



Web Service Integration

Data Center Planner

Command Reference Guide

Technical Support Site

If you encounter any installation or operational issues with your product, check the pertinent section of this manual to see if the issue can be resolved by following outlined procedures. Visit <https://www.VertivCo.com/en-us/support/> for additional assistance.

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1 OVERVIEW

The Avocent® Data Center Planner Web Service Integration tool provides an interface for external systems to retrieve and update selected asset properties contained in two web service description language (WSDL) files. The Avocent® Management Platform (AMP) Authentication WSDL is located at <https://{InstalledServer}:8092/authenticate/main.wsdl> and the Simple Asset Service WSDL is located at https://{InstalledServer}:8443/InfrastructureExplorer/ws/simple-asset/simple_asset.wsdl.

Developers can use the web services feature to create applications, query and update asset properties including the name, derate data, user-defined properties, location and mounting information.

1.1 Authentication for Web Services

The Authentication for web services generates an authentication token to authenticate Data Center Planner users prior to executing Simple Asset Web Service requests. Users authenticated using this web service experience session timeouts after extended periods of non-activity. See the following example. Definitions for this web service are located at: <https://{InstalledServer}:8092/authenticate/main.wsdl>.

Example: Authentication Request

```
<soapenv:Envelope xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:ser="http://service.authentication.amp.avocent.com">
  <soapenv:Header/>
  <soapenv:Body>
    <ser:authenticate>
      <userName>AMIE administrator username</userName>
      <password>AMIE administrator password</password>
      <instanceName>Internal or custom external authentication instance name</instanceName>
      <nextToken>?</nextToken>
    </ser:authenticate>
  </soapenv:Body>
</soapenv:Envelope>
```

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2 SIMPLE ASSET WEB SERVICE REQUESTS

The user account referenced in each web service request must have sufficient rights within the Data Center Planner application to update asset properties.

The following header must be included in all Simple Asset Web Service requests, and you must enter a unique identifier as shown.

Example: Header

```
<soapenv:Header>
  <wsse:Security xmlns:wsse="http://docs.oasis-open.org/wss/2004/01/oasis-200401-wss-wssecurity-secext-1.0.xsd">
    <wsse:SecurityContextToken>
      <wsse:Identifier>Authentication token</wsse:Identifier>
    </wsse:SecurityContextToken>
  </wsse:Security>
</soapenv:Header>
```

NOTE: The Authentication token has a different font.

The following requests are included in the Simple Asset Web Service. Examples of these requests and their responses are explained in the following sections:

- GetAsset
- Query
- SetAsset
- UnsetAsset

2.1 GetAsset Requests

These requests are used to get all or specific properties including: Name, Derate Data, Rack, Location and User-Defined Properties.

Required input: Authentication Token, AssetID

2.1.1 GetAsset - Specific properties

Example: Request

```

<soapenv:Envelope xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:sim="http://dvr.avocent.com/simple-asset">
  <soapenv:Header>
    <wsse:Security xmlns:wsse="http://docs.oasis-open.org/wss/2004/01/oasis-200401-wss-wssecurity-
secext-1.0.xsd">
      <wsse:SecurityContextToken>
        <wsse:Identifier>Authentication token</wsse:Identifier>
      </wsse:SecurityContextToken>
    </wsse:Security>
  </soapenv:Header>
  <soapenv:Body>
    <sim:GetAssetRequest>
      <!--You may enter the following 2 items in any order-->
      <sim:AssetId>AssetID</sim:AssetId>
      <sim:RequestedProperties>
        <!--You may enter the following 3 items in any order-->
        <sim:Name/>
        <sim:Derate>Weight</sim:Derate>
        <sim:UDP>warranty expiration date</sim:UDP>
      </sim:RequestedProperties>
    </sim:GetAssetRequest>
  </soapenv:Body>
</soapenv:Envelope>

