31b-4e0b-a196 | 9267a23 | 2 RC | 5.WVD | | | |
| | 🔮 Service Map | 🐺 WVD2-VM-2 | Not connected | Windows | 4554a04d-c31b-4e0b-a196 | 9267a23 | 2 RC | G.WVD | | | |
| | Workspace Data Sources | | | | | | | | | | |
| | 🐺 Virtual machines | | | | | | | | | | |
| Hom TES Virtua | e > Log Analytics workspaces > POOL1 T I machine Connect p^{ef} Disconnect \bigcirc Refresh | > | | | | | | | | | |
| G | Not connected | | | | | | | | | | |
| St N W N | atus ot connected orkspace Name one essage | | | | | | | | | | |
| v | M is not connected to Log Analytics. | | | | | | | | | | |

如果需要監控的系統不在Azure上,則需要在系統上安裝Agent 以下以Windows 為例。首先在 Agent Management 的地方找到並下載 Download Windows Agent (64 bit)

| POOL1 Agents ma | anagement … | | | | |
|--|---|------------------------------------|-------------------------------|-----------------------------------|------------|
| P Search (Ctrl+/) « | 🖬 Windows servers 💧 Linux se | ervers | | | |
| Overview Activity log | 2 Windows computers Go to logs | s connected | | | |
| Access control (IAM) | Download agent | | | | |
| 🔮 Tags | Download an agent for your operating | system, then install and configure | it using the keys for your wo | rkspace ID. | |
| Diagnose and solve problems | You'll need the Workspace ID and Key t | o install the agent. | | | |
| Settings | Download Windows Agent (64 bit) Download Windows Agent (32 bit) | | | | |
| 🔒 Locks | | 請先將 ID 與 | KEY 複製起來 | 待會安裝會使用到 | |
| Agents management | Workspace ID | | | ۵ | |
| Agents configuration | Primary key | i. | | 0 | Regenerate |
| E Custom logs | Secondary key | Ĩ. | | . 0 | Regenerate |
| Computer Groups | | | | | |
| Linked storage accounts | Log Analytics Gateway | | | | |
| Network Isolation | If you have machines with no internet o | connectivity to Log Analytics work | space, download the Log Ana | lytics Gateway to act as a proxy. | |
| Advanced settings | Learn more about Log Analytics Gatewa Download Log Analytics Gateway | 5 y | | | |



檔案下載完成後,在需要監控的 Windows 系統上執行安裝 Agent 安裝檔,注意安

裝時需要將 OMS 打勾如下圖。

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|] |
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再來需要將剛剛複製的 Workspace ID 與 Primary Key 貼上後直接安裝即可。

| L作匾識別碼(I): | Workspace ID | |
|---|--|-------------|
| L作區金鑰(K): | Primary Key | |
| zure 雲端(A): | Azure Commercial | ~ |
| 您可以在 Azure Log | g Analytics 入口網站取得您的工作區識別碼及金鑰。A: Analytics 入口網站位於 https://www.microsoft.com/oms/ | zure |
| 恋可以在 Azure Log commercial 的 Log / 安一下 [進階] 以援 | g Analytics 入口網站取得您的工作區識別碼及金鑰。A: Analytics 入口網站位於 https://www.microsoft.com/oms/ ట供 HTTP Proxy 設定。 | zure / • |



● 方法 B

準備一台可以對外連線主機扮演 Gateway 角色,安裝 Log Analytics,安裝方式 與方法 A 相同,另額外安裝 OMS Gateway,安裝過程皆使用預設安裝即可

