Eos Tools Pro App Configuration for Mobile Device Management (MDM)

In this document you will find resources and best practices for configuring the Eos Tools Pro (ETP) mobile app across multiple devices in your organization. By following these guidelines, you will benefit from a seamless out-of-the box experience and secure, work-ready app environment within ETP while using your existing Mobile Device Management (MDM) solution (e.g., UEM, EMM, MDM).

In this document, we have grouped the main configurable parameters of our ETP app into seven categories, which will be discussed in detail in the following guide:

- Differential Corrections Parameters
- Altitude and Geoid Model Parameters
- Datum Shift Parameters
- Alarm Parameters
- Tilt Compensation
- Skadi Smart Handle
- Miscellaneous Parameters

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1. Getting started

1.1 What is Mobile Device Management?

Mobile Device Management (MDM) refers to software used for the administration of official mobile devices across an organization. Organizations benefit from using MDM technology because it helps them enhance their data and network security, as well as set and enforce mobile policies. Additionally, using an MDM increases the efficiency of app deployments and the management for administrators, including the frequency and substance of app updates.

1.2 How to Deploy a Custom Application Configuration?

App configuration (AppConfig) refers to a format for providing application settings (such as differential corrections and altitude reference, in our case) within Eos Tools Pro (ETP). Instead of configuring these settings manually each time the ETP app is installed on a mobile device at your organization, you may use your MDM to not only deploy the app on this mobile device remotely, but also specify and apply pre-determined configurations automatically.

These settings are defined via a dictionary of key-value pairs in an XML file. How the dictionary is created depends on which MDM you're using. In the next chapter we will cover usage of each of the categories of ETP parameters that you may wish to pre-set in your MDM.

1.3 About the Seven Categories of Parameters That Follow

When preparing to deploy ETP to your organization's mobile devices via an MDM, there are some common settings you might wish to configure. These settings, or parameters, are divided into the seven categories that follow this section.

2. Differential Corrections Parameters

The following parameters are supported on ETP AppConfig for Differential Corrections.

IMPORTANT: If no value is entered for the diffType key, then the entire Differential Corrections group is disabled in the MDM, regardless of the values entered for any other key within the group. Therefore, if you wish to administer your Differential Corrections settings via MDM, you must define a value for the diffType key.

User interaction master key: *diffUserConfigEnabled*
* The Differential Corrections *user interaction master key*, ***diffUserConfigEnabled***, controls user interaction with all Differential Corrections settings. If *diffUserConfigEnabled* is set to false, all individual key values are overridden, and the user cannot edit any settings in the Differential Corrections group. If *diffUserConfigEnabled* is set to true, users can edit each individually enabled key, while disabled keys remain uneditable.

For example:
If *diffUserConfigEnabled* = true and *diffUserProfileEnabled* = false, then all settings in the Differential Correction group will be enabled for the user to interact with, and only Profiles will be disabled for the user.
If *diffUserConfigEnabled* = false and *diffUserProfileEnabled* = true, then all settings in the Differential Corrections group will be disabled for the user to interact with, including Profiles.

key / Description	**Type**	**Default**	**Notes**
diffType Specifies the source of differential correction	Integer		Supported values: `0` for NTRIP, `1` for DIP, `2` for Radio (Radio option only for Android)
diffHTTPSEnabled Select between secure and unsecured connection to the IP address	Boolean	`false`	Supported values: `true` for HTTPS, `false` for HTTP
diffIP IP section of the Caster URL to connect	String		Examples: `eos-gnss.com`; `69.70.178.170`
diffPort Port section of the Caster URL to connect	Integer		Supported values from `0` up to `65536` (According to RFC 793). Example: `2101`
diffUserURLEnabled Enable manual interaction of HTTPS enabled, IP and Port	Boolean	`false`	Supported values: `true` to allow user entry, `false` to deny user entry. ***Subject to master key status**
diffUsername Username for connecting to the NTRIP Caster/Server	String		A valid Username is an alphanumeric string of 1 to 255 characters containing letters from A to Z (upper or lower case), numbers from 0 to 9, space and underscore. **Regex [A-Za-z0-9 _]{255}**. For special characters use a **CDATA** block. Example: `adminRoot 1_3<![CDATA[Usér!]]><![CDATA[Th!$ is a éspeciał Us3r N@m3]]`
diffPassword Password for connecting to the NTRIP Caster/Server	String		A valid password is an alphanumeric string of 1 to 255 characters containing letters from A to Z (upper or lower case), numbers from 0 to 9, space and underscore. **Regex [A-Za-z0-9 _]{255}**. For special characters use a **CDATA** block. Example: `admin1234R00T 1_3_<![CDATA[P@swörd!.]]><![CDATA[@ Pá$$w0D'_!"#$%&/=?.;:]]`
diffUserCredentialsEnabled Enables or disables user entry for Username and Password for the NTRIP connection	Boolean	`true`	Supported values: `true` to allow user entry, `false` to deny user entry ***Subject to master key status**
diffMountpoint Name of the NTRIP Mountpoint to connect to	String		A valid name is an alphanumeric string of 1 to 255 characters that contains letters from A to Z (upper or lower case), numbers from 0 to 9, space and underscore. **Regex [A-Za-z0-9 _]{255}**. For special characters use a **CDATA** block. Example: `DIP1<![CDATA[MöÙnT-{PôînT}ç$]]>`
diffUserMountpointDisabled Enables or disables user selection of the NTRIP Mountpoint	Boolean	`false`	Supported values: `true` to deny user selection, `false` to enable user Mountpoint selection ***Subject to master key status**

diffAutoStartEnabled Defines if the connection to the NTRIP Caster should be established automatically when ETP is launched	Boolean	`false`	Supported values: `true` to automatically connect to differential source, `false` to allow manual connection
diffCorpProfileName The profile name that contains the default corporate deployment values for the Differential Corrections group	String	`Diff Corp Config`	A valid name is an alphanumeric string of 1 to 255 characters that contains letters from A to Z (upper or lower case), numbers from 0 to 9, space and underscore. **Regex [A-Za-z0-9 _]{255}.** For special characters use a **CDATA** block. Example: `Eos Corp Config,<![CDATA[Eös-{Corp}]]>`
diffUserProfileEnabled To allow or prevent user-created differential profiles	Boolean	`false`	Supported values: `true` to allow user-created differential profiles, `false` to enforce corporate differential profile only ***Subject to master key status**
diffUserConfigEnabled Disables user interaction with any of the Differential Corrections settings	Boolean	`false`	Supported values: `true` to allow editing of values for individual editable parameters, `false` to disable user edits of all values for the entire Differential Corrections group (overrides switches of individual parameters) ***This is the Differential Corrections group user interaction master key**

2.1 Differential Corrections Examples

Below you will find examples of differential correction configurations.

