

IBM® Water Operations for Waternamics 使用手冊

附註： 使用本資訊及其支援的產品之前，請先閱讀本文件結尾「[注意事項](#)」這一節的資訊。

除非新版中另有指示，否則本版適用於 IBM® Water Operations for Waternamics 5.1.0 版以及所有後續版本與修訂版。

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1. 簡介

本手冊是 IBM® Water Operations for Waternamics 各項功能的簡介，其說明該解決方案實作的部分使用案例。

如需使用該解決方案的相關資訊，請參閱 [IBM® Intelligent Operations Center 產品說明文件](#)。

2. 解決方案概觀

IBM® Water Operations for Waternamics 是內建於 IBM® Intelligent Operations Center 軟體及加強該軟體的一個解決方案。

IBM® Water Operations for Waternamics 是設計成一個狀況型解決方案，能協助城市或水管理局對水管道的有效作業控制。

此解決方案帶來下列好處：

- 從感應器和企業系統收集資料並使其產生關聯。這包括資產、測量讀數及事件的資料。
- 以地理空間環境定義，在不同的使用者設定檔中呈現此資料，以提供使用者相關資訊，讓他們在每天的危機狀況中能夠做出明智決策。在呈現此資料之前，將由該解決方案選擇性地分析及預先處理資料。此資料透過兩個視圖呈現：作業視圖和狀態視圖。
- 透過手動或自動觸發標準作業程序 (SOP)，以協助回到正常作業。

該解決方案的目標不是要取代每一個功能性、歷史性、特殊化及經過證實的系統，例如地理資訊系統 (GIS)、企業資產管理 (EAM) 系統及監督控制和資料取得 (SCADA) 系統，而只是收集所需要的相關資料並使其產生關聯，以達到最佳作業控制。

2.1. 作業視圖

在「作業」視圖中，您可以檢視您在地理空間地圖上、邏輯地圖上或清單中的資料。該資料包括：

- 資產，含或不含關聯的感應器讀數
- 事件，包括來自感應器及企業系統的工作單和警示
- 選擇性地，來自外部來源的資料，例如氣象資訊來源和開放式資料儲存庫。

選取**我的視圖 > 清單**，以檢視、監視及管理清單中的資料項目。

選取**我的視圖 > 邏輯地圖**，以監視地圖中的語意模型，及顯示此語意資料模型中的所選取資產與其他項目之間的關係。此模型是代表基礎架構、資產及測量之真實世界的抽象概念。如需語意模型的相關資訊，請參閱 [IBM® Intelligent Operations Center 產品說明文件：移入基礎架構](#)。

使用「過濾器」視窗來定義要顯示什麼資料。不同的過濾器以過濾器窗格分組。

如需作業視圖的相關資訊，請參閱 [IBM® Intelligent Operations Center 產品說明文件中的「檢視、過濾及分析裝置管理啟用資料」](#)。

3. 使用者角色與存取權

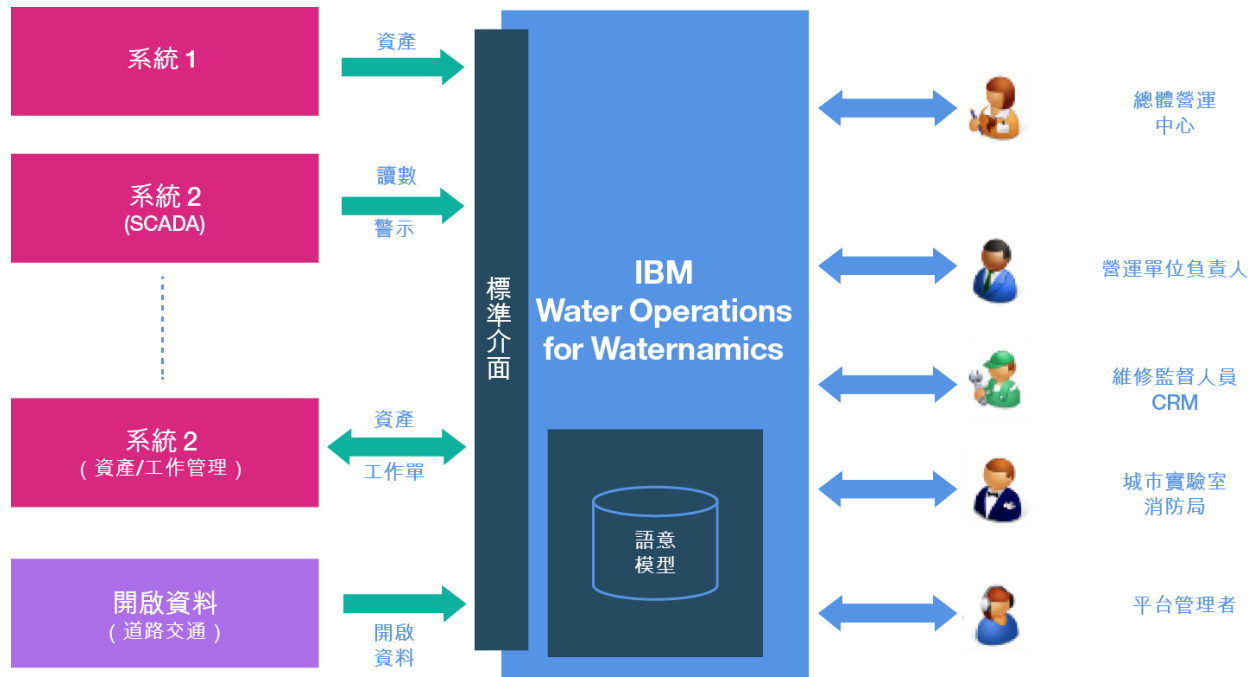


圖 1：IBM® Water Operations for Waternamics 使用者環境定義

IBM® Water Operations for Waternamics 彙總來自一個組織內負責水管道作業之不同系統的資料，以及來自外部系統的資料。這些系統會因不同的實作而有所不同。不過，此解決方案使用預先定義的介面，如果您遵守這些介面，便可簡化部署。

處理此資料之後，會根據使用者的設定檔而呈現給不同的使用者。下列各預設角色已經隨著解決方案一起安裝。根據部署此解決方案之城市的需求，可啟動一部分或全部角色：

標籤	專用的作業視圖	效能指標頁面
管理者	X	X
主管	X	X
監督員	X	X
地方當局	X	
客戶服務中心	X	
供水處理人員	X	X
廢水處理人員	X	X
維護工作人員	X	X
消防人員	X	

標籤	專用的作業視圖	效能指標頁面
現場作業人員	X	X

會建立每一個設定檔的使用者群組。會為每一個群組建立一個視圖或「作業」頁面，使每一個群組可以存取他們本身角色需要的所有資料。

4. 過濾地圖及清單上的資料

您可以從「過濾器」視窗中選取一或多個過濾器，來選擇要在地圖上或清單中顯示的資料。您可以使用的過濾器取決於您的使用者設定檔。例如，您可以選擇按地理空間位置和狀態來過濾資料。

如需相關資訊，請參閱 [IBM® Intelligent Operations Center 產品說明文件：過濾地圖和清單上的資產](#)。

4.1. 僅過濾飲用水管道的資料

如果您的部署只關心飲用水管道，您可以使用此解決方案所提供的過濾器來處理飲用水管道。這些過濾器在「過濾器」視窗中以過濾器窗格分組。過濾器群組包括下列各項：

- 水務系統：管道設備
- 水務系統：區域
- 水務系統：感應器
- 事件
- 水務系統：客戶
- 水務系統：水質
- 水務系統：人為介入
- 水務系統：警示

必要的話，可在安裝此解決方案之後重組這些過濾器。

4.2. 過濾飲用水管道和廢水管道的資料

如果 IBM® Water Operations for Waternamics 解決方案只關心飲用水管道和廢水管道，您可以使用此解決方案提供的過濾器群組來處理這些管道。過濾器群組包括下列各項：

- 水務系統：管道設備
- 水務系統：區域
- 水務系統：感應器
- 事件
- 水務系統：水質
- 水務系統：人為介入
- 水務系統：警示
- 廢水：下水道

- 廢水：管道元素
- 廢水：區域
- 廢水：感應器
- 廢水：人為介入
- 地表管道：下水道
- 地表管道：事件
- 地表管道：地點
- 地表管道：感應器

必要的話，可在安裝此解決方案之後重組這些過濾器。

5. IBM® Water Operations for Waternamics 的使用案例

5.1. 檢視管道和區域

5.1.1. 水管道

5.1.1.1. 管節

您可能需要能夠在地圖上依其屬性輕鬆識別資產。例如，您可能需要以特定線條厚度顯示特定直徑的水管，或以水管顏色指出水管的狀態。此解決方案有兩種可用的配置：

- 以單色及等厚顯示水管。顏色就是您選取的過濾器群組的顏色。
或者，
- 代表水管的線條寬度依管節的直徑比例而有所不同，線條顏色則根據管道類型和管節的狀態而有所不同。

如果採用第二個解決方案，則主要層呈現管節及其直徑和其管道類型，在第二層，顏色指出管節的狀態。此狀態取決於測量讀數及其與 GIS 中的同名屬性值的對應。這表示，如果 GIS 顯示的狀態與讀數所記錄的狀態不同，則水管顏色會指出異常。否則，顏色指出正常狀態。

如果沒有可用的讀數，則狀態是根據資產層次所宣告的現行值來決定，如下表所示：

管節 (類別： Esri.wMain)	屬性 ENABLED (「已填入」)	無讀數	狀態
	值 = 1，已啟用	無	值 = 0 (正常臨界值) - 綠色
	值 = 0，已停用	無	值 = 2 (重大臨界值) - 紅色

5.1.2. 分區和效率

您可以顯示測壓管水位區域。

5.1.2.1. 測壓管水位

IBM® Water Operations for Waternamics 顯示測壓管水位區域。區域資料必須透過資產介面提供。會顯示屬於相同的測壓管水位的多邊形資產，以及與該水位有邏輯性關聯的所有資產，例如感應器和設備。資產內容指出資產所屬的區域。

選取測壓管水位以顯示其性質。與每一個測壓管水位相關聯的多邊形有填入顏色。

有兩個解決方案可顯示測壓管水位：

- 以統一填入顏色顯示區域，並依其邊緣的呈現加以區別。

或者，

- 以介面中指定的不同顏色顯示區域，以反映該區域的測壓管水位。此資訊是透過資產介面而反饋。線條顏色反映區域的狀態，其與關聯的讀數類型和配置的臨界值相關。

與每一個測壓管水位相關聯的顏色、讀數類型和臨界值會根據資產介面而傳送至該解決方案。「狀態」顏色是 IBM® Water Operations for Waternamics 標準狀態顏色。這五個狀態為：未定、無值、可接受、注意及重要。

5.1.3. 資產介面

資產資料是透過資產介面更新。

說明

介面 ID	I1
介面名稱	IOW-IN-ASSETS-CORE
輸入資料格式	XML
輸出資料格式	RDF/ IBM® Water Operations for Waternamics 格式
介面用戶端	IBM® Water Operations for Waternamics
此介面的友機範例 (*)	ESRI 和 GAMA 系統有可重複使用的連接器。
介面型態	頻率為一天兩次的批次模式。資料在平台安裝期間起始載，然後每日新增或更新。 重要事項：起始載入時間可能要花費一些時間。

附註：對於所有介面，提供來源資料的工具的唯一需求是該工具要支援資料格式。

資料格式

此介面所處理的資料是 XML 格式。此格式說明於 XSD 檔 [VDS_IOW-IN-ASSETS-CORE.xsd](#)。

5.2. 檢視設備和感應器

5.2.1. 一般行為

選取相關的過濾器，以便在地圖上顯示資產。不論資產是否有相關聯的測量讀數都會顯示出來。

您可以配置資產類型，使資產顯示如下：

- 顯示的狀態與外部系統所傳送的或解決方案所計算的讀數值一致。
- 您可以根據此狀態或 IBM® Water Operations for Waternamics 地理區域的選擇來過濾此顯示。
- 資產圖示是由資產類型配置決定。

這些資產類型將如下顯示在地圖上：

- 會對每個資料項目顯示唯一圖示。
- 如果多個資料項目彼此保持特定距離，則會使用叢集圖示代表地圖上的鄰近資料項目群組。
- 資產圖示的背景顏色是以過濾器窗格為基礎，此窗格與包含該資產的那一層相關聯。
- 資產圖示的狀態框顏色與先前配置的臨界值和關聯讀數一致。當讀數無法使用時，這個框會停用。

對於可能在地圖上同時顯示超過 3,000 到 5,000 個資產的資產層，您也可以配置伺服器端呈現。如需伺服器端呈現的相關資訊，請參閱 [IBM® Intelligent Operations Center 產品說明文件：地圖呈現最佳化](#)。目前，只有網路是以伺服器端呈現。

5.2.2. 資產和資產狀態

5.2.2.1. 給料器的閥狀態

這裡的需求是要顯示閥的位置及其內容，其中顯示的每一個閥的狀態與其預期狀態不同。例如，其中有一個閥開啟，但它應該關閉，或是相反情況。

預期的狀態是由操作員的系統提供。此狀態是透過資產介面傳送至 IBM® Water Operations for Waternamics。

實際狀態是透過讀數介面傳送為測量值。

- 您可依照語意模型中的閥所定義之設備類型來過濾。結果層將根據下表概述的規則來顯示閥資料。顏色不表示正常/異常情況，反之，顏色指定閥是開啟（綠色）或關閉（紅色）。橙色顯示「暫時」關閉的閥：

閥 (類別： Esri.wSystemValve)	屬性 CURROPEN (「目前開啟」)	CURROPEN 讀數 (「目前開啟」)	狀態
	值 = 1, 「閥開啟」	值 = 1, 「閥開啟」	值 = 0 (可接受的臨界值) - 綠色
	值 = 1, 「閥開啟」	值 = 0, 「閥關閉」	值 = 1 (注意臨界值) - 橙色
	值 = 0, 「閥關閉」	值 = 0, 「閥關閉」	值 = 2 (重大臨界值) - 紅色
	值 = 0, 「閥關閉」	值 = 1, 「閥開啟」	值 = 0 (可接受的臨界值) - 綠色

如果沒有可用的讀數，狀態將根據資產層次所宣告的現行值來決定： 閥 (類別： Esri.wSystemValve)	屬性 CURROPEN (「目前開啟」)	無讀數	狀態
	值 = 1, 「閥開啟」	無	值 = 0 (可接受的臨界值) - 綠色
值 = 0, 「閥關閉」	無	值 = 2 (重大臨界值) - 紅色	

因此，可根據閥的狀態來過濾閥資料，及顯示開啟、關閉或暫時關閉的閥。



5.2.2.2. 管道資產

5.2.2.2.1. 消防栓

可顯示消防栓的位置和內容。此顯示會根據一個代表消防栓狀態的讀數而不同。類似閥的顯示，也會套用規則來根據屬性/讀數對應而顯示消防栓。

您可依照語意模型中的消防栓所定義之資產類型來過濾。結果層將根據下表概述的規則來顯示消防栓資料。

顏色不代表正常/異常情況，而是指定消防栓是裝滿（綠色）或乾枯（紅色）。橙色顯示消防栓「暫時」乾枯。


消防栓 (類別： Esri.wHydrant)	屬性 ENABLED (「已填入」)	讀數 ENABLED (「已填入」)	狀態
	值 = 1, 「裝滿的消防栓」	值 = 1, 「裝滿的消防栓」	值 = 0 (可接受的臨界值) - 綠色
	值 = 1, 「裝滿的消防栓」	值 = 0, 「乾枯的消防栓」	值 = 1 (注意臨界值) - 橙色
	值 = 0, 「乾枯的消防栓」	值 = 0, 「乾枯的消防栓」	值 = 2 (重大臨界值) - 紅色

	值 = 0, 「乾枯的消防栓」	值 = 1, 「裝滿的消防栓」	值 = 0 (可接受的臨界值) - 綠色
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如果沒有可用的讀數，則狀態是根據資產層次所宣告的現行值來決定：

消防栓 (類別： Esri.wHydrant)	屬性 ENABLED (「已填入」)	無讀數	狀態
	值 = 1, 「裝滿的消防栓」	無	值 = 0 (可接受的臨界值) 綠色
	值 = 0, 「乾枯的消防栓」	無	值 = 2 (重大臨界值) 紅色

消防栓資料是透過資產介面提供，而消防栓讀數（包括開始）則是透過讀數介面提供。

消防栓的圖示	
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5.2.2.2.2. 排水

您可依照語意模型中的排水所定義之資產類型來過濾。結果層顯示排水的位置和內容。也可以顯示排水的永久流出警示。

差異分析：


有專用的警示層可顯示永久流出警示

有兩個不同的層，一個「資產」層，一個「警示」層。

排水資料是透過資產介面提供，而讀數則是透過讀數介面提供。

排水水位的「永久流出」警示，在 IBM® Water Operations for Waternamics 中是透過警示介面反饋。

在設備層次，會使用特定的內容框來檢視與排水相關聯的警示清單。

排水圖示	
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5.2.2.2.3. 減壓閥

您可以檢視沒有特殊符號規則之減壓閥的位置，也就是沒有紅色/琥珀色/綠色狀態的減壓閥。您也可以檢視關聯的水壓感應器的上游和下游水壓。


- 會顯示減壓閥資產的層。
- 會顯示水壓感應器資產的層。

- 減壓閥的感應器水壓會顯示在邏輯視圖中。

減壓閥的圖示	
水壓感應器的圖示	


5.2.2.2.4. 測光區域檢測工具

此視圖顯示測光區域檢測工具的位置。

測光區域檢測工具的圖示	
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5.2.2.2.5. 管道互通

此視圖顯示管道互通的位置。會顯示管道互通的層。

管道互通的圖示	
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5.2.2.3. 工廠資產


顯示抽水站、水庫和工廠的位置和內容時，每個大樓類型會有單一圖示。

會對每一種類型的工廠資產或安裝定義一個過濾器，例如，水庫/水塔、水位高程處理廠和加壓站。

水庫的圖示	
水位高程處理廠的圖示	
集水區的圖示	
警報站的圖示	
飲用水生產工廠的圖示	
加壓廠的圖示	


5.2.2.4. 水壓感應器

廠內水壓感應器及其狀態的處理方式與管道的水壓感應器相同。

水壓感應器的圖示	
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5.2.2.5. KAPTA™ 感應器

KAPTA™ 感應器及其狀態的處理方式與管道的水壓感應器相同。



KAPTA™ 感應器的圖示	
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5.2.2.6. 自我監視取樣點

取樣點的位置和內容必須是可顯示的。您必須能夠檢視自我監視取樣點，以及監理取樣點。

取樣點的狀態是由前次分析的結果決定。

會為自我監視程式的取樣點建立一層，以及為監理點建立一層。

自我監視取樣點的圖示	
監理取樣點的圖示	


5.2.2.7. 工廠出水口感應器

這些感應器是單一讀數感應器，包括含氯量、水質濁度和溫度感應器。

可顯示這些感應器的位置和內容

它們的狀態是透過比較測量值與其類型已定義的臨界值來決定。

會為所有工廠出水口感應器建立一層。

工廠出水口感應器的圖示	
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5.2.3. 資產介面

感應器和工廠資產是透過資產介面來更新。

說明

介面 ID	I1
介面名稱	IOW-IN-ASSETS-CORE
輸入資料格式	XML
輸出資料格式	RDF/ IBM® Water Operations for Waternamics 格式
介面用戶端	IBM® Water Operations for Waternamics

介面型態	頻率為一天兩次的批次模式
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資料格式

此介面所處理的資料是 XML 格式。此資料格式由這個 XSD 檔案加以說明：[VDS_IOW-IN-ASSETS-CORE.xsd](#)。

5.3. 檢視資產內容

5.3.1. 一般行為

按一下資產以顯示預覽卡，其中包含項目的內容。這些內容是透過資產介面在 IBM® Water Operations for Waternamics 中傳回。

5.3.2. 檢視外部伺服器的其他資訊

部分設備可以與超文字鏈結相關聯，例如，與儲存在資料倉儲中的 PDF 文件的鏈結。

如果有 URL 屬性，該屬性會透過資產介面，以超文字鏈結的形式傳回。

5.3.3. 檢視與資產相關聯的警示及工作單

若要檢視與所選資產相關聯的警示和工作單，請按一下預覽卡上的**進一步資訊**。

5.3.4. 資產介面

資產內容透過資產介面而同步化。

說明

介面 ID	I1
介面名稱	IOW-IN-ASSETS-CORE
輸入資料格式	XML
輸出資料格式	RDF/ IBM® Water Operations for Waternamics 格式
介面用戶端	IBM® Water Operations for Waternamics

介面型態	頻率為一天兩次的批次模式
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資料格式

此介面所處理的資料是 XML 格式。此格式說明於 XSD 檔 [VDS_IOW-IN-ASSETS-CORE.xsd](#)。

5.4. 搜尋資產

5.4.1. 一般行為

有三種方式可在 IBM® Water Operations for Waternamics 中搜尋資產：

- 在地圖上依資產 ID 搜尋資產
- 在邏輯地圖上依資產 ID 搜尋資產
- 依資產地址搜尋資產

5.4.2. 在地圖上搜尋資產

若要使用資產 ID 搜尋資產，請按一下「過濾器」視窗中的**搜尋資產**，輸入 ID，然後按一下**搜尋**。資產的預覽卡會顯示在地圖上。

5.4.3. 在邏輯地圖上依 ID 搜尋

您也可以在邏輯地圖上依資產的 IBM® Water Operations for Waternamics ID 搜尋資產。選取資產之後，快速功能表可讓您在地圖視圖上看到它。

5.4.4. 在地圖上依地址搜尋

若要依地址搜尋，請按一下「過濾器」視窗中的**依地址搜尋**，並輸入位置。成功的搜尋會將地圖重新定位在該地址。

5.5. 檢視資產的讀數和狀態

5.5.1. 一般行為

每一個資產可以與一或多個讀數相關聯。針對每一個讀數，讀數和已定義的臨界值之間的比較是以顏色代碼顯示在讀數層次上。有三個標準臨界值，含有預先定義的顏色。臨界值是依資產或資產類型定義，會自動套用在每一個資產上。

其中一個讀數得作為主要讀數，它決定圖示狀態在地圖上的顏色。每個資產類型都有定義這個主要讀數。

在 IBM® Water Operations for Waternamics 中，只能定義三個臨界值。

- 可接受的：以綠色顯示

- 注意：以橙色顯示
- 重大：以紅色顯示

當讀數超出臨界值以外，而無法用來決定水位時，狀態為不確定，且變成灰色。

範例：

定義具有下列限制的三個臨界值：

- 可接受的：大於或等於 0 且小於 -5
- 注意：大於或等於 0 且小於 100
- 重大：大於或等於 100 且小於 200

其結果為排除下限及包括上限。例如：

- 如果值 = -50，水位 = **未定**（灰色），因為超出限制
- 如果值 = 0，水位 = **可接受的**（綠色）
- 如果值 = 100，水位 = **注意**（橙色）
- 如果值 = 200，水位 = **重大**（紅色），
- 如果值 = 250，水位 = **未定**（灰色），因為超出限制

讀數類型和臨界值是透過資產介面而定義給每一個資產。這些讀數會透過讀數介面而匯入到 IBM® Water Operations for Waternamics。

5.5.2. 資產狀態

資產狀態取決於資產的最差讀數。例如，如果涉及三個讀數類型，且其中一個是重大，另外兩個是正常，則指出資產狀態為重大，因而解決整體相符性的問題。

5.5.2.1. 水壓感應器和減壓閥

水壓感應器以六項內容來表示。這些內容的值會透過讀數介面而匯入到 IBM® Water Operations for Waternamics。內容如下：

- 水壓
- 維護狀態
- 錯誤狀態（感應器是否毀損）
- 短期錯誤
- 長期錯誤
- 一般錯誤

錯誤值指出感應器有問題。「一般錯誤」讀數是其他錯誤的上限值。此值指出感應器的整體狀態。

如果水壓感應器與減壓閥相關聯，則感應器的水壓讀數可視為減壓閥的一項性質，在判定減壓閥的狀態時應該將感應器的一般錯誤列入考量。若要尋找關聯值，您可以從母項到子項來導覽邏輯視圖，並查看相關讀數和狀態。

維護讀數也與減壓閥相關聯。

5.5.2.2. KAPTA™ 感應器

KAPTA™ 感應器由四個測量值限定：氮含量、導電率、水壓和溫度。

如同水質讀數，感應器的整體狀態取決於最差讀數，這是根據讀數臨界值來決定。

5.5.2.3. 水流讀數

水流和水壓感應器與生產單位相關聯。您可以檢視感應器的這些讀數的日誌和狀態。

知道與生產單位相關聯的感應器狀態和讀數是有益的。可透過邏輯視圖導覽至關聯的感應器來取得此資訊。

您可以依各種感應器類型來過濾。

5.5.2.4. 管道互通讀數

計量點、水閘、水壓感應器和調壓閥與每一個管道互通相關聯。

您可以依設備類型和管道互通來過濾。

您可以導覽邏輯視圖，以取得從管道互通設備產生的水流讀數、水閘狀態、水壓讀數和調壓閥狀態。

5.5.2.5. 分區和效率

夜間水流和水量讀數與分區水表相關聯。

會定義分區水表的過濾器。

透過水表相關聯的測壓管區域取得此資訊是有益的。您可以在邏輯視圖中找到此資訊。

5.5.3. 讀數介面

設備分析讀數是透過讀數介面更新。

說明

介面 ID	I2
介面名稱	IOW-IN-READINGS-CORE
輸入資料格式	XML
輸出資料格式	CSV / IBM® Water Operations for Waternamics 格式

介面用戶端	IBM® Water Operations for Waternamics
介面型態	批次模式，頻率待決定

資料格式

此介面所處理的資料是 XML 格式。此格式說明於 XSD 檔 [VDS_IOW-IN-READINGS-Core.xsd](#)。

5.6. 檢視水庫和水位

5.6.1. 一般行為

水庫的行為與設備和狀態監視的行為相同。其狀態視透過讀數介面而匯入的水池水位而定，會使用最差水池的狀態。

5.7. 事件和警示管理

5.7.1. 一般行為

針對特定層，系統可自動建立事件，您也可以手動建立警示。可透過警示介面自動產生警示。

5.7.1.1. 圖示

在特定層內識別事件或警示類型。在地圖上識別事件或警示的圖示與每一個過濾器群組相關聯。此圖示的背景顏色符合過濾器群組的顏色。

以特定圖示識別事件或警示類型。背景顏色與每一個過濾器群組相關聯，而「外框」顏色則指出事件狀態：

- 已關閉：綠色
- 未關閉（可疑、可處理、待處理）：紅色



範例：

當您在「過濾器」視窗中選取一或多個過濾器時，與結果層相關聯的事件和警示會顯示在地圖上。

若要顯示事件或警示的屬性，請按一下地圖上的事件或警示圖示。您也可以更新或取消事件或警示。

5.7.1.2. 狀態

四個事件和警示狀態如下所示：

- 可疑
- 可處理
- 待處理
- 已關閉

若要確認事件或警示，請按一下預覽卡上針對該警示或事件的**其他動作**，然後按一下**確認事件/警示**。

"yes" 值會指派給事件或警示的**已確認**欄位，且現行日期會顯示在**結束日期**欄位。

根據套用至「已確認」欄位的過濾器，已確認的事件或警示不會被移除，且仍然可以看到。依預設，不論是否已確認，所有事件和警示都是可以看到的。

在警示確認通知作業期間，您無法新增註解。不過，您可以按一下**其他動作 > 更新**，在確認作業之前或之後新增註解。

5.7.1.3. 過濾器

您可以依下列各項來過濾事件和警示：

- 類型（每一層僅一個類型）
- 狀態
- 關聯區域
- 確認通知（確認與否）
- 建立事件或警示的人員
- 日期

若套用日期過濾器，則只顯示其開始日期是介於搜尋開啟日期和結束日期之間的事件。

5.7.2. 事件特性

5.7.2.1. 事件類型

可顯示下列事件類型：

- 緊急外洩
- 火災
- 竊取水資源

- 氣候事件
- 其他

5.7.2.2. 圖示

特定圖示識別每一個事件類型。

事件	圖示
重大水質缺失	
可見的緊急外洩	
火災	
河污染	
大洪水	
水壩洩洪	
竊取水資源	
熱浪	
寒潮	
暴風雨	
加強安全限制	

5.7.2.3. 建立事件

若要建立事件，先在「過濾器」視窗中選取一或多個過濾器，以顯示所需要的資料層。按一下**其他動作>新建項目**，然後將新項目拖放到地圖上，以選取地理位置。

會自動移入下列欄位：

- **建立者**中已填入相關使用者登入。
- **測壓管區域**欄位中已填入發生事件的區域（根據地理空間查詢）
- 座標，以拖放時選取的位置為基礎

- 事件的地址屬性會以根據座標而呼叫的 ESRI 地理定位服務來更新。您可以手動調整地址，然後就會使用相同的地理定位服務來更新座標。

5.7.3. 警示特性

5.7.3.1. 要檢視的警示類型

警示類型包括：

- 逆流
- 永久洩漏
- 入浸
- 行動電表警示
- 洩漏
- Gutermann 洩漏相關器

5.7.3.2. 圖示

以特定圖示識別每一個警示類型。

警示	圖示
逆流	
連續流出	
入浸	
行動電表	
Gutermann 洩漏相關器	
毀損的減壓閥	

5.7.3.3. 建立警示

只能透過警示介面產生警示。

5.7.3.4. 警示通知和縮放

根據下列規則來傳送通知：

- 如果警示很緊急（介面的「緊急性」欄位中有 Y）且狀態為「未關閉」，則一項重要通知會引發訊息以大標題顯示，並發出警告聲。
- 如果警示不緊急，且狀態為「未關閉」，則會傳送「待監視」通知。
- 否則，會傳送正常通知。

開啟此通知，以便在地圖上顯示此警示。

5.7.3.5. 觸發標準作業程序

當 IBM® Water Operations for Waternamics 觸發警示時，可自動觸發「標準作業程序 (SOP)」。[請參閱標準作業程序](#)一節，以取得所實作之程序的說明。

5.7.4. 警示介面

IBM® Water Operations for Waternamics 中的警示是透過警示介面來更新。

說明

介面 ID	I3
介面名稱	IOW-IN-ALERTS-CORE
輸入資料格式	XML
輸出資料格式	CAP/CSV/ IBM® Water Operations for Waternamics 格式
介面用戶端	IBM® Water Operations for Waternamics
介面型態	批次模式，頻率待決定

資料格式

此介面所處理的資料是 XML 格式。此格式說明於 XSD 檔 [VDS_IOW-IN-ALERTS-CORE_1.7.xsd](#)

5.8. 檢視工作單及其狀態

5.8.1. 一般行為

工作單的視覺化呈現類似事件或警示。

您可以依工作單類型及工作單內容來過濾。若套用日期過濾器，則只顯示其開始日期是介於搜尋開啟日期和結束日期之間的工作單。






工作單類型：

- 客戶工作單
- 網路工作單
- 工廠工作單
- 街道工程
- 供水切斷

5.8.2. 工作單特性

5.8.2.1. 圖示

特定圖示識別每一個工作單類型。

工作單	圖示
客戶工作單	
工廠工作單	
網路工作單	
街道工程	
供水切斷	

此圖示外框視工作單的狀態而定：

- 工作單已完成：綠色
- 工作單安排在過去或未來的期間，且未涵蓋現行日期：橙色
- 工作單進行中（安排在涵蓋現行日期的期間）：紅色

此圖示的背景顏色與工作單相關聯的過濾器群組相關聯。

5.8.2.2. 檢視應變急救車的位置

車隊追蹤資料來源可將應變急救車的位置及其內容載入到 IBM® Water Operations for Waternamics。這些內容包括關聯的單位和類型。您可以顯示車輛在地圖上的前次已知位置，並以特定圖示代表每一種車輛類型。

當您顯示此層會定期觸發更新查詢。按一下圖示以顯示車隊追蹤資料來源所傳送的值：

- 車輛 ID
- 與車輛相關聯的代理商名稱
- 車輛登錄號碼
- 關聯群組或單位
- 車輛狀態
- 駕駛人的行動電話
- 車隊追蹤地點前次更新的日期和時間
- 車輛狀態
- 車輛速度
- GPS 狀態

此資料未儲存於 IBM® Water Operations for Waternamics。這只是地理套版。

圖示的外框顏色是由車輛的狀態決定：

- 車輛在移動（綠色）
- 引擎開啟，但車輛未移動（琥珀色）
- 引擎關閉（紅色）
- 未定，狀態不明（灰色）



5.8.2.3. 檢視交通狀況

交通資料來源在平台上載入都會區的交通狀況。

5.8.3. 建立工作單

5.8.3.1. 建立獨立工作單

若要建立工作單，先選取所需的過濾器來顯示資料層，然後按一下**其他動作>新建項目**。選取您要新增的項目類型，並將它拖曳到地圖上。在「新增項目」視窗中輸入值，並按一下**儲存**。工作單立即顯示在地圖上，且狀態為「已計劃」。

當外部系統接收到此要求時，您會接獲通知。當外部系統處理此要求時會通知您。接著此要求的狀態為「已排定」或「已完成」。

您可以顯示工作單內容，直接檢視工作單狀態的進度。

5.9. 標準運作程序 (SOPS)

5.9.1. 概觀

此解決方案包括一個手動或自動系統來啟動標準作業程序。這些程序可包括一或多個活動，其中有些可針對指定的使用者或使用者群組內的使用者；有些可起始一個全自動化程序或工作流程。如需 SOP 的相關資訊，請參閱 IBM® Intelligent Operations Center 產品說明文件中的[配置標準作業程序](#)。

5.9.2. 隨解決方案提供的 SOP

透過此解決方案，管理者可以建立特定的程序，不論是只包含手動活動或是一個全自動化程序。

例如，此解決方案提供下列程序來實作全自動化程序：

- **事件管理**：當建立事件時，就會起始此程序及其自動化程序。例如，自動化程序驗證事件的區域，必要的話，在自動完成程序之前，還會將電子郵件傳送至一或多個收件者。
- **警示管理**：當在平台上建立警示時（透過介面），會起始此程序及其處理。例如，自動化程序會產生訊息，使其得以在每個介面產生人為介入，然後等待確認或拒絕要求，在完成此程序之前，將同時透過電子郵件及應用程式通知來通知使用者群組。
- **已超出臨界值管理**：當讀數超出此平台已配置的重大臨界值時，可由程序及其自動化程序起始電子郵件或應用程式通知。

這些程序及關聯的自動化程序需要配置，以便根據事件類型、警示及超出的臨界值來啟動程序。也可以配置電子郵件和通知收件者及內容。

5.9.3. 配置自動化程序及處理

此解決方案提供可透過 Web 瀏覽器取得的圖形工具，用來配置程序、手動活動和自動化程序（不論是前述的或新建的）。

在設計自動化程序時，設計者可以用衍生此程序之資料的主要屬性值作為處理邏輯的基礎（例如：事件、警示、讀數等等）。您可以從這個解決方案所提供的動作庫中，選取該程序要執行的動作：