```


Example: Response

```
<SOAP-ENV:Envelope xmlns:SOAP-ENV="http://schemas.xmlsoap.org/soap/envelope/">
  <SOAP-ENV:Header/>
  <SOAP-ENV:Body>
    <sa:GetAssetResponse xmlns:sa="http://dvr.avocent.com/simple-asset">
      <sa:Asset>
        <sa:AssetId>155937</sa:AssetId>
        <sa:Properties>
          <sa:Name>power distribution unit 1</sa:Name>
          <sa:Derate>
            <sa:Weight>
              <sa:Units>K</sa:Units>
              <sa:Value>4000.00</sa:Value>
              <sa:IsAggregate>>false</sa:IsAggregate>
            </sa:Weight>
          </sa:Derate>
          <sa:UDP>
            <sa:Label>warranty expiration date</sa:Label>
            <sa:Value>01/20/2010</sa:Value>
          </sa:UDP>
        </sa:Properties>
      </sa:Asset>
    </sa:GetAssetResponse>
  </SOAP-ENV:Body>
</SOAP-ENV:Envelope>
GetAsset - All properties
```

Example: Request

```
<soapenv:Envelope xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/"
  xmlns:sim="http://dvr.avocent.com/simple-asset">
  <soapenv:Header>
    <wsse:Security xmlns:wsse="http://docs.oasis-open.org/wss/2004/01/oasis-200401-wss-wssecurity-secext-1.0.xsd">
      <wsse:SecurityContextToken>
        <wsse:Identifier>Authentication token</wsse:Identifier>
      </wsse:SecurityContextToken>
    </wsse:Security>
  </soapenv:Header>
  <soapenv:Body>
    <sim:GetAssetRequest>
      <sim:AssetId>AssetID</sim:AssetId>
    </sim:GetAssetRequest>
  </soapenv:Body>
</soapenv:Envelope>
```

Example: Response

```

<SOAP-ENV:Envelope xmlns:SOAP-ENV="http://schemas.xmlsoap.org/soap/envelope/">
  <SOAP-ENV:Header/>
  <SOAP-ENV:Body>
    <sa:GetAssetResponse xmlns:sa="http://dvr.avocent.com/simple-asset">
      <sa:Asset>
        <sa:AssetId>155937</sa:AssetId>
        <sa:Properties>
          <sa:Name>power distribution unit 1</sa:Name>
          <sa:Plan>
            <sa:PlanId>155607</sa:PlanId>
            <sa:Name>Vertiv Huntsville Demo</sa:Name>
          </sa:Plan>
          <sa:Rack>
            <sa:AssetId>155660</sa:AssetId>
            <sa:Name>WebServices Rack</sa:Name>
          </sa:Rack>
          <sa:Location>
            <sa:LocationType>ZeroU</sa:LocationType>
            <sa:AssetId>155660</sa:AssetId>
            <sa:Comer>FRONT_LEFT</sa:Comer>
          </sa:Location>
          <sa:Derate>
            <sa:Heat>
              <sa:Units>kW</sa:Units>
              <sa:Value>1000.00</sa:Value>
              <sa:IsAggregate>>false</sa:IsAggregate>
            </sa:Heat>
            <sa:Weight>
              <sa:Units>K</sa:Units>
              <sa:Value>4000.00</sa:Value>
              <sa:IsAggregate>>false</sa:IsAggregate>
            </sa:Weight>
            <sa:Power>
              <sa:Units>kilowatts</sa:Units>
              <sa:Value>40000.00</sa:Value>
              <sa:IsAggregate>>false</sa:IsAggregate>
            </sa:Power>
          </sa:Derate>
          <sa:UDP>
            <sa:Label>warranty expiration date</sa:Label>
            <sa:Value>01/20/2010</sa:Value>
          </sa:UDP>
          <sa:UDP>
            <sa:Label>IP address</sa:Label>
            <sa:Value>1.25.350.45</sa:Value>
          </sa:UDP>
          <sa:UDP>

```

```

        <sa:Label>cost</sa:Label>
        <sa:Value>3350.00</sa:Value>
    </sa:UDP>
</sa:Properties>
</sa:Asset>
</sa:GetAssetResponse>
</SOAP-ENV:Body>
</SOAP-ENV:Envelope>

```

2.2 Query Requests

Query requests are the equivalent of a simple search for all assets in the database. This feature lets you conduct a custom query. The asset properties that can be returned include: AssetID, Name, PlanID, PlanName, RackID, RackName and Location.

Any asset-specific string such as device Name, Manufacturer, Description, Product Line, Model, Property or User Defined Property value can be entered in the QueryString field.

Required input: Authentication Token, Query String

Optional query input parameters and values:

- assetStatus
 - tangible - search for only placed assets

NOTE: Do not include the tangible value in the assetStatus parameter if you want to return all placed and unplaced assets.