| OMS Gateway 法定 | | | |
|--|---------------------|--------|------------|
| | | | 4 |
| 為此安裝進行設定 | | | \bigcirc |
| 伺服器所要使用的連接埠號 | 6馬: | | |
| 8080 T | | | |
| 若此電腦連線至網際網路時 | 需要 HTTP Proxy,請輸入下方 | 的詳細資料。 | |
| □使用 Proxy 伺服器 | | | |
| | | | |
| Proxy 伺服器: | | | - |
| Proxy 伺服器: 我的 Proxy 需要驗證 | | | |
| Proxy 伺服器: 動動的 Proxy 需要驗證 使用者名稱: | | | - |
| Proxy 伺服器: ③ 我的 Proxy 需要驗證 使用者名稱: 密碼: | | | |
| Proxy 伺服器: ① 我的 Proxy 需要驗證 使用者名稱: 密碼: | | | |
| Proxy 伺服器: 创我的 Proxy 需要驗證 使用者名稱: 密碼: | | | |

於其他被監控主機上安裝安裝 Log Analytics,安裝方式與方法 A 相同,接下來 設定 Proxy,進到 控制台 > Microsoft Monitoring Agent > Proxy 設定,將前述 Gateway 主機 IP 輸入,後面接上:8080 即可。



| Operations Manager | Azure Log Analytics (OM | S) Proxy 設定 | 内容 | |
|--|-------------------------|-------------------|-----------------|--------------|
| 若此電腦需要 HTTP Pro | oxy 伺服器才能連線到 Azure | Log Analytics ' 뉡 | 驻止赖入詳細資料 | 2 1 * |
| ☑使用 Proxy 伺服器(| P) | | | |
| Proxy 伺服器(S): | 10.20.128.247 | :8080 | | |
| □ 我的 Proxy 需要驗 | 全(T) { Gate | eway IP }: 80 | 080 | |
| 使用者名稱(U): | | | | |
| 密碼(W): | | | | |
| an ann an tha an ann an an an ann an an ann an an an | | | | |
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確認連線狀態,如果狀態為綠色勾勾代表完成,若沒出現綠色勾勾則再重新編輯 設定一次連線即可。

| Microsoft Munitorin | ng Agent 內容 | | | |
|--|--|--------------------------|------------------------|-----------------------|
| Operations Manager | Azure Log Analytics (OMS) | Proxy 設定 | 內容 | |
| Microsoft Monitoring A 面新增、編輯或移除 <u>Analytics</u> 。 工作區 | gent 可以回報給多個 Azure Log 工作區,也可檢查工作區的狀態 | Analytics (OMS 。深入了解如 |)工作區。 何 <u>將電腦了</u> | 您可以在此頁 直接連線到 Log |
| 工作區識別碼 | 狀態 | | | 代理程式識別碼 |
| (Commented and the second sec | | A | essfully c | C |
| Lagendary | O The Microsoft Monitoring | Agent has succe | | |
| < | The Microsoft Monitoring | Agent has succe 加入(D) | 編輯(E) | 》 … 移時(R) |
| < | The Microsoft Monitoring | Agent has succe | 編輯(E) | 》 移除(R) |



- 3. 確認連線是否成功
- 進入 Agents Management 查看 Windows server or Linux server, 若畫面上顯示

綠色勾勾代表連線成立 (勾勾後方數字為連線機器數量)。

| ≡ Microsoft Azure | | Σ |] 🖗 | Q | 0 | ? | ٢ |
|--|---|---|-----|---|---|---|---|
| Home > Log Analytics workspaces > PC > POOL1 Agents n Log Analytics workspace . 9 Search (Ctrl+/) | NoLT nanagement … « 📲 Windows servers 🛆 Linux servers | | | | | | |
| Overview Activity log Access control (IAM) Tags Diagnose and solve problems Settings Locks | 2 Windows computers connected Go to logs Download agent Download an agent for your operating system, then install and configure it using the keys for your workspace ID. You'll need the Workspace ID and Key to install the agent. Download Windows Agent (64 bit) Download Windows Agent (32 bit) | | | | | | |
| Agents management Gamma Agents configuration | Workspace ID D Regenerate | | | | | | |
| Custom logs Computer Groups | Secondary key | | | | | | |
| Linked storage accounts Network Isolation Advanced settings | Log Analytics Gateway If you have machines with no internet connectivity to Log Analytics workspace, download the Log Analytics Gateway to act as a proxy. Learn more about Log Analytics Gateway Download Log Analytics Gateway | | | | | | |