- 傳送通知
- 傳送電子郵件
- 變更人為介入狀態
- 自動關閉活動

附錄 A：5.2.1 版的 XSD 檔案

5.2.1 版的警示綱目

```

<?xml version="1.0" encoding="UTF-8"?>
<!--
/*
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*
* 5725-D69
* © Copyright Veolia Environment-VE 2017, 2018.
* © Copyright International Business Machines Corporation 2012, 2018.
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* with IBM Corporation.
*/

V1.8
-->
<xsd:schema targetNamespace="http://vds.com/alertsType"
  xmlns:alert="http://vds.com/alertsType"
  xmlns:xsd="http://www.w3.org/2001/XMLSchema"
  elementFormDefault="qualified">
  <xsd:element name="operations">
    <xsd:complexType>
      <xsd:sequence>
        <xsd:element minOccurs="1" maxOccurs="unbounded" name="record" type="alert:recordType"/>
      </xsd:sequence>
      <xsd:attribute name="rootTenant" type="xsd:string" />
      <xsd:attribute name="flowSource" type="xsd:string" />
      <xsd:attribute name="timeout" type="xsd:string" />
      <xsd:attribute name="timeoutTypeId" type="xsd:string" />
      <xsd:attribute name="requestType" type="xsd:string" />
    </xsd:complexType>
  </xsd:element>
  <xsd:complexType name="recordType">
    <xsd:annotation>
      <xsd:documentation>事件資料來源記錄</xsd:documentation>
    </xsd:annotation>
  </xsd:complexType>
</xsd:schema>

```

```

<!--
  * 最小内容
  */
-->
<xsd:element name="EXTEVENTID" type="xsd:string" minOccurs="1" maxOccurs="1" />
<xsd:element name="TENANT_ID" type="xsd:string" minOccurs="0" maxOccurs="1" />
<xsd:element name="MODEL_ID" type="xsd:string" minOccurs="0" maxOccurs="1" />
<xsd:element name="STARTTS" type="alert:iibDateTime" minOccurs="1" maxOccurs="1" />
<xsd:element name="LASTUPDATEDTS" type="alert:iibDateTime" minOccurs="1" maxOccurs="1" />
<xsd:element name="SUBJECT" type="xsd:string" minOccurs="1" maxOccurs="1" />
<xsd:element name="CATEGORY" type="xsd:string" minOccurs="1" maxOccurs="1" />
<xsd:element name="EVENTYPE" type="xsd:string" minOccurs="1" maxOccurs="1" />
<xsd:element name="EVENTSUBTYPE" type="xsd:string" minOccurs="0" maxOccurs="1" />
<xsd:element name="COSTS" type="xsd:string" minOccurs="0" maxOccurs="1" />
<xsd:element name="CONSEQUENCES" type="xsd:string" minOccurs="0" maxOccurs="1" />
<xsd:element name="CREATIONTYPE" type="xsd:string" minOccurs="1" maxOccurs="1" />
<xsd:element name="NETWORK" type="xsd:string" minOccurs="1" maxOccurs="1" />
<xsd:element name="DOMAIN" type="xsd:string" minOccurs="1" maxOccurs="1" />
<xsd:element name="STATUS" type="xsd:string" minOccurs="1" maxOccurs="1" />

<xsd:element name="ENDTS" type="alert:iibDateTime" minOccurs="0" maxOccurs="1" />
<xsd:element name="EXTWORKEQUIPMENTID" type="xsd:string" minOccurs="0" maxOccurs="1" />
<xsd:element name="EXTWORKEQUIPMENTTYPE" type="xsd:string" minOccurs="0" maxOccurs="1" />
<xsd:element name="LOCATION" type="xsd:string" minOccurs="0" maxOccurs="1" />
<xsd:element name="DESCRIPTION" type="xsd:string" minOccurs="0" maxOccurs="1" />
<xsd:element name="ADDRESS" type="xsd:string" minOccurs="0" maxOccurs="1" />
<xsd:element name="OWNER" type="xsd:string" minOccurs="0" maxOccurs="1" />
<xsd:element name="CREATEDBY" type="xsd:string" minOccurs="0" maxOccurs="1" />
<xsd:element name="URGENCY" type="xsd:string" minOccurs="0" maxOccurs="1" />
<xsd:element name="CERTAINTY" type="xsd:string" minOccurs="0" maxOccurs="1" />
<xsd:element name="ZONE" type="xsd:string" minOccurs="0" maxOccurs="1" />
<xsd:element name="SEVERITY" type="xsd:string" minOccurs="0" maxOccurs="1" />
<xsd:element name="ACK" type="xsd:string" minOccurs="0" maxOccurs="1" />
<xsd:element name="ASSET_STRING_ID" type="xsd:string" minOccurs="0" maxOccurs="1" />

</xsd:all>
</xsd:complexType>

```

```
<xsd:simpleType name="iibDateTime">
  <xsd:restriction base="xsd:string">
    <xsd:pattern
Value= "\d{4}-(0[1-9]|1[012])-(0[1-9]|[12][0-9]|3[01])\s(0[0-9]|[1][0-9]|2[0-3]):([0-5][0-9]):([0-5][0-9]).([0-9]{3})"
/>
    </xsd:restriction>
  </xsd:simpleType>
</xsd:schema>
```

```

<?xml version="1.0" encoding="UTF-8"?>
<!--
/*
* Licensed Materials - Property of Veolia Environment-VE and IBM
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* 5725-D69
*
* © Copyright Veolia Environment-VE 2017, 2018.
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* with IBM Corporation.
*/

V1.8
-->
<xsd:schema targetNamespace="http://vds.com/assetTypes"
  xmlns:asset="http://vds.com/assetTypes"
  xmlns:xsd="http://www.w3.org/2001/XMLSchema"
  elementFormDefault="qualified">
  <xsd:complexType name="modelrefType">
    <xsd:annotation>
      <xsd:documentation>modelref 將參照
        多租戶環境的語意模型的 ID。
        如果 modelref 的 id 屬性是空的，
        則將針對
        預設模型執行所有要求。</xsd:documentation>
      </xsd:annotation>
      <xsd:sequence>
        <xsd:element maxOccurs="unbounded" name="request" type="asset:requestType" />
      </xsd:sequence>
    </xsd:complexType>
  </xsd:schema>

```

```

    <xsd:attribute name="id" type="xsd:string" />
</xsd:complexType>
<xsd:complexType name="relationType">
  <xsd:annotation>
    <xsd:documentation>
      RelationType 說明資產之間的關係。
    </xsd:documentation>
  </xsd:annotation>
  <xsd:attribute name="relationName" type="xsd:string" />
  <xsd:attribute name="targetExtWorkEquipmentType" type="xsd:string" />
  <xsd:attribute name="targetExtWorkEquipmentId" type="xsd:string" />
</xsd:complexType>
<xsd:complexType name="relationsType">
  <xsd:sequence>
    <xsd:element maxOccurs="unbounded" minOccurs="1" name="relation" type="asset:relationType" />
  </xsd:sequence>
</xsd:complexType>
<xsd:complexType name="thresholdType">
  <xsd:attribute name="range" type="xsd:string" />
  <xsd:attribute name="level" type="xsd:string" />
</xsd:complexType>
<xsd:complexType name="measureTypeType">
  <xsd:sequence>
    <xsd:element minOccurs="0" maxOccurs="unbounded" name="threshold" type="asset:thresholdType" />
  </xsd:sequence>
  <xsd:attribute name="unit" type="xsd:string" />
  <xsd:attribute name="no_reading_timeout" type="xsd:string" />
  <xsd:attribute name="name" type="xsd:string" />
  <xsd:attribute name="measureLabel" type="xsd:string" />

```



```

    <xsd:attribute name="isPrimaryMeasurement" type="xsd:string" />
</xsd:complexType>
<xsd:complexType name="measureTypesType">
  <xsd:sequence>
    <xsd:element minOccurs="1" maxOccurs="unbounded" name="measureType"
      type="asset:measureTypeType" />
  </xsd:sequence>
</xsd:complexType>
<xsd:complexType name="attributeType">
  <xsd:sequence>
    <xsd:element minOccurs="0" maxOccurs="1" name="value"
      type="xsd:string" />
    <xsd:element minOccurs="0" maxOccurs="1" name="unit"
      type="xsd:string" />
  </xsd:sequence>
  <xsd:attribute name="type" type="xsd:string" />
  <xsd:attribute name="name" type="xsd:string" />
</xsd:complexType>
<xsd:complexType name="assetType">
  <xsd:annotation>
    <xsd:documentation>
      AssetType 說明要建立/更新/刪除的資產。
    </xsd:documentation>
  </xsd:annotation>
  <xsd:sequence>
    <xsd:element minOccurs="1" maxOccurs="1" name="internalLocation" type="xsd:string" />
    <xsd:element minOccurs="0" maxOccurs="1" name="relations" type="asset:relationsType" />
    <xsd:element minOccurs="0" maxOccurs="unbounded" name="attribute" type="asset:attributeType" />
    <xsd:element minOccurs="0" name="measureTypes" type="asset:measureTypesType" />
  </xsd:sequence>

```

```

</xsd:sequence>
<xsd:attribute name="extWorkEquipmentType" type="xsd:string" />
<xsd:attribute name="extWorkEquipmentId" type="xsd:string" />
<xsd:attribute name="assetLabel" type="xsd:string" />
<xsd:attribute name="assetDescription" type="xsd:string" />
<xsd:attribute name="tenantId" type="xsd:string" />
</xsd:complexType>
<xsd:complexType name="requestType">
  <xsd:annotation>
    <xsd:documentation>
      Request 是指將要
      執行的實際作業。它擷取下列資訊：
      - request type :
      建立 / 更新 / 刪除
      - 資產資料（屬性、關係等等）
      要求類型必須是下列其中一項：
      - INSERT：建立資產。
      - DELETE：刪除資產
      - UPDATE：更新資產
    </xsd:documentation>
  </xsd:annotation>
  <xsd:sequence>
    <xsd:element maxOccurs="unbounded" name="asset" type="asset:assetType" />
  </xsd:sequence>
  <xsd:attribute name="type" type="xsd:string" />
</xsd:complexType>
<xsd:element name="operation">
  <xsd:annotation>
    <xsd:documentation>

```

作業是 xml 檔的根元素。它

將包含所有要求。

rootTenant：所汲取資料的根租戶。

時間戳記：xml 檔產生日期。

```
</xsd:documentation>
</xsd:annotation>
<xsd:complexType>
  <xsd:sequence>
    <xsd:element maxOccurs="unbounded" name="modelref" type="asset:modelrefType" />
  </xsd:sequence>
  <xsd:attribute name="rootTenant" type="xsd:string" />
  <xsd:attribute name="flowSource" type="xsd:string" />
  <xsd:attribute name="timestamp" type="xsd:string" />
  <xsd:attribute name="timeout" type="xsd:string" />
  <xsd:attribute name="timeoutTypeId" type="xsd:string" />
</xsd:complexType>
</xsd:element>
</xsd:schema>
```

5.2.1 版的測量讀數綱目

```

<?xml version="1.0" encoding="UTF-8"?>
<!--
/*
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* with IBM Corporation.

*/

V1.8
-->
<xsd:schema targetNamespace="http://vds.com/readingsTypes"
  xmlns:readings="http://vds.com/readingsTypes" xmlns:xsd="http://www.w3.org/2001/XMLSchema"
  elementFormDefault="qualified">
  <xsd:complexType name="readingValueType">
    <xsd:attribute name="value" type="xsd:string" />
    <xsd:attribute name="type" type="xsd:string" />
  </xsd:complexType>
  <xsd:complexType name="readingValuesType">
    <xsd:sequence>
      <xsd:element maxOccurs="unbounded" name="readingValue" type="readings:readingValueType" />
    </xsd:sequence>
  </xsd:complexType>
  <xsd:complexType name="workEquipmentType">
    <xsd:sequence>
      <xsd:element minOccurs="0" maxOccurs="1" name="description" type="xsd:string" />
      <xsd:element minOccurs="0" maxOccurs="unbounded" name="relations"

```

```

        type="readings:relationsType" />
    <xsd:element minOccurs="0" maxOccurs="1" name="attributes"
        type="readings:attributesType" />
    <xsd:element minOccurs="0" maxOccurs="1" name="measureTypes"
        type="readings:measureTypesType" />
</xsd:sequence>
<xsd:attribute name="location" type="xsd:string" />
<xsd:attribute name="extType" type="xsd:string" />
<xsd:attribute name="extId" type="xsd:string" />
<xsd:attribute name="modelRef" type="xsd:string" />
<xsd:attribute name="tenantId" type="xsd:string" />
<xsd:attribute name="assetLabel" type="xsd:string" />
<xsd:attribute name="assetDescription" type="xsd:string" />
</xsd:complexType>
<xsd:complexType name="readingSetType">
    <xsd:sequence>
        <xsd:element name="workEquipment" type="readings:workEquipmentType" />
        <xsd:element name="readingValues" type="readings:readingValuesType" />
    </xsd:sequence>
    <xsd:attribute name="extReadingSetid" type="xsd:string" />
    <xsd:attribute name="timestamp" type="xsd:string" />
</xsd:complexType>
<xsd:complexType name="attributeType">
    <xsd:sequence>
        <xsd:element minOccurs="0" maxOccurs="1" name="value" type="xsd:string" />
        <xsd:element minOccurs="0" maxOccurs="1" name="unit" type="xsd:string" />
    </xsd:sequence>
    <xsd:attribute name="type" type="xsd:string" />
    <xsd:attribute name="name" type="xsd:string" />
</xsd:complexType>
<xsd:complexType name="attributesType">
    <xsd:sequence>
        <xsd:element minOccurs="0" maxOccurs="unbounded" name="attribute"
            type="readings:attributeType" />
    </xsd:sequence>
</xsd:complexType>
<xsd:complexType name="relationType">

```

```

<xsd:attribute name="targetExtWorkEquipmentType" type="xsd:string" />
<xsd:attribute name="targetExtWorkEquipmentId" type="xsd:string" />
<xsd:attribute name="type" type="xsd:string" />
</xsd:complexType>
<xsd:complexType name="relationsType">
  <xsd:sequence>
    <xsd:element name="relation" type="readings:relationType" />
  </xsd:sequence>
</xsd:complexType>
<xsd:complexType name="thresholdType">
  <xsd:attribute name="range" type="xsd:string" />
  <xsd:attribute name="level" type="xsd:string" />
</xsd:complexType>
<xsd:complexType name="measureTypeType">
  <xsd:sequence>
    <xsd:element minOccurs="0" maxOccurs="unbounded" name="threshold"
      type="readings:thresholdType" />
  </xsd:sequence>
  <xsd:attribute name="unit" type="xsd:string" />
  <xsd:attribute name="no_reading_timeout" type="xsd:string" />
  <xsd:attribute name="name" type="xsd:string" />
  <xsd:attribute name="measureLabel" type="xsd:string" />
  <xsd:attribute name="isPrimaryMeasurement" type="xsd:string" />
</xsd:complexType>
<xsd:complexType name="measureTypesType">
  <xsd:sequence>
    <xsd:element minOccurs="0" maxOccurs="unbounded" name="measureType"
      type="readings:measureTypeType" />
  </xsd:sequence>
</xsd:complexType>
<xsd:element name="readings">
  <xsd:complexType>
    <xsd:sequence>
      <xsd:element maxOccurs="unbounded" name="readingSet" type="readings:readingSetType" />
    </xsd:sequence>
    <xsd:attribute name="rootTenant" type="xsd:string" />
    <xsd:attribute name="flowSource" type="xsd:string" />
  </xsd:complexType>
</xsd:element>

```

```
<xsd:attribute name="timeout" type="xsd:string" />  
  <xsd:attribute name="timeoutTypeeld" type="xsd:string" />  
</xsd:complexType>  
</xsd:element>  
</xsd:schema>
```

5.2.1 版的服務訂單綱目

```

<?xml version="1.0" encoding="UTF-8"?>

<!--
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#
# © Copyright Veolia Environment-VE 2016, 2018.
#
# Users Restricted Rights - Use, duplication or
# disclosure restricted by Contract with Veolia Environment-VE
#
-->
<xsd:schema targetNamespace="http://vds.com/serviceOrdersType"
  xmlns:so="http://vds.com/serviceOrdersType" xmlns:xsd="http://www.w3.org/2001/XMLSchema"
  elementFormDefault="qualified">
  <xsd:complexType name="requestType">
    <xsd:sequence>
      <xsd:element minOccurs="1" maxOccurs="unbounded" name="serviceorder" type="so:serviceOrder" />
    </xsd:sequence>
    <xsd:attribute name="type" type="xsd:string" />
  </xsd:complexType>
  <xsd:complexType name="serviceOrder">
    <xsd:all>
      <xsd:element minOccurs="0" maxOccurs="1" name="EXTERNAL_ID"
        type="xsd:integer" />
      <xsd:element minOccurs="0" maxOccurs="1" name="TENANT_ID"
        type="xsd:string" />
      <xsd:element minOccurs="0" maxOccurs="1" name="EAM_ID"
        type="xsd:string" />
      <xsd:element minOccurs="0" maxOccurs="1" name="GIS_ID"
        type="xsd:string" />
      <xsd:element minOccurs="0" maxOccurs="1" name="SITE_ID"
        type="xsd:string" />
      <xsd:element minOccurs="0" maxOccurs="1" name="NAME"
        type="xsd:string" />
      <xsd:element minOccurs="0" maxOccurs="1" name="DESCRIPTION"
        type="xsd:string" />
      <xsd:element minOccurs="0" maxOccurs="1" name="REGISTRATION_NO"
        type="xsd:string" />
      <xsd:element minOccurs="0" maxOccurs="1" name="LOCATION"
        type="xsd:string" />
      <xsd:element minOccurs="0" maxOccurs="1" name="ADDRESS"
        type="xsd:string" />
    </xsd:all>
  </xsd:complexType>
</xsd:schema>

```



```

<xsd:element minOccurs="0" maxOccurs="1" name="REGISTRATION_DATE"
                type="so:iibDateTime" />
<xsd:element minOccurs="0" maxOccurs="1" name="OPENING_DATE"
                type="so:iibDateTime" />
<xsd:element minOccurs="0" maxOccurs="1" name="COMPLETION_DATE"
                type="so:iibDateTime" />
<xsd:element minOccurs="0" maxOccurs="1" name="ATTACHMENTS"
                type="xsd:string" />
<xsd:element minOccurs="0" maxOccurs="1" name="COMPLETION_STATUS"
                type="xsd:integer" />
<xsd:element minOccurs="0" maxOccurs="1" name="STATUS"
                type="xsd:string" />
<xsd:element minOccurs="0" maxOccurs="1" name="CATEGORY"
                type="xsd:string" />
<xsd:element minOccurs="0" maxOccurs="1" name="TYPE"
                type="xsd:string" />
<xsd:element minOccurs="0" maxOccurs="1" name="CUSTOMER_ID"
                type="xsd:string" />
<xsd:element minOccurs="0" maxOccurs="1" name="customServiceOrderAttributes"
                type="so:attributes" />
<xsd:element minOccurs="0" maxOccurs="1" name="assets" type="so:assets" />
<xsd:element minOccurs="0" maxOccurs="1" name="workorders" type="so:workorders" />
</xsd:all>
</xsd:complexType>
<xsd:complexType name="attributes">
  <xsd:sequence>
    <xsd:element minOccurs="1" maxOccurs="unbounded" name="attribute" type="so:attribute" />
  </xsd:sequence>
</xsd:complexType>
<xsd:complexType name="assets">
  <xsd:sequence>
    <xsd:element minOccurs="1" maxOccurs="unbounded" name="asset" type="so:asset" />
  </xsd:sequence>
</xsd:complexType>
<xsd:complexType name="workorders">
  <xsd:sequence>
    <xsd:element minOccurs="1" maxOccurs="unbounded" name="workorder" type="so:workorder" />
  </xsd:sequence>
</xsd:complexType>
<xsd:complexType name="attribute">
  <xsd:attribute name="id" type="xsd:string" />
  <xsd:attribute name="type" type="xsd:string" />
  <xsd:attribute name="value" type="xsd:string" />
</xsd:complexType>
<xsd:complexType name="asset">
  <xsd:attribute name="id" type="xsd:string" />
  <xsd:attribute name="type" type="xsd:string" />
  <xsd:attribute name="relationshipType" type="xsd:string" />
  <xsd:attribute name="usedForGeoLocation" type="xsd:string" />
</xsd:complexType>
<xsd:complexType name="workorder">
  <xsd:attribute name="id" type="xsd:string" />
  <xsd:attribute name="relationshipType" type="xsd:string" />

```

```

</xsd:complexType>
<xsd:simpleType name="iibDateTime">
  <xsd:restriction base="xsd:string">
    <xsd:pattern
value="\d{4}-(0[1-9]|1[012])-(0[1-9]|[12][0-9]|3[01])\s(0[0-9]|[1][0-9]|2[0-3]):([0-5][0-9]):([0-5][0-9]).([0-9]{3})" />
    </xsd:restriction>
  </xsd:simpleType>
<xsd:element name="operations">
  <xsd:complexType>
    <xsd:sequence>
      <xsd:element minOccurs="1" maxOccurs="unbounded" name="request"
                    type="so:requestType">
        </xsd:element>
      </xsd:sequence>
      <xsd:attribute name="rootTenant" type="xsd:string" />
      <xsd:attribute name="flowSource" type="xsd:string" />
      <xsd:attribute name="timeout" type="xsd:string" />
      <xsd:attribute name="timeoutTypeId" type="xsd:string" />
    </xsd:complexType>
  </xsd:element>
</xsd:schema>

```

5.2.1 版的工作單綱目

```

<?xml version="1.0" encoding="UTF-8"?>
<!--
#
# Licensed Materials - Property of Veolia Environment-VE
#
# © Copyright Veolia Environment-VE 2016, 2018.
#
# Users Restricted Rights - Use, duplication or
# disclosure restricted by Contract with Veolia Environment-VE
#
-->
<xsd:schema targetNamespace="http://vds.com/workOrdersType"
  xmlns:wo="http://vds.com/workOrdersType" xmlns:xsd="http://www.w3.org/2001/XMLSchema"
  elementFormDefault="qualified">
  <xsd:complexType name="requestType">
    <xsd:sequence>
      <xsd:element minOccurs="1" maxOccurs="unbounded" name="workorder">
        <xsd:complexType>
          <xsd:all>
            <xsd:element minOccurs="0" maxOccurs="1" name="DATASOURCEID"
              type="xsd:string" />
            <xsd:element minOccurs="0" maxOccurs="1" name="RECORDID"
              type="xsd:string" />
            <xsd:element minOccurs="1" maxOccurs="1" name="WOEXTID"
              type="xsd:string" />
            <xsd:element minOccurs="1" maxOccurs="1" name="EXTERNAL_ID"
              type="xsd:string" />
            <xsd:element minOccurs="1" maxOccurs="1" name="TENANT_ID"
              type="xsd:string" />
            <xsd:element minOccurs="0" maxOccurs="1" name="MODEL_ID"
              type="xsd:string" />
            <xsd:element minOccurs="1" maxOccurs="1" name="SUBJECT"
              type="xsd:string" />
            <xsd:element minOccurs="0" maxOccurs="1" name="DESCRIPTION"
              type="xsd:string" />
          </xsd:all>
        </xsd:complexType>
      </xsd:element>
    </xsd:sequence>
  </xsd:complexType>
</xsd:schema>

```

```
<xsd:element minOccurs="1" maxOccurs="1" name="DOMAIN"
                type="xsd:string" />
<xsd:element minOccurs="0" maxOccurs="1" name="CATEGORY"
                type="xsd:string" />
<xsd:element minOccurs="0" maxOccurs="1" name="WORKORDERTYPE"
                type="xsd:string" />
<xsd:element minOccurs="0" maxOccurs="1" name="WORKTYPE"
                type="xsd:string" />
<xsd:element minOccurs="0" maxOccurs="1" name="SUBTYPE"
                type="xsd:string" />
<xsd:element minOccurs="0" maxOccurs="1" name="FAILURE"
                type="xsd:string" />
<xsd:element minOccurs="0" maxOccurs="1" name="PRIORITY"
                type="xsd:string" />
<xsd:element minOccurs="1" maxOccurs="1" name="STATUS"
                type="xsd:string" />
<xsd:element minOccurs="0" maxOccurs="1" name="JOBPLAN"
                type="xsd:string" />
<xsd:element minOccurs="1" maxOccurs="1" name="CREATIONDATE"
                type="wo:iibDateTime" />
<xsd:element minOccurs="1" maxOccurs="1" name="CREATIONTYPE"
                type="xsd:string" />
<xsd:element minOccurs="1" maxOccurs="1" name="CREATEDBY"
                type="xsd:string" />
<xsd:element minOccurs="1" maxOccurs="1" name="TARGETSTARTDATE"
                type="wo:iibDateTime" />
<xsd:element minOccurs="0" maxOccurs="1" name="TARGETENDDATE"
                type="wo:iibDateTime" />
<xsd:element minOccurs="0" maxOccurs="1" name="ACTSTARTDATE"
                type="wo:iibDateTime" />
<xsd:element minOccurs="0" maxOccurs="1" name="ACTENDDATE"
                type="wo:iibDateTime" />
<xsd:element minOccurs="1" maxOccurs="1" name="LASTUPDATEDTS"
                type="wo:iibDateTime" />
<xsd:element minOccurs="0" maxOccurs="1" name="ZONE"
                type="xsd:string" />
```

```
<xsd:element minOccurs="0" maxOccurs="1" name="LOCATION"
                type="xsd:string" />
<xsd:element minOccurs="0" maxOccurs="1" name="URL"
                type="xsd:string" />
<xsd:element minOccurs="0" maxOccurs="1" name="EXTWORKEQUIPMENTID"
                type="xsd:string" />
<xsd:element minOccurs="0" maxOccurs="1" name="EXTWORKEQUIPMENTTYPE"
                type="xsd:string" />
<xsd:element minOccurs="0" maxOccurs="1" name="UPDATEDBY"
                type="xsd:string" />
<xsd:element minOccurs="0" maxOccurs="1" name="LEAD"
                type="xsd:string" />
<xsd:element minOccurs="1" maxOccurs="1" name="NETWORK"
                type="xsd:string" />
<xsd:element minOccurs="0" maxOccurs="1" name="ADDRESS"
                type="xsd:string" />
<xsd:element minOccurs="0" maxOccurs="1" name="PERFORMEDBY"
                type="xsd:string" />
<xsd:element minOccurs="0" maxOccurs="1" name="LOCOWNERID"
                type="xsd:string" />
<xsd:element minOccurs="0" maxOccurs="1" name="LOCOWNERDETAILS"
                type="xsd:string" />
<xsd:element minOccurs="0" maxOccurs="1" name="LOCCONTACTID"
                type="xsd:string" />
<xsd:element minOccurs="0" maxOccurs="1" name="ISSUERCOMPANY"
                type="xsd:string" />
<xsd:element minOccurs="0" maxOccurs="1" name="AFFECTED"
                type="xsd:string" />
<xsd:element minOccurs="0" maxOccurs="1" name="LOCCONTACTDETAILS"
                type="xsd:string" />
<xsd:element minOccurs="0" maxOccurs="1" name="REPORT"
                type="xsd:string" />
<xsd:element minOccurs="0" maxOccurs="1" name="SITE_ID"
                type="xsd:string" />
<xsd:element minOccurs="0" maxOccurs="1" name="MAINTENANCE_TYPE"
                type="xsd:string" />
```

```

<xsd:element minOccurs="0" maxOccurs="1" name="ASSET_LENGTH_WORKED_ON"
                type="xsd:decimal" />
<xsd:element minOccurs="0" maxOccurs="1" name="ASSET_STATE"
                type="xsd:string" />
<xsd:element minOccurs="0" maxOccurs="1" name="WORKER_COMMENT"
                type="xsd:string" />
<xsd:element name="SRCEVENTLIST" type="wo:srcEventListType"
                maxOccurs="1" minOccurs="0">
</xsd:element>
<xsd:element minOccurs="0" maxOccurs="1" name="customWorkOrderAttributes"
                type="wo:attributes" />
<xsd:element minOccurs="0" maxOccurs="1" name="assets" type="wo:assets" />
</xsd:all>
</xsd:complexType>
</xsd:element>
</xsd:sequence>
<xsd:attribute name="type" type="xsd:string" />
</xsd:complexType>
<xsd:element name="operations">
<xsd:complexType>
<xsd:sequence>
<xsd:element minOccurs="1" maxOccurs="unbounded" name="request"
                type="wo:requestType">
</xsd:element>
</xsd:sequence>
<xsd:attribute name="rootTenant" type="xsd:string" />
<xsd:attribute name="flowSource" type="xsd:string" />
<xsd:attribute name="timeout" type="xsd:string" />
<xsd:attribute name="timeoutTypeId" type="xsd:string" />
</xsd:complexType>
</xsd:element>
<xsd:complexType name="srcEventType">
<xsd:all>
<xsd:element name="SRCEVTCATEGORY" maxOccurs="1"
                minOccurs="1" type="xsd:string">
</xsd:element>
<xsd:element name="SRCEVTTYPE" type="xsd:string"

```

```

        maxOccurs="1" minOccurs="1">
<xsd:annotation>
  <xsd:documentation>
    如果 SRCEVTCATEGORY = ALERT 或 EVENT，這是
    IOW EVENTTYPE，如果 SRCEVTCATEGORY =
    WORKORDER，這是 IOW
    WORKORDER DOMAIN，如果
    SRCEVTCATEGORY = NOREADING 或
    READINGTHRESHOLD，這是 IOW
    MEASUREMENTTYPE
  </xsd:documentation>
</xsd:annotation>
</xsd:element>
<xsd:element name="SRCEVTID" type="xsd:string" maxOccurs="1"
        minOccurs="0">
  <xsd:annotation>
    <xsd:documentation>
      如果 SRCEVTCATEGORY = ALERT 或 EVENT，這是
      IOW EXTEVENTID，如果 SRCEVTCATEGORY =
      WORKORDER，這是
      IOW WOEXTID，如果
      SRCEVTCATEGORY = NOREADING 或 READINGTHRESHOLD，
      這是 IOW MEASUREMENT_ID（僅用於 WO OUT）
    </xsd:documentation>
  </xsd:annotation>
</xsd:element>
<xsd:element name="SRCEVTDATA" type="wo:iibDateTime" maxOccurs="1" minOccurs="1">
</xsd:element>
<xsd:element name="SRCEVTORIGVALUE" type="xsd:string" maxOccurs="1" minOccurs="0">
</xsd:element>
<xsd:element name="SRCEVTCURRVALUE" type="xsd:string" maxOccurs="1" minOccurs="0">
</xsd:element>
<xsd:element name="SRCEVTCURRVALUESETS" type="wo:iibDateTime"
        maxOccurs="1" minOccurs="0">
</xsd:element>
<xsd:element name="SRCEVTCOMMENT" type="xsd:string"
        maxOccurs="1" minOccurs="0">

```

```

</xsd:element>
  <xsd:element name="SOPREFERENCE" type="xsd:string"
    maxOccurs="1" minOccurs="0"></xsd:element>
</xsd:all>
</xsd:complexType>
<xsd:complexType name="srcEventListType">
  <xsd:sequence>
    <xsd:element name="SRCEVENT" type="wo:srcEventType"
      maxOccurs="unbounded" minOccurs="0"></xsd:element>
  </xsd:sequence>
</xsd:complexType>
<xsd:complexType name="attributes">
  <xsd:sequence>
    <xsd:element minOccurs="1" maxOccurs="unbounded" name="attribute" type="wo:attribute" />
  </xsd:sequence>
</xsd:complexType>
<xsd:complexType name="assets">
  <xsd:sequence>
    <xsd:element minOccurs="1" maxOccurs="unbounded" name="asset" type="wo:asset" />
  </xsd:sequence>
</xsd:complexType>
<xsd:complexType name="attribute">
  <xsd:attribute name="id" type="xsd:string" />
  <xsd:attribute name="type" type="xsd:string" />
  <xsd:attribute name="value" type="xsd:string" />
</xsd:complexType>
<xsd:complexType name="asset">
  <xsd:attribute name="id" type="xsd:string" />
  <xsd:attribute name="type" type="xsd:string" />
  <xsd:attribute name="relationshipType" type="xsd:string" />
  <xsd:attribute name="usedForGeoLocation" type="xsd:string" />
</xsd:complexType>
<xsd:simpleType name="iibDateTime">
  <xsd:restriction base="xsd:string">
    <xsd:pattern
value="\d{4}-(0[1-9]|1[012])-(0[1-9]|[12][0-9]|3[01])\s(0[0-9]|[1][0-9]|2[0-3]):([0-5][0-9]):([0-5][0-9]).([0-9]{3})" />
  </xsd:restriction>
</xsd:simpleType></xsd:schema>

```


附錄 B : 5.2.0.6 版的 XSD 檔案

5.2.0.6 版的警示綱目

```

<?xml version="1.0" encoding="UTF-8"?>
<!--
/*
* Licensed Materials - Property of Veolia Environment-VE and IBM
*
* 5725-D69
* © Copyright Veolia Environment-VE 2017, 2018.
* © Copyright International Business Machines Corporation 2012, 2018.
*
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* with IBM Corporation.
*/

V1.8
-->
<xsd:schema targetNamespace="http://vds.com/alertsType"
  xmlns:alert="http://vds.com/alertsType"
  xmlns:xsd="http://www.w3.org/2001/XMLSchema"
  elementFormDefault="qualified">
  <xsd:element name="operations">
    <xsd:complexType>
      <xsd:sequence>
        <xsd:element minOccurs="1" maxOccurs="unbounded" name="record" type="alert:recordType"/>
      </xsd:sequence>
      <xsd:attribute name="rootTenant" type="xsd:string" />
      <xsd:attribute name="flowSource" type="xsd:string" />
      <xsd:attribute name="timeout" type="xsd:string" />
      <xsd:attribute name="timeoutTypeId" type="xsd:string" />
      <xsd:attribute name="requestType" type="xsd:string" />
    </xsd:complexType>
  </xsd:element>
  <xsd:complexType name="recordType">