- plan
 - planless - search for only unplaced assets
 - planname - enter a specific plan name to search for assets only contained within that plan

2.2.1 Query all properties for placed assets across all plans

Example: Request

```

<soapenv:Envelope xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:sim="http://dvr.avocent.com/simple-asset">
  <soapenv:Header>
    <wsse:Security xmlns:wsse="http://docs.oasis-open.org/wss/2004/01/oasis-200401-wss-wssecurity-secext-1.0.xsd">
      <wsse:SecurityContextToken>
        <wsse:Identifier>Authentication token</wsse:Identifier>
      </wsse:SecurityContextToken>
    </wsse:Security>
  </soapenv:Header>
  <soapenv:Body>
    <sim:QueryRequest>
      <sim:QueryString>assetStatus:tangible -plan:planless</sim:QueryString>
    </sim:QueryRequest>
  </soapenv:Body>
</soapenv:Envelope>

```

```

</sim:QueryRequest>
</soapenv:Body>
</soapenv:Envelope>

```

Example: Response

```

<SOAP-ENV:Envelope xmlns:SOAP-ENV="http://schemas.xmlsoap.org/soap/envelope/">
  <SOAP-ENV:Header/>
  <SOAP-ENV:Body>
    <sa:QueryResponse xmlns:sa="http://dvr.avocent.com/simple-asset">
      <sa:QueryString>assetStatus:tangible -plan:planless</sa:QueryString>
      <sa:Assets>
        <sa:Asset>
          <sa:AssetId>155678</sa:AssetId>
          <sa:Properties>
            <sa:Name>S1/R-2</sa:Name>
            <sa:Plan>
              <sa:PlanId>155607</sa:PlanId>
              <sa:Name>Vertiv Huntsville Demo</sa:Name>
            </sa:Plan>
            <sa:Rack>
              <sa:AssetId>155678</sa:AssetId>
              <sa:Name>S1/R-2</sa:Name>
            </sa:Rack>
            <sa:Location>
              <sa:LocationType>Floor</sa:LocationType>
              <sa:Mounting>
                <sa:PlanId>155607</sa:PlanId>
                <sa:Name>Vertiv Huntsville Demo</sa:Name>
                <sa:Xcoord>96</sa:Xcoord>
                <sa:Ycoord>72</sa:Ycoord>
                <sa:Rotation>0</sa:Rotation>
              </sa:Mounting>
            </sa:Location>
          </sa:Properties>
        </sa:Asset>
        <sa:Asset>
          <sa:AssetId>155696</sa:AssetId>
          <sa:Properties>
            <sa:Name>S3/R-1</sa:Name>
            <sa:Plan>
              <sa:PlanId>155607</sa:PlanId>
              <sa:Name>Vertiv Huntsville Demo</sa:Name>
            </sa:Plan>
            <sa:Rack>
              <sa:AssetId>155696</sa:AssetId>
              <sa:Name>S3/R-1</sa:Name>
            </sa:Rack>
          </sa:Properties>
        </sa:Asset>
      </sa:Assets>
    </sa:QueryResponse>
  </SOAP-ENV:Body>
</SOAP-ENV:Envelope>

```

```

    </sa:Rack>
    <sa:Location>
      <sa:LocationType>Floor</sa:LocationType>
      <sa:Mounting>
        <sa:PlanId>155607</sa:PlanId>
        <sa:Name>Vertiv Huntsville Demo</sa:Name>
        <sa:Xcoord>144</sa:Xcoord>
        <sa:Ycoord>72</sa:Ycoord>
        <sa:Rotation>0</sa:Rotation>
      </sa:Mounting>
    </sa:Location>
  </sa:Properties>
</sa:Asset></sa:Assets>
</sa:QueryResponse>
</SOAP-ENV:Body>
</SOAP-ENV:Envelope>

```

2.2.2 Query all properties for unplaced assets across all plans

Example: Request

```

<soapenv:Envelope xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:sim="http://dvr.avocent.com/simple-asset">
  <soapenv:Header>
    <wsse:Security xmlns:wsse="http://docs.oasis-open.org/wss/2004/01/oasis-200401-wss-wssecurity-secext-1.0.xsd">
      <wsse:SecurityContextToken>
        <wsse:Identifier>Authentication token</wsse:Identifier>
      </wsse:SecurityContextToken>
    </wsse:Security>
  </soapenv:Header>
  <soapenv:Body>
    <sim:QueryRequest>
      <sim:QueryString>plan:planless</sim:QueryString>
    </sim:QueryRequest>
  </soapenv:Body>
</soapenv:Envelope>