4. Log 查詢

進到 Logs 內可以輸入想要查詢的資料,並且點下 Run,下方會顯示出查詢的結果,如下圖我們在 Query 的地方輸入 Perf 關鍵字,系統會搜尋出所有關於 performance 的資訊。



| E Microsoft Azure | Search resources, services, and docs (G+/) | E 6 0 0 7 0 |) |
|---|--|-----------------------------------|--------|
| Home > Log Analytics workspaces > POOL1 > POOL1 Logs > ···· Log Analytics workspace > New Query 1 · × + | | ♡ Feedback 🛯 🚝 Queries | C. |
| POOL1 Select scope Tables Queries Functions ···· ◆ Search Group by: Solution ∨ Filter Group by: Solution ∨ Toollapse all Favorites You can add favorites by clicking on | Results Chart Columns Sove Share Image: Last 24 hours Image: Last 24 hours <td>Pin to dashboard 📻 Format query</td> <td></td> | Pin to dashboard 📻 Format query | |
| He A toon ✓ LogManagement → 田 Event → 田 Heartbeat | Completed. Showing partial results from the last 24 hours. Showing the first 30,000 results. Learn more on how to narrow down the result set. | S 00x | 03.1 |
| El Operation | TimeGenerated [UTC] 🖓 Computer 🖓 ObjectName 🖓 CounterName 🕅 Instan | iceName 🖓 Cou | nter\ |
| ▶ ⊞ Syslog | > 4/29/2021, 6:58:37.373 AM edc-vw-temp4.traoerawt.test LogicalDisk Disk Reads/sec Harde | diskVolume1 0 | |
| ▶ 目 Usage | > 4/29/2021, 6:58:37.373 AM edc-vw-temp4.traoerawt.test LogicalDisk Disk Reads/sec > 4/29/2021, 6:58:37.373 AM edc-vw-temp4.traoerawt.test LogicalDisk Disk Reads/sec | 0.31 | 6 6 |
| lation (/oeda) and a control (2) | I≪ Page 1 of 600 ► ► 50 ite | ems per page | |

5. 配置警告

進入 Alert > 在 condition 的地方建立想要產生報警的內容。建立成功後,在 condition name 的地方會有綠色的勾勾。我們在此配置當系統的記憶體使用率平 均超過 70%,則透過 Email 發出警告信件作為範例。

| | | | Select a signal | | | |
|---|--|---|---|----------------|-----------------------|--|
| Create alert rule | | | | | | |
| | | Choose a signal below and configure the logic on the next screen to define the alert condition. | | | | |
| Create an alert rule to identify and address issues when important conditions are found in your When defining the alert rule, check that your inputs do not contain any sensitive content. | monitoring data. View tutorial + read-more | Signal type: () All | Montor tenice () Al | | | |
| Scope | | | Displaying 1 - 29 signals out of total 63 signals | | | |
| Select the target resource you wish to monitor. | | | | | | |
| Resource | Hierarchy | | Signal name | Ta Signal Iver | 1. Monitor service 11 | |
| 📌 pooli | 📍 Microsoft Azure 🔅 🔘 rg | logtest | S And the Menting | A Meter | Elations | |
| Edit resource | | | | A Metric | Platform | |
| | | | | A Metric | Flatform | |
| Condition | | | | ,se Mebic | Flatform | |
| Configure when the alert rule should trigger by selecting a signal and defining its logic. | | | | Ar Metric | Flatform | |
| Condition name | Time series monitored | Estimated monthly cos | | Ar Mebic | Platform | |
| S Whenever the average % seed memory is greater than 70. | | \$ 0.10 | | N Metric | Platform | |
| | | Total \$ 0.10 | | ".v. Mebic | Platform | |
| | | | | 22 Mebic | Platform | |
| | | | | A/ Mabic | Platform | |
| Actions | | | | | Platform | |
| Send notifications or invoke actions when the alert rule triggers, by selecting or creating a new | action group. (Anno 1999) | | | A Metric | Platform | |
| Action group name | Contains actions | | | Ar. Metric | Platform | |
| No action group selected yet | | | Si Uted Memory | A Metric | Platform | |
| | | | % Used Symin | Ar Metric | Platform | |
| | | | | A* Metric | Flatform | |
| Alert rule details | | | | 📈 Metric | Platform | |
| Provide details on your alert rule so that you can identify and manage it later. | | | | A Metric | Platform | |
| | | | | | | |