```

```

<xsd:annotation>
  <xsd:documentation>事件資料來源記錄</xsd:documentation>
</xsd:annotation>
<xsd:all>
  <!--
    * 最小內容
  */
  -->
  <xsd:element name="EXTEVENTID" type="xsd:string" minOccurs="1" maxOccurs="1" />
  <xsd:element name="TENANT_ID" type="xsd:string" minOccurs="0" maxOccurs="1" />
  <xsd:element name="MODEL_ID" type="xsd:string" minOccurs="0" maxOccurs="1" />
  <xsd:element name="STARTTS" type="alert:iibDateTime" minOccurs="1" maxOccurs="1" />
  <xsd:element name="LASTUPDATEDTS" type="alert:iibDateTime" minOccurs="1" maxOccurs="1" />
  <xsd:element name="SUBJECT" type="xsd:string" minOccurs="1" maxOccurs="1" />
  <xsd:element name="CATEGORY" type="xsd:string" minOccurs="1" maxOccurs="1" />
  <xsd:element name="EVENTYPE" type="xsd:string" minOccurs="1" maxOccurs="1" />
  <xsd:element name="EVENTSUBTYPE" type="xsd:string" minOccurs="0" maxOccurs="1" />
  <xsd:element name="COSTS" type="xsd:string" minOccurs="0" maxOccurs="1" />
  <xsd:element name="CONSEQUENCES" type="xsd:string" minOccurs="0" maxOccurs="1" />
  <xsd:element name="CREATIONTYPE" type="xsd:string" minOccurs="1" maxOccurs="1" />
  <xsd:element name="NETWORK" type="xsd:string" minOccurs="1" maxOccurs="1" />
  <xsd:element name="DOMAIN" type="xsd:string" minOccurs="1" maxOccurs="1" />
  <xsd:element name="STATUS" type="xsd:string" minOccurs="1" maxOccurs="1" />

  <xsd:element name="ENDTS" type="alert:iibDateTime" minOccurs="0" maxOccurs="1" />
  <xsd:element name="EXTWORKEQUIPMENTID" type="xsd:string" minOccurs="0" maxOccurs="1" />
  <xsd:element name="EXTWORKEQUIPMENTTYPE" type="xsd:string" minOccurs="0" maxOccurs="1" />
  <xsd:element name="LOCATION" type="xsd:string" minOccurs="0" maxOccurs="1" />
  <xsd:element name="DESCRIPTION" type="xsd:string" minOccurs="0" maxOccurs="1" />
  <xsd:element name="ADDRESS" type="xsd:string" minOccurs="0" maxOccurs="1" />
  <xsd:element name="OWNER" type="xsd:string" minOccurs="0" maxOccurs="1" />
  <xsd:element name="CREATEDBY" type="xsd:string" minOccurs="0" maxOccurs="1" />
  <xsd:element name="URGENCY" type="xsd:string" minOccurs="0" maxOccurs="1" />
  <xsd:element name="CERTAINTY" type="xsd:string" minOccurs="0" maxOccurs="1" />
  <xsd:element name="ZONE" type="xsd:string" minOccurs="0" maxOccurs="1" />
  <xsd:element name="SEVERITY" type="xsd:string" minOccurs="0" maxOccurs="1" />
  <xsd:element name="ACK" type="xsd:string" minOccurs="0" maxOccurs="1" />

```

```

<xsd:element name="ASSET_STRING_ID" type="xsd:string" minOccurs="0" maxOccurs="1" />

</xsd:all>
</xsd:complexType>
<xsd:simpleType name="iibDateTime">
  <xsd:restriction base="xsd:string">
    <xsd:pattern
Value= "\d{4}-(0[1-9]|1[012])-(0[1-9]|[12][0-9]|3[01])\s(0[0-9]|1[0-9]|2[0-3]):([0-5][0-9]):([0-5][0-9]).([0-9]{3})"
/>
    </xsd:restriction>
  </xsd:simpleType>
</xsd:schema>

```

5.2.0.6 版的資產綱目

```

<?xml version="1.0" encoding="UTF-8"?>
<!--
/*
* Licensed Materials - Property of Veolia Environment-VE and IBM
*
* 5725-D69
*
* © Copyright Veolia Environment-VE 2017, 2018.
* © Copyright International Business Machines Corporation 2015, 2018.
*
* 針對 IBM Corporation 提供的版本、版次與修訂版：US Government Users
* Restricted Rights - Use, duplication or disclosure restricted by GSA ADP Schedule Contract
* with IBM Corporation.
*/

V1.8
-->
<xsd:schema targetNamespace="http://vds.com/assetTypes"
  xmlns:asset="http://vds.com/assetTypes"
  xmlns:xsd="http://www.w3.org/2001/XMLSchema"
  elementFormDefault="qualified">
  <xsd:complexType name="modelrefType">
    <xsd:annotation>
      <xsd:documentation>modelref 將參照
        多租戶環境的語意模型的 ID。
        如果 modelref 的 id 屬性是空的，
        則將針對
        預設模型執行所有要求。</xsd:documentation>
      </xsd:annotation>
    <xsd:sequence>

```

```

    <xsd:element maxOccurs="unbounded" name="request" type="asset:requestType" />
  </xsd:sequence>
  <xsd:attribute name="id" type="xsd:string" />
</xsd:complexType>
<xsd:complexType name="relationType">
  <xsd:annotation>
    <xsd:documentation>
      RelationType 說明資產之間的關係。
    </xsd:documentation>
  </xsd:annotation>
  <xsd:attribute name="relationName" type="xsd:string" />
  <xsd:attribute name="targetExtWorkEquipmentType" type="xsd:string" />
  <xsd:attribute name="targetExtWorkEquipmentId" type="xsd:string" />
</xsd:complexType>
<xsd:complexType name="relationsType">
  <xsd:sequence>
    <xsd:element maxOccurs="unbounded" minOccurs="1" name="relation" type="asset:relationType" />
  </xsd:sequence>
</xsd:complexType>
<xsd:complexType name="thresholdType">
  <xsd:attribute name="range" type="xsd:string" />
  <xsd:attribute name="level" type="xsd:string" />
</xsd:complexType>
<xsd:complexType name="measureTypeType">
  <xsd:sequence>
    <xsd:element minOccurs="0" maxOccurs="unbounded" name="threshold" type="asset:thresholdType" />
  </xsd:sequence>
  <xsd:attribute name="unit" type="xsd:string" />
  <xsd:attribute name="no_reading_timeout" type="xsd:string" />

```

```

<xsd:attribute name="name" type="xsd:string" />
<xsd:attribute name="measureLabel" type="xsd:string" />
<xsd:attribute name="isPrimaryMeasurement" type="xsd:string" />
</xsd:complexType>
<xsd:complexType name="measureTypesType">
  <xsd:sequence>
    <xsd:element minOccurs="1" maxOccurs="unbounded" name="measureType"
      type="asset:measureTypeType" />
  </xsd:sequence>
</xsd:complexType>
<xsd:complexType name="attributeType">
  <xsd:sequence>
    <xsd:element minOccurs="0" maxOccurs="1" name="value"
      type="xsd:string" />
    <xsd:element minOccurs="0" maxOccurs="1" name="unit"
      type="xsd:string" />
  </xsd:sequence>
  <xsd:attribute name="type" type="xsd:string" />
  <xsd:attribute name="name" type="xsd:string" />
</xsd:complexType>
<xsd:complexType name="assetType">
  <xsd:annotation>
    <xsd:documentation>
      AssetType 說明要建立/更新/刪除的資產。
    </xsd:documentation>
  </xsd:annotation>
  <xsd:sequence>
    <xsd:element minOccurs="1" maxOccurs="1" name="internalLocation" type="xsd:string" />
    <xsd:element minOccurs="0" maxOccurs="1" name="relations" type="asset:relationsType" />
  </xsd:sequence>

```

```

<xsd:element minOccurs="0" maxOccurs="unbounded" name="attribute" type="asset:attributeType" />
<xsd:element minOccurs="0" name="measureTypes" type="asset:measureTypesType" />
</xsd:sequence>
<xsd:attribute name="extWorkEquipmentType" type="xsd:string" />
<xsd:attribute name="extWorkEquipmentId" type="xsd:string" />
<xsd:attribute name="assetLabel" type="xsd:string" />
<xsd:attribute name="assetDescription" type="xsd:string" />
<xsd:attribute name="tenantId" type="xsd:string" />
</xsd:complexType>
<xsd:complexType name="requestType">
  <xsd:annotation>
    <xsd:documentation>
      Request 是指將要
      執行的實際作業。它擷取下列資訊：
      - request type :
      建立 / 更新 / 刪除
      - 資產資料（屬性、關係等等）
      要求類型必須是下列其中一項：
      - INSERT：建立資產。
      - DELETE：刪除資產。
      - UPDATE：更新資產
    </xsd:documentation>
  </xsd:annotation>
  <xsd:sequence>
    <xsd:element maxOccurs="unbounded" name="asset" type="asset:assetType" />
  </xsd:sequence>
  <xsd:attribute name="type" type="xsd:string" />
</xsd:complexType>
<xsd:element name="operation">

```

```
<xsd:annotation>  
  <xsd:documentation>  
    作業是 xml 檔的根元素。它  
    將包含所有要求。  
    rootTenant：所汲取資料的根租戶。  
    時間戳記：xml 檔產生日期。  
  </xsd:documentation>  
</xsd:annotation>  
<xsd:complexType>  
  <xsd:sequence>  
    <xsd:element maxOccurs="unbounded" name="modelref" type="asset:modelrefType" />  
  </xsd:sequence>  
  <xsd:attribute name="rootTenant" type="xsd:string" />  
  <xsd:attribute name="flowSource" type="xsd:string" />  
  <xsd:attribute name="timestamp" type="xsd:string" />  
  <xsd:attribute name="timeout" type="xsd:string" />  
  <xsd:attribute name="timeoutTypeId" type="xsd:string" />  
</xsd:complexType>  
</xsd:element>  
</xsd:schema>
```


5.2.0.6 版的測量讀數綱目

```

<?xml version="1.0" encoding="UTF-8"?>
<!--
/*
* Licensed Materials - Property of Veolia Environment-VE and IBM
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* 5725-D69
*
* © Copyright Veolia Environment-VE 2017, 2018.
* © Copyright International Business Machines Corporation 2012, 2018.
*
* 針對 IBM Corporation 提供的版本、版次與修訂版：US Government Users
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* with IBM Corporation.

*/

V1.8
-->
<xsd:schema targetNamespace="http://vds.com/readingsTypes"
  xmlns:readings="http://vds.com/readingsTypes" xmlns:xsd="http://www.w3.org/2001/XMLSchema"
  elementFormDefault="qualified">
  <xsd:complexType name="readingValueType">
    <xsd:attribute name="value" type="xsd:string" />
    <xsd:attribute name="unit" type="xsd:string" />
    <xsd:attribute name="type" type="xsd:string" />
  </xsd:complexType>
  <xsd:complexType name="readingValuesType">
    <xsd:sequence>
      <xsd:element maxOccurs="unbounded" name="readingValue" type="readings:readingValueType" />
    </xsd:sequence>
  </xsd:complexType>
  <xsd:complexType name="workEquipmentType">
    <xsd:sequence>
      <xsd:element minOccurs="0" maxOccurs="1" name="description" type="xsd:string" />

```

```

<xsd:element minOccurs="0" maxOccurs="unbounded" name="relations"
                type="readings:relationsType" />
<xsd:element minOccurs="0" maxOccurs="1" name="attributes"
                type="readings:attributesType" />
<xsd:element minOccurs="0" maxOccurs="1" name="measureTypes"
                type="readings:measureTypesType" />
</xsd:sequence>
<xsd:attribute name="location" type="xsd:string" />
<xsd:attribute name="extType" type="xsd:string" />
<xsd:attribute name="extId" type="xsd:string" />
<xsd:attribute name="modelRef" type="xsd:string" />
<xsd:attribute name="tenantId" type="xsd:string" />
<xsd:attribute name="assetLabel" type="xsd:string" />
<xsd:attribute name="assetDescription" type="xsd:string" />
</xsd:complexType>
<xsd:complexType name="readingSetType">
  <xsd:sequence>
    <xsd:element name="workEquipment" type="readings:workEquipmentType" />
    <xsd:element name="readingValues" type="readings:readingValuesType" />
  </xsd:sequence>
  <xsd:attribute name="extReadingSetid" type="xsd:string" />
  <xsd:attribute name="timestamp" type="xsd:string" />
</xsd:complexType>
<xsd:complexType name="attributeType">
  <xsd:sequence>
    <xsd:element minOccurs="0" maxOccurs="1" name="value" type="xsd:string" />
    <xsd:element minOccurs="0" maxOccurs="1" name="unit" type="xsd:string" />
  </xsd:sequence>
  <xsd:attribute name="type" type="xsd:string" />
  <xsd:attribute name="name" type="xsd:string" />
</xsd:complexType>
<xsd:complexType name="attributesType">
  <xsd:sequence>
    <xsd:element minOccurs="0" maxOccurs="unbounded" name="attribute"
                  type="readings:attributeType" />
  </xsd:sequence>
</xsd:complexType>

```

```

<xsd:complexType name="relationType">
  <xsd:attribute name="targetExtWorkEquipmentType" type="xsd:string" />
  <xsd:attribute name="targetExtWorkEquipmentId" type="xsd:string" />
  <xsd:attribute name="type" type="xsd:string" />
</xsd:complexType>
<xsd:complexType name="relationsType">
  <xsd:sequence>
    <xsd:element name="relation" type="readings:relationType" />
  </xsd:sequence>
</xsd:complexType>
<xsd:complexType name="thresholdType">
  <xsd:attribute name="range" type="xsd:string" />
  <xsd:attribute name="level" type="xsd:string" />
</xsd:complexType>
<xsd:complexType name="measureTypeType">
  <xsd:sequence>
    <xsd:element minOccurs="0" maxOccurs="unbounded" name="threshold"
      type="readings:thresholdType" />
  </xsd:sequence>
  <xsd:attribute name="unit" type="xsd:string" />
  <xsd:attribute name="no_reading_timeout" type="xsd:string" />
  <xsd:attribute name="name" type="xsd:string" />
  <xsd:attribute name="measureLabel" type="xsd:string" />
  <xsd:attribute name="isPrimaryMeasurement" type="xsd:string" />
</xsd:complexType>
<xsd:complexType name="measureTypesType">
  <xsd:sequence>
    <xsd:element minOccurs="0" maxOccurs="unbounded" name="measureType"
      type="readings:measureTypeType" />
  </xsd:sequence>
</xsd:complexType>
<xsd:element name="readings">
  <xsd:complexType>
    <xsd:sequence>
      <xsd:element maxOccurs="unbounded" name="readingSet" type="readings:readingSetType" />
    </xsd:sequence>
    <xsd:attribute name="rootTenant" type="xsd:string" />
  </xsd:complexType>
</xsd:element>

```

```
<xsd:attribute name="flowSource" type="xsd:string" />  
<xsd:attribute name="timeout" type="xsd:string" />  
<xsd:attribute name="timeoutTypeld" type="xsd:string" />  
</xsd:complexType>  
</xsd:element>  
</xsd:schema>
```

5.2.0.6 版的服務訂單綱目

```

<?xml version="1.0" encoding="UTF-8"?>

<!--
#
# Licensed Materials - Property of Veolia Environment-VE
#
# © Copyright Veolia Environment-VE 2016, 2018.
#
# Users Restricted Rights - Use, duplication or
# disclosure restricted by Contract with Veolia Environment-VE
#
-->
<xsd:schema targetNamespace="http://vds.com/serviceOrdersType"
  xmlns:so="http://vds.com/serviceOrdersType" xmlns:xsd="http://www.w3.org/2001/XMLSchema"
  elementFormDefault="qualified">
  <xsd:complexType name="requestType">
    <xsd:sequence>
      <xsd:element minOccurs="1" maxOccurs="unbounded" name="serviceorder" type="so:serviceOrder" />
    </xsd:sequence>
    <xsd:attribute name="type" type="xsd:string" />
  </xsd:complexType>
  <xsd:complexType name="serviceOrder">
    <xsd:all>
      <xsd:element minOccurs="0" maxOccurs="1" name="EXTERNAL_ID"
        type="xsd:integer" />
      <xsd:element minOccurs="0" maxOccurs="1" name="TENANT_ID"
        type="xsd:string" />
      <xsd:element minOccurs="0" maxOccurs="1" name="EAM_ID"
        type="xsd:string" />
      <xsd:element minOccurs="0" maxOccurs="1" name="GIS_ID"
        type="xsd:string" />
      <xsd:element minOccurs="0" maxOccurs="1" name="SITE_ID"
        type="xsd:string" />
      <xsd:element minOccurs="0" maxOccurs="1" name="NAME"
        type="xsd:string" />
      <xsd:element minOccurs="0" maxOccurs="1" name="DESCRIPTION"
        type="xsd:string" />
      <xsd:element minOccurs="0" maxOccurs="1" name="REGISTRATION_NO"
        type="xsd:string" />
      <xsd:element minOccurs="0" maxOccurs="1" name="LOCATION"
        type="xsd:string" />
      <xsd:element minOccurs="0" maxOccurs="1" name="ADDRESS"
        type="xsd:string" />
    </xsd:all>
  </xsd:complexType>
</xsd:schema>

```

```

<xsd:element minOccurs="0" maxOccurs="1" name="REGISTRATION_DATE"
    type="so:iibDateTime" />
<xsd:element minOccurs="0" maxOccurs="1" name="OPENING_DATE"
    type="so:iibDateTime" />
<xsd:element minOccurs="0" maxOccurs="1" name="COMPLETION_DATE"
    type="so:iibDateTime" />
<xsd:element minOccurs="0" maxOccurs="1" name="ATTACHMENTS"
    type="xsd:string" />
<xsd:element minOccurs="0" maxOccurs="1" name="COMPLETION_STATUS"
    type="xsd:integer" />
<xsd:element minOccurs="0" maxOccurs="1" name="STATUS"
    type="xsd:string" />
<xsd:element minOccurs="0" maxOccurs="1" name="CATEGORY"
    type="xsd:string" />
<xsd:element minOccurs="0" maxOccurs="1" name="customServiceOrderAttributes"
    type="so:attributes" />
<xsd:element minOccurs="0" maxOccurs="1" name="assets" type="so:assets" />
<xsd:element minOccurs="0" maxOccurs="1" name="workorders" type="so:workorders" />
</xsd:all>
</xsd:complexType>
<xsd:complexType name="attributes">
    <xsd:sequence>
        <xsd:element minOccurs="1" maxOccurs="unbounded" name="attribute" type="so:attribute" />
    </xsd:sequence>
</xsd:complexType>
<xsd:complexType name="assets">
    <xsd:sequence>
        <xsd:element minOccurs="1" maxOccurs="unbounded" name="asset" type="so:asset" />
    </xsd:sequence>
</xsd:complexType>
<xsd:complexType name="workorders">
    <xsd:sequence>
        <xsd:element minOccurs="1" maxOccurs="unbounded" name="workorder" type="so:workorder" />
    </xsd:sequence>
</xsd:complexType>
<xsd:complexType name="attribute">
    <xsd:attribute name="id" type="xsd:string" />
    <xsd:attribute name="type" type="xsd:string" />
    <xsd:attribute name="value" type="xsd:string" />
</xsd:complexType>
<xsd:complexType name="asset">
    <xsd:attribute name="id" type="xsd:string" />
    <xsd:attribute name="type" type="xsd:string" />
    <xsd:attribute name="relationshipType" type="xsd:string" />
</xsd:complexType>
<xsd:complexType name="workorder">
    <xsd:attribute name="id" type="xsd:string" />
    <xsd:attribute name="relationshipType" type="xsd:string" />
</xsd:complexType>
<xsd:simpleType name="iibDateTime">
    <xsd:restriction base="xsd:string">
        <xsd:pattern
value="\d{4}-(0[1-9]|1[012])-(0[1-9]|[12][0-9]|3[01])\s(0[0-9]|[1][0-9]|2[0-3]):([0-5][0-9]):([0-5][0-9]).([0-9]{3})" />

```

```
</xsd:restriction>
</xsd:simpleType>
<xsd:element name="operations">
  <xsd:complexType>
    <xsd:sequence>
      <xsd:element minOccurs="1" maxOccurs="unbounded" name="request"
                    type="so:requestType">
        </xsd:element>
      </xsd:sequence>
      <xsd:attribute name="rootTenant" type="xsd:string" />
      <xsd:attribute name="flowSource" type="xsd:string" />
      <xsd:attribute name="timeout" type="xsd:string" />
      <xsd:attribute name="timeoutTypeId" type="xsd:string" />
    </xsd:complexType>
  </xsd:element>
</xsd:schema>
```

5.2.0.6 版的工作單綱目

```

<?xml version="1.0" encoding="UTF-8"?>
<!--
#
# Licensed Materials - Property of Veolia Environment-VE
#
# © Copyright Veolia Environment-VE 2016, 2018.
#
# Users Restricted Rights - Use, duplication or
# disclosure restricted by Contract with Veolia Environment-VE
#
-->
<xsd:schema targetNamespace="http://vds.com/workOrdersType"
  xmlns:wo="http://vds.com/workOrdersType" xmlns:xsd="http://www.w3.org/2001/XMLSchema"
  elementFormDefault="qualified">
  <xsd:complexType name="requestType">
    <xsd:sequence>
      <xsd:element minOccurs="1" maxOccurs="unbounded" name="workorder">
        <xsd:complexType>
          <xsd:all>
            <xsd:element minOccurs="0" maxOccurs="1" name="DATASOURCEID"
              type="xsd:string" />
            <xsd:element minOccurs="0" maxOccurs="1" name="RECORDID"
              type="xsd:string" />
            <xsd:element minOccurs="1" maxOccurs="1" name="WOEXTID"
              type="xsd:string" />
            <xsd:element minOccurs="1" maxOccurs="1" name="TENANT_ID"
              type="xsd:string" />
            <xsd:element minOccurs="0" maxOccurs="1" name="MODEL_ID"
              type="xsd:string" />
            <xsd:element minOccurs="1" maxOccurs="1" name="SUBJECT"
              type="xsd:string" />
            <xsd:element minOccurs="0" maxOccurs="1" name="DESCRIPTION"
              type="xsd:string" />
          </xsd:all>
        </xsd:complexType>
      </xsd:element>
    </xsd:sequence>
  </xsd:complexType>
</xsd:schema>

```



```
<xsd:element minOccurs="1" maxOccurs="1" name="DOMAIN"
                type="xsd:string" />
<xsd:element minOccurs="0" maxOccurs="1" name="CATEGORY"
                type="xsd:string" />
<xsd:element minOccurs="0" maxOccurs="1" name="WORKORDERTYPE"
                type="xsd:string" />
<xsd:element minOccurs="0" maxOccurs="1" name="WORKTYPE"
                type="xsd:string" />
<xsd:element minOccurs="0" maxOccurs="1" name="SUBTYPE"
                type="xsd:string" />
<xsd:element minOccurs="0" maxOccurs="1" name="FAILURE"
                type="xsd:string" />
<xsd:element minOccurs="0" maxOccurs="1" name="PRIORITY"
                type="xsd:string" />
<xsd:element minOccurs="1" maxOccurs="1" name="STATUS"
                type="xsd:string" />
<xsd:element minOccurs="0" maxOccurs="1" name="JOBPLAN"
                type="xsd:string" />
<xsd:element minOccurs="1" maxOccurs="1" name="CREATIONDATE"
                type="wo:iibDateTime" />
<xsd:element minOccurs="1" maxOccurs="1" name="CREATIONTYPE"
                type="xsd:string" />
<xsd:element minOccurs="1" maxOccurs="1" name="CREATEDBY"
                type="xsd:string" />
<xsd:element minOccurs="1" maxOccurs="1" name="TARGETSTARTDATE"
                type="wo:iibDateTime" />
<xsd:element minOccurs="0" maxOccurs="1" name="TARGETENDDATE"
                type="wo:iibDateTime" />
<xsd:element minOccurs="0" maxOccurs="1" name="ACTSTARTDATE"
                type="wo:iibDateTime" />
<xsd:element minOccurs="0" maxOccurs="1" name="ACTENDDATE"
                type="wo:iibDateTime" />
<xsd:element minOccurs="1" maxOccurs="1" name="LASTUPDATEDTS"
                type="wo:iibDateTime" />
<xsd:element minOccurs="0" maxOccurs="1" name="ZONE"
                type="xsd:string" />
```

```
<xsd:element minOccurs="0" maxOccurs="1" name="LOCATION"
                type="xsd:string" />
<xsd:element minOccurs="0" maxOccurs="1" name="URL"
                type="xsd:string" />
<xsd:element minOccurs="0" maxOccurs="1" name="EXTWORKEQUIPMENTID"
                type="xsd:string" />
<xsd:element minOccurs="0" maxOccurs="1" name="EXTWORKEQUIPMENTTYPE"
                type="xsd:string" />
<xsd:element minOccurs="0" maxOccurs="1" name="UPDATEDBY"
                type="xsd:string" />
<xsd:element minOccurs="0" maxOccurs="1" name="LEAD"
                type="xsd:string" />
<xsd:element minOccurs="1" maxOccurs="1" name="NETWORK"
                type="xsd:string" />
<xsd:element minOccurs="0" maxOccurs="1" name="ADDRESS"
                type="xsd:string" />
<xsd:element minOccurs="0" maxOccurs="1" name="PERFORMEDBY"
                type="xsd:string" />
<xsd:element minOccurs="0" maxOccurs="1" name="LOCOWNERID"
                type="xsd:string" />
<xsd:element minOccurs="0" maxOccurs="1" name="LOCOWNERDETAILS"
                type="xsd:string" />
<xsd:element minOccurs="0" maxOccurs="1" name="LOCCONTACTID"
                type="xsd:string" />
<xsd:element minOccurs="0" maxOccurs="1" name="ISSUERCOMPANY"
                type="xsd:string" />
<xsd:element minOccurs="0" maxOccurs="1" name="AFFECTED"
                type="xsd:string" />
<xsd:element minOccurs="0" maxOccurs="1" name="LOCCONTACTDETAILS"
                type="xsd:string" />
<xsd:element minOccurs="0" maxOccurs="1" name="REPORT"
                type="xsd:string" />
<xsd:element minOccurs="0" maxOccurs="1" name="SITE_ID"
                type="xsd:string" />
<xsd:element minOccurs="0" maxOccurs="1" name="MAINTENANCE_TYPE"
                type="xsd:string" />
```

```

<xsd:element minOccurs="0" maxOccurs="1" name="ASSET_LENGTH_WORKED_ON"
                type="xsd:decimal" />
<xsd:element minOccurs="0" maxOccurs="1" name="ASSET_STATE"
                type="xsd:string" />
<xsd:element minOccurs="0" maxOccurs="1" name="WORKER_COMMENT"
                type="xsd:string" />
<xsd:element name="SRCEVENTLIST" type="wo:srcEventListType"
                maxOccurs="1" minOccurs="0">
</xsd:element>
<xsd:element minOccurs="0" maxOccurs="1" name="customWorkOrderAttributes"
                type="wo:attributes" />
<xsd:element minOccurs="0" maxOccurs="1" name="assets" type="wo:assets" />
</xsd:all>
</xsd:complexType>
</xsd:element>
</xsd:sequence>
<xsd:attribute name="type" type="xsd:string" />
</xsd:complexType>
<xsd:element name="operations">
<xsd:complexType>
<xsd:sequence>
<xsd:element minOccurs="1" maxOccurs="unbounded" name="request"
                type="wo:requestType">
</xsd:element>
</xsd:sequence>
<xsd:attribute name="rootTenant" type="xsd:string" />
<xsd:attribute name="flowSource" type="xsd:string" />
<xsd:attribute name="timeout" type="xsd:string" />
<xsd:attribute name="timeoutTypeId" type="xsd:string" />
</xsd:complexType>
</xsd:element>
<xsd:complexType name="srcEventType">
<xsd:all>
<xsd:element name="SRCEVTCATEGORY" maxOccurs="1"
                minOccurs="1" type="xsd:string">
</xsd:element>
<xsd:element name="SRCEVTTYPE" type="xsd:string"

```

```

        maxOccurs="1" minOccurs="1">
<xsd:annotation>
  <xsd:documentation>
    如果 SRCEVTCATEGORY = ALERT 或 EVENT，這是
    IOW EVENTTYPE，如果 SRCEVTCATEGORY =
    WORKORDER，這是 IOW
    WORKORDER DOMAIN，如果
    SRCEVTCATEGORY = NOREADING 或
    READINGTHRESHOLD，這是 IOW
    MEASUREMENTTYPE
  </xsd:documentation>
</xsd:annotation>
</xsd:element>
<xsd:element name="SRCEVTID" type="xsd:string" maxOccurs="1"
  minOccurs="0">
  <xsd:annotation>
    <xsd:documentation>
      如果 SRCEVTCATEGORY = ALERT 或 EVENT，這是
      IOW EXTEVENTID，如果 SRCEVTCATEGORY =
      WORKORDER，這是
      IOW WOEXTID，如果
      SRCEVTCATEGORY = NOREADING 或 READINGTHRESHOLD，
      這是 IOW MEASUREMENT_ID（僅用於 WO OUT）
    </xsd:documentation>
  </xsd:annotation>
</xsd:element>
<xsd:element name="SRCEVTDAT" type="wo:iibDateTime" maxOccurs="1" minOccurs="1">
</xsd:element>
<xsd:element name="SRCEVTORIGVALUE" type="xsd:string" maxOccurs="1" minOccurs="0">
</xsd:element>
<xsd:element name="SRCEVTCURRVALUE" type="xsd:string" maxOccurs="1" minOccurs="0">
</xsd:element>
<xsd:element name="SRCEVTCURRVALUESETS" type="wo:iibDateTime"
  maxOccurs="1" minOccurs="0">
</xsd:element>
<xsd:element name="SRCEVTCOMMENT" type="xsd:string"
  maxOccurs="1" minOccurs="0">

```

```

</xsd:element>
  <xsd:element name="SOPREFERENCE" type="xsd:string"
    maxOccurs="1" minOccurs="0"></xsd:element>
</xsd:all>
</xsd:complexType>
<xsd:complexType name="srcEventListType">
  <xsd:sequence>
    <xsd:element name="SRCEVENT" type="wo:srcEventType"
      maxOccurs="unbounded" minOccurs="0"></xsd:element>
  </xsd:sequence>
</xsd:complexType>
<xsd:complexType name="attributes">
  <xsd:sequence>
    <xsd:element minOccurs="1" maxOccurs="unbounded" name="attribute" type="wo:attribute" />
  </xsd:sequence>
</xsd:complexType>
<xsd:complexType name="assets">
  <xsd:sequence>
    <xsd:element minOccurs="1" maxOccurs="unbounded" name="asset" type="wo:asset" />
  </xsd:sequence>
</xsd:complexType>
<xsd:complexType name="attribute">
  <xsd:attribute name="id" type="xsd:string" />
  <xsd:attribute name="type" type="xsd:string" />
  <xsd:attribute name="value" type="xsd:string" />
</xsd:complexType>
<xsd:complexType name="asset">
  <xsd:attribute name="id" type="xsd:string" />
  <xsd:attribute name="type" type="xsd:string" />
  <xsd:attribute name="relationshipType" type="xsd:string" />
</xsd:complexType>
<xsd:simpleType name="iibDateTime">
  <xsd:restriction base="xsd:string">
    <xsd:pattern
value="\d{4}-(0[1-9]|1[012])-(0[1-9]|[12][0-9]|3[01])\s(0[0-9]|[1][0-9]|2[0-3]):([0-5][0-9]):([0-5][0-9]).([0-9]{3})" />
  </xsd:restriction>
</xsd:simpleType>
</xsd:schema>

```

附錄 C : 5.2.0.5 版的 XSD 檔案

5.2.0.5 版的警示綱目

```

<?xml version="1.0" encoding="UTF-8"?>
<!--
/*
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*
* 5725-D69
* © Copyright Veolia Environment-VE 2017.
* © Copyright International Business Machines Corporation 2012, 2017.
*
* 針對 IBM Corporation 提供的版本、版次與修訂版：US Government Users
* Restricted Rights - Use, duplication or disclosure restricted by GSA ADP Schedule Contract
* with IBM Corporation.
*/

V1.8
-->
<xsd:schema targetNamespace="http://vds.com/alertsType"
  xmlns:alert="http://vds.com/alertsType"
  xmlns:xsd="http://www.w3.org/2001/XMLSchema"
  elementFormDefault="qualified">
  <xsd:element name="operations">
    <xsd:complexType>
      <xsd:sequence>
        <xsd:element minOccurs="1" maxOccurs="unbounded" name="record" type="alert:recordType"/>
      </xsd:sequence>
      <xsd:attribute name="rootTenant" type="xsd:string" />
      <xsd:attribute name="flowSource" type="xsd:string" />
      <xsd:attribute name="timeout" type="xsd:string" />
      <xsd:attribute name="timeoutTypeid" type="xsd:string" />
      <xsd:attribute name="requestType" type="xsd:string" />
    </xsd:complexType>
  </xsd:element>
  <xsd:complexType name="recordType">
    <xsd:annotation>

```

```

<xsd:documentation>事件資料來源記錄</xsd:documentation>
</xsd:annotation>
<xsd:all>
  <!--
    * 最小內容
  */
  -->
  <xsd:element name="EXTEVENTID" type="xsd:string" minOccurs="1" maxOccurs="1" />
  <xsd:element name="TENANT_ID" type="xsd:string" minOccurs="0" maxOccurs="1" />
  <xsd:element name="MODEL_ID" type="xsd:string" minOccurs="0" maxOccurs="1" />
  <xsd:element name="STARTTS" type="alert:iibDateTime" minOccurs="1" maxOccurs="1" />
  <xsd:element name="LASTUPDATEDTS" type="alert:iibDateTime" minOccurs="1" maxOccurs="1" />
  <xsd:element name="SUBJECT" type="xsd:string" minOccurs="1" maxOccurs="1" />
  <xsd:element name="CATEGORY" type="xsd:string" minOccurs="1" maxOccurs="1" />
  <xsd:element name="EVENTYPE" type="xsd:string" minOccurs="1" maxOccurs="1" />
  <xsd:element name="EVENTSUBTYPE" type="xsd:string" minOccurs="0" maxOccurs="1" />
  <xsd:element name="COSTS" type="xsd:string" minOccurs="0" maxOccurs="1" />
  <xsd:element name="CONSEQUENCES" type="xsd:string" minOccurs="0" maxOccurs="1" />
  <xsd:element name="CREATIONTYPE" type="xsd:string" minOccurs="1" maxOccurs="1" />
  <xsd:element name="NETWORK" type="xsd:string" minOccurs="1" maxOccurs="1" />
  <xsd:element name="DOMAIN" type="xsd:string" minOccurs="1" maxOccurs="1" />
  <xsd:element name="STATUS" type="xsd:string" minOccurs="1" maxOccurs="1" />

  <xsd:element name="ENDTS" type="alert:iibDateTime" minOccurs="0" maxOccurs="1" />
  <xsd:element name="EXTWORKEQUIPMENTID" type="xsd:string" minOccurs="0" maxOccurs="1" />
  <xsd:element name="EXTWORKEQUIPMENTTYPE" type="xsd:string" minOccurs="0" maxOccurs="1" />
  <xsd:element name="LOCATION" type="xsd:string" minOccurs="0" maxOccurs="1" />
  <xsd:element name="DESCRIPTION" type="xsd:string" minOccurs="0" maxOccurs="1" />
  <xsd:element name="ADDRESS" type="xsd:string" minOccurs="0" maxOccurs="1" />
  <xsd:element name="OWNER" type="xsd:string" minOccurs="0" maxOccurs="1" />
  <xsd:element name="CREATEDBY" type="xsd:string" minOccurs="0" maxOccurs="1" />
  <xsd:element name="URGENCY" type="xsd:string" minOccurs="0" maxOccurs="1" />
  <xsd:element name="CERTAINTY" type="xsd:string" minOccurs="0" maxOccurs="1" />
  <xsd:element name="ZONE" type="xsd:string" minOccurs="0" maxOccurs="1" />
  <xsd:element name="SEVERITY" type="xsd:string" minOccurs="0" maxOccurs="1" />
  <xsd:element name="ACK" type="xsd:string" minOccurs="0" maxOccurs="1" />

```

```
</xsd:all>
</xsd:complexType>
<xsd:simpleType name="iibDateTime">
  <xsd:restriction base="xsd:string">
    <xsd:pattern
Value= "\\d{4}-(0[1-9]|1[012])-(0[1-9]|1[2][0-9]|3[01])\\s(0[0-9]|1[1][0-9]|2[0-3]):([0-5][0-9]):([0-5][0-9]).([0-9]{3})"
/>
    </xsd:restriction>
  </xsd:simpleType>
</xsd:schema>
```