2.1.1 Example 1: NTRIP Connection

The following example will establish an editable NTRIP automatic connection over HTTPS to the URL https://69.70.178.170:2101 with an editable Caster Username admin and Caster Password P@sword! to a switchable Mountpoint NTRIP 1 with the Profile name Diff Corp Config:

```
<?xml version="1.0" encoding="UTF-8"?>
<!DOCTYPE plist PUBLIC "-//Apple//DTD PLIST 1.0//EN" "http://www.apple.com/DTDs/Propert
yList-1.0.dtd"><plist version="1.0">
    <dict>
        <key>diffType</key>
        <integer>0</integer>
        <key>diffHTTPSEnabled</key>
        <true/>
        <key>diffIP</key>
        <string>69.70.178.170</string>
        <key>diffPort</key>
        <integer>2101</integer>
        <key>diffUserURLEnabled</key>
        <true/>
        <key>diffUsername</key>
        <string>admin</string>
        <key>diffPassword</key>
        <string>P@sword!</string>
        <key>diffUserCredentialsEnabled</key>
        <true/>
        <key>diffMountpoint</key>
        <string>Ntrip 1</string>
        <key>diffUserMountpointDisabled</key>
        <false/>
        <key>diffAutoStartEnabled</key>
        <true/>
        <key>diffCorpProfileName</key>
        <string>Diff Corp Config</string>
        <key>diffUserProfileEnabled</key>
        <true/>
        <key>diffUserConfigEnabled</key>
        <true/>
    </dict>
</plist>
```

The next section will cover MDM configurations for altitude and geoid model parameters …

2.1.2 Example 2: DIP Connection

The following example will establish a Direct IP, or DIP, manual connection over HTTP to the editable URL http://eos-gnss.com:2101, a fixed Mountpoint DIP1 and the Profile Name Chicago:

```
<?xml version="1.0" encoding="UTF-8"?>
<!DOCTYPE plist PUBLIC "-//Apple//DTD PLIST 1.0//EN" "http://www.apple.com/DTDs/PropertyList-
1.0.dtd">
<plist version="1.0">
    <dict>
        <key>diffType</key>
        <integer>1</integer>
        <key>diffHTTPSEnabled</key>
        <false/>
        <key>diffIP</key>
        <string>eos-gnss.com</string>
        <key>diffPort</key>
        <integer>2101</integer>
        <key>diffUserURLEnabled<key>
        <true/>
        <key>diffMountpoint</key>
        <string>DIP1</string>
        <key>diffUserMountpointDisabled</key>
        <true/>
        <key>diffAutoStartEnabled</key>
        <false/>
        <key>diffCorpProfileName</key>
        <string>Chicago</string>
        <key>diffUserProfileEnabled</key>
        <false/>
        <key>diffUserConfigEnabled</key>
        <true/>
    </dict>
</plist>
```

3. Altitude and Geoid Model Parameters

The following parameters are supported on ETP AppConfig for Altitude and Geoid Model.

IMPORTANT: If no value is entered for the altReference key, then the entire Altitude and Geoid Model group is MDM disabled, regardless of values entered for any other key within the group. Therefore, if you wish to administer your Altitude and Geoid Model settings via MDM, you must define a value for altReference.

User interaction master key: *altUserConfigEnabled*

*The Altitude and Geoid Model *user interaction master key*, ***altUserConfigEnabled***, controls user interaction with all the Altitude and Geoid model settings. If *altUserConfigEnabled* is set to false, all individual key values are overridden, and the user cannot edit any settings in the Altitude and Geoid Model group. If *altUserConfigEnabled* is set to true, users can edit each individually enabled key, while disabled keys remain uneditable.

For example:
If *altUserConfigEnabled* = true and *altUserGeoidExceptionValue* = false, then all settings in the Altitude and Geoid Model group will be enabled for the user to interact with, and only Geoid Exception Value will be disabled for the user.

If *altUserConfigEnabled* = false and *altUserGeoidExceptionValue* = true, then all settings in the Altitude and Geoid Model group will be disabled for the user to interact with, including Geoid Exception Value.

key / Description	**Type**	**Default**	**Notes**
altReference Specifies the desired altitude reference	Integer		Supported values: `0` for Receiver MSL, `1` for Orthometric, `2` for Ellipsoidal
altGeoidModel Specify the Geoid Model to use when altReference is set to Orthometric (value of 1)	String		Supported values: See table below. Example for **United States GEOID18 / NAVD88 (NAD83 2011),** value is `USGEOID18`
altGeoidExceptionValue Select the invalidation value that will be used in the GGA message when exceptions occur while using orthometric heights	Integer		Supported values: `0` for Position Not Valid, `1` for Uncorrected Position. Supported Receivers: Arrow Series with Bluetooth Firmware: > 2.2.1385: Fully supported = 2.2.1385: Supports `0` Position Not Valid only < 2.2.1385: Not supported
altUserGeoidExceptionValue Enable or disable user interaction with the Geoid Exception value	Boolean	`true`	Supported values: `true` to allow user to select the invalidation value, `false` to deny user selection ***Subject to master key status**
altUserConfigEnabled Disables or enables user interaction with the Altitude Reference settings	Boolean	`false`	Supported values: `true` to allow user to select Altitude reference values, `false` to disable user editing of Altitude and Geoid Model settings ***This is the Altitude and Geoid Model group user interaction master key**

Country	**Geoid Model / Vertical Datum (Horizontal Datum)**	**Values**
Australia	AUSGeoid09 / AHD71 (GDA94) AUSGeoid2020 / AHD71 (GDA2020)	`AUGEOID09` `AUGEOID2020`
Brazil	MAPGEO2015 / DVB-I (SIRGAS 2000)	`BRGEO2015`

Canada	CGG2013a / CGVD2013 (NAD83 CSRS)
	CGG2013a / CGVD2013 (ITRF 2008)
	HTv2.0 / CGVD28 (NAD83 CSRS)
		`CA2013A_NAD83`
		`CA2013A_ITRF`
		`CAHTV2`

Germany	GCG2016 / DHHN2016 (ETRS89-DREF91	`DEGCG2016`

Iceland	IceGeoid2011 / ISH2004 (ISN93)
	IceGeoid2011 / ISH2004 (ISN2004)
	IceGeoid2011 / ISH2004 (ISN2016)
		`ISGEOID2011_ISN93`
		`ISGEOID2011_ISN2004`
		`ISGEOID2011_ISN2016`

Sweden	SWEN17 / RH 2000 (SWEREF 99)	`SESWEN17`
United States	GEOID18 / NAVD88 (NAD83 2011) GEOID12B / NAVD88 (NAD83 2011/PA11/MA11)	`USGEOID18` `USGEOID12B`

3.1 Altitude and Geoid Model Configuration Examples

Below are examples of various potential altitude configurations.

3.1.1 Example 1: Altitude MSL Reference.

The following example will use a fixed MSL Altitude Reference:

```
<?xml version="1.0" encoding="UTF-8"?>
<!DOCTYPE plist PUBLIC "-//Apple//DTD PLIST 1.0//EN"
"http://www.apple.com/DTDs/PropertyList-1.0.dtd">
<plist version="1.0">
    <dict>
        <key>altReference</key>
        <integer>0</integer>
        <key>altUserConfigEnabled</key>
        <false/>
    </dict>
</plist>
```

3.1.2 Example 2: United States NAD 83 Geoid Model

The following example will use an editable Orthometric Altitude with a GEOID12B / NAVD88 (NAD83) Geoid Model and if exceptions occur positions are invalidated as Uncorrected Positions (1):

```
<?xml version="1.0" encoding="UTF-8"?>
<!DOCTYPE plist PUBLIC "-//Apple//DTD PLIST 1.0//EN" "http://www.apple.com/DTDs/Propert
yList-1.0.dtd"> <plist version="1.0">
    <dict>
        <key>altReference</key>
        <integer>1</integer>
        <key>altGeoidModel</key>
        <string>USGEOID12B</string>
        <key>altGeoidExceptionValue</key>
        <integer>1</integer>
        <key>altUserGeoidExceptionValue</key>
        <true/>
        <key>altUserConfigEnabled</key>
        <true/>
    </dict>
</plist>
```

4. Datum Shift Parameters

The following parameters are supported on ETP AppConfig for Datum Shift offsets.