| t time series () gregate | Chart period Cver the last 6 hours Over the last 6 hours PM 2PM 3PM Immension value, each time series that results from the monitoring multiple time series Add custom value Monitoring 1 time series 150 1/time ser |
|---|--|
| gregate 70 <th>Over the last 6 hours PM 2PM Bimension value, each time series that results from the monitoring multiple time series Over the series Over the last 6 hours</th> | Over the last 6 hours PM 2PM Bimension value, each time series that results from the monitoring multiple time series Over the series Over the last 6 hours |
| 70 60 50 40 30 20 11 12 10 11 12 10 12 13 14 14 15 15 15 16 17 18 19 10 10 10 11 12 13 14 15 16 16 16 17 16 | PM 2 PM 3 PM dimension value, each time series that results from the monitoring multiple time series O Add custom value |
| 70 60 50 40 30 20 10 10 AM 11 AM 12 PM 10 10 AM 10 AM 11 AM 12 PM 10 10 AM 11 AM 12 PM 12 PM 10 AM 11 AM 12 PM 11 AM 12 PM 12 PM 13 AM 14 AM 15 AM 15 AM 16 AM 17 AM 18 AM 19 AM 10 AM 10 | PM 2 PM 3 PM dimension value, each time series that results from the monitoring multiple time series ① Add custom value Add custom value |
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| 50 40 30 20 10 10 M 11 AM 12 PM 1 10 M 11 AM 12 PM 1 Used Memory Treshold 55.56 70 by dimensions imensions to monitor specific time series. If you select more than one ination will be charged separately. About 1 mension name Operator Dimension values lect dimension \checkmark = \checkmark 0 selected logic hold 0 | PM 2 PM 3 PM dimension value, each time series that results from the monitoring multiple time series O Add custom value |
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| 20 10 10 M TI M 12 PM 1 Used Memory Treshold 5.5.56 To by dimensions imensions to monitor specific time series. If you select more than one ination will trigger its own alert and will be charged separately. About mension name Operator Dimension values lect dimension \checkmark = \checkmark @ selected logic hold © | PM 2 PM 3 PM dimension value, each time series that results from the monitoring multiple time series O Add custom value |
| 20 10 10 AM 11 AM 12 PM 12 Used Memory 5.5.56 Too by dimensions immensions to monitor specific time series. If you select more than one instion will trigger its own alert and will be charged separately. About mension name Operator Dimension values lect dimension lect di | PM 2 PM 3 PM dimension value, each time series that results from the monitoring multiple time series ① Add custom value Add custom value |
| 10 10 AM 11 AM 12 PM 12 | PM 2 PM 3 PM dimension value, each time series that results from the monitoring multiple time series O Add custom value |
| 10 10 AM TI AM 12 PM TI AM 12 | PM 2 PM 3 PM dimension value, each time series that results from the monitoring multiple time series O Add custom value Add custom value |
| Used Mercel Threshold by dimensions Treshold by dimensions Treshold imensions to monitor specific time series. If you select more than one ination will trigger its own alert and will be charged separately. About nension name Operator Dimension values text dimension = Iogic hold | dimension value, each time series that results from the monitoring multiple time series O Add custom value |
| by dimensions imensions to monitor specific time series. If you select more than one ination will trigger its own alert and will be charged separately. About mension name Operator Dimension values lect dimension \checkmark = \checkmark Dimension values lect dimension \checkmark = \checkmark Dimension values logic hold O | dimension value, each time series that results from the monitoring multiple time series O Add custom value |
| lect dimension V = V O selected | Add custom value |
| logic hold () | Monitoring 1 time series (\$0.1/time series) |
| logic hold () | |
| hold 0 | |
| Static | |
| | |
| itor 🛈 Aggregation type 🕷 🛈 Thresh | old value * 🕐 Unit * 🔿 |
| Average V 70 | Count |
| ition preview | |
| ever the average % used memory is greater than 70 | |
| ated bared on | |
| ated based on | |
| Igation granularity (Period) * () Frequencies | iency of evaluation () |
| nutes V Eve | |
| | ny 1 Minute |