5.2.0.5 版的資產綱目

```

<?xml version="1.0" encoding="UTF-8"?>
<!--
/*
* Licensed Materials - Property of Veolia Environment-VE and IBM
*
* 5725-D69
*
* © Copyright Veolia Environment-VE 2017.
* © Copyright International Business Machines Corporation 2015, 2017.
*
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* with IBM Corporation.
*/

V1.8
-->
<xsd:schema targetNamespace="http://vds.com/assetTypes"
  xmlns:asset="http://vds.com/assetTypes"
  xmlns:xsd="http://www.w3.org/2001/XMLSchema"
  elementFormDefault="qualified">
  <xsd:complexType name="modelrefType">
    <xsd:annotation>
      <xsd:documentation>modelref 將參照
        多租戶環境的語意模型的 ID 。
        如果 modelref 的 id 屬性是空的，
        則將針對
        預設模型執行所有要求。 </xsd:documentation>
      </xsd:annotation>
    <xsd:sequence>
      <xsd:element maxOccurs="unbounded" name="request" type="asset:requestType" />
    </xsd:sequence>
  </xsd:complexType>
</xsd:schema>

```

```

</xsd:sequence>
<xsd:attribute name="id" type="xsd:string" />
</xsd:complexType>
<xsd:complexType name="relationType">
  <xsd:annotation>
    <xsd:documentation>
      RelationType 用來說明資產之間的關係。
    </xsd:documentation>
  </xsd:annotation>
  <xsd:attribute name="relationName" type="xsd:string" />
  <xsd:attribute name="targetExtWorkEquipmentType" type="xsd:string" />
  <xsd:attribute name="targetExtWorkEquipmentId" type="xsd:string" />
</xsd:complexType>
<xsd:complexType name="relationsType">
  <xsd:sequence>
    <xsd:element maxOccurs="unbounded" minOccurs="1" name="relation" type="asset:relationType" />
  </xsd:sequence>
</xsd:complexType>
<xsd:complexType name="thresholdType">
  <xsd:attribute name="range" type="xsd:string" />
  <xsd:attribute name="level" type="xsd:string" />
</xsd:complexType>
<xsd:complexType name="measureTypeType">
  <xsd:sequence>
    <xsd:element minOccurs="0" name="threshold" type="asset:thresholdType" />
  </xsd:sequence>
  <xsd:attribute name="unit" type="xsd:string" />
  <xsd:attribute name="no_reading_timeout" type="xsd:string" />
  <xsd:attribute name="name" type="xsd:string" />

```

```

<xsd:attribute name="measureLabel" type="xsd:string" />
<xsd:attribute name="isPrimaryMeasurement" type="xsd:string" />
</xsd:complexType>
<xsd:complexType name="measureTypesType">
  <xsd:sequence>
    <xsd:element minOccurs="1" maxOccurs="unbounded" name="measureType"
      type="asset:measureTypeType" />
  </xsd:sequence>
</xsd:complexType>
<xsd:complexType name="attributeType">
  <xsd:sequence>
    <xsd:element minOccurs="0" maxOccurs="1" name="value"
      type="xsd:string" />
    <xsd:element minOccurs="0" maxOccurs="1" name="unit"
      type="xsd:string" />
  </xsd:sequence>
  <xsd:attribute name="type" type="xsd:string" />
  <xsd:attribute name="name" type="xsd:string" />
</xsd:complexType>
<xsd:complexType name="assetType">
  <xsd:annotation>
    <xsd:documentation>
      AssetType 說明要建立/更新/刪除的資產。
    </xsd:documentation>
  </xsd:annotation>
  <xsd:sequence>
    <xsd:element minOccurs="1" maxOccurs="1" name="internalLocation" type="xsd:string" />
    <xsd:element minOccurs="0" maxOccurs="1" name="relations" type="asset:relationsType" />
    <xsd:element minOccurs="0" maxOccurs="unbounded" name="attribute" type="asset:attributeType" />
  </xsd:sequence>

```

```

    <xsd:element minOccurs="0" name="measureTypes" type="asset:measureTypesType" />
</xsd:sequence>
<xsd:attribute name="extWorkEquipmentType" type="xsd:string" />
<xsd:attribute name="extWorkEquipmentId" type="xsd:string" />
<xsd:attribute name="assetLabel" type="xsd:string" />
<xsd:attribute name="assetDescription" type="xsd:string" />
<xsd:attribute name="tenantId" type="xsd:string" />
</xsd:complexType>
<xsd:complexType name="requestType">
  <xsd:annotation>
    <xsd:documentation>
      Request 是指將要
      執行的實際作業。它擷取下列資訊：
      - request type :
      建立 / 更新 / 刪除
      - 資產資料（屬性、關係等等）
      要求類型必須是下列其中一項：
      - INSERT：建立資產。
      - DELETE：刪除資產
      - UPDATE：更新資產
    </xsd:documentation>
  </xsd:annotation>
  <xsd:sequence>
    <xsd:element maxOccurs="unbounded" name="asset" type="asset:assetType" />
  </xsd:sequence>
  <xsd:attribute name="type" type="xsd:string" />
</xsd:complexType>
<xsd:element name="operation">
  <xsd:annotation>

```

```
<xsd:documentation>
```

作業是 xml 檔的根元素。它

將包含所有要求。

rootTenant：所汲取資料的根租戶。

時間戳記：xml 檔產生日期。

```
</xsd:documentation>
```

```
</xsd:annotation>
```

```
<xsd:complexType>
```

```
<xsd:sequence>
```

```
<xsd:element maxOccurs="unbounded" name="modelref" type="asset:modelrefType" />
```

```
</xsd:sequence>
```

```
<xsd:attribute name="rootTenant" type="xsd:string" />
```

```
<xsd:attribute name="flowSource" type="xsd:string" />
```

```
<xsd:attribute name="timestamp" type="xsd:string" />
```

```
<xsd:attribute name="timeout" type="xsd:string" />
```

```
<xsd:attribute name="timeoutTypeId" type="xsd:string" />
```

```
</xsd:complexType>
```

```
</xsd:element>
```

```
</xsd:schema>
```

5.2.0.5 版的測量讀數綱目

```

<?xml version="1.0" encoding="UTF-8"?>
<!--
/*
* Licensed Materials - Property of Veolia Environment-VE and IBM
*
* 5725-D69
*
* © Copyright Veolia Environment-VE 2017.
* © Copyright International Business Machines Corporation 2012, 2017.
*
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* with IBM Corporation.

*/

V1.8
-->
<xsd:schema targetNamespace="http://vds.com/readingsTypes"
  xmlns:readings="http://vds.com/readingsTypes" xmlns:xsd="http://www.w3.org/2001/XMLSchema"
  elementFormDefault="qualified">
  <xsd:complexType name="readingValueType">
    <xsd:attribute name="value" type="xsd:string" />
    <xsd:attribute name="unit" type="xsd:string" />
    <xsd:attribute name="type" type="xsd:string" />
  </xsd:complexType>
  <xsd:complexType name="readingValuesType">
    <xsd:sequence>
      <xsd:element maxOccurs="unbounded" name="readingValue" type="readings:readingValueType" />
    </xsd:sequence>
  </xsd:complexType>
  <xsd:complexType name="workEquipmentType">
    <xsd:sequence>
      <xsd:element minOccurs="0" maxOccurs="1" name="description" type="xsd:string" />

```

```

<xsd:element minOccurs="0" maxOccurs="unbounded" name="relations"
                type="readings:relationsType" />
<xsd:element minOccurs="0" maxOccurs="1" name="attributes"
                type="readings:attributesType" />
<xsd:element minOccurs="0" maxOccurs="1" name="measureTypes"
                type="readings:measureTypesType" />
</xsd:sequence>
<xsd:attribute name="location" type="xsd:string" />
<xsd:attribute name="extType" type="xsd:string" />
<xsd:attribute name="extId" type="xsd:string" />
<xsd:attribute name="modelRef" type="xsd:string" />
<xsd:attribute name="tenantId" type="xsd:string" />
<xsd:attribute name="assetLabel" type="xsd:string" />
<xsd:attribute name="assetDescription" type="xsd:string" />
</xsd:complexType>
<xsd:complexType name="readingSetType">
  <xsd:sequence>
    <xsd:element name="workEquipment" type="readings:workEquipmentType" />
    <xsd:element name="readingValues" type="readings:readingValuesType" />
  </xsd:sequence>
  <xsd:attribute name="extReadingSetid" type="xsd:string" />
  <xsd:attribute name="timestamp" type="xsd:string" />
</xsd:complexType>
<xsd:complexType name="attributeType">
  <xsd:sequence>
    <xsd:element minOccurs="0" maxOccurs="1" name="value" type="xsd:string" />
    <xsd:element minOccurs="0" maxOccurs="1" name="unit" type="xsd:string" />
  </xsd:sequence>
  <xsd:attribute name="type" type="xsd:string" />
  <xsd:attribute name="name" type="xsd:string" />
</xsd:complexType>
<xsd:complexType name="attributesType">
  <xsd:sequence>
    <xsd:element minOccurs="0" maxOccurs="unbounded" name="attribute"
                  type="readings:attributeType" />
  </xsd:sequence>
</xsd:complexType>

```

```

<xsd:complexType name="relationType">
  <xsd:attribute name="targetExtWorkEquipmentType" type="xsd:string" />
  <xsd:attribute name="targetExtWorkEquipmentId" type="xsd:string" />
  <xsd:attribute name="type" type="xsd:string" />
</xsd:complexType>
<xsd:complexType name="relationsType">
  <xsd:sequence>
    <xsd:element name="relation" type="readings:relationType" />
  </xsd:sequence>
</xsd:complexType>
<xsd:complexType name="thresholdType">
  <xsd:attribute name="range" type="xsd:string" />
  <xsd:attribute name="level" type="xsd:string" />
</xsd:complexType>
<xsd:complexType name="measureTypeType">
  <xsd:sequence>
    <xsd:element minOccurs="0" maxOccurs="unbounded" name="threshold"
      type="readings:thresholdType" />
  </xsd:sequence>
  <xsd:attribute name="unit" type="xsd:string" />
  <xsd:attribute name="no_reading_timeout" type="xsd:string" />
  <xsd:attribute name="name" type="xsd:string" />
  <xsd:attribute name="measureLabel" type="xsd:string" />
  <xsd:attribute name="isPrimaryMeasurement" type="xsd:string" />
</xsd:complexType>
<xsd:complexType name="measureTypesType">
  <xsd:sequence>
    <xsd:element minOccurs="0" maxOccurs="unbounded" name="measureType"
      type="readings:measureTypeType" />
  </xsd:sequence>
</xsd:complexType>
<xsd:element name="readings">
  <xsd:complexType>
    <xsd:sequence>
      <xsd:element maxOccurs="unbounded" name="readingSet" type="readings:readingSetType" />
    </xsd:sequence>
    <xsd:attribute name="rootTenant" type="xsd:string" />
  </xsd:complexType>
</xsd:element>

```



```
<xsd:attribute name="flowSource" type="xsd:string" />  
<xsd:attribute name="timeout" type="xsd:string" />  
<xsd:attribute name="timeoutTypeeld" type="xsd:string" />  
</xsd:complexType>  
</xsd:element>  
</xsd:schema>
```

5.2.0.5 版的服務訂單綱目

```

<?xml version="1.0" encoding="UTF-8"?>

<!--
#
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#
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#
-->
<xsd:schema targetNamespace="http://vds.com/serviceOrdersType"
  xmlns:so="http://vds.com/serviceOrdersType" xmlns:xsd="http://www.w3.org/2001/XMLSchema"
  elementFormDefault="qualified">
  <xsd:complexType name="requestType">
    <xsd:sequence>
      <xsd:element minOccurs="1" maxOccurs="unbounded" name="serviceorder" type="so:serviceOrder" />
    </xsd:sequence>
    <xsd:attribute name="type" type="xsd:string" />
  </xsd:complexType>
  <xsd:complexType name="serviceOrder">
    <xsd:all>
      <xsd:element minOccurs="0" maxOccurs="1" name="EXTERNAL_ID"
        type="xsd:integer" />
      <xsd:element minOccurs="0" maxOccurs="1" name="TENANT_ID"
        type="xsd:string" />
      <xsd:element minOccurs="0" maxOccurs="1" name="EAM_ID"
        type="xsd:string" />
      <xsd:element minOccurs="0" maxOccurs="1" name="GIS_ID"
        type="xsd:string" />
      <xsd:element minOccurs="0" maxOccurs="1" name="SITE_ID"
        type="xsd:string" />
      <xsd:element minOccurs="0" maxOccurs="1" name="NAME"
        type="xsd:string" />
      <xsd:element minOccurs="0" maxOccurs="1" name="DESCRIPTION"
        type="xsd:string" />
      <xsd:element minOccurs="0" maxOccurs="1" name="REGISTRATION_NO"
        type="xsd:string" />
      <xsd:element minOccurs="0" maxOccurs="1" name="LOCATION"
        type="xsd:string" />
      <xsd:element minOccurs="0" maxOccurs="1" name="REGISTRATION_DATE"
        type="so:iibDateTime" />
      <xsd:element minOccurs="0" maxOccurs="1" name="OPENING_DATE"

```

```

        type="so:iibDateTime" />
<xsd:element minOccurs="0" maxOccurs="1" name="COMPLETION_DATE"
        type="so:iibDateTime" />
<xsd:element minOccurs="0" maxOccurs="1" name="ATTACHMENTS"
        type="xsd:string" />
<xsd:element minOccurs="0" maxOccurs="1" name="COMPLETION_STATUS"
        type="xsd:string" />
<xsd:element minOccurs="0" maxOccurs="1" name="STATUS"
        type="xsd:string" />
<xsd:element minOccurs="0" maxOccurs="1" name="CATEGORY"
        type="xsd:string" />
<xsd:element minOccurs="0" maxOccurs="1" name="customServiceOrderAttributes"
        type="so:attributes" />
<xsd:element minOccurs="0" maxOccurs="1" name="assets" type="so:assets" />
<xsd:element minOccurs="0" maxOccurs="1" name="workorders" type="so:workorders" />
</xsd:all>
</xsd:complexType>
<xsd:complexType name="attributes">
  <xsd:sequence>
    <xsd:element minOccurs="1" maxOccurs="unbounded" name="attribute" type="so:attribute" />
  </xsd:sequence>
</xsd:complexType>
<xsd:complexType name="assets">
  <xsd:sequence>
    <xsd:element minOccurs="1" maxOccurs="unbounded" name="asset" type="so:asset" />
  </xsd:sequence>
</xsd:complexType>
<xsd:complexType name="workorders">
  <xsd:sequence>
    <xsd:element minOccurs="1" maxOccurs="unbounded" name="workorder" type="so:workorder" />
  </xsd:sequence>
</xsd:complexType>
<xsd:complexType name="attribute">
  <xsd:attribute name="id" type="xsd:string" />
  <xsd:attribute name="type" type="xsd:string" />
  <xsd:attribute name="value" type="xsd:string" />
</xsd:complexType>
<xsd:complexType name="asset">
  <xsd:attribute name="id" type="xsd:string" />
  <xsd:attribute name="type" type="xsd:string" />
  <xsd:attribute name="relationshipType" type="xsd:string" />
</xsd:complexType>
<xsd:complexType name="workorder">
  <xsd:attribute name="id" type="xsd:string" />
  <xsd:attribute name="relationshipType" type="xsd:string" />
</xsd:complexType>
<xsd:simpleType name="iibDateTime">
  <xsd:restriction base="xsd:string">
    <xsd:pattern
value="\d{4}-(0[1-9]|1[012])-(0[1-9]|1[2][0-9]|3[01])\s(0[0-9]|1[1][0-9]|2[0-3]):([0-5][0-9]):([0-5][0-9]).([0-9]{3})" />
    </xsd:restriction>
  </xsd:simpleType>
<xsd:element name="operations">

```

```
<xsd:complexType>
  <xsd:sequence>
    <xsd:element minOccurs="1" maxOccurs="unbounded" name="request"
                  type="so:requestType">
      </xsd:element>
    </xsd:sequence>
    <xsd:attribute name="rootTenant" type="xsd:string" />
    <xsd:attribute name="flowSource" type="xsd:string" />
    <xsd:attribute name="timeout" type="xsd:string" />
    <xsd:attribute name="timeoutTypeid" type="xsd:string" />
  </xsd:complexType>
</xsd:element>
</xsd:schema>
```

5.2.0.5 版的工作單綱目

```

<?xml version="1.0" encoding="UTF-8"?>
<!--
#
# Licensed Materials - Property of Veolia Environment-VE
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#
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#
-->
<xsd:schema targetNamespace="http://vds.com/workOrdersType"
  xmlns:wo="http://vds.com/workOrdersType" xmlns:xsd="http://www.w3.org/2001/XMLSchema"
  elementFormDefault="qualified">
  <xsd:complexType name="requestType">
    <xsd:sequence>
      <xsd:element minOccurs="1" maxOccurs="unbounded" name="workorder">
        <xsd:complexType>
          <xsd:all>
            <xsd:element minOccurs="0" maxOccurs="1" name="DATASOURCEID"
              type="xsd:string" />
            <xsd:element minOccurs="0" maxOccurs="1" name="RECORDID"
              type="xsd:string" />
            <xsd:element minOccurs="1" maxOccurs="1" name="WOEXTID"
              type="xsd:string" />
            <xsd:element minOccurs="0" maxOccurs="1" name="TENANT_ID"
              type="xsd:string" />
            <xsd:element minOccurs="1" maxOccurs="1" name="MODEL_ID"
              type="xsd:string" />
            <xsd:element minOccurs="1" maxOccurs="1" name="SUBJECT"
              type="xsd:string" />
            <xsd:element minOccurs="0" maxOccurs="1" name="DESCRIPTION"
              type="xsd:string" />
          </xsd:all>
        </xsd:complexType>
      </xsd:element>
    </xsd:sequence>
  </xsd:complexType>
</xsd:schema>

```

```

<xsd:element minOccurs="1" maxOccurs="1" name="DOMAIN"
                type="xsd:string" />
<xsd:element minOccurs="0" maxOccurs="1" name="CATEGORY"
                type="xsd:string" />
<xsd:element minOccurs="0" maxOccurs="1" name="WORKORDERTYPE"
                type="xsd:string" />
<xsd:element minOccurs="0" maxOccurs="1" name="WORKTYPE"
                type="xsd:string" />
<xsd:element minOccurs="0" maxOccurs="1" name="SUBTYPE"
                type="xsd:string" />
<xsd:element minOccurs="0" maxOccurs="1" name="FAILURE"
                type="xsd:string" />
<xsd:element minOccurs="0" maxOccurs="1" name="PRIORITY"
                type="xsd:string" />
<xsd:element minOccurs="1" maxOccurs="1" name="STATUS"
                type="xsd:string" />
<xsd:element minOccurs="0" maxOccurs="1" name="JOBPLAN"
                type="xsd:string" />
<xsd:element minOccurs="1" maxOccurs="1" name="CREATIONDATE"
                type="wo:iibDateTime" />
<xsd:element minOccurs="1" maxOccurs="1" name="CREATIONTYPE"
                type="xsd:string" />
<xsd:element minOccurs="1" maxOccurs="1" name="CREATEDBY"
                type="xsd:string" />
<xsd:element minOccurs="0" maxOccurs="1" name="TARGETSTARTDATE"
                type="wo:iibDateTime" />
<xsd:element minOccurs="0" maxOccurs="1" name="TARGETENDDATE"
                type="wo:iibDateTime" />
<xsd:element minOccurs="0" maxOccurs="1" name="ACTSTARTDATE"
                type="wo:iibDateTime" />
<xsd:element minOccurs="0" maxOccurs="1" name="ACTENDDATE"
                type="wo:iibDateTime" />
<xsd:element minOccurs="1" maxOccurs="1" name="LASTUPDATEDTS"
                type="wo:iibDateTime" />
<xsd:element minOccurs="0" maxOccurs="1" name="ZONE"
                type="xsd:string" />

```

```
<xsd:element minOccurs="0" maxOccurs="1" name="LOCATION"
                type="xsd:string" />
<xsd:element minOccurs="0" maxOccurs="1" name="URL"
                type="xsd:string" />
<xsd:element minOccurs="0" maxOccurs="1" name="EXTWORKEQUIPMENTID"
                type="xsd:string" />
<xsd:element minOccurs="0" maxOccurs="1" name="EXTWORKEQUIPMENTTYPE"
                type="xsd:string" />
<xsd:element minOccurs="0" maxOccurs="1" name="UPDATEDBY"
                type="xsd:string" />
<xsd:element minOccurs="0" maxOccurs="1" name="LEAD"
                type="xsd:string" />
<xsd:element minOccurs="1" maxOccurs="1" name="NETWORK"
                type="xsd:string" />
<xsd:element minOccurs="0" maxOccurs="1" name="ADDRESS"
                type="xsd:string" />
<xsd:element minOccurs="0" maxOccurs="1" name="PERFORMEDBY"
                type="xsd:string" />
<xsd:element minOccurs="0" maxOccurs="1" name="LOCOWNERID"
                type="xsd:string" />
<xsd:element minOccurs="0" maxOccurs="1" name="LOCOWNERDETAILS"
                type="xsd:string" />
<xsd:element minOccurs="0" maxOccurs="1" name="LOCCONTACTID"
                type="xsd:string" />
<xsd:element minOccurs="0" maxOccurs="1" name="ISSUERCOMPANY"
                type="xsd:string" />
<xsd:element minOccurs="0" maxOccurs="1" name="AFFECTED"
                type="xsd:string" />
<xsd:element minOccurs="0" maxOccurs="1" name="LOCCONTACTDETAILS"
                type="xsd:string" />
<xsd:element minOccurs="0" maxOccurs="1" name="REPORT"
                type="xsd:string" />
<xsd:element minOccurs="0" maxOccurs="1" name="SITE_ID"
                type="xsd:string" />
<xsd:element minOccurs="0" maxOccurs="1" name="MAINTENANCE_TYPE"
                type="xsd:string" />
```

```

<xsd:element minOccurs="0" maxOccurs="1" name="ASSET_LENGTH_WORKED_ON"
                type="xsd:decimal" />
<xsd:element minOccurs="0" maxOccurs="1" name="ASSET_STATE"
                type="xsd:string" />
<xsd:element minOccurs="0" maxOccurs="1" name="WORKER_COMMENT"
                type="xsd:string" />
<xsd:element name="SRCEVENTLIST" type="wo:srcEventListType"
                maxOccurs="1" minOccurs="0">
</xsd:element>
<xsd:element minOccurs="0" maxOccurs="1" name="customWorkOrderAttributes"
                type="wo:attributes" />
<xsd:element minOccurs="0" maxOccurs="1" name="assets" type="wo:assets" />
</xsd:all>
</xsd:complexType>
</xsd:element>
</xsd:sequence>
<xsd:attribute name="type" type="xsd:string" />
</xsd:complexType>
<xsd:element name="operations">
<xsd:complexType>
<xsd:sequence>
<xsd:element minOccurs="1" maxOccurs="unbounded" name="request"
                type="wo:requestType">
</xsd:element>
</xsd:sequence>
<xsd:attribute name="rootTenant" type="xsd:string" />
<xsd:attribute name="flowSource" type="xsd:string" />
<xsd:attribute name="timeout" type="xsd:string" />
<xsd:attribute name="timeoutTypeId" type="xsd:string" />
</xsd:complexType>
</xsd:element>
<xsd:complexType name="srcEventType">
<xsd:all>
<xsd:element name="SRCEVTCATEGORY" maxOccurs="1"
                minOccurs="1" type="xsd:string">
</xsd:element>
<xsd:element name="SRCEVTTYPE" type="xsd:string"

```



```

        maxOccurs="1" minOccurs="1">
<xsd:annotation>
  <xsd:documentation>
    如果 SRCEVTCATEGORY = ALERT 或 EVENT，這是
    IOW EVENTTYPE，如果 SRCEVTCATEGORY =
    WORKORDER，這是 IOW
    WORKORDER DOMAIN，如果
    SRCEVTCATEGORY = NOREADING 或
    READINGTHRESHOLD，這是 IOW
    MEASUREMENTTYPE
  </xsd:documentation>
</xsd:annotation>
</xsd:element>
<xsd:element name="SRCEVTID" type="xsd:string" maxOccurs="1"
        minOccurs="0">
  <xsd:annotation>
    <xsd:documentation>
      如果 SRCEVTCATEGORY = ALERT 或 EVENT，這是
      IOW EXTEVENTID，如果 SRCEVTCATEGORY =
      WORKORDER，這是
      IOW WOEXTID，如果
      SRCEVTCATEGORY = NOREADING 或 READINGTHRESHOLD，
      這是 IOW MEASUREMENT_ID（僅用於 WO OUT）
    </xsd:documentation>
  </xsd:annotation>
</xsd:element>
<xsd:element name="SRCEVTDAT" type="wo:iibDateTime" maxOccurs="1" minOccurs="1">
</xsd:element>
<xsd:element name="SRCEVTORIGVALUE" type="xsd:string" maxOccurs="1" minOccurs="0">
</xsd:element>
<xsd:element name="SRCEVTCURRVALUE" type="xsd:string" maxOccurs="1" minOccurs="0">
</xsd:element>
<xsd:element name="SRCEVTCURRVALUESETS" type="wo:iibDateTime"
        maxOccurs="1" minOccurs="0">
</xsd:element>
<xsd:element name="SRCEVTCOMMENT" type="xsd:string"
        maxOccurs="1" minOccurs="0">

```

```

</xsd:element>
  <xsd:element name="SOPREFERENCE" type="xsd:string"
    maxOccurs="1" minOccurs="0"></xsd:element>
</xsd:all>
</xsd:complexType>
<xsd:complexType name="srcEventListType">
  <xsd:sequence>
    <xsd:element name="SRCEVENT" type="wo:srcEventType"
      maxOccurs="unbounded" minOccurs="0"></xsd:element>
  </xsd:sequence>
</xsd:complexType>
<xsd:complexType name="attributes">
  <xsd:sequence>
    <xsd:element minOccurs="1" maxOccurs="unbounded" name="attribute" type="wo:attribute" />
  </xsd:sequence>
</xsd:complexType>
<xsd:complexType name="assets">
  <xsd:sequence>
    <xsd:element minOccurs="1" maxOccurs="unbounded" name="asset" type="wo:asset" />
  </xsd:sequence>
</xsd:complexType>
<xsd:complexType name="attribute">
  <xsd:attribute name="id" type="xsd:string" />
  <xsd:attribute name="type" type="xsd:string" />
  <xsd:attribute name="value" type="xsd:string" />
</xsd:complexType>
<xsd:complexType name="asset">
  <xsd:attribute name="id" type="xsd:string" />
  <xsd:attribute name="type" type="xsd:string" />
  <xsd:attribute name="relationshipType" type="xsd:string" />
</xsd:complexType>
<xsd:simpleType name="iibDateTime">
  <xsd:restriction base="xsd:string">
    <xsd:pattern
value="\d{4}-(0[1-9]|1[012])-(0[1-9]|[12][0-9]|3[01])\s(0[0-9]|[1][0-9]|2[0-3]):([0-5][0-9]):([0-5][0-9]).([0-9]{3})" />
  </xsd:restriction>
</xsd:simpleType>
</xsd:schema>

```

附錄 D : 5.2.0.4 版的 XSD 檔案

VDS_IOW-IN-ALERTS-CORE_5201.XSD

```

<?xml version="1.0" encoding="UTF-8"?>
<!--
/*
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* with IBM Corporation.
*/

V1.8
-->
<xsd:schema targetNamespace="http://vds.com/alertsType"
  xmlns:alert="http://vds.com/alertsType"
  xmlns:xsd="http://www.w3.org/2001/XMLSchema"
  elementFormDefault="qualified">
  <xsd:element name="operations">
    <xsd:complexType>
      <xsd:sequence>
        <xsd:element minOccurs="1" maxOccurs="unbounded" name="record" type="alert:recordType"/>
      </xsd:sequence>
      <xsd:attribute name="rootTenant" type="xsd:string" />
      <xsd:attribute name="timeout" type="xsd:string" />
      <xsd:attribute name="timeoutTypeIcd" type="xsd:string" />
      <xsd:attribute name="requestType" type="xsd:string" />
    </xsd:complexType>
  </xsd:element>
  <xsd:complexType name="recordType">
    <xsd:annotation>
      <xsd:documentation>事件資料來源記錄</xsd:documentation>
    </xsd:annotation>
  </xsd:complexType>

```

```
</xsd:annotation>
```

```
<xsd:all>
```

```
<!--
```

```
  * 最小內容
```

```
  */
```

```
-->
```

```
<xsd:element name="EXTEVENTID" type="xsd:string" minOccurs="1" maxOccurs="1" />
```

```
<xsd:element name="TENANT_ID" type="xsd:string" minOccurs="0" maxOccurs="1" />
```

```
<xsd:element name="MODEL_ID" type="xsd:string" minOccurs="0" maxOccurs="1" />
```

```
<xsd:element name="STARTTS" type="alert:iibDateTime" minOccurs="1" maxOccurs="1" />
```

```
<xsd:element name="LASTUPDATEDTS" type="alert:iibDateTime" minOccurs="1" maxOccurs="1" />
```

```
<xsd:element name="SUBJECT" type="xsd:string" minOccurs="1" maxOccurs="1" />
```

```
<xsd:element name="CATEGORY" type="xsd:string" minOccurs="1" maxOccurs="1" />
```

```
<xsd:element name="EVENTTYPE" type="xsd:string" minOccurs="1" maxOccurs="1" />
```

```
<xsd:element name="EVENTSUBTYPE" type="xsd:string" minOccurs="0" maxOccurs="1" />
```

```
<xsd:element name="COSTS" type="xsd:string" minOccurs="0" maxOccurs="1" />
```

```
<xsd:element name="CONSEQUENCES" type="xsd:string" minOccurs="0" maxOccurs="1" />
```

```
<xsd:element name="CREATIONTYPE" type="xsd:string" minOccurs="1" maxOccurs="1" />
```

```
<xsd:element name="NETWORK" type="xsd:string" minOccurs="1" maxOccurs="1" />
```

```
<xsd:element name="DOMAIN" type="xsd:string" minOccurs="1" maxOccurs="1" />
```

```
<xsd:element name="STATUS" type="xsd:string" minOccurs="1" maxOccurs="1" />
```

```
<!--
```

```
  * 關鍵/完整內容
```

```
  */
```

```
-->
```

```
<!-- 需要 (EXTWORKEQUIPMENTID + EXTWORKEQUIPMENTTYPE) 或 LOCATION 其中之一 -->
```

```
<xsd:element name="ENDTS" type="alert:iibDateTime" minOccurs="0" maxOccurs="1" />
```

```
<xsd:element name="EXTWORKEQUIPMENTID" type="xsd:string" minOccurs="0" maxOccurs="1" />
```

```
<xsd:element name="EXTWORKEQUIPMENTTYPE" type="xsd:string" minOccurs="0" maxOccurs="1" />
```

```
<xsd:element name="LOCATION" type="xsd:string" minOccurs="0" maxOccurs="1" />
```

```
<xsd:element name="DESCRIPTION" type="xsd:string" minOccurs="0" maxOccurs="1" />
```

```
<xsd:element name="ADDRESS" type="xsd:string" minOccurs="0" maxOccurs="1" />
```

```
<xsd:element name="OWNER" type="xsd:string" minOccurs="0" maxOccurs="1" />
```

```
<xsd:element name="CREATEDBY" type="xsd:string" minOccurs="0" maxOccurs="1" />
```

```
<xsd:element name="URGENCY" type="xsd:string" minOccurs="0" maxOccurs="1" />
```

```

<xsd:element name="CERTAINTY" type="xsd:string" minOccurs="0" maxOccurs="1" />

<xsd:element name="ZONE" type="xsd:string" minOccurs="0" maxOccurs="1" />
<xsd:element name="SEVERITY" type="xsd:string" minOccurs="0" maxOccurs="1" />
<xsd:element name="ACK" type="xsd:string" minOccurs="0" maxOccurs="1" />
<xsd:element name="MEASURE" minOccurs="0" maxOccurs="1" >
  <xsd:annotation>
    <xsd:documentation>臨界值屬性網域是 0、1 或 2</xsd:documentation>
  </xsd:annotation>
  <xsd:complexType>
    <xsd:attribute name="value" type="xsd:string" />
    <xsd:attribute name="unit" type="xsd:string" />
    <xsd:attribute name="type" type="xsd:string" />
    <xsd:attribute name="threshold_value" type="xsd:string" />
    <xsd:attribute name="threshold" type="xsd:string" />
  </xsd:complexType>
</xsd:element>
</xsd:all>
</xsd:complexType>
<xsd:simpleType name="iibDateTime">
  <xsd:restriction base="xsd:string">
    <xsd:pattern
Value= "\d{4}-(0[1-9]|1[012])-(0[1-9]|[12][0-9]|3[01])\s(0[0-9]|[1][0-9]|2[0-3]):([0-5][0-9]):([0-5][0-9]).([0-9]{3})"
/>
    </xsd:restriction>
  </xsd:simpleType>
</xsd:schema>

```

VDS_IOW-IN-ASSETS-CORE_5210.XSD

```

<?xml version="1.0" encoding="UTF-8"?>
<!--
/*
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* 5725-D69
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*/

V1.8
-->
<xsd:schema targetNamespace="http://vds.com/assetTypes"
      xmlns:asset="http://vds.com/assetTypes"
      xmlns:xsd="http://www.w3.org/2001/XMLSchema"
      elementFormDefault="qualified">
  <xsd:complexType name="modelrefType">
    <xsd:annotation>
      <xsd:documentation>modelref 將參照
        多租戶環境的語意模型的 ID。
        如果 modelref 的 id 屬性是空的，
        則將針對
        預設模型執行所有要求。</xsd:documentation>
    </xsd:annotation>
  <xsd:sequence>

```

```

    <xsd:element maxOccurs="unbounded" name="request" type="asset:requestType" />
  </xsd:sequence>
  <xsd:attribute name="id" type="xsd:string" />
</xsd:complexType>
<xsd:complexType name="relationType">
  <xsd:annotation>
    <xsd:documentation>
      RelationType 用來說明資產之間的關係。
    </xsd:documentation>
  </xsd:annotation>
  <xsd:attribute name="relationName" type="xsd:string" />
  <xsd:attribute name="targetExtWorkEquipmentType" type="xsd:string" />
  <xsd:attribute name="targetExtWorkEquipmentId" type="xsd:string" />
</xsd:complexType>
<xsd:complexType name="relationsType">
  <xsd:sequence>
    <xsd:element maxOccurs="unbounded" minOccurs="1" name="relation" type="asset:relationType" />
  </xsd:sequence>
</xsd:complexType>
<xsd:complexType name="thresholdType">
  <xsd:attribute name="range" type="xsd:string" />
  <xsd:attribute name="level" type="xsd:string" />
</xsd:complexType>
<xsd:complexType name="measureTypeType">
  <xsd:sequence>
    <xsd:element minOccurs="0" maxOccurs="3" name="threshold" type="asset:thresholdType" />
  </xsd:sequence>
  <xsd:attribute name="unit" type="xsd:string" />