```

Example: Response

```

<SOAP-ENV:Envelope xmlns:SOAP-ENV="http://schemas.xmlsoap.org/soap/envelope/">
  <SOAP-ENV:Header/>
  <SOAP-ENV:Body>
    <sa:QueryResponse xmlns:sa="http://dvr.avocent.com/simple-asset">
      <sa:QueryString>plan:planless</sa:QueryString>
      <sa:Assets>

```

```

<sa:Asset>
  <sa:AssetId>156855</sa:AssetId>
  <sa:Properties>
    <sa:Name>S9/R-3/PATCH-1</sa:Name>
    <sa:Plan>
      <sa:PlanId/>
      <sa:Name>Planless</sa:Name>
    </sa:Plan>
    <sa:Rack>
      <sa:AssetId>155787</sa:AssetId>
      <sa:Name>Unplaced Asset</sa:Name>
    </sa:Rack>
    <sa:Location>
      <sa:LocationType>Asset</sa:LocationType>
      <sa:Mounting>
        <sa:AssetId>155787</sa:AssetId>
        <sa:Slots>
          <sa:Slot>RS1#41</sa:Slot>
        </sa:Slots>
      </sa:Mounting>
    </sa:Location>
  </sa:Properties>
</sa:Asset>
<sa:Asset>
  <sa:AssetId>156914</sa:AssetId>
  <sa:Properties>
    <sa:Name>S9/R-3/PDU-1</sa:Name>
    <sa:Plan>
      <sa:PlanId/>
      <sa:Name>Planless</sa:Name>
    </sa:Plan>
    <sa:Rack>
      <sa:AssetId>155787</sa:AssetId>
      <sa:Name>Unplaced Asset</sa:Name>
    </sa:Rack>
    <sa:Location>
      <sa:LocationType>Asset</sa:LocationType>
      <sa:Mounting>
        <sa:AssetId>155787</sa:AssetId>
        <sa:Slots>
          <sa:Slot>RS1#1</sa:Slot>
          <sa:Slot>RS1#2</sa:Slot>
        </sa:Slots>
      </sa:Mounting>
    </sa:Location>
  </sa:Properties>
</sa:Asset>
</sa:Assets>

```

```

    </sa:QueryResponse>
  </SOAP-ENV:Body>
</SOAP-ENV:Envelope>

```

2.3 SetAsset Requests

These requests are used to add or modify the properties of a single asset including: Name, Derate and User-Defined Properties.

Required input: Authentication Token, AssetID.

Example: Request

```

<soapenv:Envelope xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:sim="http://dvr.avocent.com/simple-asset">
  <soapenv:Header>
    <wsse:Security xmlns:wsse="http://docs.oasis-open.org/wss/2004/01/oasis-200401-wss-wssecurity-secext-1.0.xsd">
      <wsse:SecurityContextToken>
        <wsse:Identifier>Authentication token<4">wsse:Identifier>
      </wsse:SecurityContextToken>
    </wsse:Security>
  </soapenv:Header>
  <soapenv:Body>
    <sim:SetAssetRequest>
      <sim:AssetId>196333</sim:AssetId>
      <sim:Properties>
        <sim:Name>WebServices Rack - for Testing</sim:Name>
        <sim:Derate>
          <sim:Heat>
            <sim:Units>BTU/Hr</sim:Units>
            <sim:Value>100</sim:Value>
            <sim:IsAggregate>true</sim:IsAggregate>
          </sim:Heat>
          <sim:Weight>
            <sim:Units>L</sim:Units>
            <sim:Value>400</sim:Value>
            <sim:IsAggregate>true</sim:IsAggregate>
          </sim:Weight>
          <sim:Power>
            <sim:Units>watts</sim:Units>
            <sim:Value>4000</sim:Value>
            <sim:IsAggregate>true</sim:IsAggregate>
          </sim:Power>
        </sim:Derate>
        <sim:UDP>
          <sim:Label>IP address</sim:Label>
          <sim:Value>1.20.300.40</sim:Value>
        </sim:UDP>
      </sim:Properties>
    </sim:SetAssetRequest>
  </soapenv:Body>
</soapenv:Envelope>