接下來到 Action 的地方,配置警報發生後要發送 mail 告知管理人員的配置。



| Home > POOL1 > Create alert rule | 5 | | | | | Email/SMS message/Push/Voice |
|--|-----------------------|---|------------------------------------|-------------------|--|--|
| Create action group | | | | | | Add or edit an Email/SMS/Push/Voice action |
| Basics Notifications Actions | Tag | Review + create | | | | Email Email * () wayneJn@acer.com |
| Notifications | | | | | | |
| Configure the method in which users w reciever details and add a unique descr | vill be n ription. | otified when the action This step is optional. | group triggers. Select notificatio | in types, provide | | Country code |
| Notification type 🛈 | | Name 🗊 | Selected 🛈 | | | Phone number * |
| Email/SMS message/Push/Voice | \sim | LogMessage | Email O | <u>e</u> 🗉 | | 1214 |
| | | | | | | Azure app Push Notifications |
| | | | | | | Azure account email • O |
| | | | | | | Voice |
| | | | | | | Country code () |
| | | | | | | Phone number |
| | | | | | | Enable the common alert schema. Learn more |
| | | | | | | OX. |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| Review + create Drevisor | 1 [| Next: Actions > | | | | |

設定完 Action 的 Notifications 就可以執行 Create,創建完 Action 後為 Alert Rule 命名,再選取該警報的 Severity 等級即可完成警告配置。

| Actions Send notifications or invoke actions when | the alert rule triggers, by selecting or creating a new action grou | p. Learn more | |
|--|---|------------------|--|
| Action group name | | Contains actions | |
| | | 1 Email 🛈 | |
| Manage action groups | | | |
| Alert rule details Provide details on your alert rule so that y | ou can identify and manage it later. | | |
| Alert rule name * ① | LogAlert | ×. | |
| Description | Specify the alert rule description | | |
| Save alert rule to resource group * 🕐 | RG.LogTest | ~ | |
| Severity 🐂 🔘 | 0 - Critical | ~ | |
| Enable alert rule upon creation | | | |
| Automatically resolve alerts ① | | | |
| Create alert rule | | | |