```

```

<xsd:attribute name="no_reading_timeout" type="xsd:string" />
<xsd:attribute name="name" type="xsd:string" />
<xsd:attribute name="measureLabel" type="xsd:string" />
<xsd:attribute name="isPrimaryMeasurement" type="xsd:string" />
</xsd:complexType>
<xsd:complexType name="measureTypesType">
  <xsd:sequence>
    <xsd:element minOccurs="1" maxOccurs="unbounded" name="measureType"
      type="asset:measureTypeType" />
  </xsd:sequence>
</xsd:complexType>
<xsd:complexType name="attributeType">
  <xsd:sequence>
    <xsd:element minOccurs="0" maxOccurs="1" name="value"
      type="xsd:string" />
    <xsd:element minOccurs="0" maxOccurs="1" name="unit"
      type="xsd:string" />
  </xsd:sequence>
  <xsd:attribute name="type" type="xsd:string" />
  <xsd:attribute name="name" type="xsd:string" />
</xsd:complexType>
<xsd:complexType name="assetType">
  <xsd:annotation>
    <xsd:documentation>
      AssetType 說明要建立/更新/刪除的資產。
    </xsd:documentation>
  </xsd:annotation>
  <xsd:sequence>
    <xsd:element minOccurs="1" maxOccurs="1" name="internalLocation" type="xsd:string" />

```



```

<xsd:element minOccurs="0" maxOccurs="1" name="relations" type="asset:relationsType" />
<xsd:element minOccurs="0" maxOccurs="unbounded" name="attribute" type="asset:attributeType" />
<xsd:element minOccurs="0" maxOccurs="1" name="measureTypes" type="asset:measureTypesType" />
</xsd:sequence>
<xsd:attribute name="extWorkEquipmentType" type="xsd:string" />
<xsd:attribute name="extWorkEquipmentId" type="xsd:string" />
<xsd:attribute name="assetLabel" type="xsd:string" />
<xsd:attribute name="assetDescription" type="xsd:string" />
<xsd:attribute name="tenantId" type="xsd:string" />
</xsd:complexType>
<xsd:complexType name="requestType">
  <xsd:annotation>
    <xsd:documentation>
      Request 是指將要
      執行的實際作業。它擷取下列資訊：
      - request type :
      建立 / 更新 / 刪除
      - 資產資料（屬性、關係等等）
      要求類型必須是下列其中一項：
      - INSERT：建立資產。
      - DELETE：刪除資產
      - UPDATE：更新資產
    </xsd:documentation>
  </xsd:annotation>
  <xsd:sequence>
    <xsd:element maxOccurs="unbounded" name="asset" type="asset:assetType" />
  </xsd:sequence>
  <xsd:attribute name="type" type="xsd:string" />

```

```
</xsd:complexType>
<xsd:element name="operation">
  <xsd:annotation>
    <xsd:documentation>
      作業是 xml 檔的根元素。它
      將包含所有要求。
      rootTenant：所汲取資料的根租戶。
      時間戳記：xml 檔產生日期。
    </xsd:documentation>
  </xsd:annotation>
  <xsd:complexType>
    <xsd:sequence>
      <xsd:element maxOccurs="unbounded" name="modelref" type="asset:modelrefType" />
    </xsd:sequence>
    <xsd:attribute name="rootTenant" type="xsd:string" />
    <xsd:attribute name="timestamp" type="xsd:string" />
    <xsd:attribute name="timeout" type="xsd:string" />
    <xsd:attribute name="timeoutTypeId" type="xsd:string" />
  </xsd:complexType>
</xsd:element>
</xsd:schema>
```

VDS_IOW-IN-READINGS-CORE_5201.XSD

```

<?xml version="1.0" encoding="UTF-8"?>
<!--
/*
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*
* 5725-D69
*
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*/

V1.8
-->
<xsd:schema targetNamespace="http://vds.com/readingsTypes"
  xmlns:readings="http://vds.com/readingsTypes" xmlns:xsd="http://www.w3.org/2001/XMLSchema"
  elementFormDefault="qualified">
  <xsd:complexType name="readingValueType">
    <xsd:attribute name="value" type="xsd:string" />
    <xsd:attribute name="unit" type="xsd:string" />
    <xsd:attribute name="type" type="xsd:string" />
  </xsd:complexType>
  <xsd:complexType name="readingValuesType">
    <xsd:sequence>
      <xsd:element maxOccurs="unbounded" name="readingValue" type="readings:readingValueType" />
    </xsd:sequence>
  </xsd:complexType>
  <xsd:complexType name="workEquipmentType">
    <xsd:sequence>
      <xsd:element maxOccurs="1" minOccurs="0" name="description" type="xsd:string" />

```

```

<xsd:element minOccurs="0" maxOccurs="unbounded" name="relations"
                type="readings:relationsType" />
<xsd:element minOccurs="0" maxOccurs="unbounded" name="attributes"
                type="readings:attributesType" />
<xsd:element minOccurs="0" maxOccurs="1" name="measureTypes"
                type="readings:measureTypesType" />
</xsd:sequence>
<xsd:attribute name="location" type="xsd:string" />
<xsd:attribute name="extType" type="xsd:string" />
<xsd:attribute name="extId" type="xsd:string" />
<xsd:attribute name="modelRef" type="xsd:string" />
<xsd:attribute name="tenantId" type="xsd:string" />
<xsd:attribute name="assetLabel" type="xsd:string" />
<xsd:attribute name="assetDescription" type="xsd:string" />
</xsd:complexType>
<xsd:complexType name="readingSetType">
  <xsd:sequence>
    <xsd:element name="workEquipment" type="readings:workEquipmentType" />
    <xsd:element name="readingValues" type="readings:readingValuesType" />
  </xsd:sequence>
  <xsd:attribute name="extReadingSetid" type="xsd:string" />
  <xsd:attribute name="timestamp" type="xsd:string" />
  <xsd:attribute name="extRelatedEvtId" type="xsd:string" />
  <xsd:attribute name="extRelatedEvtType" type="xsd:string" />
</xsd:complexType>
<xsd:complexType name="attributeType">
  <xsd:sequence>
    <xsd:element minOccurs="0" maxOccurs="1" name="value" type="xsd:string" />
    <xsd:element minOccurs="0" maxOccurs="1" name="unit" type="xsd:string" />
  </xsd:sequence>
  <xsd:attribute name="type" type="xsd:string" />
  <xsd:attribute name="name" type="xsd:string" />
</xsd:complexType>
<xsd:complexType name="attributesType">
  <xsd:sequence>
    <xsd:element name="attribute" type="readings:attributeType" />
  </xsd:sequence>

```

```

</xsd:complexType>
<xsd:complexType name="relationType">
  <xsd:attribute name="targetExtWorkEquipmentType" type="xsd:string" />
  <xsd:attribute name="targetExtWorkEquipmentId" type="xsd:string" />
  <xsd:attribute name="type" type="xsd:string" />
</xsd:complexType>
<xsd:complexType name="relationsType">
  <xsd:sequence>
    <xsd:element name="relation" type="readings:relationType" />
  </xsd:sequence>
</xsd:complexType>
<xsd:complexType name="thresholdType">
  <xsd:attribute name="range" type="xsd:string" />
  <xsd:attribute name="level" type="xsd:string" />
</xsd:complexType>
<xsd:complexType name="measureTypeType">
  <xsd:sequence>
    <xsd:element minOccurs="0" maxOccurs="unbounded" name="threshold"
      type="readings:thresholdType" />
  </xsd:sequence>
  <xsd:attribute name="unit" type="xsd:string" />
  <xsd:attribute name="no_reading_timeout" type="xsd:string" />
  <xsd:attribute name="name" type="xsd:string" />
  <xsd:attribute name="isPrimaryMeasurement" type="xsd:string" />
</xsd:complexType>
<xsd:complexType name="measureTypesType">
  <xsd:sequence>
    <xsd:element minOccurs="0" maxOccurs="unbounded" name="measureType"
      type="readings:measureTypeType" />
  </xsd:sequence>
</xsd:complexType>
<xsd:element name="readings">
  <xsd:complexType>
    <xsd:sequence>
      <xsd:element maxOccurs="unbounded" name="readingSet" type="readings:readingSetType" />
    </xsd:sequence>
    <xsd:attribute name="rootTenant" type="xsd:string" />
  </xsd:complexType>
</xsd:element>

```

```
<xsd:attribute name="timeout" type="xsd:string" />  
<xsd:attribute name="timeoutTypeeld" type="xsd:string" />  
</xsd:complexType>  
</xsd:element>  
</xsd:schema>
```

VDS_IOW-IN-SO-CORE_5201.XSD

```

<?xml version="1.0" encoding="UTF-8"?>

<!--
#
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#
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#
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#
-->
<xsd:schema targetNamespace="http://vds.com/serviceOrdersType"
  xmlns:so="http://vds.com/serviceOrdersType" xmlns:xsd="http://www.w3.org/2001/XMLSchema"
  elementFormDefault="qualified">
  <xsd:complexType name="requestType">
    <xsd:sequence>
      <xsd:element minOccurs="1" maxOccurs="unbounded" name="serviceorder" type="so:serviceOrder" />
    </xsd:sequence>
    <xsd:attribute name="type" type="xsd:string" />
  </xsd:complexType>
  <xsd:complexType name="serviceOrder">
    <xsd:all>
      <xsd:element minOccurs="0" maxOccurs="1" name="EXTERNAL_ID"
        type="xsd:string" />
      <xsd:element minOccurs="0" maxOccurs="1" name="TENANT_ID"
        type="xsd:string" />
      <xsd:element minOccurs="0" maxOccurs="1" name="EAM_ID"
        type="xsd:string" />
      <xsd:element minOccurs="0" maxOccurs="1" name="GIS_ID"
        type="xsd:string" />
      <xsd:element minOccurs="0" maxOccurs="1" name="SITE_ID"
        type="xsd:string" />
      <xsd:element minOccurs="0" maxOccurs="1" name="NAME"
        type="xsd:string" />
      <xsd:element minOccurs="0" maxOccurs="1" name="DESCRIPTION"
        type="xsd:string" />
      <xsd:element minOccurs="0" maxOccurs="1" name="REGISTRATION_NO"
        type="xsd:string" />
      <xsd:element minOccurs="0" maxOccurs="1" name="LOCATION"
        type="xsd:string" />
      <xsd:element minOccurs="0" maxOccurs="1" name="REGISTRATION_DATE"
        type="so:iibDateTime" />
      <xsd:element minOccurs="0" maxOccurs="1" name="OPENING_DATE"

```

```

        type="so:iibDateTime" />
<xsd:element minOccurs="0" maxOccurs="1" name="COMPLETION_DATE"
        type="so:iibDateTime" />
<xsd:element minOccurs="0" maxOccurs="1" name="ATTACHMENTS"
        type="xsd:string" />
<xsd:element minOccurs="0" maxOccurs="1" name="COMPLETION_STATUS"
        type="xsd:string" />
<xsd:element minOccurs="0" maxOccurs="1" name="STATUS"
        type="xsd:string" />
<xsd:element minOccurs="0" maxOccurs="1" name="CATEGORY"
        type="xsd:string" />
<xsd:element minOccurs="0" maxOccurs="1" name="customServiceOrderAttributes"
        type="so:attributes" />
<xsd:element minOccurs="0" maxOccurs="1" name="assets" type="so:assets" />
<xsd:element minOccurs="0" maxOccurs="1" name="workorders" type="so:workorders" />
</xsd:all>
</xsd:complexType>

<xsd:complexType name="attributes">
  <xsd:sequence>
    <xsd:element minOccurs="1" maxOccurs="unbounded" name="attribute" type="so:attribute" />
  </xsd:sequence>
</xsd:complexType>

<xsd:complexType name="assets">
  <xsd:sequence>
    <xsd:element minOccurs="1" maxOccurs="unbounded" name="asset" type="so:asset" />
  </xsd:sequence>
</xsd:complexType>

<xsd:complexType name="workorders">
  <xsd:sequence>
    <xsd:element minOccurs="1" maxOccurs="unbounded" name="workorder" type="so:workorder" />
  </xsd:sequence>
</xsd:complexType>

<xsd:complexType name="attribute">
  <xsd:attribute name="id" type="xsd:string" />
  <xsd:attribute name="type" type="xsd:string" />
  <xsd:attribute name="value" type="xsd:string" />
</xsd:complexType>

<xsd:complexType name="asset">
  <xsd:attribute name="id" type="xsd:string" />
  <xsd:attribute name="type" type="xsd:string" />
  <xsd:attribute name="relationshipType" type="xsd:string" />
</xsd:complexType>

<xsd:complexType name="workorder">
  <xsd:attribute name="id" type="xsd:string" />
  <xsd:attribute name="relationshipType" type="xsd:string" />
</xsd:complexType>

```



```

<xsd:simpleType name="iibDateTime">
  <xsd:restriction base="xsd:string">
    <xsd:pattern
value="\d{4}-(0[1-9]|1[012])-(0[1-9]|[12][0-9]|3[01])\s(0[0-9]|[1][0-9]|2[0-3]):([0-5][0-9]):([0-5][0-9]).([0-9]{3})" />
    </xsd:restriction>
  </xsd:simpleType>
  <xsd:element name="operations">
    <xsd:complexType>
      <xsd:sequence>
        <xsd:element minOccurs="1" maxOccurs="unbounded" name="request"
                      type="so:requestType">
          </xsd:element>
        </xsd:sequence>
        <xsd:attribute name="rootTenant" type="xsd:string" />
        <xsd:attribute name="timeout" type="xsd:string" />
        <xsd:attribute name="timeoutTypeId" type="xsd:string" />
      </xsd:complexType>
    </xsd:element>
  </xsd:schema>

```

VDS_IOW-IN-WO-CORE_5201.XSD

```

<?xml version="1.0" encoding="UTF-8"?>
<!--
#
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#
-->
<xsd:schema targetNamespace="http://vds.com/workOrdersType"
  xmlns:wo="http://vds.com/workOrdersType" xmlns:xsd="http://www.w3.org/2001/XMLSchema"
  elementFormDefault="qualified">
  <xsd:complexType name="requestType">
    <xsd:sequence>
      <xsd:element minOccurs="1" maxOccurs="unbounded" name="workorder">
        <xsd:complexType>
          <xsd:all>
            <xsd:element minOccurs="0" maxOccurs="1" name="DATASOURCEID"
              type="xsd:string" />
            <xsd:element minOccurs="0" maxOccurs="1" name="RECORDID"
              type="xsd:string" />
            <xsd:element minOccurs="1" maxOccurs="1" name="WOEXTID"
              type="xsd:string" />
            <xsd:element minOccurs="0" maxOccurs="1" name="TENANT_ID"
              type="xsd:string" />
            <xsd:element minOccurs="0" maxOccurs="1" name="MODEL_ID"
              type="xsd:string" />
            <xsd:element minOccurs="1" maxOccurs="1" name="SUBJECT"
              type="xsd:string" />
            <xsd:element minOccurs="0" maxOccurs="1" name="DESCRIPTION"
              type="xsd:string" />
          </xsd:all>
        </xsd:complexType>
      </xsd:element>
    </xsd:sequence>
  </xsd:complexType>
</xsd:schema>

```

```
<xsd:element minOccurs="1" maxOccurs="1" name="DOMAIN"
                type="xsd:string" />
<xsd:element minOccurs="0" maxOccurs="1" name="CATEGORY"
                type="xsd:string" />
<xsd:element minOccurs="0" maxOccurs="1" name="WORKORDERTYPE"
                type="xsd:string" />
<xsd:element minOccurs="0" maxOccurs="1" name="WORKTYPE"
                type="xsd:string" />
<xsd:element minOccurs="0" maxOccurs="1" name="SUBTYPE"
                type="xsd:string" />
<xsd:element minOccurs="0" maxOccurs="1" name="FAILURE"
                type="xsd:string" />
<xsd:element minOccurs="0" maxOccurs="1" name="PRIORITY"
                type="xsd:string" />
<xsd:element minOccurs="1" maxOccurs="1" name="STATUS"
                type="xsd:string" />
<xsd:element minOccurs="0" maxOccurs="1" name="JOBPLAN"
                type="xsd:string" />
<xsd:element minOccurs="1" maxOccurs="1" name="CREATIONDATE"
                type="wo:iibDateTime" />
<xsd:element minOccurs="1" maxOccurs="1" name="CREATIONTYPE"
                type="xsd:string" />
<xsd:element minOccurs="1" maxOccurs="1" name="CREATEDBY"
                type="xsd:string" />
<xsd:element minOccurs="0" maxOccurs="1" name="TARGETSTARTDATE"
                type="wo:iibDateTime" />
<xsd:element minOccurs="0" maxOccurs="1" name="TARGETENDDATE"
                type="wo:iibDateTime" />
<xsd:element minOccurs="0" maxOccurs="1" name="ACTSTARTDATE"
                type="wo:iibDateTime" />
<xsd:element minOccurs="0" maxOccurs="1" name="ACTENDDATE"
                type="wo:iibDateTime" />
<xsd:element minOccurs="1" maxOccurs="1" name="LASTUPDATEDTS"
                type="wo:iibDateTime" />
<xsd:element minOccurs="0" maxOccurs="1" name="ZONE"
                type="xsd:string" />
```

```
<xsd:element minOccurs="0" maxOccurs="1" name="LOCATION"
                type="xsd:string" />
<xsd:element minOccurs="0" maxOccurs="1" name="URL"
                type="xsd:string" />
<xsd:element minOccurs="0" maxOccurs="1" name="EXTWORKEQUIPMENTID"
                type="xsd:string" />
<xsd:element minOccurs="0" maxOccurs="1" name="EXTWORKEQUIPMENTTYPE"
                type="xsd:string" />
<xsd:element minOccurs="0" maxOccurs="1" name="UPDATEDBY"
                type="xsd:string" />
<xsd:element minOccurs="0" maxOccurs="1" name="LEAD"
                type="xsd:string" />
<xsd:element minOccurs="1" maxOccurs="1" name="NETWORK"
                type="xsd:string" />
<xsd:element minOccurs="0" maxOccurs="1" name="ADDRESS"
                type="xsd:string" />
<xsd:element minOccurs="0" maxOccurs="1" name="PERFORMEDBY"
                type="xsd:string" />
<xsd:element minOccurs="0" maxOccurs="1" name="LOCOWNERID"
                type="xsd:string" />
<xsd:element minOccurs="0" maxOccurs="1" name="LOCOWNERDETAILS"
                type="xsd:string" />
<xsd:element minOccurs="0" maxOccurs="1" name="LOCCONTACTID"
                type="xsd:string" />
<xsd:element minOccurs="0" maxOccurs="1" name="ISSUERCOMPANY"
                type="xsd:string" />
<xsd:element minOccurs="0" maxOccurs="1" name="AFFECTED"
                type="xsd:string" />
<xsd:element minOccurs="0" maxOccurs="1" name="LOCCONTACTDETAILS"
                type="xsd:string" />
<xsd:element minOccurs="0" maxOccurs="1" name="REPORT"
                type="xsd:string" />
<xsd:element minOccurs="0" maxOccurs="1" name="SITE_ID"
                type="xsd:string" />
<xsd:element minOccurs="0" maxOccurs="1" name="MAINTENANCE_TYPE"
                type="xsd:string" />
```

```

<xsd:element minOccurs="0" maxOccurs="1" name="ASSET_LENGTH_WORKED_ON"
                type="xsd:decimal" />
<xsd:element minOccurs="0" maxOccurs="1" name="ASSET_STATE"
                type="xsd:string" />
<xsd:element minOccurs="0" maxOccurs="1" name="WORKER_COMMENT"
                type="xsd:string" />
<xsd:element name="SRCEVENTLIST" type="wo:srcEventListType"
                maxOccurs="1" minOccurs="0">
</xsd:element>
<xsd:element minOccurs="0" maxOccurs="1" name="customWorkOrderAttributes"
                type="wo:attributes" />
<xsd:element minOccurs="0" maxOccurs="1" name="assets" type="wo:assets" />
</xsd:all>
</xsd:complexType>
</xsd:element>
</xsd:sequence>
<xsd:attribute name="type" type="xsd:string" />
</xsd:complexType>
<xsd:element name="operations">
<xsd:complexType>
<xsd:sequence>
<xsd:element minOccurs="1" maxOccurs="unbounded" name="request"
                type="wo:requestType">
</xsd:element>
</xsd:sequence>
<xsd:attribute name="rootTenant" type="xsd:string" />
<xsd:attribute name="timeout" type="xsd:string" />
<xsd:attribute name="timeoutTypeId" type="xsd:string" />
</xsd:complexType>
</xsd:element>
<xsd:complexType name="srcEventType">
<xsd:all>
<xsd:element name="SRCEVTCATEGORY" maxOccurs="1"
                minOccurs="1" type="xsd:string">
</xsd:element>
<xsd:element name="SRCEVTTYPE" type="xsd:string"
                maxOccurs="1" minOccurs="1">

```

```

<xsd:annotation>
  <xsd:documentation>
    如果 SRCEVTCATEGORY = ALERT 或 EVENT，這是
    IOW EVENTTYPE，如果 SRCEVTCATEGORY =
    WORKORDER，這是 IOW
    WORKORDER DOMAIN，如果
    SRCEVTCATEGORY = NOREADING 或
    READINGTHRESHOLD，這是 IOW
    MEASUREMENTTYPE
  </xsd:documentation>
</xsd:annotation>
</xsd:element>
<xsd:element name="SRCEVTID" type="xsd:string" maxOccurs="1"
              minOccurs="0">
  <xsd:annotation>
    <xsd:documentation>
      如果 SRCEVTCATEGORY = ALERT 或 EVENT，這是
      IOW EXTEVENTID，如果 SRCEVTCATEGORY =
      WORKORDER，這是
      IOW WOEXTID，如果
      SRCEVTCATEGORY = NOREADING 或 READINGTHRESHOLD，
      這是 IOW MEASUREMENT_ID（僅用於 WO OUT）
    </xsd:documentation>
  </xsd:annotation>
</xsd:element>
<xsd:element name="SRCEVTDATE" type="wo:iibDateTime" maxOccurs="1" minOccurs="1">
</xsd:element>
<xsd:element name="SRCEVTORIGVALUE" type="xsd:string" maxOccurs="1" minOccurs="0">
</xsd:element>
<xsd:element name="SRCEVTCURRVALUE" type="xsd:string" maxOccurs="1" minOccurs="0">
</xsd:element>
<xsd:element name="SRCEVTCURRVALUESETS" type="wo:iibDateTime"
              maxOccurs="1" minOccurs="0">
</xsd:element>
<xsd:element name="SRCEVTCOMMENT" type="xsd:string"
              maxOccurs="1" minOccurs="0">
</xsd:element>

```

```

    <xsd:element name="SOPREFERENCE" type="xsd:string"
                maxOccurs="1" minOccurs="0"></xsd:element>
</xsd:all>
</xsd:complexType>
<xsd:complexType name="srcEventListType">
  <xsd:sequence>
    <xsd:element name="SRCEVENT" type="wo:srcEventType"
                maxOccurs="unbounded" minOccurs="0"></xsd:element>
  </xsd:sequence>
</xsd:complexType>
<xsd:complexType name="attributes">
  <xsd:sequence>
    <xsd:element minOccurs="1" maxOccurs="unbounded" name="attribute" type="wo:attribute" />
  </xsd:sequence>
</xsd:complexType>

<xsd:complexType name="assets">
  <xsd:sequence>
    <xsd:element minOccurs="1" maxOccurs="unbounded" name="asset" type="wo:asset" />
  </xsd:sequence>
</xsd:complexType>
<xsd:complexType name="attribute">
  <xsd:attribute name="id" type="xsd:string" />
  <xsd:attribute name="type" type="xsd:string" />
  <xsd:attribute name="value" type="xsd:string" />
</xsd:complexType>
<xsd:complexType name="asset">
  <xsd:attribute name="id" type="xsd:string" />
  <xsd:attribute name="type" type="xsd:string" />
  <xsd:attribute name="relationshipType" type="xsd:string" />
</xsd:complexType>
<xsd:simpleType name="iibDateTime">
  <xsd:restriction base="xsd:string">
    <xsd:pattern
value="\d{4}-(0[1-9]|1[012])-(0[1-9]|[12][0-9]|3[01])\s(0[0-9]|[1][0-9]|2[0-3]):([0-5][0-9]):([0-5][0-9]).([0-9]{3})" />
  </xsd:restriction>
</xsd:simpleType>
</xsd:schema>

```

附錄 E : 5.2.0.3 版的 XSD 檔案

VDS_IOW-IN-ALERTS-CORE_5201.XSD

```

<?xml version="1.0" encoding="UTF-8"?>
<!--
/*
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*
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* Restricted Rights - Use, duplication or disclosure restricted by GSA ADP Schedule Contract
* with IBM Corporation.
*/

V1.8
-->
<xsd:schema targetNamespace="http://vds.com/alertsType"
  xmlns:alert="http://vds.com/alertsType"
  xmlns:xsd="http://www.w3.org/2001/XMLSchema"
  elementFormDefault="qualified">
  <xsd:element name="operations">
    <xsd:complexType>
      <xsd:sequence>
        <xsd:element minOccurs="1" maxOccurs="unbounded" name="record" type="alert:recordType"/>
      </xsd:sequence>
      <xsd:attribute name="rootTenant" type="xsd:string" />
      <xsd:attribute name="timeout" type="xsd:string" />
      <xsd:attribute name="timeoutTypeIeld" type="xsd:string" />
    </xsd:complexType>
  </xsd:element>
  <xsd:complexType name="recordType">
    <xsd:annotation>
      <xsd:documentation>事件資料來源記錄</xsd:documentation>
    </xsd:annotation>

```



```

<xsd:all>
  <!--
    * 最小內容
    */
  -->

  <xsd:element name="EXTEVENTID" type="xsd:string" minOccurs="1" maxOccurs="1" />
  <xsd:element name="TENANT_ID" type="xsd:string" minOccurs="0" maxOccurs="1" />
  <xsd:element name="MODEL_ID" type="xsd:string" minOccurs="0" maxOccurs="1" />
  <xsd:element name="STARTTS" type="alert:iibDateTime" minOccurs="1" maxOccurs="1" />
  <xsd:element name="LASTUPDATEDTS" type="alert:iibDateTime" minOccurs="1" maxOccurs="1" />
  <xsd:element name="SUBJECT" type="xsd:string" minOccurs="1" maxOccurs="1" />
  <xsd:element name="CATEGORY" type="xsd:string" minOccurs="1" maxOccurs="1" />
  <xsd:element name="EVENTYPE" type="xsd:string" minOccurs="1" maxOccurs="1" />
  <xsd:element name="EVENTSUBTYPE" type="xsd:string" minOccurs="0" maxOccurs="1" />
  <xsd:element name="COSTS" type="xsd:string" minOccurs="0" maxOccurs="1" />
  <xsd:element name="CONSEQUENCES" type="xsd:string" minOccurs="0" maxOccurs="1" />
  <xsd:element name="CREATIONTYPE" type="xsd:string" minOccurs="1" maxOccurs="1" />
  <xsd:element name="NETWORK" type="xsd:string" minOccurs="1" maxOccurs="1" />
  <xsd:element name="DOMAIN" type="xsd:string" minOccurs="1" maxOccurs="1" />
  <xsd:element name="STATUS" type="xsd:string" minOccurs="1" maxOccurs="1" />
  <!--
    * 關鍵/完整內容
    */
  -->
  <!-- 需要 (EXTWORKEQUIPMENTID + EXTWORKEQUIPMENTTYPE) 或 LOCATION 其中之一 -->
  <xsd:element name="ENDTS" type="alert:iibDateTime" minOccurs="0" maxOccurs="1" />
  <xsd:element name="EXTWORKEQUIPMENTID" type="xsd:string" minOccurs="0" maxOccurs="1" />
  <xsd:element name="EXTWORKEQUIPMENTTYPE" type="xsd:string" minOccurs="0" maxOccurs="1" />
  <xsd:element name="LOCATION" type="xsd:string" minOccurs="0" maxOccurs="1" />
  <xsd:element name="DESCRIPTION" type="xsd:string" minOccurs="0" maxOccurs="1" />
  <xsd:element name="ADDRESS" type="xsd:string" minOccurs="0" maxOccurs="1" />
  <xsd:element name="OWNER" type="xsd:string" minOccurs="0" maxOccurs="1" />
  <xsd:element name="CREATEDBY" type="xsd:string" minOccurs="0" maxOccurs="1" />
  <xsd:element name="URGENCY" type="xsd:string" minOccurs="0" maxOccurs="1" />
  <xsd:element name="CERTAINTY" type="xsd:string" minOccurs="0" maxOccurs="1" />

```

```

<xsd:element name="ZONE" type="xsd:string" minOccurs="0" maxOccurs="1" />
<xsd:element name="SEVERITY" type="xsd:string" minOccurs="0" maxOccurs="1" />
<xsd:element name="ACK" type="xsd:string" minOccurs="0" maxOccurs="1" />
<xsd:element name="MEASURE" minOccurs="0" maxOccurs="1" >
  <xsd:annotation>
    <xsd:documentation>臨界值屬性網域是 0、1 或 2</xsd:documentation>
  </xsd:annotation>
  <xsd:complexType>
    <xsd:attribute name="value" type="xsd:string" />
    <xsd:attribute name="unit" type="xsd:string" />
    <xsd:attribute name="type" type="xsd:string" />
    <xsd:attribute name="threshold_value" type="xsd:string" />
    <xsd:attribute name="threshold" type="xsd:string" />
  </xsd:complexType>
</xsd:element>
</xsd:all>
</xsd:complexType>
<xsd:simpleType name="iibDateTime">
  <xsd:restriction base="xsd:string">
    <xsd:pattern
value="\d{4}-(0[1-9]|1[012])-(0[1-9]|[12][0-9]|3[01])\s(0[0-9]|[1][0-9]|2[1-3]):([0-5][0-9]):([0-5][0-9]).([0-9]{3})" />
    </xsd:restriction>
  </xsd:simpleType>
</xsd:schema>

```

VDS_IOW-IN-ASSETS-CORE_5210.XSD

```

<?xml version="1.0" encoding="UTF-8"?>
<!--
/*
* Licensed Materials - Property of Veolia Environment-VE and IBM
*
* 5725-D69
*
* © Copyright Veolia Environment-VE 2017.
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*/

V1.8
-->
<xsd:schema targetNamespace="http://vds.com/assetTypes"
  xmlns:asset="http://vds.com/assetTypes"
  xmlns:xsd="http://www.w3.org/2001/XMLSchema"
  elementFormDefault="qualified">
  <xsd:complexType name="modelrefType">
    <xsd:annotation>
      <xsd:documentation>modelref 將參照
        多租戶環境的語意模型的 ID。
        如果 modelref 的 id 屬性是空的，
        則將針對
        預設模型執行所有要求。</xsd:documentation>
      </xsd:annotation>
    <xsd:sequence>
      <xsd:element maxOccurs="unbounded" name="request" type="asset:requestType" />
    </xsd:sequence>
  </xsd:complexType>
</xsd:schema>

```

```

</xsd:sequence>
<xsd:attribute name="id" type="xsd:string" />
</xsd:complexType>
<xsd:complexType name="relationType">
  <xsd:annotation>
    <xsd:documentation>
      RelationType 用來說明資產之間的關係。
    </xsd:documentation>
  </xsd:annotation>
  <xsd:attribute name="relationName" type="xsd:string" />
  <xsd:attribute name="targetExtWorkEquipmentType" type="xsd:string" />
  <xsd:attribute name="targetExtWorkEquipmentId" type="xsd:string" />
</xsd:complexType>
<xsd:complexType name="relationsType">
  <xsd:sequence>
    <xsd:element maxOccurs="unbounded" minOccurs="1" name="relation" type="asset:relationType" />
  </xsd:sequence>
</xsd:complexType>
<xsd:complexType name="thresholdType">
  <xsd:attribute name="range" type="xsd:string" />
  <xsd:attribute name="level" type="xsd:string" />
</xsd:complexType>
<xsd:complexType name="measureTypeType">
  <xsd:sequence>
    <xsd:element minOccurs="0" maxOccurs="3" name="threshold" type="asset:thresholdType" />
  </xsd:sequence>
  <xsd:attribute name="unit" type="xsd:string" />

  <xsd:attribute name="no_reading_timeout" type="xsd:string" />

```

```

<xsd:attribute name="name" type="xsd:string" />
<xsd:attribute name="measureLabel" type="xsd:string" />
<xsd:attribute name="isPrimaryMeasurement" type="xsd:string" />
</xsd:complexType>
<xsd:complexType name="measureTypesType">
  <xsd:sequence>
    <xsd:element minOccurs="1" maxOccurs="unbounded" name="measureType"
      type="asset:measureTypeType" />
  </xsd:sequence>
</xsd:complexType>
<xsd:complexType name="attributeType">
  <xsd:sequence>
    <xsd:element minOccurs="0" maxOccurs="1" name="value"
      type="xsd:string" />
    <xsd:element minOccurs="0" maxOccurs="1" name="unit"
      type="xsd:string" />
  </xsd:sequence>
  <xsd:attribute name="type" type="xsd:string" />
  <xsd:attribute name="name" type="xsd:string" />
</xsd:complexType>
<xsd:complexType name="assetType">
  <xsd:annotation>
    <xsd:documentation>
      AssetType 說明要建立/更新/刪除的資產。
    </xsd:documentation>
  </xsd:annotation>
  <xsd:sequence>
    <xsd:element minOccurs="1" maxOccurs="1" name="internalLocation" type="xsd:string" />
    <xsd:element minOccurs="0" maxOccurs="1" name="relations" type="asset:relationsType" />
  </xsd:sequence>

```

```

<xsd:element minOccurs="0" maxOccurs="unbounded" name="attribute" type="asset:attributeType" />
<xsd:element minOccurs="0" maxOccurs="1" name="measureTypes" type="asset:measureTypesType" />
</xsd:sequence>
<xsd:attribute name="extWorkEquipmentType" type="xsd:string" />
<xsd:attribute name="extWorkEquipmentId" type="xsd:string" />
<xsd:attribute name="assetLabel" type="xsd:string" />
<xsd:attribute name="assetDescription" type="xsd:string" />
<xsd:attribute name="tenantId" type="xsd:string" />
</xsd:complexType>
<xsd:complexType name="requestType">
  <xsd:annotation>
    <xsd:documentation>
      Request 是指將要
      執行的實際作業。它擷取下列資訊：
      - request type :
      建立 / 更新 / 刪除
      - 資產資料（屬性、關係等等）
      要求類型必須是下列其中一項：
      - INSERT：建立資產。
      - DELETE：刪除資產
      - UPDATE：更新資產
    </xsd:documentation>
  </xsd:annotation>
  <xsd:sequence>
    <xsd:element maxOccurs="unbounded" name="asset" type="asset:assetType" />
  </xsd:sequence>
  <xsd:attribute name="type" type="xsd:string" />
</xsd:complexType>