IMPORTANT: If no values are provided for all three of the following keys datumShiftLat, datumShiftLon, datumShiftAlt ,then Datum Shift Offset configuration is MDM disabled. Therefore, if you wish to administer a Datum Shift setting via MDM, you must define a value for all three of these keys: datumShiftLat, datumShiftLon, datumShiftAlt.

User interaction master key: *datumShiftUserConfigEnabled*

*The Datum Shift *user interaction master key*, ***datumShiftUserConfigEnabled***, controls user interaction with all Datum Shift settings. If *datumShiftUserConfigEnabled* is set to false, all individual key values are overridden, and the user cannot edit any settings in the Datum Shift group. If *datumShiftUserConfigEnabled* is set to true, users can edit each individually enabled key, while disabled keys remain uneditable.

For example:

If *datumShiftUserConfigEnabled* = false and *datumShiftUserProfileEnabled* = true, then all settings in the Datum Shift group will be disabled for the user to interact with, including Datum Shift Profiles.

If *datumShiftUserConfigEnabled* = true and *datumShiftUserProfileEnabled* = false, then all settings in the Datum Shift group will be enabled for the user to interact with, and only Datum Shift Profiles will be disabled for the user.

key / Description	**Type**	**Default**	**Notes**
datumShiftLat Offset on the vertical (y) axis (Latitude)	Real		Units: Decimal degrees. Supported values range from -2 to 2 degree with up to 8 decimals. Examples: `1.273234350`;`.018`
datumShiftLon Offset on the horizontal (x) axis (Longitude)	Real		Units: Decimal degrees. Supported values range from -2 to 2 degree with up to 8 decimals. Examples: `1.456782730`;`.018`
datumShiftAlt Offset on the depth (Z) axis (Altitude)	Real		Units: meters. Supported values range from ± 999.999 meters with up to 3 decimals. Examples: `-1.273`; `.018`
datumShiftEnabled Activate datum shift, and on iOS also saves to the Arrow receiver	Boolean	`false`	Supported values: `true` to enable datum shift, `false` to disable datum shift
datumShiftCorpProfileName The profile name that contains the default corporate deployment values for the Datum Shift group	String	`DatumShift Corp Config`	A valid name is an alphanumeric string of 1 to 255 characters that contains letters from A to Z (upper and lower case), numbers from 0 to 9, space and underscore. **Regex [A-Za-z0-9 _]{255}.** For special characters use a **CDATA** block. Example: `Eos Shift Config,<![CDATA[Eös-{Shift}]]>`
datumShiftUserProfileEnabled To allow or prevent user-created Datum Shift Profiles	Boolean	`false`	Supported values: `true` to allow user-created profiles, `false` to prevent user-created profiles ***Subject to master key status**
datumShiftUserConfigEnabled Disable user interaction with any of the Datum Shift settings	Boolean	`false`	Supported values: `true` to allow editing of values for individual parameters, `false` to disable user edits of all values for the entire Datum Shift group (overrides switches of individual parameters) ***This is the Datum Shift group user interaction master key**

4.1 Datum Shift Examples

Below are examples of various potential datum shift configurations.

4.1.1 Example 1: Horizontal Datum Shift

This example will apply a horizontal (X-axis) Datum Shift Offset of 0.028 degrees with the profile name Corporate Configuration:

```
<?xml version="1.0" encoding="UTF-8"?>
<!DOCTYPE plist PUBLIC "-//Apple//DTD PLIST 1.0//EN" "http://www.apple.com/DTDs/Pr
opertyList-1.0.dtd"> <plist version="1.0">
    <dict>
        <key>datumShiftLat</key>
        <real>0.0</real>
        <key>datumShiftLon</key>
        <real>0.028</real>
        <key>datumShiftAlt</key>
        <real>0.0</real>
        <key>datumShiftEnabled</key>
        <true/>
        <key>datumShiftCorpProfileName</key>
        <string>Corporate Configuration</string>
        <key>datumShiftUserProfileEnabled</key>
        <false/>
        <key>datumShiftUserConfigEnabled</key>
        <false/>
    </dict>
</plist>
```

4.1.2 Example 2: Full Datum Shift

This example will apply an editable Datum Shift Offset of 0.028 degrees horizontal (X-axis), -1.273 degrees vertical (Y-axis) and 1.228 meters depth (Z-axis) with the profile name Chicago, can be user switched to another profile, and can be edited by user:

```
<?xml version="1.0" encoding="UTF-8"?>
<!DOCTYPE plist PUBLIC "-//Apple//DTD PLIST 1.0//EN" "http://www.apple.com/DTDs/Pr
opertyList-1.0.dtd"> <plist version="1.0">
    <dict>
        <key>datumShiftLat</key>
        <real>-1.273</real>
        <key>datumShiftLon</key>
        <real>0.028</real>
        <key>datumShiftAlt</key>
        <real>1.228</real>
        <key>datumShiftEnabled</key>
        <true/>
        <key>datumShiftCorpProfileName</key>
        <string>Chicago</string>
        <key>datumShiftUserProfileEnabled</key>
        <true/>
        <key>datumShiftUserConfigEnabled</key>
        <true/>
    </dict>
</plist>
```

The next section will cover MDM configurations for alarm parameters …

5. Alarms Parameters

The following parameters are supported on ETP AppConfig for Alarms.

IMPORTANT: If no value is entered for the alarmMonitoringEnabled key, then the entire Alarms group is MDM disabled, regardless of values entered for any other key within the group. Therefore, if you wish to administer Eos Tools Pro Alarms settings via MDM, you must define a value for the alarmMonitoringEnabled key.

User interaction master key: *alarmUserConfigEnabled*

*The Alarms *user interaction master key*, ***alarmUserConfigEnabled***, controls user interaction with all Alarms settings. If *alarmUserConfigEnabled* is set to false, all individual key values are overridden, and the user cannot edit any settings in the Alarms group. If *alarmUserConfigEnabled* is set to true, users can edit each individually enabled key, while disabled keys remain uneditable.