到此已經完成整個 Log Analytics 的配置



Log Analytics 整合 Power BI

這裡我們要將 Log Analytics 所接收到的所有關於效能的資訊傳送到 Power BI, 再由 Power BI 整理出更加視覺化的內容。



1. 匯出 LOG

透過 Analytics Log 將所需要的 LOG 匯出。這邊匯出會是一個檔案,需要將檔案的內容複製。

| ⊟ Microsoft Azure P Search reso | surces, services, and docs (G+/) | N 🖓 Q | @ ? © |
|--|--|------------------|---|
| Home > | | | × |
| 🥐 New Query 1* 🛛 🗙 🕂 | | 💙 Feedback | 🚰 Queries 🧾 Query explorer 🛛 🍪 🛄 🗠 |
| POOL1 Select scope | Time range : Last 30 minutes 🛛 层 Save 🗸 🖻 Share 🗸 | + New alert rule | Export 🚽 💉 Pin to dashboard 🛛 … |
| Tables Queries Functions … « | 1 Perf | | Export to CSV - all columns |
| Search : | | | Export to CSV - displayed columns Export to Power BI (M query) |
| ♥ Filter I III Group by: Solution ∨ T[™] Collapse all | | | * |
| Favorites | Results Chart Columns V O Display time (UTC+00:00) V | Group colum | nns |
| You can add favorites by clicking on the ☆ icon | Completed. Showing results from the last 30 minutes. | | Ŏ 00:00.7 🔳 4,504 records 🛛 😣 |
| LogManagement | TimeGenerated [UTC] 🛛 Computer 🖓 ObjectName | | |
| Image: Microsoft Azure Image: Search resources, services, and docs (G+r) Home > Image: Pool 1 Image: Pool 1 <td>es C:</td> | es C: | | |
| ► 目 Heartbeat | > 5/4/2021, 6:45:47.867 AM LogicalDisk | Free Megabyt | es HarddiskVolume1 |
| ▶ 目 Operation ▶ 目 Perf | > 5/4/2021, 6:45:47.867 AM LogicalDisk | Free Megabyt | es _Total |

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2. 將 LOG 匯入 Power BI

將匯出的 M Query 內容輸入到 Power BI,以作為資料來源。Power BI 介面 選到 新來源 > 空白查詢 > 進階編輯器

| E 9 | 常用 描 | 入 模型化 8 | 良視 1 | 院明 | | | | | | | | | | | |
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| 11 A I | []]中有智。 | Charlen and an and an | 92 | 常用 | 時換 | 新埔資料行 | 检视表 | 工具 | 說明 | | | | | | |
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| é <u>s</u> | | Power BI 資料流程 | 時間立 霰用・ | 請未 班 遵▼ 的 | 近世州町 | 人 資料的 料 源設支 | 宮理 参数・ | 現現費・ | , 🛄 管理 🕶 | 福信賞 特許賞 科行・科行・ | (出業賞 修辞賞 お列・科列・ | ガ創業 | 方坦 1,2 取代值 | 10合併檔案 | Azure Machine Learning |
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| | | 고는 프라 (1) | | | | | | | | | | | | | |
| | | Power BI 都本應用 | | | | | | | | | | | | | |
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將剛剛所匯出的內容輸入至進階編輯器。



/ 進階編輯器 × Azure Pool 1 Perf 顧示選項 • 🕜 The exported Power Query Formula Language (M Language) can be used with Power Query in Excel and Power BI Desktop. For Power BI Desktop follow the instructions below: Download Power BI Desktop from https://powerbi.microsoft.com/desktop/
 In Power BI Desktop select: 'Get Data' -> 'Blank Query'->'Advanced Query Editor'
 Paste the M Language script into the Advanced Query Editor and select 'Done' let AnalyticsQuery = let Source = Json.Document(Web.Contents("https://api.loganalytics.io/v1/workspaces/bc9de04d-f74c-4f2e-afcb-4cf60e2369c5/query", [Query=[#"query"="Perf ",#"x-ms-app"="OmsAnalyticsPBI",#"timespan"="PT30M",#"prefer"="ai.response-thinning=true"],Timeout=#duration(0,0,4,0)])), TypeMap = #table({ "AnalyticsTypes", "Type" }, "string", Text.Type }, { "int", { "long", Int32.Type }, Int64.Type }, { "real", Double.Type }, { "timespan", Duration.Type },
{ "datetime", DateTimeZone.Type }, { "bool", Logical.Type },
{ "guid", Text.Type }, "dynamic", Text.Type } 3). DataTable = Source[tables]{0}, Columns = Table.FromRcords(DataTable[columns]), ColumnsWithType = Table.Join(Columns, {"type"}, TypeMap , {"AnalyticsTypes"}), Rows = Table.FromRows(DataTable[rows], Columns[name]), Table = Table.TransformColumnTypes(Rows, Table.ToList(ColumnsWithType, (c) => { c{0}, c{3}})) Table, 導出的當地時間 = Table.TransformColumns(AnalyticsOuery,{{"TimeGenerated", DateTimeZone.ToLocal, type datetimezone}}) ✓ 未偵測到任何語法錯誤。 完成 取消

