# DENTCloud™
# Questions & Answers

**Q: Is the DENTCloud™ feature only available on the new PS48HDs?**
A: Because of the flexibility in applications, we have chosen the PS48HD to be the first product to be enabled to work with DENTCloud. We plan to add the PS3HD, PS12HD, and PS24HD soon.

**Q: Do you have any plans for enabling the ELITEpro XC™ for DENTCloud™?**
A: The ELITEpro XC™ (our current product version) will not have the ability to be DENTCloud-enabled. However, we plan to include this in our next generation of ELITEpro. We currently do not have a release date for this product, but will keep you posted.

**Q: What is the cost difference for the cloud-enabled PS48HD?**
A: There is no price difference between a standard PS48HD, and the DENTCloud-enabled versions.

**Q: What is the monthly or yearly fee per meter or site to use DENTCloud™?**
A: FREE. When you purchase a cloud-enabled PS48HD, you get the cloud for free. We recognize that at some point, such as hosting large data sets, a nominal fee will be required to exceed a nominal data limit. Also, some future features (e.g., a billing module) may also have a cost associated with them.

**Q: Can DENTCloud™ be added to an existing PS48HD?**
A: Currently the PS48HD must be ordered with DENTCloud already enabled. We are looking into the option to upgrade existing meters with DENTCloud, but that will likely require that meters be returned to us for the upgrade.

**Q: Is there a rough ETA for enabling the PS3HD with DENTCloud™?**
A: We will be announcing the projected rollout dates soon.

**Q: Does DENT Instruments plan to provide updates to their DENTCloud™ solution?**
A: Absolutely! The first release of DENTCloud, version 1.1, is only the beginning. We plan to add a host of features and capabilities to our product road-map. We would love to hear your thoughts on what new functionality to consider as well.

**Q: What hardware is required to connect to DENTCloud™?**
A: All you need is a cloud-enabled PS48HD and an internet connection. Just plug the PS48HD into the local network with an Ethernet cable–or into a cellular modem if you want to keep it independent of the local network.

**Q: Can one DENTCloud™ account handle multiple PS48HDs, even if they are in different buildings?**
A: Yes. A single DENTCloud account can view and manage as many meters as you want–regardless of physical location.

**Q: Can more than one DENTCloud™ account access the same meter?**
A: Yes. Multiple people/accounts can access the data from a single meter.

**Q: How long is the data stored in the cloud?**
A: There is no limit to how much or how long data can be stored with DENTCloud.

**Q: What is the logging interval, and is it adjustable?**
A: The logging interval is 15 minutes. It is currently not adjustable, but future versions will likely support different logging intervals as well as user-defined data values to be sent to the cloud.

**Q: Is the data stored on the meter or in the cloud?**
A: Both. The data shown in DENTCloud is stored in the cloud. This offers the advantage of faster data access, as well as giving you unlimited historical storage. The PS48HD series meters *also* store some data (kWh) in non-volatile memory at 15-minute intervals. The meter data storage is a "FIFO" (first in, first out–also called a ring memory) and holds the most recent 60 days (about 2 months) before a new data record overwrites the oldest data record.

**Q: Does DENTCloud™ support or remove the 60 days of local storage?**
A: DENTCloud does not have a feature to purge 60-days (about 2 months) data from your meter, but it does store that same data, and can store additional 60-days data, for years.

**Q: Can I use DENTCloud™ to do subtenant billing?**
A: The data collected by the PS48HD is revenue grade per ANSI C12.20-2012 Class 0.1, so the data from DENTCloud can be used for subtenant billing. There is no billing module yet, so the data must be exported to create the monthly bills using another program such as Excel.

**Q: Is DENTCloud™ able to send alarms such as High/Low values?**
A: In the initial release of DENTCloud, we do not have data alarms available; however, alarm functionality is on the road-map for future upgrades.

**Q: How is the data uploaded securely? Does it use http or https?**
A: The data is uploaded using the secure MQTT messaging protocol.

**Q: What ports must be open on the firewall for the meter to communicate with DENTcloud™?**
A: 1883 and 8883 for the MQTT communications.

**Q: Is there support for a non-TCP connection?**
A: An internet connection through the local network or a cellular modem is required for the meter to reach the cloud.

**Q: Does the PS48HD have a built-in modem?**
A: No. The PS48HD requires connecting to the local internet or a separate cellular modem to reach DENTCloud.

**Q: Can the PS48HD use BACnet and DENTCloud™ simultaneously?**
A: A cloud-enabled PS48HD can use MODBUS and the cloud simultaneously, but the Cloud-enabled meter no longer has BACnet capabilities. This is being reviewed for the future releases.

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**Q: If the meter loses internet connectivity, is the data lost?**
A: Yes–and No. While the values that would have been logged to the Cloud during the internet connection failure will not be uploaded, some interval data is stored in the meter's non-volatile memory. Also, accumulated values, e.g., kWh, kVARh, kVAh, will be the correct values when they post after connectivity is restored Though the 15-minute interval data may not be available (except for what is in the meter memory), cumulative (integrated) values like kVARh will be available. We are also looking into options for retrieving the data stored in the meter and posting it to the Cloud.

**Q: How is DENTCloud™ data is time-stamped relative to the meter date and time?**
A: PowerScout meters have an internal real-time clock (RTC) set through ViewPoint HD™. The RTC is currently not synchronized with any external system and is independent of the timestamps recorded with the data in the cloud. The data in the cloud is timestamped with the time it arrives to the Cloud in a UTC/GMT time format. Future versions of PowerScout HD firmware will allow the meter to synchronize its internal RTC with the extremely accurate Cloud time.

**Q: Does DENTCloud™ show the same "Descriptions" as seen in the ViewPoint HD™ software?**
**A:** Currently, there are only labels for the whole meter, (i.e., a general description field and a location field). In its first release, the DENTCloud does not receive ViewPoint HD's "System Description" or the "Element Descriptions" from the meters. These will be added later.

**Q: How does the display appear for mixed 3 and single phases of a PS48HD?**
A: Every data field sent to the cloud, whether a channel-level parameter or an element-level parameter, is shown in the tabular data presentation. The column heading follows the format of PARAMETER/ELEMENT/CHANNEL. We will likely change how we show the column headings in future versions of the DENTCloud. Also, in version 1.1 of the DENTCloud, a limited data set is sent from the meter to the Cloud. In future versions, the data sent by the meter to the Cloud will be user-configurable. The data currently being sent are voltage, current, kW (now, demand, max), Line Frequency, kWh, kVARh, kVAh, aPF, dPF (both meter and channel, where applicable).

**Q: Are the values average or instantaneous?**
A: The values posted to the Cloud are the same as those in the meter. That is, if the value in the meter is an average, the Cloud value would be too. Likewise, if the meter value is instantaneous, the Cloud value will be instantaneous at the time the data was posted to the Cloud.