For example:
If *alarmUserConfigEnabled* = true and *alarmUserDefaultProfileEnabled* = false, then all settings in the Alarms group will be enabled for user interaction, and only Profiles will be disabled to the user.
If *alarmUserConfigEnabled* = false and *alarmUserDefaultProfileEnabled* = true, then all settings in the Alarms group will be disabled for the user to interact with, including Profiles.

key / Description	**Type**	**Default**	**Notes**
alarmMonitoringEnabled Enable or disable monitoring of alarm conditions	Boolean		Supported values: `true` to enable monitoring of alarm conditions, `false` to disable monitoring of alarm conditions.
alarmDefaultProfile Select a profile among ETP's predefined sets of threshold values for Differential status, H RMS, 3D RMS, PDOP Mask, Number of Satellites and Differential Age	Integer		Supported values: 0 = Submeter (Diff = Any DGNSS, 3D RMS = 1.5m, H RMS = 1m, PDOP = 3, Sats = 4, Diff Age = 1800s) 1 = Forestry (Diff = Any DGNSS, 3D RMS = 5m, H RMS = 3m, PDOP = 3, Sats = 4, Diff Age = 2700s) 2 = Subfoot (Diff = RTK Fixed/Float, 3D RMS = 50cm, H RMS = 30cm, PDOP = 3, Sats = 4, Diff Age = 300s) 3 = RTK (Diff = RTK Fixed, 3D RMS = 5cm, H RMS = 3cm, PDOP = 3, Sats = 4, Diff Age = 30s) 4 = All Off (Diff = Off, 3D RMS = Off, H RMS = Off, PDOP = Off, Sats = Off, Diff Age = Off)
alarmUserDefaultProfileEnabled Enable user selection of ETP predefined Alarm Profiles	Boolean	`false`	Supported values: `true` for enable manual Profile selection, `false` for loading no editable Alarm Profile selection. ***Subject to master key status**
alarmDiffStatus Set or override the alarm threshold for the Differential Status	Integer		Supported values: `0` for Off, `1` for Any DGNSS, `2` for RTK Fixed/Float, `3` for RTK Fixed Only

alarmUserDiffStatusEnabled Enable or disable user selection of the Differential Status setting (*alarmDiffStatus*)	Boolean		Supported values: `true` for enable manual Differential limit selection, `false` for loading no editable Differential limit selection. ***Subject to master key status**
alarm3DRMSValue Set or override the alarm threshold value for the 3D RMS estimated accuracy	Real		Supported values: from `0` to `2500` centimeters with one decimal. Note: `0` means Off
alarmUser3DRMSEnabled Enable or disable user input for the 3D RMS threshold value (*alarm3DRMSValue*)	Boolean		Supported values: `true` to enable user selection of 3D RMS threshold values, `false` to disable user selection. * Subject to master key status
alarmHRMSValue Set or override the alarm threshold value for the H RMS estimated accuracy	Real		Supported values: from `0` to `2500` centimeters with one decimal. Note: `0` means Off
alarmUserHRMSEnabled Enable or disable user input for the H RMS threshold value (*alarmHRMSValue*)	Boolean		Supported values: `true` to enable user selection of HRMS threshold values, `false` to disable user selection. ***Subject to master key status**
alarmPDOPValue Set or override the alarm threshold value for PDOP	Integer		Supported values: integer from `0` to `10` with one decimal. Note: `0` means Off
alarmUserPDOPEnabled Enable or disable user input for the PDOP threshold value (*alarmPDOPValue*)	Boolean		Supported values: `true` to enable user selection of PDOP threshold values, `false` to disable user selection. * Subject to master key status
alarmSatsValue Set or override the alarm threshold for the minimum number of visible satellites	Integer		Supported values: `0` and from `3` to `10` satellites. Note: `0` means Off
alarmUserSatsEnabled Enable or disable user input for the minimum number of satellites (*alarmSatsValue*)	Boolean		Supported values: `true` to enable user selection of the minimum number of satellites, `false` to disable user selection ***Subject to master key status**
alarmDiffAgeValue Set or override the alarm threshold for Differential Correction Age limit	Integer		Supported values: 0 and from 2 to 3600 in seconds. Note: 0 means Off
alarmUserDiffAgeEnabled Enable or disable user input for Differential Age limit (*alarmDiffAgeValue*)	Boolean		Supported values: `true` to enable user selection of the Differential Age limit, `false` to disable user selection ***Subject to master key status**
alarmLostConnectionEnabled Enable or disable an audible sound when Bluetooth® connection is lost with the receiver	Boolean	`false`	Supported values: `true` to enable an audible sound when Bluetooth connection with the receiver is lost, `false` to disable the audible sound when Bluetooth connection with the receiver is lost ***Subject to master key status**

alarmContinuousAlertEnabled Enable or disable a continuous audible sound for the duration of any alarm condition. If disabled, audible sound is emitted once and only at the first occurrence of any alarm condition	Boolean	`false`	Supported values: `true` to enable a continuous audible alert as long as there is an alarm condition, `false` to limit the audible alert to only once at the occurrence of an event ***Subject to master key status**
alarmLocalNotificationEnabled Display a local notification at the occurrence of an alarm condition and when an alarm condition is dismissed	Boolean	`false`	Supported values: `true` to enable Local Notifications, `false` to disable Local Notifications ***Subject to master key status**
alarmSkadiVoiceEnabled Enable or disable Skadi voice notifications for Skadi Tilt Compensation and Skadi Smart Handle status updates	Boolean	`true`	Supported values: `true` to allow Skadi voice notifications, `false` to disable Skadi voice ***Subject to master key status**
alarmUserConfigEnabled Enable or disable user configuration of alarms parameters	Boolean	`false`	Supported values: `true` to allow users to manage alarm settings, `false` to prevent users from modifying alarm settings ***This is the Alarms group user interaction master key**

5.1 Alarm Examples

Below are examples of various potential alarm configurations.

5.1.1 Example 1: Subfoot Alarms

This is an example of a subfoot (2) alarm profile in which alarm conditions occur when Differential Status is different than RTK Fixed/Float, 3D RMS estimated accuracy is 50cm or above, H RMS is 30cm or above, PDOP value is 3 or above, Number of Satellites equals to 4 or less, Differential Age equals to 300 seconds or above, emit a continuous sound and a local notification with the detail of the parameter that exceeds the limit, as well as a notification when the parameter falls back into range.

Here is the example:

```
<?xml version="1.0" encoding="UTF-8"?>
	<!DOCTYPE plist PUBLIC "-//Apple//DTD PLIST 1.0//EN" "http://www.apple.com/DTDs/Propert
	yList-1.0.dtd"> <plist version="1.0">
	    <dict>
	        <key>alarmMonitoringEnabled</key>
	        <true/>
	        <key>alarmDefaultProfile</key>
	        <integer>2</integer>
	        <key>alarmContinuousAlertEnabled</key>
	        <true/>
	        <key>alarmLocalNotificationEnabled</key>
	        <true/>
	    </dict>
	</plist>
```

5.1.2 Example 2: RTK Alarms Customized

This example will allow you to monitor the alarm conditions when Differential is not equal to RTK Fixed, 3D RMS is 5cm or above, H RMS equals to 3cm or more, PDOP Mask equals to 3 or lower, Number of Satellites equals to 4 or higher, Differential Age equals to 5 seconds or more that can be manually switched from default options, emit an audible alert and a notification with the detail of the parameter

that exceeded the limit, as well as a notification when the parameter gets back into range, and Skadi voice notifications when Skadi Tilt Compensation or Skadi Smart Handle status changes. Here is the example:

```
<?xml version="1.0" encoding="UTF-8"?>
<!DOCTYPE plist PUBLIC "-//Apple//DTD PLIST 1.0//EN" "http://www.apple.com/DTDs/Propert
yList-1.0.dtd"> <plist version="1.0">
    <dict>
        <key>alarmMonitoringEnabled</key>
        <true/>
        <key>alarmDefaultProfile</key>
        <integer>3</integer>
        <key>alarmUserDefaultProfileEnabled</key>
        <true/>
        <key>alarmDiffAgeValue</key>
        <integer>5</integer>
        <key>alarmUserDiffAgeEnabled</key>
        <true/>
        <key>alarmContinuousAlertEnabled</key>
        <true/>
        <key>alarmLocalNotificationEnabled</key>
        <true/>
        <key>alarmUserConfigEnabled</key>
        <true/>
        <key>alarmSkadiVoiceEnabled</key>
        <true/>
    </dict>
</plist>
```

The next section will cover MDM configurations for tilt compensation parameters …

6. Tilt Compensation

The following parameters are supported on ETP AppConfig for Skadi Tilt Compensation.