```

```
<xsd:element name="operation">  
  <xsd:annotation>  
    <xsd:documentation>  
      作業是 xml 檔的根元素。它  
      將包含所有要求。  
      rootTenant：所汲取資料的根租戶。  
      時間戳記：xml 檔產生日期。  
    </xsd:documentation>  
  </xsd:annotation>  
  <xsd:complexType>  
    <xsd:sequence>  
      <xsd:element maxOccurs="unbounded" name="modelref" type="asset:modelrefType" />  
    </xsd:sequence>  
    <xsd:attribute name="rootTenant" type="xsd:string" />  
    <xsd:attribute name="timestamp" type="xsd:string" />  
    <xsd:attribute name="timeout" type="xsd:string" />  
    <xsd:attribute name="timeoutTypeId" type="xsd:string" />  
  </xsd:complexType>  
</xsd:element>  
</xsd:schema>
```

VDS_IOW-IN-READINGS-CORE_5201.XSD

```

<?xml version="1.0" encoding="UTF-8"?>
<!--
/*
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*/

V1.8
-->
<xsd:schema targetNamespace="http://vds.com/readingsTypes"
  xmlns:readings="http://vds.com/readingsTypes" xmlns:xsd="http://www.w3.org/2001/XMLSchema"
  elementFormDefault="qualified">
  <xsd:complexType name="readingValueType">
    <xsd:attribute name="value" type="xsd:string" />
    <xsd:attribute name="unit" type="xsd:string" />
    <xsd:attribute name="type" type="xsd:string" />
  </xsd:complexType>
  <xsd:complexType name="readingValuesType">
    <xsd:sequence>
      <xsd:element maxOccurs="unbounded" name="readingValue" type="readings:readingValueType" />
    </xsd:sequence>
  </xsd:complexType>
  <xsd:complexType name="workEquipmentType">
    <xsd:sequence>
      <xsd:element maxOccurs="1" minOccurs="0" name="description" type="xsd:string" />
    </xsd:sequence>
  </xsd:complexType>

```



```

<xsd:element minOccurs="0" maxOccurs="unbounded" name="relations"
                type="readings:relationsType" />
<xsd:element minOccurs="0" maxOccurs="unbounded" name="attributes"
                type="readings:attributesType" />
<xsd:element minOccurs="0" maxOccurs="1" name="measureTypes"
                type="readings:measureTypesType" />
</xsd:sequence>
<xsd:attribute name="location" type="xsd:string" />
<xsd:attribute name="extType" type="xsd:string" />
<xsd:attribute name="extId" type="xsd:string" />
<xsd:attribute name="modelRef" type="xsd:string" />
<xsd:attribute name="tenantId" type="xsd:string" />
<xsd:attribute name="assetLabel" type="xsd:string" />
<xsd:attribute name="assetDescription" type="xsd:string" />
</xsd:complexType>
<xsd:complexType name="readingSetType">
  <xsd:sequence>
    <xsd:element name="workEquipment" type="readings:workEquipmentType" />
    <xsd:element name="readingValues" type="readings:readingValuesType" />
  </xsd:sequence>
  <xsd:attribute name="extReadingSetid" type="xsd:string" />
  <xsd:attribute name="timestamp" type="xsd:string" />
  <xsd:attribute name="extRelatedEvtId" type="xsd:string" />
  <xsd:attribute name="extRelatedEvtType" type="xsd:string" />
</xsd:complexType>
<xsd:complexType name="attributeType">
  <xsd:sequence>
    <xsd:element minOccurs="0" maxOccurs="1" name="value" type="xsd:string" />
    <xsd:element minOccurs="0" maxOccurs="1" name="unit" type="xsd:string" />
  </xsd:sequence>
  <xsd:attribute name="type" type="xsd:string" />
  <xsd:attribute name="name" type="xsd:string" />
</xsd:complexType>
<xsd:complexType name="attributesType">
  <xsd:sequence>
    <xsd:element name="attribute" type="readings:attributeType" />
  </xsd:sequence>

```

```

</xsd:complexType>
<xsd:complexType name="relationType">
  <xsd:attribute name="targetExtWorkEquipmentType" type="xsd:string" />
  <xsd:attribute name="targetExtWorkEquipmentId" type="xsd:string" />
  <xsd:attribute name="type" type="xsd:string" />
</xsd:complexType>
<xsd:complexType name="relationsType">
  <xsd:sequence>
    <xsd:element name="relation" type="readings:relationType" />
  </xsd:sequence>
</xsd:complexType>
<xsd:complexType name="thresholdType">
  <xsd:attribute name="range" type="xsd:string" />
  <xsd:attribute name="level" type="xsd:string" />
</xsd:complexType>
<xsd:complexType name="measureTypeType">
  <xsd:sequence>
    <xsd:element minOccurs="0" maxOccurs="unbounded" name="threshold"
      type="readings:thresholdType" />
  </xsd:sequence>
  <xsd:attribute name="unit" type="xsd:string" />
  <xsd:attribute name="no_reading_timeout" type="xsd:string" />
  <xsd:attribute name="name" type="xsd:string" />
  <xsd:attribute name="isPrimaryMeasurement" type="xsd:string" />
</xsd:complexType>
<xsd:complexType name="measureTypesType">
  <xsd:sequence>
    <xsd:element minOccurs="0" maxOccurs="unbounded" name="measureType"
      type="readings:measureTypeType" />
  </xsd:sequence>
</xsd:complexType>
<xsd:element name="readings">
  <xsd:complexType>
    <xsd:sequence>
      <xsd:element maxOccurs="unbounded" name="readingSet" type="readings:readingSetType" />
    </xsd:sequence>
    <xsd:attribute name="rootTenant" type="xsd:string" />
  </xsd:complexType>
</xsd:element>

```

```
<xsd:attribute name="timeout" type="xsd:string" />  
<xsd:attribute name="timeoutTypeeld" type="xsd:string" />  
</xsd:complexType>  
</xsd:element>  
</xsd:schema>
```

VDS_IOW-IN-SO-CORE_5201.XSD

```

<?xml version="1.0" encoding="UTF-8"?>

<!--
#
# Licensed Materials - Property of Veolia Environment-VE
#
# © Copyright Veolia Environment-VE 2016, 2017.
#
# Users Restricted Rights - Use, duplication or
# disclosure restricted by Contract with Veolia Environment-VE
#
-->
<xsd:schema targetNamespace="http://vds.com/serviceOrdersType"
  xmlns:so="http://vds.com/serviceOrdersType" xmlns:xsd="http://www.w3.org/2001/XMLSchema"
  elementFormDefault="qualified">
  <xsd:complexType name="requestType">
    <xsd:sequence>
      <xsd:element minOccurs="1" maxOccurs="unbounded" name="serviceorder" type="so:serviceOrder" />
    </xsd:sequence>
    <xsd:attribute name="type" type="xsd:string" />
  </xsd:complexType>
  <xsd:complexType name="serviceOrder">
    <xsd:all>
      <xsd:element minOccurs="0" maxOccurs="1" name="EXTERNAL_ID"
        type="xsd:string" />
      <xsd:element minOccurs="0" maxOccurs="1" name="TENANT_ID"
        type="xsd:string" />
      <xsd:element minOccurs="0" maxOccurs="1" name="EAM_ID"
        type="xsd:string" />
      <xsd:element minOccurs="0" maxOccurs="1" name="GIS_ID"
        type="xsd:string" />
      <xsd:element minOccurs="0" maxOccurs="1" name="SITE_ID"
        type="xsd:string" />
      <xsd:element minOccurs="0" maxOccurs="1" name="NAME"
        type="xsd:string" />
      <xsd:element minOccurs="0" maxOccurs="1" name="DESCRIPTION"
        type="xsd:string" />
      <xsd:element minOccurs="0" maxOccurs="1" name="REGISTRATION_NO"
        type="xsd:string" />
      <xsd:element minOccurs="0" maxOccurs="1" name="LOCATION"
        type="xsd:string" />
      <xsd:element minOccurs="0" maxOccurs="1" name="REGISTRATION_DATE"
        type="so:iibDateTime" />
      <xsd:element minOccurs="0" maxOccurs="1" name="OPENING_DATE"

```

```

        type="so:iibDateTime" />
<xsd:element minOccurs="0" maxOccurs="1" name="COMPLETION_DATE"
        type="so:iibDateTime" />
<xsd:element minOccurs="0" maxOccurs="1" name="ATTACHMENTS"
        type="xsd:string" />
<xsd:element minOccurs="0" maxOccurs="1" name="COMPLETION_STATUS"
        type="xsd:string" />
<xsd:element minOccurs="0" maxOccurs="1" name="STATUS"
        type="xsd:string" />
<xsd:element minOccurs="0" maxOccurs="1" name="CATEGORY"
        type="xsd:string" />

<xsd:element minOccurs="0" maxOccurs="1" name="customServiceOrderAttributes"
        type="so:attributes" />
<xsd:element minOccurs="0" maxOccurs="1" name="assets" type="so:assets" />
<xsd:element minOccurs="0" maxOccurs="1" name="workorders" type="so:workorders" />
</xsd:all>
</xsd:complexType>

<xsd:complexType name="attributes">
  <xsd:sequence>
    <xsd:element minOccurs="1" maxOccurs="unbounded" name="attribute" type="so:attribute" />
  </xsd:sequence>
</xsd:complexType>

<xsd:complexType name="assets">
  <xsd:sequence>
    <xsd:element minOccurs="1" maxOccurs="unbounded" name="asset" type="so:asset" />
  </xsd:sequence>
</xsd:complexType>

<xsd:complexType name="workorders">
  <xsd:sequence>
    <xsd:element minOccurs="1" maxOccurs="unbounded" name="workorder" type="so:workorder" />
  </xsd:sequence>
</xsd:complexType>

<xsd:complexType name="attribute">
  <xsd:attribute name="id" type="xsd:string" />
  <xsd:attribute name="type" type="xsd:string" />
  <xsd:attribute name="value" type="xsd:string" />
</xsd:complexType>

<xsd:complexType name="asset">
  <xsd:attribute name="id" type="xsd:string" />
  <xsd:attribute name="type" type="xsd:string" />
  <xsd:attribute name="relationshipType" type="xsd:string" />
</xsd:complexType>

<xsd:complexType name="workorder">
  <xsd:attribute name="id" type="xsd:string" />
  <xsd:attribute name="relationshipType" type="xsd:string" />
</xsd:complexType>

```

```

<xsd:simpleType name="iibDateTime">
  <xsd:restriction base="xsd:string">
    <xsd:pattern
value="\d{4}-(0[1-9]|1[012])-(0[1-9]|1[12][0-9]|3[01])\s(0[0-9]|[1][0-9]|2[1-3]):([0-5][0-9]):([0-5][0-9]).([0-9]{3})" />
    </xsd:restriction>
  </xsd:simpleType>

  <xsd:element name="operations">
    <xsd:complexType>
      <xsd:sequence>
        <xsd:element minOccurs="1" maxOccurs="unbounded" name="request"
                      type="so:requestType">
          </xsd:element>
        </xsd:sequence>
        <xsd:attribute name="rootTenant" type="xsd:string" />
        <xsd:attribute name="timeout" type="xsd:string" />
        <xsd:attribute name="timeoutTypeId" type="xsd:string" />
      </xsd:complexType>
    </xsd:element>
  </xsd:schema>

```

VDS_IOW-IN-WO-CORE_5201.XSD

```

<?xml version="1.0" encoding="UTF-8"?>
<!--
#
# Licensed Materials - Property of Veolia Environment-VE
#
# © Copyright Veolia Environment-VE 2016, 2017.
#
# Users Restricted Rights - Use, duplication or
# disclosure restricted by Contract with Veolia Environment-VE
#
-->
<xsd:schema targetNamespace="http://vds.com/workOrdersType"
  xmlns:wo="http://vds.com/workOrdersType" xmlns:xsd="http://www.w3.org/2001/XMLSchema"
  elementFormDefault="qualified">
  <xsd:complexType name="requestType">
    <xsd:sequence>
      <xsd:element minOccurs="1" maxOccurs="unbounded" name="workorder">
        <xsd:complexType>
          <xsd:all>
            <xsd:element minOccurs="0" maxOccurs="1" name="DATASOURCEID"
              type="xsd:string" />
            <xsd:element minOccurs="0" maxOccurs="1" name="RECORDID"
              type="xsd:string" />
            <xsd:element minOccurs="1" maxOccurs="1" name="WOEXTID"
              type="xsd:string" />
            <xsd:element minOccurs="0" maxOccurs="1" name="TENANT_ID"
              type="xsd:string" />
            <xsd:element minOccurs="0" maxOccurs="1" name="MODEL_ID"
              type="xsd:string" />
            <xsd:element minOccurs="1" maxOccurs="1" name="SUBJECT"
              type="xsd:string" />
            <xsd:element minOccurs="0" maxOccurs="1" name="DESCRIPTION"
              type="xsd:string" />
          </xsd:all>
        </xsd:complexType>
      </xsd:element>
    </xsd:sequence>
  </xsd:complexType>
</xsd:schema>

```

```
<xsd:element minOccurs="1" maxOccurs="1" name="DOMAIN"
                    type="xsd:string" />
<xsd:element minOccurs="0" maxOccurs="1" name="CATEGORY"
                    type="xsd:string" />
<xsd:element minOccurs="0" maxOccurs="1" name="WORKORDERTYPE"
                    type="xsd:string" />
<xsd:element minOccurs="0" maxOccurs="1" name="WORKTYPE"
                    type="xsd:string" />
<xsd:element minOccurs="0" maxOccurs="1" name="SUBTYPE"
                    type="xsd:string" />
<xsd:element minOccurs="0" maxOccurs="1" name="FAILURE"
                    type="xsd:string" />
<xsd:element minOccurs="0" maxOccurs="1" name="PRIORITY"
                    type="xsd:string" />
<xsd:element minOccurs="1" maxOccurs="1" name="STATUS"
                    type="xsd:string" />
<xsd:element minOccurs="0" maxOccurs="1" name="JOBPLAN"
                    type="xsd:string" />
<xsd:element minOccurs="1" maxOccurs="1" name="CREATIONDATE"
                    type="wo:iibDateTime" />
<xsd:element minOccurs="1" maxOccurs="1" name="CREATIONTYPE"
                    type="xsd:string" />
<xsd:element minOccurs="1" maxOccurs="1" name="CREATEDBY"
                    type="xsd:string" />
<xsd:element minOccurs="0" maxOccurs="1" name="TARGETSTARTDATE"
                    type="wo:iibDateTime" />
<xsd:element minOccurs="0" maxOccurs="1" name="TARGETENDDATE"
                    type="wo:iibDateTime" />
<xsd:element minOccurs="0" maxOccurs="1" name="ACTSTARTDATE"
                    type="wo:iibDateTime" />
<xsd:element minOccurs="0" maxOccurs="1" name="ACTENDDATE"
                    type="wo:iibDateTime" />
<xsd:element minOccurs="1" maxOccurs="1" name="LASTUPDATEDTS"
                    type="wo:iibDateTime" />
<xsd:element minOccurs="0" maxOccurs="1" name="ZONE"
                    type="xsd:string" />
```



```

<xsd:element minOccurs="0" maxOccurs="1" name="LOCATION"
                type="xsd:string" />
<xsd:element minOccurs="0" maxOccurs="1" name="URL"
                type="xsd:string" />
<xsd:element minOccurs="0" maxOccurs="1" name="EXTWORKEQUIPMENTID"
                type="xsd:string" />
<xsd:element minOccurs="0" maxOccurs="1" name="EXTWORKEQUIPMENTTYPE"
                type="xsd:string" />
<xsd:element minOccurs="0" maxOccurs="1" name="UPDATEDBY"
                type="xsd:string" />
<xsd:element minOccurs="0" maxOccurs="1" name="LEAD"
                type="xsd:string" />
<xsd:element minOccurs="1" maxOccurs="1" name="NETWORK"
                type="xsd:string" />
<xsd:element minOccurs="0" maxOccurs="1" name="ADDRESS"
                type="xsd:string" />
<xsd:element minOccurs="0" maxOccurs="1" name="PERFORMEDBY"
                type="xsd:string" />
<xsd:element minOccurs="0" maxOccurs="1" name="LOCOWNERID"
                type="xsd:string" />
<xsd:element minOccurs="0" maxOccurs="1" name="LOCOWNERDETAILS"
                type="xsd:string" />
<xsd:element minOccurs="0" maxOccurs="1" name="LOCCONTACTID"
                type="xsd:string" />
<xsd:element minOccurs="0" maxOccurs="1" name="ISSUERCOMPANY"
                type="xsd:string" />
<xsd:element minOccurs="0" maxOccurs="1" name="AFFECTED"
                type="xsd:string" />
<xsd:element minOccurs="0" maxOccurs="1" name="LOCCONTACTDETAILS"
                type="xsd:string" />
<xsd:element minOccurs="0" maxOccurs="1" name="REPORT"
                type="xsd:string" />
<xsd:element minOccurs="0" maxOccurs="1" name="SITE_ID"
                type="xsd:string" />
<xsd:element name="SRCEVENTLIST" type="wo:srcEventListType"
                maxOccurs="1" minOccurs="0">
</xsd:element>

```

```

    <xsd:element minOccurs="0" maxOccurs="1" name="customWorkOrderAttributes"
                type="wo:attributes" />
    <xsd:element minOccurs="0" maxOccurs="1" name="assets" type="wo:assets" />
  </xsd:all>
</xsd:complexType>
</xsd:element>
</xsd:sequence>
<xsd:attribute name="type" type="xsd:string" />
</xsd:complexType>
<xsd:element name="operations">
  <xsd:complexType>
    <xsd:sequence>
      <xsd:element minOccurs="1" maxOccurs="unbounded" name="request"
                  type="wo:requestType">
        </xsd:element>
      </xsd:sequence>
      <xsd:attribute name="rootTenant" type="xsd:string" />
      <xsd:attribute name="timeout" type="xsd:string" />
      <xsd:attribute name="timeoutTypeId" type="xsd:string" />
    </xsd:complexType>
  </xsd:element>
</xsd:complexType name="srcEventType">
  <xsd:all>
    <xsd:element name="SRCEVTCATEGORY" maxOccurs="1"
                minOccurs="1" type="xsd:string">
      </xsd:element>
    <xsd:element name="SRCEVTTYPE" type="xsd:string"
                maxOccurs="1" minOccurs="1">
      <xsd:annotation>
        <xsd:documentation>
          如果 SRCEVTCATEGORY = ALERT 或 EVENT，這是
          IOW EVENTTYPE，如果 SRCEVTCATEGORY =
          WORKORDER，這是 IOW
          WORKORDER DOMAIN，如果
          SRCEVTCATEGORY = NOREADING 或
          READINGTHRESHOLD，這是 IOW
          MEASUREMENTTYPE
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
  </xsd:all>

```

```

    </xsd:documentation>
  </xsd:annotation>
</xsd:element>
<xsd:element name="SRCEVTID" type="xsd:string" maxOccurs="1"
              minOccurs="0">
  <xsd:annotation>
    <xsd:documentation>
      如果 SRCEVTCATEGORY = ALERT 或 EVENT，這是
      IOW EXTEVENTID，如果 SRCEVTCATEGORY =
      WORKORDER，這是
      IOW WOEXTID，如果
      SRCEVTCATEGORY = NOREADING 或 READINGTHRESHOLD，
      這是 IOW MEASUREMENT_ID（僅用於 WO OUT）
    </xsd:documentation>
  </xsd:annotation>
</xsd:element>
<xsd:element name="SRCEVTDATETIME" type="wo:iibDateTime" maxOccurs="1" minOccurs="1">
</xsd:element>
<xsd:element name="SRCEVTORIGVALUE" type="xsd:string" maxOccurs="1" minOccurs="0">
</xsd:element>
<xsd:element name="SRCEVTCURRVALUE" type="xsd:string" maxOccurs="1" minOccurs="0">
</xsd:element>
<xsd:element name="SRCEVTCURRVALUESETS" type="wo:iibDateTime"
              maxOccurs="1" minOccurs="0">
</xsd:element>
<xsd:element name="SRCEVTCOMMENT" type="xsd:string"
              maxOccurs="1" minOccurs="0">
</xsd:element>
<xsd:element name="SOPREFERENCE" type="xsd:string"
              maxOccurs="1" minOccurs="0"></xsd:element>
</xsd:all>
</xsd:complexType>
<xsd:complexType name="srcEventListType">
  <xsd:sequence>
    <xsd:element name="SRCEVENT" type="wo:srcEventType"
              maxOccurs="unbounded" minOccurs="0"></xsd:element>
  </xsd:sequence>
</xsd:complexType>

```

```

</xsd:complexType>
<xsd:complexType name="attributes">
  <xsd:sequence>
    <xsd:element minOccurs="1" maxOccurs="unbounded" name="attribute" type="wo:attribute" />
  </xsd:sequence>
</xsd:complexType>

<xsd:complexType name="assets">
  <xsd:sequence>
    <xsd:element minOccurs="1" maxOccurs="unbounded" name="asset" type="wo:asset" />
  </xsd:sequence>
</xsd:complexType>

<xsd:complexType name="attribute">
  <xsd:attribute name="id" type="xsd:string" />
  <xsd:attribute name="type" type="xsd:string" />
  <xsd:attribute name="value" type="xsd:string" />
</xsd:complexType>

<xsd:complexType name="asset">
  <xsd:attribute name="id" type="xsd:string" />
  <xsd:attribute name="type" type="xsd:string" />
  <xsd:attribute name="relationshipType" type="xsd:string" />
</xsd:complexType>

<xsd:simpleType name="iibDateTime">
  <xsd:restriction base="xsd:string">
    <xsd:pattern
value="\d{4}-(0[1-9]|1[012])-(0[1-9]|[12][0-9]|3[01])\s(0[0-9]|[1][0-9]|2[1-3]):([0-5][0-9]):([0-5][0-9]).([0-9]{3})" />
    </xsd:restriction>
  </xsd:simpleType>
</xsd:schema>

```

附錄 F : 5.2.0.2 版的 XSD 檔案

VDS_IOW-IN-ALERTS-CORE_5201.XSD

```

<?xml version="1.0" encoding="UTF-8"?>
<!--
/*
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*
* 5725-D69
* © Copyright Veolia Environment-VE 2017.
* © Copyright International Business Machines Corporation 2012, 2017.
*
* 針對 IBM Corporation 提供的版本、版次與修訂版：US Government Users
* Restricted Rights - Use, duplication or disclosure restricted by GSA ADP Schedule Contract
* with IBM Corporation.
*/

V1.8
-->
<xsd:schema targetNamespace="http://vds.com/alertsType"
  xmlns:alert="http://vds.com/alertsType"
  xmlns:xsd="http://www.w3.org/2001/XMLSchema"
  elementFormDefault="qualified">
  <xsd:element name="operations">
    <xsd:complexType>
      <xsd:sequence>
        <xsd:element minOccurs="1" maxOccurs="unbounded" name="record" type="alert:recordType"/>
      </xsd:sequence>
      <xsd:attribute name="rootTenant" type="xsd:string" />
      <xsd:attribute name="timeout" type="xsd:string" />
      <xsd:attribute name="timeoutTypeIeld" type="xsd:string" />
    </xsd:complexType>
  </xsd:element>
  <xsd:complexType name="recordType">
    <xsd:annotation>
      <xsd:documentation>事件資料來源記錄</xsd:documentation>
    </xsd:annotation>

```

```

<xsd:all>
  <!--
    * 最小內容
    */
  -->

  <xsd:element name="EXTEVENTID" type="xsd:string" minOccurs="1" maxOccurs="1" />
  <xsd:element name="TENANT_ID" type="xsd:string" minOccurs="0" maxOccurs="1" />
  <xsd:element name="MODEL_ID" type="xsd:string" minOccurs="0" maxOccurs="1" />
  <xsd:element name="STARTTS" type="xsd:dateTime" minOccurs="1" maxOccurs="1" />
  <xsd:element name="LASTUPDATEDTS" type="xsd:dateTime" minOccurs="1" maxOccurs="1" />
  <xsd:element name="SUBJECT" type="xsd:string" minOccurs="1" maxOccurs="1" />
  <xsd:element name="CATEGORY" type="xsd:string" minOccurs="1" maxOccurs="1" />
  <xsd:element name="EVENTYPE" type="xsd:string" minOccurs="1" maxOccurs="1" />
  <xsd:element name="EVENTSUBTYPE" type="xsd:string" minOccurs="0" maxOccurs="1" />
  <xsd:element name="COSTS" type="xsd:string" minOccurs="0" maxOccurs="1" />
  <xsd:element name="CONSEQUENCES" type="xsd:string" minOccurs="0" maxOccurs="1" />
  <xsd:element name="CREATIONTYPE" type="xsd:string" minOccurs="1" maxOccurs="1" />
  <xsd:element name="NETWORK" type="xsd:string" minOccurs="1" maxOccurs="1" />
  <xsd:element name="DOMAIN" type="xsd:string" minOccurs="1" maxOccurs="1" />
  <xsd:element name="STATUS" type="xsd:string" minOccurs="1" maxOccurs="1" />
  <!--
    * 關鍵/完整內容
    */
  -->
  <!-- 需要 (EXTWORKEQUIPMENTID + EXTWORKEQUIPMENTTYPE) 或 LOCATION 其中之一 -->
  <xsd:element name="ENDTS" type="xsd:dateTime" minOccurs="0" maxOccurs="1" />
  <xsd:element name="EXTWORKEQUIPMENTID" type="xsd:string" minOccurs="0" maxOccurs="1" />
  <xsd:element name="EXTWORKEQUIPMENTTYPE" type="xsd:string" minOccurs="0" maxOccurs="1" />
  <xsd:element name="LOCATION" type="xsd:string" minOccurs="0" maxOccurs="1" />
  <xsd:element name="DESCRIPTION" type="xsd:string" minOccurs="0" maxOccurs="1" />
  <xsd:element name="ADDRESS" type="xsd:string" minOccurs="0" maxOccurs="1" />
  <xsd:element name="OWNER" type="xsd:string" minOccurs="0" maxOccurs="1" />
  <xsd:element name="CREATEDBY" type="xsd:string" minOccurs="0" maxOccurs="1" />
  <xsd:element name="URGENCY" type="xsd:string" minOccurs="0" maxOccurs="1" />
  <xsd:element name="CERTAINTY" type="xsd:string" minOccurs="0" maxOccurs="1" />

```

```
<xsd:element name="ZONE" type="xsd:string" minOccurs="0" maxOccurs="1" />
<xsd:element name="SEVERITY" type="xsd:string" minOccurs="0" maxOccurs="1" />
<xsd:element name="ACK" type="xsd:string" minOccurs="0" maxOccurs="1" />
<xsd:element name="MEASURE" minOccurs="0" maxOccurs="1" >
  <xsd:annotation>
    <xsd:documentation>臨界值屬性網域是 0、1 或 2</xsd:documentation>
  </xsd:annotation>
  <xsd:complexType>
    <xsd:attribute name="value" type="xsd:string" />
    <xsd:attribute name="unit" type="xsd:string" />
    <xsd:attribute name="type" type="xsd:string" />
    <xsd:attribute name="threshold_value" type="xsd:string" />
    <xsd:attribute name="threshold" type="xsd:string" />
  </xsd:complexType>
</xsd:element>
</xsd:all>
</xsd:complexType>
</xsd:schema>
```

VDS_IOW-IN-ASSETS-CORE_5210.XSD

```

<?xml version="1.0" encoding="UTF-8"?>
<!--
/*
* Licensed Materials - Property of Veolia Environment-VE and IBM
*
* 5725-D69
*
* © Copyright Veolia Environment-VE 2017.
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*
* 針對 IBM Corporation 提供的版本、版次與修訂版：US Government Users
* Restricted Rights - Use, duplication or disclosure restricted by GSA ADP Schedule Contract
* with IBM Corporation.
*/

V1.8
-->
<xsd:schema targetNamespace="http://vds.com/assetTypes"
  xmlns:asset="http://vds.com/assetTypes"
  xmlns:xsd="http://www.w3.org/2001/XMLSchema"
  elementFormDefault="qualified">
  <xsd:complexType name="modelrefType">
    <xsd:annotation>
      <xsd:documentation>modelref 將參照
        多租戶環境的語意模型的 ID。
        如果 modelref 的 id 屬性是空的，
        則將針對
        預設模型執行所有要求。</xsd:documentation>
      </xsd:annotation>
    <xsd:sequence>

```



```

    <xsd:element maxOccurs="unbounded" name="request" type="asset:requestType" />
  </xsd:sequence>
  <xsd:attribute name="id" type="xsd:string" />
</xsd:complexType>
<xsd:complexType name="relationType">
  <xsd:annotation>
    <xsd:documentation>
      RelationType 用來說明資產之間的關係。
    </xsd:documentation>
  </xsd:annotation>
  <xsd:attribute name="relationName" type="xsd:string" />
  <xsd:attribute name="targetExtWorkEquipmentType" type="xsd:string" />
  <xsd:attribute name="targetExtWorkEquipmentId" type="xsd:string" />
</xsd:complexType>
<xsd:complexType name="relationsType">
  <xsd:sequence>
    <xsd:element maxOccurs="unbounded" minOccurs="1" name="relation" type="asset:relationType" />
  </xsd:sequence>
</xsd:complexType>
<xsd:complexType name="thresholdType">
  <xsd:attribute name="range" type="xsd:string" />
  <xsd:attribute name="level" type="xsd:string" />
</xsd:complexType>
<xsd:complexType name="measureTypeType">
  <xsd:sequence>
    <xsd:element minOccurs="0" maxOccurs="3" name="threshold" type="asset:thresholdType" />
  </xsd:sequence>
  <xsd:attribute name="unit" type="xsd:string" />

```

```

<xsd:attribute name="no_reading_timeout" type="xsd:string" />
<xsd:attribute name="name" type="xsd:string" />
<xsd:attribute name="measureLabel" type="xsd:string" />
<xsd:attribute name="isPrimaryMeasurement" type="xsd:string" />
</xsd:complexType>
<xsd:complexType name="measureTypesType">
  <xsd:sequence>
    <xsd:element minOccurs="1" maxOccurs="unbounded" name="measureType"
      type="asset:measureTypeType" />
  </xsd:sequence>
</xsd:complexType>
<xsd:complexType name="attributeType">
  <xsd:sequence>
    <xsd:element minOccurs="0" maxOccurs="1" name="value"
      type="xsd:string" />
    <xsd:element minOccurs="0" maxOccurs="1" name="unit"
      type="xsd:string" />
  </xsd:sequence>
  <xsd:attribute name="type" type="xsd:string" />
  <xsd:attribute name="name" type="xsd:string" />
</xsd:complexType>
<xsd:complexType name="assetType">
  <xsd:annotation>
    <xsd:documentation>
      AssetType 說明要建立/更新/刪除的資產。
    </xsd:documentation>
  </xsd:annotation>
  <xsd:sequence>

```

```

<xsd:element minOccurs="1" maxOccurs="1" name="internalLocation" type="xsd:string" />
<xsd:element minOccurs="0" maxOccurs="1" name="relations" type="asset:relationsType" />
<xsd:element minOccurs="0" maxOccurs="unbounded" name="attribute" type="asset:attributeType" />
<xsd:element minOccurs="0" maxOccurs="1" name="measureTypes" type="asset:measureTypesType" />
</xsd:sequence>
<xsd:attribute name="extWorkEquipmentType" type="xsd:string" />
<xsd:attribute name="extWorkEquipmentId" type="xsd:string" />
<xsd:attribute name="assetLabel" type="xsd:string" />
<xsd:attribute name="assetDescription" type="xsd:string" />
<xsd:attribute name="tenantId" type="xsd:string" />
</xsd:complexType>
<xsd:complexType name="requestType">
  <xsd:annotation>
    <xsd:documentation>
      Request 是指將要
      執行的實際作業。它擷取下列資訊：
      - request type :
      建立 / 更新 / 刪除
      - 資產資料（屬性、關係等等）
      要求類型必須是下列其中一項：
      - INSERT：建立資產。
      - DELETE：刪除資產
      - UPDATE：更新資產
    </xsd:documentation>
  </xsd:annotation>
  <xsd:sequence>
    <xsd:element maxOccurs="unbounded" name="asset" type="asset:assetType" />
  </xsd:sequence>

```

```

    <xsd:attribute name="type" type="xsd:string" />
</xsd:complexType>
<xsd:element name="operation">
  <xsd:annotation>
    <xsd:documentation>
      作業是 xml 檔的根元素。它
      將包含所有要求。
      rootTenant：所汲取資料的根租戶。
      時間戳記：xml 檔產生日期。
    </xsd:documentation>
  </xsd:annotation>
</xsd:complexType>
<xsd:sequence>
  <xsd:element maxOccurs="unbounded" name="modelref" type="asset:modelrefType" />
</xsd:sequence>
  <xsd:attribute name="rootTenant" type="xsd:string" />
  <xsd:attribute name="timestamp" type="xsd:string" />
  <xsd:attribute name="timeout" type="xsd:string" />
  <xsd:attribute name="timeoutTypeId" type="xsd:string" />
</xsd:complexType>
</xsd:element>
</xsd:schema>

```

VDS_IOW-IN-READINGS-CORE_1.7.XSD

```

<?xml version="1.0" encoding="UTF-8"?>
<!--
/*
* Licensed Materials - Property of IBM
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* 5725-D69
*
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*
* 針對 IBM Corporation 提供的版本、版次與修訂版：US Government Users
* Restricted Rights - Use, duplication or disclosure restricted by GSA ADP Schedule Contract
* with IBM Corporation.
*/

V1.8
-->
<xsd:schema targetNamespace="http://vds.com/readingsTypes"
  xmlns:readings="http://vds.com/readingsTypes" xmlns:xsd="http://www.w3.org/2001/XMLSchema"
  elementFormDefault="qualified">
  <xsd:complexType name="readingValueType">
    <xsd:attribute name="value" type="xsd:string" />
    <xsd:attribute name="unit" type="xsd:string" />
    <xsd:attribute name="type" type="xsd:string" />
  </xsd:complexType>
  <xsd:complexType name="readingValuesType">
    <xsd:sequence>
      <xsd:element maxOccurs="unbounded" name="readingValue" type="readings:readingValueType" />
    </xsd:sequence>
  </xsd:complexType>
  <xsd:complexType name="workEquipmentType">
    <xsd:sequence>
      <xsd:element maxOccurs="1" minOccurs="0" name="description" type="xsd:string" />
      <xsd:element minOccurs="0" maxOccurs="unbounded" name="relations"
        type="readings:relationsType" />
    </xsd:sequence>
  </xsd:complexType>
</xsd:schema>

```

```

<xsd:element minOccurs="0" maxOccurs="unbounded" name="attributes"
                type="readings:attributesType" />
<xsd:element minOccurs="0" maxOccurs="1" name="measureTypes"
                type="readings:measureTypesType" />
</xsd:sequence>
<xsd:attribute name="location" type="xsd:string" />
<xsd:attribute name="extType" type="xsd:string" />
<xsd:attribute name="extId" type="xsd:string" />
<xsd:attribute name="modelRef" type="xsd:string" />
<xsd:attribute name="assetLabel" type="xsd:string" />
<xsd:attribute name="assetDescription" type="xsd:string" />
</xsd:complexType>
<xsd:complexType name="readingSetType">
  <xsd:sequence>
    <xsd:element name="workEquipment" type="readings:workEquipmentType" />
    <xsd:element name="readingValues" type="readings:readingValuesType" />
  </xsd:sequence>
  <xsd:attribute name="extReadingSetid" type="xsd:string" />
  <xsd:attribute name="timestamp" type="xsd:string" />
  <xsd:attribute name="extRelatedEvtId" type="xsd:string" />
  <xsd:attribute name="extRelatedEvtType" type="xsd:string" />
</xsd:complexType>
<xsd:complexType name="attributeType">
  <xsd:sequence>
    <xsd:element minOccurs="0" maxOccurs="1" name="value" type="xsd:string" />
    <xsd:element minOccurs="0" maxOccurs="1" name="unit" type="xsd:string" />
  </xsd:sequence>
  <xsd:attribute name="type" type="xsd:string" />
  <xsd:attribute name="name" type="xsd:string" />
</xsd:complexType>
<xsd:complexType name="attributesType">
  <xsd:sequence>
    <xsd:element name="attribute" type="readings:attributeType" />
  </xsd:sequence>
</xsd:complexType>