點選完成後將呈現出以下表格,呈現出此表,代表匯出完成。

| 型詞 [5] | < [] | ✓ ∫ _I = Table.Transfor | rmColumns(AnalyticsQue | ery,{{"TimeGenerated", DateTi | imeZone.ToLocal, type datetia | iezone}}) | | | v |
|-------------------|------|--------------------------------------|------------------------|-------------------------------|---|---------------------------------|---------------------|---|--------------|
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| | 2 | bc9de04d-f74c-4f2e-afcb-4cf60e2369c | 5 centos7-2 | Memory | % Used Memory | Memory | 16 | 2021/4/23 上午11:21:06 +06:00 OpsManager | \\cento |
| | 3 | bc9de04d-f74c-4f2e-afcb-4cf60e2369cf | 5 centos7-2 | Memory | % Used Swap Space | Memory | 5 | 2021/4/23 _+# 11:21:05 +08:00 OpsManager | \\cento. |
| | 4 | bc9de04d-f74c-4f2e-aftb-4cf60e2069ct | 5 centos7-2 | Processor | % Privileged Time | _Total | 0 | 2021/4/23 上+#11:21:06 +68:00 OpsManager | \\cento |
| | 5 | bc9de04d-f74c-4f2e-afcb-4cf60e2369cf | 5 centos7-2 | Network | Total Bytes Received | 4050 | 695539433 | 2021/4/28 上午11:21:06 +08:00 OpsManager | \\cento |
| | ő | bc9de04d-f74c-4f2e-afcb-4cf60e2369cf | 5 centos7-2 | Network | Total Bytes Transmitted | eth0 | 103035841 | 2021/4/25 上中 11:21:06 +08:00 OpsManager | \\centa |
| | 7 | bc9de04d-f74c-4f2e-afcb-4cf60e2369ct | s centos7-2 | Processor | % Processor Time | _Total | 1 | 2021/4/25 11:21:06 +68:00 OpsManager | \\cento |
| | | | | | | | | and dates it to the second second | |

匯入完成後我們到報表的介面開始製作屬於我們的監控畫面。

在紅色框框的地方可以選擇適合自己的效果。



之後在欄位的地方輸入自己想要的數據,即可產出一份屬於自己的報表。

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| - | MAR . | | | | | | | |

下面這張圖是根據 CPU 與記憶體以及硬碟所整理出來的報表,這樣對 IT 人員 在監控系統顯得非常容易,也可以更快的發現問題。



整合進 Power BI 可以透過 Power BI 產出 LOG Analytics 的所有資訊,並且將 資訊相互關聯,如上圖所示,如果要觀看單一系統的資訊,可以篩選想觀看的 系統名稱 Power BI 將會呈現您所選取的系統上所有相關資訊報表。

簡單來說就是可以更加值觀並快速的知道所有系統的資訊狀況,這樣做可以不必透過繁瑣的 Query 過程,就能夠查看所有系統的資訊。

3. 發佈至雲端

Power BI 也可以同步上傳至 WEB,點按下圖之發行鈕,就可以將在 Power BI Desktop 上製作的報表上傳至帳戶上的雲端工作區,這樣就可以隨時隨地監控 系統的所有狀況,不管是在公司還是在外地出差,都可以透過瀏覽器第一時間 知道系統狀況,如果是 Mobile 平台則可以透過 Power BI APP 查看。





至此我們已經利用 Azure Log Analytics 及 Power BI 快速完成一套簡單的雲端 日誌收集及分析系統。