IMPORTANT: If no value is entered for the skadiTiltEnabled key, then the entire Tilt Compensation group is MDM disabled, regardless of values entered for any other key within the group. Therefore, if you wish to administer Eos Tools Pro Tilt Compensation settings via MDM, you must define a value for the skadiTiltEnabled key. RTK Fixed position and pole height are required to initialize Skadi Tilt Compensation.

User interaction master key: *skadiUserConfigEnabled*
*The Tilt Compensation *user interaction master key*, ***skadiUserConfigEnabled***, controls user interaction with all Tilt Compensation settings. If *skadiUserConfigEnabled* is set to false, all individual key values are overridden, and the user cannot edit any settings in the Tilt Compensation group. If *skadiUserConfigEnabled* is set to true, users can edit each individually enabled key, while disabled keys remain uneditable.

For example:
If *skadiUserConfigEnabled* = true, and *skadiUserPoleHeightEnabled* = false, then all settings in the Tilt Compensation group will be enabled for the user to interact with, and only pole height will be disabled for the user.

If *skadiUserConfigEnabled* = false, and *skadiUserPoleHeightEnabled* = true, then all settings in the Tilt Compensation group will be disabled for the user to interact with, including pole height.

key / Description	**Type**	**Default**	**Notes**
skadiTiltEnabled Enable or disable Skadi Tilt Compensation	Boolean		Supported values: `true` to enable Skadi Tilt Compensation, `false` to disable Skadi Tilt Compensation
skadiUserTiltEnabled Enable or disable user interaction with skadiTiltEnabled	Boolean		Supported values: `true` to allow user to enable or disable Skadi Tilt Compensation, `false` to restrict user access ***Subject to master key status**
skadiPoleHeight Range pole height, measured from the bottom of the pole up to the bottom of the Skadi receiver (Antenna Phase Center Reference Plane)	Real		Units: meters. Supported values range from 0 to 5 meters with up to 3 decimals Example: 2.037
skadiUserPoleHeightEnabled Enable or disable user entry for Pole Height	Boolean		Supported values: `true` to allow user entry of pole height, `false` to deny user entry ***Subject to master key status**
skadiTiltAngleValue Set or override the warning threshold value for tilt angle	Integer	`90`	Units: degrees (°). Supported values range from 0° to 100° in 5° increments
skadiUserTiltAngleEnabled Enable or disable user selection of Tilt Angle Threshold for Skadi Tilt Compensation	Boolean		Supported values: `true` to allow user selection of Tilt Angle Threshold for Skadi Tilt Compensation, `false` to deny user selection ***Subject to master key status**
skadiTiltQualityValue Set or override the warning threshold value for tilt quality	Real	`5`	Units: centimeters. Supported values range from 1 to 5 centimeters in 0.5 centimeter increments
skadiUserTiltQualityEnabled Enable or disable user selection of Tilt Quality Threshold for Skadi Tilt Compensation	Boolean		Supported values: `true` to allow user selection of Tilt Quality Threshold for Skadi Tilt Compensation, `false` to deny user selection ***Subject to master key status**
skadiFloatModeEnabled Enable or disable RTK Float Mode for Skadi Tilt Compensation	Boolean		Supported values: `true` to enable RTK Float Mode for Skadi Tilt Compensation after initialization in RTK Fixed, `false` to disable Float Mode for Skadi Tilt Compensation
skadiUserFloatModeEnabled Enable or disable user interaction with RTK Float Mode	Boolean		Supported values: `true` to allow user to enable or disable Float Mode, `false` deny user interaction with Float Mode ***Subject to master key status**
skadiFloatHRMSValue Set or override the H RMS Limit value for RTK Float Mode	Real	`10`	Units: centimeters. Supported values range from 5 to 50 centimeters in 5 centimeter increments

skadiUserFloatHRMSEnabled Enable or disable user selection of the H RMS Limit value	Boolean		Supported values: `true` to allow user selection of the H RMS Limit value for Float Mode, `false` to deny user selection of the H RMS Limit value ***Subject to master key status**
skadiFloatDiffAgeValue Set or override the Differential Age Limit value for RTK Float Mode	Integer	`60`	Units: seconds. Supported values: 15, 30, 45, 60, 90,120, 180 seconds
skadiUserFloatDiffAgeEnabled Enable or disable user selection of the Differential Age Limit value	Boolean		Supported values: `true` to allow user selection of the Differential Age Limit value for Float Mode, `false` to deny user selection of the Differential Age Limit value ***Subject to master key status**
skadiUserConfigEnabled Enable or disable user interaction with any of the Skadi Tilt Compensation settings	Boolean	`false`	Supported values: `true` to allow editing of values for individual editable parameters, `false` to disable user edits of all values for the entire Skadi Tilt Compensation group (overrides switches of individual parameters) ***This is the Skadi Tilt Compensation group user interaction master key**

6.1 Tilt Compensation Examples

Below is an example of a typical tilt compensation configuration:

6.1.1 Example 1: Skadi Tilt Compensation and Float Mode Enabled

The following example will establish an editable NTRIP automatic connection over HTTPS to the URL https://69.70.178.170:2101 with an editable Caster Username admin and Caster Password P@sword! to a switchable Mountpoint NTRIP 1 with the Profile name Diff Corp Config, with Tilt Compensation enabled and switchable with RTK Float Mode allowed with Float HRMS Limit of 10cm and Float Differential Age Limit less than 60 seconds.

```
<?xml version="1.0" encoding="UTF-8"?>
<!DOCTYPE plist PUBLIC "-//Apple//DTD PLIST 1.0//EN" "http://www.apple.com/DTDs/Propert yList-
1.0.dtd"> <plist version="1.0">
    <dict>
        <key>diffType</key>
        <integer>0</integer>
        <key>diffHTTPSEnabled</key>
        <true/>
        <key>diffIP</key>
        <string>69.70.178.170</string>
        <key>diffPort</key>
        <integer>2101</integer>
        <key>diffUserURLEnabled</key>
        <true/>
        <key>diffUsername</key>
        <string>admin</string>
        <key>diffPassword</key>
        <string>P@sword!</string>
        <key>diffUserCredentialsEnabled</key>
        <true/>
        <key>diffMountpoint</key>
        <string>Ntrip 1</string>
        <key>diffUserMountpointDisabled</key>
        <false/>
        <key>diffAutoStartEnabled</key>
        <true/>
        <key>diffCorpProfileName</key>
        <string>Diff Corp Config</string>
        <key>diffUserProfileEnabled</key>
        <true/>
        <key>diffUserConfigEnabled</key>
        <true/>
        <key>skadiTiltEnabled</key>
        <true>
        <key>skadiUserTiltEnabled </key>
        <true/>
        <key>skadiFloatModeEnabled</key>
        <true>
        <key>skadiUserFloatModeEnabled</key>
        <false>
        <key>skadiFloatHRMSValue</key>
        <real>10</real>
        <key>skadiUserFloatHRMSEnabled</key>
        <false>
        <key>skadiFloatDiffAgeValue</key>
        <integer>60</integer>
        <key>skadiUserFloatDiffAgeEnabled</key>
        <false>
        <key>skadiUserConfigEnabled</key>
        <true>
    </dict>
</plist>
```

The next section will cover MDM configurations for smart handle parameters …

7. Skadi Smart Handle

The following parameters are supported on ETP AppConfig for the Skadi Smart Handle.