```

```

<xsd:complexType name="relationType">
  <xsd:attribute name="targetExtWorkEquipmentType" type="xsd:string" />
  <xsd:attribute name="targetExtWorkEquipmentId" type="xsd:string" />
  <xsd:attribute name="type" type="xsd:string" />
</xsd:complexType>
<xsd:complexType name="relationsType">
  <xsd:sequence>
    <xsd:element name="relation" type="readings:relationType" />
  </xsd:sequence>
</xsd:complexType>
<xsd:complexType name="thresholdType">
  <xsd:attribute name="range" type="xsd:string" />
  <xsd:attribute name="level" type="xsd:string" />
</xsd:complexType>
<xsd:complexType name="measureTypeType">
  <xsd:sequence>
    <xsd:element minOccurs="0" maxOccurs="3" name="threshold"
      type="readings:thresholdType" />
  </xsd:sequence>
  <xsd:attribute name="unit" type="xsd:string" />
  <xsd:attribute name="name" type="xsd:string" />
  <xsd:attribute name="isPrimaryMeasurement" type="xsd:string" />
</xsd:complexType>
<xsd:complexType name="measureTypesType">
  <xsd:sequence>
    <xsd:element minOccurs="0" maxOccurs="unbounded" name="measureType"
      type="readings:measureTypeType" />
  </xsd:sequence>
</xsd:complexType>
<xsd:element name="readings">
  <xsd:complexType>
    <xsd:sequence>
      <xsd:element maxOccurs="unbounded" name="readingSet" type="readings:readingSetType" />
    </xsd:sequence>
  </xsd:complexType>
</xsd:element>
</xsd:schema>

```

VDS_IOW-IN-SO-CORE_5201.XSD

```

<?xml version="1.0" encoding="UTF-8"?>

<!--
#
# Licensed Materials - Property of Veolia Environment-VE
#
# © Copyright Veolia Environment-VE 2016, 2017.
#
# Users Restricted Rights - Use, duplication or
# disclosure restricted by Contract with Veolia Environment-VE
#
-->
<xsd:schema targetNamespace="http://vds.com/serviceOrdersType"
  xmlns:so="http://vds.com/serviceOrdersType" xmlns:xsd="http://www.w3.org/2001/XMLSchema"
  elementFormDefault="qualified">
  <xsd:complexType name="requestType">
    <xsd:sequence>
      <xsd:element minOccurs="1" maxOccurs="unbounded" name="serviceorder" type="so:serviceOrder" />
    </xsd:sequence>
    <xsd:attribute name="type" type="xsd:string" />
  </xsd:complexType>
  <xsd:complexType name="serviceOrder">
    <xsd:all>
      <xsd:element minOccurs="0" maxOccurs="1" name="EXTERNAL_ID"
        type="xsd:string" />
      <xsd:element minOccurs="0" maxOccurs="1" name="TENANT_ID"
        type="xsd:string" />
      <xsd:element minOccurs="0" maxOccurs="1" name="EAM_ID"
        type="xsd:string" />
      <xsd:element minOccurs="0" maxOccurs="1" name="GIS_ID"
        type="xsd:string" />
      <xsd:element minOccurs="0" maxOccurs="1" name="SITE_ID"
        type="xsd:string" />
      <xsd:element minOccurs="0" maxOccurs="1" name="NAME"
        type="xsd:string" />
      <xsd:element minOccurs="0" maxOccurs="1" name="DESCRIPTION"
        type="xsd:string" />
      <xsd:element minOccurs="0" maxOccurs="1" name="REGISTRATION_NO"
        type="xsd:string" />
      <xsd:element minOccurs="0" maxOccurs="1" name="LOCATION"
        type="xsd:string" />
      <xsd:element minOccurs="0" maxOccurs="1" name="REGISTRATION_DATE"
        type="xsd:string" />
      <xsd:element minOccurs="0" maxOccurs="1" name="OPENING_DATE"

```



```

        type="xsd:string" />
<xsd:element minOccurs="0" maxOccurs="1" name="COMPLETION_DATE"
        type="xsd:string" />
<xsd:element minOccurs="0" maxOccurs="1" name="ATTACHMENTS"
        type="xsd:string" />
<xsd:element minOccurs="0" maxOccurs="1" name="COMPLETION_STATUS"
        type="xsd:string" />
<xsd:element minOccurs="0" maxOccurs="1" name="STATUS"
        type="xsd:string" />
<xsd:element minOccurs="0" maxOccurs="1" name="CATEGORY"
        type="xsd:string" />

<xsd:element minOccurs="0" maxOccurs="1" name="customServiceOrderAttributes"
        type="so:attributes" />
<xsd:element minOccurs="0" maxOccurs="1" name="assets" type="so:assets" />
<xsd:element minOccurs="0" maxOccurs="1" name="workorders" type="so:workorders" />
</xsd:all>
</xsd:complexType>

<xsd:complexType name="attributes">
  <xsd:sequence>
    <xsd:element minOccurs="1" maxOccurs="unbounded" name="attribute" type="so:attribute" />
  </xsd:sequence>
</xsd:complexType>

<xsd:complexType name="assets">
  <xsd:sequence>
    <xsd:element minOccurs="1" maxOccurs="unbounded" name="asset" type="so:asset" />
  </xsd:sequence>
</xsd:complexType>

<xsd:complexType name="workorders">
  <xsd:sequence>
    <xsd:element minOccurs="1" maxOccurs="unbounded" name="workorder" type="so:workorder" />
  </xsd:sequence>
</xsd:complexType>

<xsd:complexType name="attribute">
  <xsd:attribute name="id" type="xsd:string" />
  <xsd:attribute name="type" type="xsd:string" />
  <xsd:attribute name="value" type="xsd:string" />
</xsd:complexType>

<xsd:complexType name="asset">
  <xsd:attribute name="id" type="xsd:string" />
  <xsd:attribute name="type" type="xsd:string" />
</xsd:complexType>

<xsd:complexType name="workorder">
  <xsd:attribute name="id" type="xsd:string" />
  <xsd:attribute name="relationshipType" type="xsd:string" />
</xsd:complexType>

```

```
<xsd:element name="operations">
  <xsd:complexType>
    <xsd:sequence>
      <xsd:element minOccurs="1" maxOccurs="unbounded" name="request"
                    type="so:requestType">
        </xsd:element>
      </xsd:sequence>
      <xsd:attribute name="rootTenant" type="xsd:string" />
      <xsd:attribute name="timeout" type="xsd:string" />
      <xsd:attribute name="timeoutTypeId" type="xsd:string" />
    </xsd:complexType>
  </xsd:element>
</xsd:schema>
```

VDS_IOW-IN-WO-CORE_5201.XSD

```

<?xml version="1.0" encoding="UTF-8"?>
<!--
#
# Licensed Materials - Property of Veolia Environment-VE
#
# © Copyright Veolia Environment-VE 2016, 2017.
#
# Users Restricted Rights - Use, duplication or
# disclosure restricted by Contract with Veolia Environment-VE
#
-->
<xsd:schema targetNamespace="http://vds.com/workOrdersType"
  xmlns:wo="http://vds.com/workOrdersType" xmlns:xsd="http://www.w3.org/2001/XMLSchema"
  elementFormDefault="qualified">
  <xsd:complexType name="requestType">
    <xsd:sequence>
      <xsd:element minOccurs="1" maxOccurs="unbounded" name="workorder">
        <xsd:complexType>
          <xsd:all>
            <xsd:element minOccurs="0" maxOccurs="1" name="DATASOURCEID"
              type="xsd:string" />
            <xsd:element minOccurs="0" maxOccurs="1" name="RECORDID"
              type="xsd:string" />
            <xsd:element minOccurs="1" maxOccurs="1" name="WOEXTID"
              type="xsd:string" />
            <xsd:element minOccurs="0" maxOccurs="1" name="TENANT_ID"
              type="xsd:string" />
            <xsd:element minOccurs="0" maxOccurs="1" name="MODEL_ID"
              type="xsd:string" />
            <xsd:element minOccurs="1" maxOccurs="1" name="SUBJECT"
              type="xsd:string" />
            <xsd:element minOccurs="0" maxOccurs="1" name="DESCRIPTION"
              type="xsd:string" />
          </xsd:all>
        </xsd:complexType>
      </xsd:element>
    </xsd:sequence>
  </xsd:complexType>
</xsd:schema>

```

```
<xsd:element minOccurs="1" maxOccurs="1" name="DOMAIN"
                type="xsd:string" />
<xsd:element minOccurs="0" maxOccurs="1" name="CATEGORY"
                type="xsd:string" />
<xsd:element minOccurs="0" maxOccurs="1" name="WORKORDERTYPE"
                type="xsd:string" />
<xsd:element minOccurs="0" maxOccurs="1" name="WORKTYPE"
                type="xsd:string" />
<xsd:element minOccurs="0" maxOccurs="1" name="SUBTYPE"
                type="xsd:string" />
<xsd:element minOccurs="0" maxOccurs="1" name="FAILURE"
                type="xsd:string" />
<xsd:element minOccurs="0" maxOccurs="1" name="PRIORITY"
                type="xsd:string" />
<xsd:element minOccurs="1" maxOccurs="1" name="STATUS"
                type="xsd:string" />
<xsd:element minOccurs="0" maxOccurs="1" name="JOBPLAN"
                type="xsd:string" />
<xsd:element minOccurs="1" maxOccurs="1" name="CREATIONDATE"
                type="wo:iibDateTime" />
<xsd:element minOccurs="1" maxOccurs="1" name="CREATIONTYPE"
                type="xsd:string" />
<xsd:element minOccurs="1" maxOccurs="1" name="CREATEDBY"
                type="xsd:string" />
<xsd:element minOccurs="0" maxOccurs="1" name="TARGETSTARTDATE"
                type="wo:iibDateTime" />
<xsd:element minOccurs="0" maxOccurs="1" name="TARGETENDDATE"
                type="wo:iibDateTime" />
<xsd:element minOccurs="0" maxOccurs="1" name="ACTSTARTDATE"
                type="wo:iibDateTime" />
<xsd:element minOccurs="0" maxOccurs="1" name="ACTENDDATE"
                type="wo:iibDateTime" />
<xsd:element minOccurs="1" maxOccurs="1" name="LASTUPDATEDTS"
                type="wo:iibDateTime" />
<xsd:element minOccurs="0" maxOccurs="1" name="ZONE"
                type="xsd:string" />
```

```

<xsd:element minOccurs="0" maxOccurs="1" name="LOCATION"
                type="xsd:string" />
<xsd:element minOccurs="0" maxOccurs="1" name="URL"
                type="xsd:string" />
<xsd:element minOccurs="0" maxOccurs="1" name="EXTWORKEQUIPMENTID"
                type="xsd:string" />
<xsd:element minOccurs="0" maxOccurs="1" name="EXTWORKEQUIPMENTTYPE"
                type="xsd:string" />
<xsd:element minOccurs="0" maxOccurs="1" name="UPDATEDBY"
                type="xsd:string" />
<xsd:element minOccurs="0" maxOccurs="1" name="LEAD"
                type="xsd:string" />
<xsd:element minOccurs="1" maxOccurs="1" name="NETWORK"
                type="xsd:string" />
<xsd:element minOccurs="0" maxOccurs="1" name="ADDRESS"
                type="xsd:string" />
    <xsd:element minOccurs="0" maxOccurs="1" name="PERFORMEDBY"
                type="xsd:string" />
<xsd:element minOccurs="0" maxOccurs="1" name="LOCOWNERID"
                type="xsd:string" />
<xsd:element minOccurs="0" maxOccurs="1" name="LOCOWNERDETAILS"
                type="xsd:string" />
<xsd:element minOccurs="0" maxOccurs="1" name="LOCCONTACTID"
                type="xsd:string" />
<xsd:element minOccurs="0" maxOccurs="1" name="ISSUERCOMPANY"
                type="xsd:string" />
<xsd:element minOccurs="0" maxOccurs="1" name="AFFECTED"
                type="xsd:string" />
<xsd:element minOccurs="0" maxOccurs="1" name="LOCCONTACTDETAILS"
                type="xsd:string" />
<xsd:element minOccurs="0" maxOccurs="1" name="REPORT"
                type="xsd:string" />
<xsd:element minOccurs="0" maxOccurs="1" name="SITE_ID"
                type="xsd:string" />
    <xsd:element name="SRCEVENTLIST" type="wo:srcEventListType"
                maxOccurs="1" minOccurs="0">
</xsd:element>

```

```

    <xsd:element minOccurs="0" maxOccurs="1" name="customWorkOrderAttributes"
                type="wo:attributes" />
    <xsd:element minOccurs="0" maxOccurs="1" name="assets" type="wo:assets" />
  </xsd:all>
</xsd:complexType>
</xsd:element>
</xsd:sequence>
<xsd:attribute name="type" type="xsd:string" />
</xsd:complexType>
<xsd:element name="operations">
  <xsd:complexType>
    <xsd:sequence>
      <xsd:element minOccurs="1" maxOccurs="unbounded" name="request"
                  type="wo:requestType">
        </xsd:element>
      </xsd:sequence>
      <xsd:attribute name="rootTenant" type="xsd:string" />
      <xsd:attribute name="timeout" type="xsd:string" />
      <xsd:attribute name="timeoutTypeId" type="xsd:string" />
    </xsd:complexType>
  </xsd:element>
<xsd:complexType name="srcEventType">
  <xsd:all>
    <xsd:element name="SRCEVTCATEGORY" maxOccurs="1"
                minOccurs="1" type="xsd:string">
      </xsd:element>
    <xsd:element name="SRCEVTTYPE" type="xsd:string"
                maxOccurs="1" minOccurs="1">
      <xsd:annotation>
        <xsd:documentation>
          如果 SRCEVTCATEGORY = ALERT 或 EVENT，這是
          IOW EVENTTYPE，如果 SRCEVTCATEGORY =
          WORKORDER，這是 IOW
          WORKORDER DOMAIN，如果
          SRCEVTCATEGORY = NOREADING 或
          READINGTHRESHOLD，這是 IOW
          MEASUREMENTTYPE
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
  </xsd:all>
</xsd:complexType>

```

```

    </xsd:documentation>
  </xsd:annotation>
</xsd:element>
<xsd:element name="SRCEVTID" type="xsd:string" maxOccurs="1"
              minOccurs="0">
  <xsd:annotation>
    <xsd:documentation>
      如果 SRCEVTCATEGORY = ALERT 或 EVENT，這是
      IOW EXTEVENTID，如果 SRCEVTCATEGORY =
      WORKORDER，這是
      IOW WOEXTID，如果
      SRCEVTCATEGORY = NOREADING 或 READINGTHRESHOLD，
      這是 IOW MEASUREMENT_ID（僅用於 WO OUT）
    </xsd:documentation>
  </xsd:annotation>
</xsd:element>
<xsd:element name="SRCEVTDATETIME" type="wo:iibDateTime" maxOccurs="1" minOccurs="1">
</xsd:element>
<xsd:element name="SRCEVTORIGVALUE" type="xsd:string" maxOccurs="1" minOccurs="0">
</xsd:element>
<xsd:element name="SRCEVTCURRVALUE" type="xsd:string" maxOccurs="1" minOccurs="0">
</xsd:element>
<xsd:element name="SRCEVTCURRVALUESETS" type="wo:iibDateTime"
                maxOccurs="1" minOccurs="0">
</xsd:element>
<xsd:element name="SRCEVTCOMMENT" type="xsd:string"
                maxOccurs="1" minOccurs="0">
</xsd:element>
<xsd:element name="SOPREFERENCE" type="xsd:string"
                maxOccurs="1" minOccurs="0"></xsd:element>
</xsd:all>
</xsd:complexType>
<xsd:complexType name="srcEventListType">
  <xsd:sequence>
    <xsd:element name="SRCEVENT" type="wo:srcEventType"
                  maxOccurs="unbounded" minOccurs="0"></xsd:element>
  </xsd:sequence>
</xsd:complexType>

```

```

</xsd:complexType>

<xsd:complexType name="attributes">
  <xsd:sequence>
    <xsd:element minOccurs="1" maxOccurs="unbounded" name="attribute" type="wo:attribute" />
  </xsd:sequence>
</xsd:complexType>

<xsd:complexType name="assets">
  <xsd:sequence>
    <xsd:element minOccurs="1" maxOccurs="unbounded" name="asset" type="wo:asset" />
  </xsd:sequence>
</xsd:complexType>

<xsd:complexType name="attribute">
  <xsd:attribute name="id" type="xsd:string" />
  <xsd:attribute name="type" type="xsd:string" />
  <xsd:attribute name="value" type="xsd:string" />
</xsd:complexType>

<xsd:complexType name="asset">
  <xsd:attribute name="id" type="xsd:string" />
  <xsd:attribute name="type" type="xsd:string" />
</xsd:complexType>

<xsd:simpleType name="iibDateTime">
  <xsd:restriction base="xsd:string">
    <xsd:pattern
value="\d{4}-(0[1-9]|1[012])-(0[1-9]|[12][0-9]|3[01])\s(0[0-9]|[1][0-9]|2[1-3]):([0-5][0-9]):([0-5][0-9]).([0-9]{3})" />
    </xsd:restriction>
  </xsd:simpleType>
</xsd:schema>

```


附錄 G : 5.2.0.1 版的 XSD 檔案

VDS_IOW-IN-ALERTS-CORE_5201.XSD

```

<?xml version="1.0" encoding="UTF-8"?>
<!--
/*
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*
* 5725-D69
* © Copyright Veolia Environment-VE 2017.
* © Copyright International Business Machines Corporation 2012, 2017.
*
* 針對 IBM Corporation 提供的版本、版次與修訂版：US Government Users
* Restricted Rights - Use, duplication or disclosure restricted by GSA ADP Schedule Contract
* with IBM Corporation.
*/

V1.8
-->
<xsd:schema targetNamespace="http://vds.com/alertsType"
  xmlns:alert="http://vds.com/alertsType"
  xmlns:xsd="http://www.w3.org/2001/XMLSchema"
  elementFormDefault="qualified">
  <xsd:element name="operations">
    <xsd:complexType>
      <xsd:sequence>
        <xsd:element minOccurs="1" maxOccurs="unbounded" name="record" type="alert:recordType"/>
      </xsd:sequence>
      <xsd:attribute name="rootTenant" type="xsd:string" />
      <xsd:attribute name="timeout" type="xsd:string" />
      <xsd:attribute name="timeoutTypeIeld" type="xsd:string" />
    </xsd:complexType>
  </xsd:element>
  <xsd:complexType name="recordType">
    <xsd:annotation>
      <xsd:documentation>事件資料來源記錄</xsd:documentation>
    </xsd:annotation>

```

```

<xsd:all>
  <!--
    * 最小內容
    */
  -->

  <xsd:element name="EXTEVENTID" type="xsd:string" minOccurs="1" maxOccurs="1" />
  <xsd:element name="TENANT_ID" type="xsd:string" minOccurs="0" maxOccurs="1" />
  <xsd:element name="MODEL_ID" type="xsd:string" minOccurs="0" maxOccurs="1" />
  <xsd:element name="STARTTS" type="xsd:dateTime" minOccurs="1" maxOccurs="1" />
  <xsd:element name="LASTUPDATEDTS" type="xsd:dateTime" minOccurs="1" maxOccurs="1" />
  <xsd:element name="SUBJECT" type="xsd:string" minOccurs="1" maxOccurs="1" />
  <xsd:element name="CATEGORY" type="xsd:string" minOccurs="1" maxOccurs="1" />
  <xsd:element name="EVENTYPE" type="xsd:string" minOccurs="1" maxOccurs="1" />
  <xsd:element name="EVENTSUBTYPE" type="xsd:string" minOccurs="0" maxOccurs="1" />
  <xsd:element name="COSTS" type="xsd:string" minOccurs="0" maxOccurs="1" />
  <xsd:element name="CONSEQUENCES" type="xsd:string" minOccurs="0" maxOccurs="1" />
  <xsd:element name="CREATIONTYPE" type="xsd:string" minOccurs="1" maxOccurs="1" />
  <xsd:element name="NETWORK" type="xsd:string" minOccurs="1" maxOccurs="1" />
  <xsd:element name="DOMAIN" type="xsd:string" minOccurs="1" maxOccurs="1" />
  <xsd:element name="STATUS" type="xsd:string" minOccurs="1" maxOccurs="1" />
  <!--
    * 關鍵/完整內容
    */
  -->
  <!-- 需要 (EXTWORKEQUIPMENTID + EXTWORKEQUIPMENTTYPE) 或 LOCATION 其中之一 -->
  <xsd:element name="ENDTS" type="xsd:dateTime" minOccurs="0" maxOccurs="1" />
  <xsd:element name="EXTWORKEQUIPMENTID" type="xsd:string" minOccurs="0" maxOccurs="1" />
  <xsd:element name="EXTWORKEQUIPMENTTYPE" type="xsd:string" minOccurs="0" maxOccurs="1" />
  <xsd:element name="LOCATION" type="xsd:string" minOccurs="0" maxOccurs="1" />
  <xsd:element name="DESCRIPTION" type="xsd:string" minOccurs="0" maxOccurs="1" />
  <xsd:element name="ADDRESS" type="xsd:string" minOccurs="0" maxOccurs="1" />
  <xsd:element name="OWNER" type="xsd:string" minOccurs="0" maxOccurs="1" />
  <xsd:element name="CREATEDBY" type="xsd:string" minOccurs="0" maxOccurs="1" />
  <xsd:element name="URGENCY" type="xsd:string" minOccurs="0" maxOccurs="1" />
  <xsd:element name="CERTAINTY" type="xsd:string" minOccurs="0" maxOccurs="1" />

```

```
<xsd:element name="ZONE" type="xsd:string" minOccurs="0" maxOccurs="1" />
<xsd:element name="SEVERITY" type="xsd:string" minOccurs="0" maxOccurs="1" />
<xsd:element name="ACK" type="xsd:string" minOccurs="0" maxOccurs="1" />
<xsd:element name="MEASURE" minOccurs="0" maxOccurs="1" >
  <xsd:annotation>
    <xsd:documentation>臨界值屬性網域是 0、1 或 2</xsd:documentation>
  </xsd:annotation>
  <xsd:complexType>
    <xsd:attribute name="value" type="xsd:string" />
    <xsd:attribute name="unit" type="xsd:string" />
    <xsd:attribute name="type" type="xsd:string" />
    <xsd:attribute name="threshold_value" type="xsd:string" />
    <xsd:attribute name="threshold" type="xsd:string" />
  </xsd:complexType>
</xsd:element>
</xsd:all>
</xsd:complexType>
</xsd:schema>
```

VDS_IOW-IN-ASSETS-CORE_5210.XSD

```

<?xml version="1.0" encoding="UTF-8"?>
<!--
/*
* Licensed Materials - Property of Veolia Environment-VE and IBM
*
* 5725-D69
*
* © Copyright Veolia Environment-VE 2017.
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*
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* with IBM Corporation.
*/

V1.8
-->
<xsd:schema targetNamespace="http://vds.com/assetTypes"
  xmlns:asset="http://vds.com/assetTypes"
  xmlns:xsd="http://www.w3.org/2001/XMLSchema"
  elementFormDefault="qualified">
  <xsd:complexType name="modelrefType">
    <xsd:annotation>
      <xsd:documentation>modelref 將參照
        多租戶環境的語意模型的 ID。
        如果 modelref 的 id 屬性是空的，
        則將針對
        預設模型執行所有要求。</xsd:documentation>
      </xsd:annotation>
    <xsd:sequence>

```

```

    <xsd:element maxOccurs="unbounded" name="request" type="asset:requestType" />
  </xsd:sequence>
  <xsd:attribute name="id" type="xsd:string" />
</xsd:complexType>
<xsd:complexType name="relationType">
  <xsd:annotation>
    <xsd:documentation>
      RelationType 用來說明資產之間的關係。
    </xsd:documentation>
  </xsd:annotation>
  <xsd:attribute name="relationName" type="xsd:string" />
  <xsd:attribute name="targetExtWorkEquipmentType" type="xsd:string" />
  <xsd:attribute name="targetExtWorkEquipmentId" type="xsd:string" />
</xsd:complexType>
<xsd:complexType name="relationsType">
  <xsd:sequence>
    <xsd:element maxOccurs="unbounded" minOccurs="1" name="relation" type="asset:relationType" />
  </xsd:sequence>
</xsd:complexType>
<xsd:complexType name="thresholdType">
  <xsd:attribute name="range" type="xsd:string" />
  <xsd:attribute name="level" type="xsd:string" />
</xsd:complexType>
<xsd:complexType name="measureTypeType">
  <xsd:sequence>
    <xsd:element minOccurs="0" maxOccurs="3" name="threshold" type="asset:thresholdType" />
  </xsd:sequence>
  <xsd:attribute name="unit" type="xsd:string" />

```

```

<xsd:attribute name="no_reading_timeout" type="xsd:string" />
<xsd:attribute name="name" type="xsd:string" />
<xsd:attribute name="measureLabel" type="xsd:string" />
<xsd:attribute name="isPrimaryMeasurement" type="xsd:string" />
</xsd:complexType>
<xsd:complexType name="measureTypesType">
  <xsd:sequence>
    <xsd:element minOccurs="1" maxOccurs="unbounded" name="measureType"
      type="asset:measureTypeType" />
  </xsd:sequence>
</xsd:complexType>
<xsd:complexType name="attributeType">
  <xsd:sequence>
    <xsd:element minOccurs="0" maxOccurs="1" name="value"
      type="xsd:string" />
    <xsd:element minOccurs="0" maxOccurs="1" name="unit"
      type="xsd:string" />
  </xsd:sequence>
  <xsd:attribute name="type" type="xsd:string" />
  <xsd:attribute name="name" type="xsd:string" />
</xsd:complexType>
<xsd:complexType name="assetType">
  <xsd:annotation>
    <xsd:documentation>
      AssetType 是要說明所要建立/更新/刪除的資產。
    </xsd:documentation>
  </xsd:annotation>
  <xsd:sequence>

```

```

<xsd:element minOccurs="1" maxOccurs="1" name="internalLocation" type="xsd:string" />
<xsd:element minOccurs="0" maxOccurs="1" name="relations" type="asset:relationsType" />
<xsd:element minOccurs="0" maxOccurs="unbounded" name="attribute" type="asset:attributeType" />
<xsd:element minOccurs="0" maxOccurs="1" name="measureTypes" type="asset:measureTypesType" />
</xsd:sequence>
<xsd:attribute name="extWorkEquipmentType" type="xsd:string" />
<xsd:attribute name="extWorkEquipmentId" type="xsd:string" />
<xsd:attribute name="assetLabel" type="xsd:string" />
<xsd:attribute name="assetDescription" type="xsd:string" />
<xsd:attribute name="tenantId" type="xsd:string" />
</xsd:complexType>
<xsd:complexType name="requestType">
  <xsd:annotation>
    <xsd:documentation>
      Request 是指將要
      執行的實際作業。它擷取下列資訊：
      - request type :
      CREATE / UPDATE / DELETE
      - 資產資料（屬性、關係等等）
      要求類型必須是下列其中一項：
      - INSERT：建立資產。
      - DELETE：刪除資產。
      - UPDATE：更新資產。
    </xsd:documentation>
  </xsd:annotation>
  <xsd:sequence>
    <xsd:element maxOccurs="unbounded" name="asset" type="asset:assetType" />
  </xsd:sequence>

```

```

    <xsd:attribute name="type" type="xsd:string" />
</xsd:complexType>
<xsd:element name="operation">
  <xsd:annotation>
    <xsd:documentation>
      作業是 xml 檔的根元素。它
      將包含所有要求。
      rootTenant：所汲取資料的根租戶。
      時間戳記：xml 檔產生日期。
    </xsd:documentation>
  </xsd:annotation>
</xsd:complexType>
<xsd:sequence>
  <xsd:element maxOccurs="unbounded" name="modelref" type="asset:modelrefType" />
</xsd:sequence>
  <xsd:attribute name="rootTenant" type="xsd:string" />
  <xsd:attribute name="timestamp" type="xsd:string" />
  <xsd:attribute name="timeout" type="xsd:string" />
  <xsd:attribute name="timeoutTypeId" type="xsd:string" />
</xsd:complexType>
</xsd:element>
</xsd:schema>

```


VDS_IOW-IN-READINGS-CORE_1.7.XSD

```

<?xml version="1.0" encoding="UTF-8"?>
<!--
/*
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* with IBM Corporation.
*/

V1.8
-->
<xsd:schema targetNamespace="http://vds.com/readingsTypes"
  xmlns:readings="http://vds.com/readingsTypes" xmlns:xsd="http://www.w3.org/2001/XMLSchema"
  elementFormDefault="qualified">
  <xsd:complexType name="readingValueType">
    <xsd:attribute name="value" type="xsd:string" />
    <xsd:attribute name="unit" type="xsd:string" />
    <xsd:attribute name="type" type="xsd:string" />
  </xsd:complexType>
  <xsd:complexType name="readingValuesType">
    <xsd:sequence>
      <xsd:element maxOccurs="unbounded" name="readingValue" type="readings:readingValueType" />
    </xsd:sequence>
  </xsd:complexType>
  <xsd:complexType name="workEquipmentType">
    <xsd:sequence>
      <xsd:element maxOccurs="1" minOccurs="0" name="description" type="xsd:string" />
      <xsd:element minOccurs="0" maxOccurs="unbounded" name="relations"
        type="readings:relationsType" />
    </xsd:sequence>
  </xsd:complexType>
</xsd:schema>

```

```

<xsd:element minOccurs="0" maxOccurs="unbounded" name="attributes"
                type="readings:attributesType" />
<xsd:element minOccurs="0" maxOccurs="1" name="measureTypes"
                type="readings:measureTypesType" />
</xsd:sequence>
<xsd:attribute name="location" type="xsd:string" />
<xsd:attribute name="extType" type="xsd:string" />
<xsd:attribute name="extId" type="xsd:string" />
<xsd:attribute name="modelRef" type="xsd:string" />
<xsd:attribute name="assetLabel" type="xsd:string" />
<xsd:attribute name="assetDescription" type="xsd:string" />
</xsd:complexType>
<xsd:complexType name="readingSetType">
  <xsd:sequence>
    <xsd:element name="workEquipment" type="readings:workEquipmentType" />
    <xsd:element name="readingValues" type="readings:readingValuesType" />
  </xsd:sequence>
  <xsd:attribute name="extReadingSetid" type="xsd:string" />
  <xsd:attribute name="timestamp" type="xsd:string" />
  <xsd:attribute name="extRelatedEvtId" type="xsd:string" />
  <xsd:attribute name="extRelatedEvtType" type="xsd:string" />
</xsd:complexType>
<xsd:complexType name="attributeType">
  <xsd:sequence>
    <xsd:element minOccurs="0" maxOccurs="1" name="value" type="xsd:string" />
    <xsd:element minOccurs="0" maxOccurs="1" name="unit" type="xsd:string" />
  </xsd:sequence>
  <xsd:attribute name="type" type="xsd:string" />
  <xsd:attribute name="name" type="xsd:string" />
</xsd:complexType>
<xsd:complexType name="attributesType">
  <xsd:sequence>
    <xsd:element name="attribute" type="readings:attributeType" />
  </xsd:sequence>
</xsd:complexType>

```

```

<xsd:complexType name="relationType">
  <xsd:attribute name="targetExtWorkEquipmentType" type="xsd:string" />
  <xsd:attribute name="targetExtWorkEquipmentId" type="xsd:string" />
  <xsd:attribute name="type" type="xsd:string" />
</xsd:complexType>
<xsd:complexType name="relationsType">
  <xsd:sequence>
    <xsd:element name="relation" type="readings:relationType" />
  </xsd:sequence>
</xsd:complexType>
<xsd:complexType name="thresholdType">
  <xsd:attribute name="range" type="xsd:string" />
  <xsd:attribute name="level" type="xsd:string" />
</xsd:complexType>
<xsd:complexType name="measureTypeType">
  <xsd:sequence>
    <xsd:element minOccurs="0" maxOccurs="3" name="threshold"
      type="readings:thresholdType" />
  </xsd:sequence>
  <xsd:attribute name="unit" type="xsd:string" />
  <xsd:attribute name="name" type="xsd:string" />
  <xsd:attribute name="isPrimaryMeasurement" type="xsd:string" />
</xsd:complexType>
<xsd:complexType name="measureTypesType">
  <xsd:sequence>
    <xsd:element minOccurs="0" maxOccurs="unbounded" name="measureType"
      type="readings:measureTypeType" />
  </xsd:sequence>
</xsd:complexType>
<xsd:element name="readings">
  <xsd:complexType>
    <xsd:sequence>
      <xsd:element maxOccurs="unbounded" name="readingSet" type="readings:readingSetType" />
    </xsd:sequence>
  </xsd:complexType>
</xsd:element>
</xsd:schema>

```

VDS_IOW-IN-SO-CORE_5201.XSD

```

<?xml version="1.0" encoding="UTF-8"?>

<!--
#
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#
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#
-->
<xsd:schema targetNamespace="http://vds.com/serviceOrdersType"
  xmlns:so="http://vds.com/serviceOrdersType" xmlns:xsd="http://www.w3.org/2001/XMLSchema"
  elementFormDefault="qualified">
  <xsd:complexType name="requestType">
    <xsd:sequence>
      <xsd:element minOccurs="1" maxOccurs="unbounded" name="serviceorder" type="so:serviceOrder" />
    </xsd:sequence>
    <xsd:attribute name="type" type="xsd:string" />
  </xsd:complexType>
  <xsd:complexType name="serviceOrder">
    <xsd:all>
      <xsd:element minOccurs="0" maxOccurs="1" name="EXTERNAL_ID"
        type="xsd:string" />
      <xsd:element minOccurs="0" maxOccurs="1" name="TENANT_ID"
        type="xsd:string" />
      <xsd:element minOccurs="0" maxOccurs="1" name="EAM_ID"
        type="xsd:string" />
      <xsd:element minOccurs="0" maxOccurs="1" name="GIS_ID"
        type="xsd:string" />
      <xsd:element minOccurs="0" maxOccurs="1" name="SITE_ID"
        type="xsd:string" />
      <xsd:element minOccurs="0" maxOccurs="1" name="NAME"
        type="xsd:string" />
      <xsd:element minOccurs="0" maxOccurs="1" name="DESCRIPTION"
        type="xsd:string" />
      <xsd:element minOccurs="0" maxOccurs="1" name="REGISTRATION_NO"
        type="xsd:string" />
      <xsd:element minOccurs="0" maxOccurs="1" name="LOCATION"
        type="xsd:string" />

      <xsd:element minOccurs="0" maxOccurs="1" name="REGISTRATION_DATE"