```

```

</sim:UDP>
<sim:UDP>
  <sim:Label>warranty expiration date</sim:Label>
  <sim:Value>12/31/2009</sim:Value>
</sim:UDP>
<sim:UDP>
  <sim:Label>cost</sim:Label>
  <sim:Value>4500</sim:Value>
</sim:UDP>
</sim:Properties>
</sim:SetAssetRequest>
</soapenv:Body>
</soapenv:Envelope>

```

Example: Response

```

<SOAP-ENV:Envelope xmlns:SOAP-ENV="http://schemas.xmlsoap.org/soap/envelope/">
  <SOAP-ENV:Header/>
  <SOAP-ENV:Body>
    <sa:SetAssetResponse xmlns:sa="http://dvr.avocent.com/simple-asset">
      <sa:Asset>
        <sa:AssetId>196333</sa:AssetId>
        <sa:Properties>
          <sa:Name>WebServices Rack - for Testing</sa:Name>
          <sa:Derate>
            <sa:Heat>
              <sa:Units>BTU/Hr</sa:Units>
              <sa:Value>100</sa:Value>
              <sa:IsAggregate>true</sa:IsAggregate>
            </sa:Heat>
            <sa:Weight>
              <sa:Units>L</sa:Units>
              <sa:Value>400</sa:Value>
              <sa:IsAggregate>true</sa:IsAggregate>
            </sa:Weight>
            <sa:Power>
              <sa:Units>watts</sa:Units>
              <sa:Value>4000</sa:Value>
              <sa:IsAggregate>true</sa:IsAggregate>
            </sa:Power>
          </sa:Derate>
          <sa:UDP>
            <sa:Label>warranty expiration date</sa:Label>
            <sa:Value>12/31/2009</sa:Value>
          </sa:UDP>
          <sa:UDP>
            <sa:Label>IP address</sa:Label>

```



```

        <sa:Value>1.20.300.40</sa:Value>
    </sa:UDP>
    <sa:UDP>
        <sa:Label>cost</sa:Label>
        <sa:Value>4500</sa:Value>
    </sa:UDP>
</sa:Properties>
</sa:Asset>
</sa:SetAssetResponse>
</SOAP-ENV:Body>
</SOAP-ENV:Envelope>

```

2.4 UnsetAsset Request

These requests are used to delete the properties of a single asset. Asset properties that can be deleted include: Derate and User-Defined Properties.

Required input: Authentication Token, AssetID.

Example: Request

```

<soapenv:Envelope xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:sim="http://dvr.avocent.com/simple-asset">
  <soapenv:Header>
    <wsse:Security xmlns:wsse="http://docs.oasis-open.org/wss/2004/01/oasis-200401-wss-wssecurity-secext-1.0.xsd">
      <wsse:SecurityContextToken>
        <wsse:Identifier>Authentication Token</wsse:Identifier>
      </wsse:SecurityContextToken>
    </wsse:Security>
  </soapenv:Header>
  <soapenv:Body>
    <sim:UnsetAssetRequest>
      <!--You may enter the following 3 items in any order-->
      <sim:AssetId>AssetID</sim:AssetId>
      <sim:UDP>
        <sim:Label>warranty expiration date</sim:Label>
        <sim:Label>cost</sim:Label>
        <sim:Label>IP address</sim:Label>
      </sim:UDP>
      <sim:Derate>
        <sim:Label>Heat</sim:Label>
        <sim:Label>Weight</sim:Label>
        <sim:Label>Power</sim:Label>
      </sim:Derate>
    </sim:UnsetAssetRequest>
  </soapenv:Body>
</soapenv:Envelope>

```

Example: Response

```
<SOAP-ENV:Envelope xmlns:SOAP-ENV="http://schemas.xmlsoap.org/soap/envelope/">
  <SOAP-ENV:Header/>
  <SOAP-ENV:Body>
    <sa:UnsetAssetResponse xmlns:sa="http://dvr.avocent.com/simple-asset">
      <sa:AssetId>163555</sa:AssetId>
      <sa:Success/>
    </sa:UnsetAssetResponse>
  </SOAP-ENV:Body>
</SOAP-ENV:Envelope>
```




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