```

```

        type="xsd:string" />
<xsd:element minOccurs="0" maxOccurs="1" name="OPENING_DATE"
        type="xsd:string" />
<xsd:element minOccurs="0" maxOccurs="1" name="COMPLETION_DATE"
        type="xsd:string" />
<xsd:element minOccurs="0" maxOccurs="1" name="ATTACHMENTS"
        type="xsd:string" />
<xsd:element minOccurs="0" maxOccurs="1" name="COMPLETION_STATUS"
        type="xsd:string" />
<xsd:element minOccurs="0" maxOccurs="1" name="STATUS"
        type="xsd:string" />
<xsd:element minOccurs="0" maxOccurs="1" name="CATEGORY"
        type="xsd:dateTime" />

<xsd:element minOccurs="0" maxOccurs="1" name="customServiceOrderAttributes"
        type="so:attributes" />
<xsd:element minOccurs="0" maxOccurs="1" name="assets" type="so:assets" />
<xsd:element minOccurs="0" maxOccurs="1" name="workorders" type="so:workorders" />
</xsd:all>
</xsd:complexType>

<xsd:complexType name="attributes">
  <xsd:sequence>
    <xsd:element minOccurs="1" maxOccurs="unbounded" name="attribute" type="so:attribute" />
  </xsd:sequence>
</xsd:complexType>

<xsd:complexType name="assets">
  <xsd:sequence>
    <xsd:element minOccurs="1" maxOccurs="unbounded" name="asset" type="so:asset" />
  </xsd:sequence>
</xsd:complexType>

<xsd:complexType name="workorders">
  <xsd:sequence>
    <xsd:element minOccurs="1" maxOccurs="unbounded" name="workorder" type="so:workorder" />
  </xsd:sequence>
</xsd:complexType>

<xsd:complexType name="attribute">
  <xsd:attribute name="id" type="xsd:string" />
  <xsd:attribute name="type" type="xsd:string" />
  <xsd:attribute name="value" type="xsd:string" />
</xsd:complexType>

<xsd:complexType name="asset">
  <xsd:attribute name="id" type="xsd:string" />
</xsd:complexType>

<xsd:complexType name="workorder">

  <xsd:attribute name="id" type="xsd:string" />
  <xsd:attribute name="relationshipType" type="xsd:string" />

```

```
</xsd:complexType>
<xsd:element name="operations">
  <xsd:complexType>
    <xsd:sequence>
      <xsd:element minOccurs="1" maxOccurs="unbounded" name="request"
                    type="so:requestType">
        </xsd:element>
      </xsd:sequence>
      <xsd:attribute name="rootTenant" type="xsd:string" />
      <xsd:attribute name="timeout" type="xsd:string" />
      <xsd:attribute name="timeoutTypeId" type="xsd:string" />
    </xsd:complexType>
  </xsd:element>
</xsd:schema>
```

VDS_IOW-IN-WO-CORE_5201.XSD

```

<?xml version="1.0" encoding="UTF-8"?>
<!--
#
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#
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#
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#
-->
<xsd:schema targetNamespace="http://vds.com/workOrdersType"
  xmlns:wo="http://vds.com/workOrdersType" xmlns:xsd="http://www.w3.org/2001/XMLSchema"
  elementFormDefault="qualified">
  <xsd:complexType name="requestType">
    <xsd:sequence>
      <xsd:element minOccurs="1" maxOccurs="unbounded" name="workorder">
        <xsd:complexType>
          <xsd:all>
            <xsd:element minOccurs="0" maxOccurs="1" name="DATASOURCEID"
              type="xsd:string" />
            <xsd:element minOccurs="0" maxOccurs="1" name="RECORDID"
              type="xsd:string" />
            <xsd:element minOccurs="1" maxOccurs="1" name="WOEXTID"
              type="xsd:string" />
            <xsd:element minOccurs="0" maxOccurs="1" name="TENANT_ID"
              type="xsd:string" />
            <xsd:element minOccurs="0" maxOccurs="1" name="MODEL_ID"
              type="xsd:string" />
            <xsd:element minOccurs="1" maxOccurs="1" name="SUBJECT"
              type="xsd:string" />
            <xsd:element minOccurs="0" maxOccurs="1" name="DESCRIPTION"
              type="xsd:string" />
          </xsd:all>
        </xsd:complexType>
      </xsd:element>
    </xsd:sequence>
  </xsd:complexType>
</xsd:schema>

```

```
<xsd:element minOccurs="1" maxOccurs="1" name="DOMAIN"
                type="xsd:string" />
<xsd:element minOccurs="0" maxOccurs="1" name="CATEGORY"
                type="xsd:string" />
<xsd:element minOccurs="0" maxOccurs="1" name="WORKORDERTYPE"
                type="xsd:string" />
<xsd:element minOccurs="0" maxOccurs="1" name="WORKTYPE"
                type="xsd:string" />
<xsd:element minOccurs="0" maxOccurs="1" name="SUBTYPE"
                type="xsd:string" />
<xsd:element minOccurs="0" maxOccurs="1" name="FAILURE"
                type="xsd:string" />
<xsd:element minOccurs="0" maxOccurs="1" name="PRIORITY"
                type="xsd:string" />
<xsd:element minOccurs="1" maxOccurs="1" name="STATUS"
                type="xsd:string" />
<xsd:element minOccurs="0" maxOccurs="1" name="JOBPLAN"
                type="xsd:string" />
<xsd:element minOccurs="1" maxOccurs="1" name="CREATIONDATE"
                type="xsd:dateTime" />
<xsd:element minOccurs="1" maxOccurs="1" name="CREATIONTYPE"
                type="xsd:string" />
<xsd:element minOccurs="1" maxOccurs="1" name="CREATEDBY"
                type="xsd:string" />
<xsd:element minOccurs="0" maxOccurs="1" name="TARGETSTARTDATE"
                type="xsd:dateTime" />
<xsd:element minOccurs="0" maxOccurs="1" name="TARGETENDDATE"
                type="xsd:dateTime" />
<xsd:element minOccurs="0" maxOccurs="1" name="ACTSTARTDATE"
                type="xsd:dateTime" />
<xsd:element minOccurs="0" maxOccurs="1" name="ACTENDDATE"
                type="xsd:dateTime" />
<xsd:element minOccurs="1" maxOccurs="1" name="LASTUPDATEDTS"
                type="xsd:dateTime" />
<xsd:element minOccurs="0" maxOccurs="1" name="ZONE"
                type="xsd:string" />
```



```
<xsd:element minOccurs="0" maxOccurs="1" name="LOCATION"
                type="xsd:string" />
<xsd:element minOccurs="0" maxOccurs="1" name="customWorkOrderAttributes"
                type="wo:attributes" />
<xsd:element minOccurs="0" maxOccurs="1" name="assets" type="wo:assets" />
<xsd:element minOccurs="0" maxOccurs="1" name="URL"
                type="xsd:string" />
<xsd:element minOccurs="0" maxOccurs="1" name="EXTWORKEQUIPMENTID"
                type="xsd:string" />
<xsd:element minOccurs="0" maxOccurs="1" name="EXTWORKEQUIPMENTTYPE"
                type="xsd:string" />
<xsd:element minOccurs="0" maxOccurs="1" name="UPDATEDBY"
                type="xsd:string" />
<xsd:element minOccurs="0" maxOccurs="1" name="LEAD"
                type="xsd:string" />
<xsd:element minOccurs="1" maxOccurs="1" name="NETWORK"
                type="xsd:string" />
<xsd:element minOccurs="0" maxOccurs="1" name="ADDRESS"
                type="xsd:string" />
<xsd:element minOccurs="0" maxOccurs="1" name="PERFORMEDBY"
                type="xsd:string" />
<xsd:element minOccurs="0" maxOccurs="1" name="LOCOWNERID"
                type="xsd:string" />
<xsd:element minOccurs="0" maxOccurs="1" name="LOCOWNERDETAILS"
                type="xsd:string" />
<xsd:element minOccurs="0" maxOccurs="1" name="LOCCONTACTID"
                type="xsd:string" />
<xsd:element minOccurs="0" maxOccurs="1" name="ISSUERCOMPANY"
                type="xsd:string" />
<xsd:element minOccurs="0" maxOccurs="1" name="AFFECTED"
                type="xsd:string" />
<xsd:element minOccurs="0" maxOccurs="1" name="LOCCONTACTDETAILS"
                type="xsd:string" />
<xsd:element minOccurs="0" maxOccurs="1" name="REPORT"
                type="xsd:string" />
```

```

    <xsd:element minOccurs="0" maxOccurs="1" name="SITE_ID"
                type="xsd:string" />
    <xsd:element name="SRCEVENTLIST" type="wo:srcEventListType"
                maxOccurs="1" minOccurs="0">
        </xsd:element>
    </xsd:all>
</xsd:complexType>
</xsd:element>
</xsd:sequence>
<xsd:attribute name="type" type="xsd:string" />
</xsd:complexType>
<xsd:element name="operations">
    <xsd:complexType>
        <xsd:sequence>
            <xsd:element minOccurs="1" maxOccurs="unbounded" name="request"
                        type="wo:requestType">
                </xsd:element>
            </xsd:sequence>
            <xsd:attribute name="rootTenant" type="xsd:string" />
            <xsd:attribute name="timeout" type="xsd:string" />
            <xsd:attribute name="timeoutTypeId" type="xsd:string" />
        </xsd:complexType>
    </xsd:element>
<xsd:complexType name="srcEventType">
    <xsd:all>
        <xsd:element name="SRCEVTCATEGORY" maxOccurs="1"
                    minOccurs="1" type="xsd:string">
            </xsd:element>
        <xsd:element name="SRCEVTTYPE" type="xsd:string"
                    maxOccurs="1" minOccurs="1">
            </xsd:element>
        <xsd:annotation>
            <xsd:documentation>
                如果 SRCEVTCATEGORY = ALERT 或 EVENT，這是
                IOW EVENTTYPE，如果 SRCEVTCATEGORY =
                WORKORDER，這是 IOW
                WORKORDER DOMAIN，如果

```

```

        SRCEVTCATEGORY = NOREADING 或
        READINGTHRESHOLD ， 這是 IOW
        MEASUREMENTTYPE
    </xsd:documentation>

    </xsd:annotation>
</xsd:element>
<xsd:element name="SRCEVTID" type="xsd:string" maxOccurs="1"
                minOccurs="0">
    <xsd:annotation>
        <xsd:documentation>
            如果 SRCEVTCATEGORY = ALERT 或 EVENT ， 這是
            IOW EXTEVENTID ， 如果 SRCEVTCATEGORY =
            WORKORDER ， 這是
            IOW WOEXTID ， 如果
            SRCEVTCATEGORY = NOREADING 或 READINGTHRESHOLD ，
            這是 IOW MEASUREMENT_ID （ 僅用於 WO OUT ）
        </xsd:documentation>
    </xsd:annotation>
</xsd:element>
<xsd:element name="SRCEVTDATE" type="xsd:dateTime" maxOccurs="1" minOccurs="1">
</xsd:element>
<xsd:element name="SRCEVTORIGVALUE" type="xsd:string" maxOccurs="1" minOccurs="0">
</xsd:element>
<xsd:element name="SRCEVTCURRVALUE" type="xsd:string" maxOccurs="1" minOccurs="0">
</xsd:element>
<xsd:element name="SRCEVTCURRVALUESETS" type="xsd:dateTime"
                maxOccurs="1" minOccurs="0">
</xsd:element>
<xsd:element name="SRCEVTCOMMENT" type="xsd:string"
                maxOccurs="1" minOccurs="0">
</xsd:element>
<xsd:element name="SOPREFERENCE" type="xsd:string"
                maxOccurs="1" minOccurs="0"></xsd:element>
</xsd:all>
</xsd:complexType>
<xsd:complexType name="srcEventListType">

```

```

<xsd:sequence>
  <xsd:element name="SRCEVENT" type="wo:srcEventType"
    maxOccurs="unbounded" minOccurs="0"></xsd:element>
</xsd:sequence>
</xsd:complexType>

<xsd:complexType name="attributes">
  <xsd:sequence>
    <xsd:element minOccurs="1" maxOccurs="unbounded" name="attribute" type="wo:attribute" />
  </xsd:sequence>
</xsd:complexType>

<xsd:complexType name="assets">
  <xsd:sequence>
    <xsd:element minOccurs="1" maxOccurs="unbounded" name="asset" type="wo:asset" />
  </xsd:sequence>
</xsd:complexType>

<xsd:complexType name="attribute">
  <xsd:attribute name="id" type="xsd:string" />
  <xsd:attribute name="type" type="xsd:string" />
  <xsd:attribute name="value" type="xsd:string" />
</xsd:complexType>

<xsd:complexType name="asset">
  <xsd:attribute name="id" type="xsd:string" />
</xsd:complexType>
</xsd:schema>

```

附錄 H : 5.1 版和 5.2.0 版的 XSD 檔案

VDS_IOW-IN-ALERTS-CORE_1.7.XSD

```
<?xml version="1.0" encoding="UTF-8"?>
<!--
/*
* Licensed Materials - Property of IBM
*
* 5725-D69
*
* © Copyright International Business Machines Corporation 2012.
*
* 針對 IBM Corporation 提供的版本、版次與修訂版：US Government Users
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* with IBM Corporation.
*/

V1.8
-->
<xsd:schema targetNamespace="http://vds.com/alertsType"
            xmlns:alert="http://vds.com/alertsType"
            xmlns:xsd="http://www.w3.org/2001/XMLSchema"
            elementFormDefault="qualified">
  <xsd:element name="operations">
    <xsd:complexType>
      <xsd:sequence>
        <xsd:element minOccurs="1" maxOccurs="unbounded" name="record" type="alert:recordType"/>
      </xsd:sequence>
    </xsd:complexType>
  </xsd:element>
  <xsd:complexType name="recordType">
    <xsd:annotation>
      <xsd:documentation>事件資料來源記錄</xsd:documentation>
    </xsd:annotation>
    <xsd:all>
      <!--
        * 最小內容
```

```

*/
-->
<xsd:element name="EXTEVENTID" type="xsd:string" minOccurs="1" maxOccurs="1" />
<xsd:element name="MODEL_ID" type="xsd:string" minOccurs="1" maxOccurs="1" />
<xsd:element name="STARTTS" type="xsd:dateTime" minOccurs="1" maxOccurs="1" />
<xsd:element name="LASTUPDATEDTS" type="xsd:dateTime" minOccurs="1" maxOccurs="1" />
<xsd:element name="SUBJECT" type="xsd:string" minOccurs="1" maxOccurs="1" />
<xsd:element name="CATEGORY" type="xsd:string" minOccurs="1" maxOccurs="1" />
<xsd:element name="EVENTYPE" type="xsd:string" minOccurs="1" maxOccurs="1" />
<xsd:element name="CREATIONTYPE" type="xsd:string" minOccurs="1" maxOccurs="1" />
<xsd:element name="NETWORK" type="xsd:string" minOccurs="1" maxOccurs="1" />
<xsd:element name="DOMAIN" type="xsd:string" minOccurs="1" maxOccurs="1" />
<xsd:element name="STATUS" type="xsd:string" minOccurs="1" maxOccurs="1" />

<!--
  * 關鍵/完整內容
  */
-->
<!-- (EXTWORKEQUIPMENTID + EXTWORKEQUIPMENTTYPE) 或 LOCATION 是必要的 -->
<xsd:element name="ENDTS" type="xsd:dateTime" minOccurs="0" maxOccurs="1" />
<xsd:element name="EXTWORKEQUIPMENTID" type="xsd:string" minOccurs="0" maxOccurs="1" />
<xsd:element name="EXTWORKEQUIPMENTTYPE" type="xsd:string" minOccurs="0" maxOccurs="1" />
<xsd:element name="LOCATION" type="xsd:string" minOccurs="0" maxOccurs="1" />
<xsd:element name="DESCRIPTION" type="xsd:string" minOccurs="0" maxOccurs="1" />
<xsd:element name="ADDRESS" type="xsd:string" minOccurs="0" maxOccurs="1" />
<xsd:element name="OWNER" type="xsd:string" minOccurs="0" maxOccurs="1" />
<xsd:element name="CREATEDBY" type="xsd:string" minOccurs="0" maxOccurs="1" />
<xsd:element name="URGENCY" type="xsd:string" minOccurs="0" maxOccurs="1" />
<xsd:element name="CERTAINTY" type="xsd:string" minOccurs="0" maxOccurs="1" />
<xsd:element name="ZONE" type="xsd:string" minOccurs="0" maxOccurs="1" />
<xsd:element name="SEVERITY" type="xsd:string" minOccurs="0" maxOccurs="1" />
<xsd:element name="ACK" type="xsd:string" minOccurs="0" maxOccurs="1" />
<xsd:element name="MEASURE" minOccurs="0" maxOccurs="1" >
  <xsd:annotation>
    <xsd:documentation>臨界值屬性網域是 0、1 或 2</xsd:documentation>
  </xsd:annotation>

```

```
<xsd:complexType>
  <xsd:attribute name="value" type="xsd:string" />
  <xsd:attribute name="unit" type="xsd:string" />
  <xsd:attribute name="type" type="xsd:string" />
  <xsd:attribute name="threshold_value" type="xsd:string" />
  <xsd:attribute name="threshold" type="xsd:string" />
</xsd:complexType>
</xsd:element>
</xsd:all>
</xsd:complexType>
</xsd:schema>
```

VDS_IOW-IN-ASSETS-CORE_1.7.XSD

```

<?xml version="1.0" encoding="UTF-8"?>
<!--
/*
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*/

V1.8
-->
<xsd:schema targetNamespace="http://vds.com/assetTypes"
  xmlns:asset="http://vds.com/assetTypes"
  xmlns:xsd="http://www.w3.org/2001/XMLSchema"
  elementFormDefault="qualified">
  <xsd:complexType name="modelrefType">
    <xsd:annotation>
      <xsd:documentation>modelref 將參照
        多租戶環境的語意模型的 ID。
        如果 modelref 的 id 屬性是空的，
        則將針對
        預設模型
        來執行所有要求。</xsd:documentation>
      </xsd:annotation>
    <xsd:sequence>
      <xsd:element maxOccurs="unbounded" name="request" type="asset:requestType" />
    </xsd:sequence>
    <xsd:attribute name="id" type="xsd:string" />
  </xsd:complexType>

```



```

<xsd:complexType name="relationType">
    <xsd:attribute name="relationName" type="xsd:string" />
    <xsd:attribute name="targetExtWorkEquipmentType" type="xsd:string" />
    <xsd:attribute name="targetExtWorkEquipmentId" type="xsd:string" />
</xsd:complexType>
<xsd:complexType name="relationsType">
    <xsd:sequence>
        <xsd:element maxOccurs="unbounded" minOccurs="1" name="relation" type="asset:relationType" />
    </xsd:sequence>
</xsd:complexType>
<xsd:complexType name="thresholdType">
    <xsd:attribute name="range" type="xsd:string" />
    <xsd:attribute name="level" type="xsd:string" />
</xsd:complexType>
<xsd:complexType name="measureTypeType">
    <xsd:sequence>
        <xsd:element minOccurs="0" maxOccurs="3" name="threshold" type="asset:thresholdType" />
    </xsd:sequence>
    <xsd:attribute name="unit" type="xsd:string" />
    <xsd:attribute name="name" type="xsd:string" />
    <xsd:attribute name="measureLabel" type="xsd:string" />
    <xsd:attribute name="isPrimaryMeasurement" type="xsd:string" />
</xsd:complexType>
<xsd:complexType name="measureTypesType">
    <xsd:sequence>
        <xsd:element minOccurs="1" maxOccurs="unbounded" name="measureType"
            type="asset:measureTypeType" />
    </xsd:sequence>
</xsd:complexType>
<xsd:complexType name="attributeType">
    <xsd:sequence>
        <xsd:element minOccurs="0" maxOccurs="1" name="value" type="xsd:string" />
        <xsd:element minOccurs="0" maxOccurs="1" name="unit" type="xsd:string" />
    </xsd:sequence>
    <xsd:attribute name="type" type="xsd:string" />
    <xsd:attribute name="name" type="xsd:string" />

```

```
</xsd:complexType>
```

```
<xsd:complexType name="assetType">
```

```
  <xsd:sequence>
```

```
    <xsd:element minOccurs="1" maxOccurs="1" name="internalLocation" type="xsd:string" />
```

```
    <xsd:element minOccurs="0" maxOccurs="1" name="relations" type="asset:relationsType" />
```

```
    <xsd:element minOccurs="0" maxOccurs="unbounded" name="attribute" type="asset:attributeType" />
```

```
    <xsd:element minOccurs="0" maxOccurs="1" name="measureTypes" type="asset:measureTypesType" />
```

```
  </xsd:sequence>
```

```
  <xsd:attribute name="extWorkEquipmentType" type="xsd:string" />
```

```
  <xsd:attribute name="extWorkEquipmentId" type="xsd:string" />
```

```
  <xsd:attribute name="assetLabel" type="xsd:string" />
```

```
  <xsd:attribute name="assetDescription" type="xsd:string" />
```

```
</xsd:complexType>
```

```
<xsd:complexType name="requestType">
```

```
  <xsd:annotation>
```

```
    <xsd:documentation> 要求是將要執行  
                        的實際作業。它會擷取下列資訊：  
                        要求類型：  
                        建立 / 更新 / 刪除  
                        - 資產資料（  
                        屬性、關係等等  
                        ...)
```

```
                        此要求類型必須是
```

```
                        下列其中之一：
```

```
                        - INSERT：建立資產。
```

```
                        - DELETE：刪除資產。
```

```
                        - UPDATE：更新資產
```

```
    </xsd:documentation>
```

```
  </xsd:annotation>
```

```
  <xsd:sequence>
```

```
    <xsd:element maxOccurs="unbounded" name="asset" type="asset:assetType" />
```

```
  </xsd:sequence>
```

```
  <xsd:attribute name="type" type="xsd:string" />
```

```
</xsd:complexType>
```

```
<xsd:element name="operation">
```

```
<xsd:annotation>
```

```
  <xsd:documentation>作業是 xml 檔的根元素。
```

```
    它將包含所有要求。
```

```
    時間戳記：xml 檔產生日期。
```

```
  </xsd:documentation>
```

```
</xsd:annotation>
```

```
<xsd:complexType>
```

```
  <xsd:sequence>
```

```
    <xsd:element maxOccurs="unbounded" name="modelref" type="asset:modelrefType" />
```

```
  </xsd:sequence>
```

```
  <xsd:attribute name="timestamp" type="xsd:string" />
```

```
</xsd:complexType>
```

```
</xsd:element>
```

```
</xsd:schema>
```

VDS_IOW-IN-READINGS-CORE_1.7.XSD

```

<?xml version="1.0" encoding="UTF-8"?>
<!--
/*
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* with IBM Corporation.
*/

V1.8
-->
<xsd:schema targetNamespace="http://vds.com/readingsTypes"
  xmlns:readings="http://vds.com/readingsTypes" xmlns:xsd="http://www.w3.org/2001/XMLSchema"
  elementFormDefault="qualified">
  <xsd:complexType name="readingValueType">
    <xsd:attribute name="value" type="xsd:string" />
    <xsd:attribute name="unit" type="xsd:string" />
    <xsd:attribute name="type" type="xsd:string" />
  </xsd:complexType>
  <xsd:complexType name="readingValuesType">
    <xsd:sequence>
      <xsd:element maxOccurs="unbounded" name="readingValue" type="readings:readingValueType" />
    </xsd:sequence>
  </xsd:complexType>
  <xsd:complexType name="workEquipmentType">
    <xsd:sequence>
      <xsd:element maxOccurs="1" minOccurs="0" name="description" type="xsd:string" />
      <xsd:element minOccurs="0" maxOccurs="unbounded" name="relations"
        type="readings:relationsType" />
    </xsd:sequence>
  </xsd:complexType>
</xsd:schema>

```

```

<xsd:element minOccurs="0" maxOccurs="unbounded" name="attributes"
                type="readings:attributesType" />
<xsd:element minOccurs="0" maxOccurs="1" name="measureTypes"
                type="readings:measureTypesType" />
</xsd:sequence>
<xsd:attribute name="location" type="xsd:string" />
<xsd:attribute name="extType" type="xsd:string" />
<xsd:attribute name="extId" type="xsd:string" />
<xsd:attribute name="modelRef" type="xsd:string" />
<xsd:attribute name="assetLabel" type="xsd:string" />
<xsd:attribute name="assetDescription" type="xsd:string" />
</xsd:complexType>
<xsd:complexType name="readingSetType">
  <xsd:sequence>
    <xsd:element name="workEquipment" type="readings:workEquipmentType" />
    <xsd:element name="readingValues" type="readings:readingValuesType" />
  </xsd:sequence>
  <xsd:attribute name="extReadingSetid" type="xsd:string" />
  <xsd:attribute name="timestamp" type="xsd:string" />
  <xsd:attribute name="extRelatedEvtId" type="xsd:string" />
  <xsd:attribute name="extRelatedEvtType" type="xsd:string" />
</xsd:complexType>
<xsd:complexType name="attributeType">
  <xsd:sequence>
    <xsd:element minOccurs="0" maxOccurs="1" name="value" type="xsd:string" />
    <xsd:element minOccurs="0" maxOccurs="1" name="unit" type="xsd:string" />
  </xsd:sequence>
  <xsd:attribute name="type" type="xsd:string" />
  <xsd:attribute name="name" type="xsd:string" />
</xsd:complexType>
<xsd:complexType name="attributesType">
  <xsd:sequence>
    <xsd:element name="attribute" type="readings:attributeType" />
  </xsd:sequence>
</xsd:complexType>

```

```

<xsd:complexType name="relationType">
  <xsd:attribute name="targetExtWorkEquipmentType" type="xsd:string" />
  <xsd:attribute name="targetExtWorkEquipmentId" type="xsd:string" />
  <xsd:attribute name="type" type="xsd:string" />
</xsd:complexType>
<xsd:complexType name="relationsType">
  <xsd:sequence>
    <xsd:element name="relation" type="readings:relationType" />
  </xsd:sequence>
</xsd:complexType>
<xsd:complexType name="thresholdType">
  <xsd:attribute name="range" type="xsd:string" />
  <xsd:attribute name="level" type="xsd:string" />
</xsd:complexType>
<xsd:complexType name="measureTypeType">
  <xsd:sequence>
    <xsd:element minOccurs="0" maxOccurs="3" name="threshold"
      type="readings:thresholdType" />
  </xsd:sequence>
  <xsd:attribute name="unit" type="xsd:string" />
  <xsd:attribute name="name" type="xsd:string" />
  <xsd:attribute name="isPrimaryMeasurement" type="xsd:string" />
</xsd:complexType>
<xsd:complexType name="measureTypesType">
  <xsd:sequence>
    <xsd:element minOccurs="0" maxOccurs="unbounded" name="measureType"
      type="readings:measureTypeType" />
  </xsd:sequence>
</xsd:complexType>
<xsd:element name="readings">
  <xsd:complexType>
    <xsd:sequence>
      <xsd:element maxOccurs="unbounded" name="readingSet" type="readings:readingSetType" />
    </xsd:sequence>
  </xsd:complexType>
</xsd:element>
</xsd:schema>

```

VDS_IOW-IN-WO-CORE_1.7.XSD

```

<?xml version="1.0" encoding="UTF-8"?>
<!--
#
# Licensed Materials - Property of Veolia Environment-VE
#
# (C) Copyright Veolia Environment-VE.
#
# Users Restricted Rights - Use, duplication or
# disclosure restricted by Contract with Veolia Environment-VE
#
-->
<xsd:schema targetNamespace="http://vds.com/workOrdersType"
  xmlns:wo="http://vds.com/workOrdersType" xmlns:xsd="http://www.w3.org/2001/XMLSchema"
  elementFormDefault="qualified">
  <xsd:complexType name="requestType">
    <xsd:sequence>
      <xsd:element minOccurs="1" maxOccurs="unbounded" name="workorder">
        <xsd:complexType>
          <xsd:all>
            <xsd:element minOccurs="0" maxOccurs="1" name="DATASOURCEID" type="xsd:string" />
            <xsd:element minOccurs="0" maxOccurs="1" name="RECORDID" type="xsd:string" />
            <xsd:element minOccurs="1" maxOccurs="1" name="WOEXTID" type="xsd:string" />
            <xsd:element minOccurs="1" maxOccurs="1" name="MODEL_ID" type="xsd:string" />
            <xsd:element minOccurs="1" maxOccurs="1" name="SUBJECT" type="xsd:string" />
            <xsd:element minOccurs="0" maxOccurs="1" name="DESCRIPTION" type="xsd:string" />
            <xsd:element minOccurs="1" maxOccurs="1" name="DOMAIN" type="xsd:string" />
            <xsd:element minOccurs="0" maxOccurs="1" name="CATEGORY" type="xsd:string" />
            <xsd:element minOccurs="0" maxOccurs="1" name="WORKORDERTYPE" type="xsd:string" />
            <xsd:element minOccurs="0" maxOccurs="1" name="WORKTYPE" type="xsd:string" />
            <xsd:element minOccurs="0" maxOccurs="1" name="SUBTYPE" type="xsd:string" />
            <xsd:element minOccurs="0" maxOccurs="1" name="FAILURE" type="xsd:string" />
            <xsd:element minOccurs="0" maxOccurs="1" name="PRIORITY" type="xsd:string" />
          </xsd:all>
        </xsd:complexType>
      </xsd:element>
    </xsd:sequence>
  </xsd:complexType>
</xsd:schema>

```

```

<xsd:element minOccurs="1" maxOccurs="1" name="STATUS" type="xsd:string" />
<xsd:element minOccurs="0" maxOccurs="1" name="JOBPLAN" type="xsd:string" />
<xsd:element minOccurs="1" maxOccurs="1" name="CREATIONDATE" type="xsd:dateTime" />
<xsd:element minOccurs="1" maxOccurs="1" name="CREATIONTYPE" type="xsd:string" />
<xsd:element minOccurs="1" maxOccurs="1" name="CREATEDBY" type="xsd:string" />
<xsd:element minOccurs="0" maxOccurs="1" name="TARGETSTARTDATE" type="xsd:dateTime" />
<xsd:element minOccurs="0" maxOccurs="1" name="TARGETENDDATE" type="xsd:dateTime" />
<xsd:element minOccurs="0" maxOccurs="1" name="ACTSTARTDATE" type="xsd:dateTime" />
<xsd:element minOccurs="0" maxOccurs="1" name="ACTENDDATE" type="xsd:dateTime" />
<xsd:element minOccurs="1" maxOccurs="1" name="LASTUPDATEDTS" type="xsd:dateTime" />
<xsd:element minOccurs="0" maxOccurs="1" name="ZONE" type="xsd:string" />
<xsd:element minOccurs="0" maxOccurs="1" name="LOCATION" type="xsd:string" />
<xsd:element minOccurs="0" maxOccurs="1" name="EXTWORKEQUIPMENTID" type="xsd:string" />
<xsd:element minOccurs="0" maxOccurs="1"
    name="EXTWORKEQUIPMENTTYPE" type="xsd:string" />
<xsd:element minOccurs="0" maxOccurs="1" name="UPDATEDBY" type="xsd:string" />
<xsd:element minOccurs="0" maxOccurs="1" name="LEAD" type="xsd:string" />
<xsd:element minOccurs="1" maxOccurs="1" name="NETWORK" type="xsd:string" />
<xsd:element minOccurs="0" maxOccurs="1" name="ADDRESS" type="xsd:string" />
<xsd:element minOccurs="0" maxOccurs="1" name="PERFORMEDBY"
    type="xsd:string" />
<xsd:element minOccurs="0" maxOccurs="1" name="LOCOWNERID" type="xsd:string" />
<xsd:element minOccurs="0" maxOccurs="1" name="LOCOWNERDETAILS" type="xsd:string" />
<xsd:element minOccurs="0" maxOccurs="1" name="LOCCONTACTID" type="xsd:string" />
<xsd:element minOccurs="0" maxOccurs="1"
    name="LOCCONTACTDETAILS" type="xsd:string" />
<xsd:element minOccurs="0" maxOccurs="1" name="REPORT" type="xsd:string" />
<xsd:element name="SRCEVENTLIST" type="wo:srcEventListType"
    maxOccurs="1" minOccurs="0">

</xsd:element>
</xsd:all>
</xsd:complexType>
</xsd:element>
</xsd:sequence>

```



```

<xsd:attribute name="type" type="xsd:string" />
</xsd:complexType>
<xsd:element name="operations">
  <xsd:complexType>
    <xsd:sequence>
      <xsd:element minOccurs="1" maxOccurs="unbounded" name="request" type="wo:requestType">
        </xsd:element>
      </xsd:sequence>
    </xsd:complexType>
  </xsd:element>

<xsd:complexType name="srcEventType">
  <xsd:all>
    <xsd:element name="SRCEVTCATEGORY" maxOccurs="1" minOccurs="1" type="xsd:string">
      </xsd:element>

    <xsd:element name="SRCEVTTYPE" type="xsd:string" maxOccurs="1" minOccurs="1">
      <xsd:annotation>
        <xsd:documentation>
          如果 SRCEVTCATEGORY = ALERT 或 EVENT ， 這是
          IOW EVENTTYPE ， 如果 SRCEVTCATEGORY =
          WORKORDER ， 這是 IOW
          WORKORDER DOMAIN 如果 SRCEVTCATEGORY = NOREADING 或
          READINGTHRESHOLD ， 這是 IOW MEASUREMENTTYPE
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>

    <xsd:element name="SRCEVTID" type="xsd:string" maxOccurs="1" minOccurs="0">
      <xsd:annotation>
        <xsd:documentation>
          如果 SRCEVTCATEGORY = ALERT 或 EVENT ， 這是
          IOW EXTEVENTID ， 如果 SRCEVTCATEGORY = WORKORDER ， 這是
          IOW WOEXTID 如果 SRCEVTCATEGORY = NOREADING 或 READINGTHRESHOLD ，

```

這是 IOW MEASUREMENT_ID (僅用於 WO OUT)

```

</xsd:documentation>
</xsd:annotation>
</xsd:element>
<xsd:element name="SRCEVTDATE" type="xsd:dateTime" maxOccurs="1" minOccurs="1">
</xsd:element>
<xsd:element name="SRCEVTORIGVALUE" type="xsd:string" maxOccurs="1" minOccurs="0">
</xsd:element>
<xsd:element name="SRCEVTCURRVALUE" type="xsd:string" maxOccurs="1" minOccurs="0">
</xsd:element>

<xsd:element name="SRCEVTCURRVALUETS" type="xsd:dateTime"
                maxOccurs="1" minOccurs="0"> </xsd:element>
<xsd:element name="SRCEVTCOMMENT" type="xsd:string"
                maxOccurs="1" minOccurs="0"> </xsd:element>
<xsd:element name="SOPREFERENCE" type="xsd:string"
                maxOccurs="1" minOccurs="0"> </xsd:element>
</xsd:all>
</xsd:complexType>
<xsd:complexType name="srcEventListType">
<xsd:sequence>
    <xsd:element name="SRCEVENT" type="wo:srcEventType"
                maxOccurs="unbounded" minOccurs="0"> </xsd:element>
</xsd:sequence>
</xsd:complexType>
</xsd:schema>

```

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