IMPORTANT: If no value is entered for the smartHandleEnabled key, then the entire Smart Handle group is MDM disabled, regardless of values entered for any other key within the group. Therefore, if you wish to administer Eos Tools Pro Smart Handle settings via MDM, you must define a value for the smartHandleEnabled key. RTK Fixed is required to initialize Skadi Smart Handle.

User interaction master key: *smartHandleUserConfigEnabled*
*The Skadi Smart Handle *user interaction master key*, ***smartHandleUserConfigEnabled***, controls user interaction with all Skadi Smart Handle settings. If *smartHandleUserConfigEnabled* is set to false, all individual key values are overridden, and the user cannot edit any settings in the Skadi Smart Handle group. If *smartHandleUserConfigEnabled* is set to true, users can edit each individually enabled key, while disabled keys remain uneditable.

For example:
If *smartHandleUserConfigEnabled* = true and *smartHandleUserModeEnabled* = false, then all settings in the Skadi Smart Handle group will be enabled for the user to interact with, and only Smart Handle Mode will be disabled for the user.
If *smartHandleUserConfigEnabled* = false and *smartHandleUserModeEnabled* = true, then all settings in the Skadi Smart Handle group will be disabled for the user to interact with, including Smart Handle Mode.

key / Description	**Type**	**Default**	**Notes**
smartHandleEnabled Enable or disable Skadi Smart Handle	Boolean		Supported values: `true` to enable Skadi Smart Handle, `false` to disable Skadi Smart Handle
smartHandleUserEnabled Enable or disable user ability to enable or disable the Smart Handle	Boolean		Supported values: `true` to allow user to enable or disable Skadi Smart Handle, `false` to restrict user access. ***Subject to master key status**
smartHandleMode Specifies the Smart Handle mode	Integer	`0`	Supported values: 0 = Extensible, 1 = Invisible
smartHandleUserModeEnabled Enable or disable user selection of the Smart Handle mode	Boolean		Supported values: `true` to allow user selection of Smart Handle mode, `false` to disable user selection ***Subject to master key status**
smartHandleSinglePointEnabled Enable or disable Single Point mode	Boolean		Supported values: `true` to enable Single Point mode, `false` to disable. If Single Point mode is enabled, then smartHandleMode must be set to Extensible (0)

smartHandleUserSinglePointEnabled Enable or disable user interaction with Smart Handle Single Point mode	Boolean		Supported values: `true` to allow user to enable and disable Single Point mode, `false` to disable user interaction. If true, then smartHandleMode must be Extensible (0) ***Subject to master key status**
smartHandleExtensibleAngleValue Set or override the warning threshold for extensible mode tilt angle	Integer	`75`	Units: degrees (°). Supported values range from 5° to 100° degrees in 5° increments
smartHandleUserExtensibleAngleEnabled Set or override the alarm threshold value for the H RMS estimated accuracy	Boolean		Supported values: `true` to allow user selection of tilt angle threshold value for extensible mode, `false` to deny user selection ***Subject to master key status**
smartHandleInvisibleAngleValue Set or override the warning threshold for invisible mode tilt angle	Integer	`40`	Units: degrees (°). Supported values range from 5° to 100° degrees in 5° increments
smartHandleUserInvisibleAngleEnabled Enable or disable user selection of tilt angle threshold value for invisible mode	Boolean		Supported values: `true` to allow user selection of tilt angle threshold value for invisible mode, `false` to deny user selection ***Subject to master key status**
smartHandleExtensibleQualityValue Set or override the warning threshold value for extensible mode tilt quality	Real	`2`	Units: centimeters. Supported values range from 0 to 4 centimeters in 0.5 centimeter increments
smartHandleUserExtensibleQualityEnabled Enable or disable user selection of tilt quality threshold value for extensible mode	Boolean		Supported values: `true` to allow user selection of tilt quality threshold for extensible mode, `false` to deny user selection ***Subject to master key status**
smartHandleInvisibleQualityValue Set or override the warning threshold value for invisible mode tilt quality	Real	`2`	Units: centimeters. Supported values range from 0 to 4 centimeters in 0.5 centimeter increments
smartHandleUserInvisibleQualityEnabled Set or override the alarm threshold for Differential Correction Age limit	Boolean		Supported values: `true` to allow user selection of tilt quality threshold for invisible mode, `false` to deny user selection ***Subject to master key status**
smartHandleFloatModeEnabled Enable or disable Smart Handle RTK Float Mode	Boolean		Supported values: `true` to enable RTK Float Mode for Skadi Smart Handle after initialization in RTK Fixed, `false` to disable Float Mode for Skadi Smart Handle
smartHandleUserFloatModeEnabled Enable or disable user interaction with Smart Handle RTK Float Mode	Boolean		Supported values: `true` to allow user to enable and disable Smart Handle Float Mode, `false` to disable user interaction ***Subject to master key status**
smartHandleFloatHRMSValue Set or override the H RMS Limit value for Smart Handle RTK Float Mode	Real	`10`	Units: centimeters. Supported values range from 5 to 50 centimeters in 5 centimeter increments

smartHandleUserFloatHRMSEnabled Enable or disable user selection of the H RMS Limit value in RTK Float Mode (smartHandleFloatHRMSValue)	Boolean		Supported values: `true` to allow user selection, `false` to disable user selection ***Subject to master key status**
smartHandleFloatDiffAgeValue Set or override the Differential Age Limit value for Smart Handle RTK Float Mode	Integer	`60`	Units: seconds. Supported values: 15, 30, 45, 60, 90, 120, 180 seconds
smartHandleUserFloatDiffAgeEnabled Enable or disable user selection of the Differential Age Limit value in Smart Handle RTK Float Mode	Boolean		Supported values: `true` to allow user selection, `false` to disable user selection ***Subject to master key status**
smartHandleUserConfigEnabled Enable or disable user interaction with any of the Smart Handle settings	Boolean	`false`	Supported values: `true` to allow editing of values for individual editable parameters, `false` to disable user edits of all values for the entire Smart Handle group (overrides switches of individual parameters) ***This is the Smart Handle group user interaction master key**

7.1 Skadi Smart Handle Examples

Below are examples of various potential Skadi Smart Handle key configuration:

7.1.1 Example 1: Skadi Smart Handle in Invisible Pole Mode

Here is an example of how to enable Skadi Smart Handle to operate only in Invisible Pole Mode with RTK Float Mode enabled, with a maximum float H RMS value of 10cm and differential age limit of 60 seconds, Differential Corrections parameters not configured via MDM allowing the user to set these parameters in the app. Note: RTK Fixed is required to initialize Skadi Smart Handle:

```
<?xml version="1.0" encoding="UTF-8"?>
<!DOCTYPE plist PUBLIC "-//Apple//DTD PLIST 1.0//EN" "http://www.apple.com/DTDs/Propert
yList-1.0.dtd"><plist version="1.0">
    <dict>
        <key> smartHandleEnabled</key>
        <true>
        <key> smartHandleUserEnabled</key>
        <false/>
        <key> smartHandleMode</key>
        <integer>1</integer>
        <key> smartHandleUserModeEnabled</key>
        <false/>
        <key> smartHandleFloatModeEnabled</key>
        <true/>
        <key> smartHandleUserFloatModeEnabled</key>
        <true/>
        <key>smartHandleFloatHRMSValue</key>
        <real>10</real>
        <key>smartHandleUserFloatHRMSEnabled</key>
        <false>
        <key>smartHandleFloatDiffAgeValue</key>
        <integer>60</integer>
        <key>smartHandleUserFloatDiffAgeEnabled</key>
        <false>
        <key> smartHandleUserConfigEnabled</key>
        <true/>
    </dict>
</plist>
```

7.1.2 Example 2: Skadi Smart Handle

Here is an example of how to enable Skadi Smart Handle to operate in Extensible Virtual Range Pole (0) mode with Single Point Mode allowed, warning thresholds for Tilt Angle set to 75 degrees and Tilt Quality 2cm, disable RTK Float Mode and establish an editable NTRIP automatic connection over HTTPS to the URL https://69.70.178.170:2101 with an editable Caster Username admin and Caster Password P@sword! to a switchable Mountpoint NTRIP 1 with the Profile name Diff Corp Config.:

```
<?xml version="1.0" encoding="UTF-8"?>
<!DOCTYPE plist PUBLIC "-//Apple//DTD PLIST 1.0//EN" "http://www.apple.com/DTDs/Propert yList-1.0.dtd"><plist
version="1.0">
    <dict>
        <key>diffType</key>
        <integer>0</integer>
        <key>diffHTTPSEnabled</key>
        <true/>
        <key>diffIP</key>
        <string>69.70.178.170</string>
        <key>diffPort</key>
        <integer>2101</integer>
        <key>diffUserURLEnabled</key>
        <true/>
        <key>diffUsername</key>
        <string>admin</string>
        <key>diffPassword</key>
        <string>P@sword!</string>
        <key>diffUserCredentialsEnabled</key>
        <true/>
        <key>diffMountpoint</key>
        <string>Ntrip 1</string>
        <key>diffUserMountpointDisabled</key>
        <false/>
        <key>diffAutoStartEnabled</key>
        <true/>
        <key>diffCorpProfileName</key>
        <string>Diff Corp Config</string>
        <key>diffUserProfileEnabled</key>
        <true/>
        <key>diffUserConfigEnabled</key>
        <true/>
        <key> smartHandleEnabled</key>
        <true>
        <key> smartHandleUserEnabled</key>
        <false/>
        <key> smartHandleMode</key>
        <integer>0</integer>
        <key> smartHandleUserModeEnabled</key>
        <false/>
        <key> smartHandleExtensibleAngleValue</key>
        <integer>75</integer>
        <key> smartHandleUserExtensibleAngleValue </key>
        <false/>
        <key> smartHandleExtensibleQualityValue</key>
        <real>2</real>
        <key> smartHandleUserExtensibleQualityValue </key>
        <false/>
        <key> smartHandleSinglePointEnabled</key>
        <true/>
        <key> smartHandleUserSinglePointEnabled</key>
        <false/>
        <key> smartHandleFloatModeEnabled</key>
        <false/>
        <key> smartHandleUserFloatModeEnabled</key>
        <false/>
        <key> smartHandleUserConfigEnabled</key>
        <true/>
    </dict>
</plist>
```

The next section will cover MDM configurations for miscellaneous parameters …

8. Miscellaneous Parameters

The following parameters are supported on ETP AppConfig for Miscellaneous.

IMPORTANT: The entire Miscellaneous category cannot be MDM disabled as can the above categories. Instead, each key is considered unique and configured independently.

User interaction master key: *miscUserConfigEnabled*

*The Miscellaneous *user interaction master key*, ***miscUserConfigEnabled***, controls user interaction with Miscellaneous settings. If *miscUserConfigEnabled* is set to false, all individual key values are overridden, and the user cannot edit any settings in the Miscellaneous group. If *miscUserConfigEnabled* is set to true, users can edit each individually enabled key, while disabled keys remain uneditable.

For example:

If *miscUserConfigEnabled* = true and *miscUserReceiverOutputDisabled* = false, then all settings in the Miscellaneous group will be enabled for user interaction, and only receiver invalidation parameters will be disabled to the user.

If *miscUserConfigEnabled* = false and *miscUserReceiverOutputDisabled* = true, then all settings in the Miscellaneous group will be disabled for the user to interact with, including receiver invalidation parameters.

key /Description	**Type**	**Default**	**Notes**
miscAppInUse Identifier of the companion app to synchronize with ETP	Integer		Supported values: `0` for None, `1` for Esri ArcGIS Field Maps, `2` for Esri ArcGIS Collector, `3` for Esri ArcGIS Survey123, `4` for Esri ArcGIS QuickCapture
miscAppAutoLaunchEnabled Enable or disable automatic launching of *miscAppInUse* app after opening ETP	Boolean	`false`	Supported values: `true` Launch app selected in *miscAppInUse* after launching ETP, `false` to disable automatically launch of *miscAppInUse*
miscReceiverOutputDisabled Enable or disable receiver output to third-party apps when Eos Tools Pro is closed while Ntrip, Orthometric Height or Datum Shift are enabled	Boolean		Supported values: `true` to disable receiver output to third-party apps when Eos Tools Pro is closed, `false` to enable receiver output
miscReceiverOutputDisabledValue Select the invalidation value that will be used in the GGA message when miscReceiverOutputDisabled is set to true (enabled)	Integer		Supported values: `0` for Position Not Valid, `1` for Uncorrected Position. Supported Receivers: Arrow Series with Bluetooth Firmware: > 2.2.1385: Fully supported = 2.2.1385: Supports `0` Position Not Valid only < 2.2.1385: Not supported
miscUserReceiverOutputDisabled Enable or disable user editing of the Disable Receiver Output parameters	Boolean	`true`	Supported values: `true` to allow user to edit the Disable Receiver Output parameters, `false` to deny user interaction ***Subject to master key status**
miscUserConfigEnabled Enable or disable user configuration of miscellaneous parameters	Boolean	`false`	Supported values: `true` to allow users to manage miscellaneous settings, `false` to prevent users from modifying miscellaneous settings ***This is the Miscellaneous group user interaction master key**

8.1 Miscellaneous Examples

Below are examples of various potential miscellaneous key configurations:

8.1.1 Example 1: Esri ArcGIS Field Maps App Auto-launch

Here is an example of how to enable automatic launching of Esri ArcGIS Field Maps (1) after opening ETP:

```
<?xml version="1.0" encoding="UTF-8"?>
<!DOCTYPE plist PUBLIC "-//Apple//DTD PLIST 1.0//EN" "http://www.apple.com/DTDs/Propert
yList-1.0.dtd"><plist version="1.0">
    <dict>
        <key>miscAppInUse</key>
        <integer>1</integer>
        <key>miscAppAutoLaunchEnabled</key>
        <true/>
    </dict>
</plist>
```

8.1.2 Example 2: Disable Receiver Output

Here is an example of how to automatically disable receiver output when the app is closed with a locked invalidation value of Uncorrected Position (1):

```
<?xml version="1.0" encoding="UTF-8"?>
<!DOCTYPE plist PUBLIC "-//Apple//DTD PLIST 1.0//EN" "http://www.apple.com/DTDs/Propert
yList-1.0.dtd"><plist version="1.0">
    <dict>
        <key>miscReceiverOutputDisabled</key>
        <true/>
        <key>miscReceiverOutputDisabledValue</key>
        <integer>1</integer>
         <key>miscUserReceiverOutputDisabled</key>
        <false/>
    </dict>
</plist>
```

In the next section, we will look at full use cases of MDM deployment, including examples of MDM deployments that contain all types of parameters from all seven categories …

9. Full MDM Deployment Examples

What follows are examples of full MDM deployments from fictional but probable situations.

9.1 Example 1: Simple Configuration

The following example will intend to establish an automatic NTRIP connection over HTTPS to the URL https://ntrip.data.gnss.ga.gov.au:443 with the Caster Username eos-test.username1 and Caster Password H@rdP@ssw0rd!.$ connected to a Mountpoint 4GLE00AUS0 – AUS, with manual Mount Point selection not allowed, and the Differential Profile Name Diff Corp Config, using a Receiver MSL Altitude Reference, applying a horizontal (X-axis) Datum Shift Offset of 0.028 degrees with the Datum Shift Profile Name Datum Shift Corp Config, and no MDM Alarms configured. Here is what the sample configuration would look like:

```
<?xml version="1.0" encoding="UTF-8"?>
<!DOCTYPE plist PUBLIC "-//Apple//DTD PLIST 1.0//EN" "http://www.apple.com/DTDs/Propert
yList-1.0.dtd"> <plist version="1.0">
    <dict>
        <!-- Start Differential -->
        <key>diffType</key>
        <integer>0</integer>
        <key>diffHTTPSEnabled</key>
        <true/>
        <key>diffIP</key>
        <string><![CDATA[ntrip.data.gnss.ga.gov.au]]></string>
        <key>diffPort</key>
        <integer>443</integer>
        <key>diffUsername</key>
        <string><![CDATA[eos-test.username1]]></string>
        <key>diffPassword</key>
        <string><![CDATA[H@rdP@ssw0rd!.$]]></string>
        <key>diffMountpoint</key>
        <string>4GLE00AUS0 - AUS</string>
        <key>diffUserMountpointDisabled</key>
        <true/>
        <key>diffAutoStartEnabled</key>
        <true/>
        <!-- End Differential -->
        <!-- Start Altitude -->
        <key>altReference</key>
        <integer>0</integer>
        <!-- End Altitude -->
        <!-- Start Datum Shift -->
        <key>datumShiftLon</key>
        <real>0.028</real>
        <key>datumShiftLat</key>
        <real>0.0</real>
        <key>datumShiftAlt</key>
        <real>0.0</real>
        <key>datumShiftEnabled</key>
        <true/>
         <key>datumShiftCorpProfileName</key>
         <string>Datum Shift Corp Config</string>
          <!-- End Datum Shift -->
    </dict>
</plist>
```

9.2 Example 2: Common Configuration

The following example will intend to establish an NTRIP automatic connection over HTTPS to the URL https://ntrip.data.gnss.ga.gov.au:443 with editable Caster User Name eos-test.username1 and editable Caster Password H@rdP@ssw0rd!.$ connected to the Caster Mountpoint 240600NZL0 with user selectable Mountpoint disabled; the Differential Profile Name Australia Base Station and user Differential Profile switching enabled; using an editable Orthometric Altitude Reference with a GEOID12B / NAVD88 (NAD83 2011/PA11/MA11) Geoid Model; apply an editable Datum Shift of 0.028 degrees on longitude, -1.27323435 degrees on latitude and 1.456 meters on altitude, with the Datum Shift Profile Name Chicago, user created Datum Shift Profiles enabled; and an editable Alarm Profile of Subfoot (Differential equals to RTK Fixed/Float, 3D RMS equals to 50cm or less, H RMS equals to 30cm or less, PDOP Mask equals to 3 or less , Number of Satellites equals to 4 or higher, Differential Age equals to 300 seconds or less); Alarms monitoring configuration with sound alerts, local notification and manual Alarm Default Profile switching enabled.

```
<?xml version="1.0" encoding="UTF-8"?>
<!DOCTYPE plist PUBLIC "-//Apple//DTD PLIST 1.0//EN" "http://www.apple.com/DTDs/Propert
yList-1.0.dtd"><plist version="1.0">
    <dict>
        <!-- Start Differential -->
        <key>diffType</key>
        <integer>0</integer>
        <key>diffHTTPSEnabled</key>
        <true/>
        <key>diffIP</key>
        <string><![CDATA[ntrip.data.gnss.ga.gov.au]]></string>
        <key>diffPort</key>
        <integer>443</integer>
        <key>diffUsername</key>
        <string><![CDATA[eos-test.username1]]></string>
        <key>diffPassword</key>
        <string><![CDATA[H@rdP@ssw0rd!.$]]></string>
        <key>diffUserCredentialsEnabled</key>
        <true/>
        <key>diffMountpoint</key>
        <string>240600NZL0</string>
        <key>diffUserMountpointDisabled</key>
        <true/>
        <key>diffAutoStartEnabled</key>
        <true/>
        <key>diffCorpProfileName</key>
        <string>Australia Base Station</string>
        <key>diffUserProfileEnabled</key>
        <true/>
        <!-- End Differential -->
        <!-- Start Altitude -->
        <key>altReference</key>
        <integer>1</integer>
        <key>altGeoidModel</key>
        <string>USGEOID12B</string>
        <key>altUserConfigEnabled</key>
        <true/>
        <!-- End Altitude -->
        <!-- Start Datum Shift -->
```

```
            <key>datumShiftLon</key>
            <real>0.028</real>
            <key>datumShiftLat</key>
            <real>-1.27323435</real>
            <key>datumShiftAlt</key>
            <real>1.456</real>
            <key>datumShiftCorpProfileName</key>
            <string>Chicago</string>
            <key>datumUserShiftProfileEnabled</key>
            <true/>
            <key>datumShiftUserConfigEnabled</key>
            <true/>
            <!-- End Datum Shift -->
            <!-- Start Alarms -->
            <key>alarmMonitoringEnabled</key>
            <true/>
            <key>alarmDefaultProfile</key>
            <integer>2</integer>
            <key>alarmUserDefaultProfileEnabled</key>
            <true/>
            <key>alarmLostConnectionEnabled</key>
            <true/>
            <key>alarmContinuousAlertEnabled</key>
            <true/>
            <key>alarmLocalNotificationEnabled</key>
            <true/>
            <key>alarmUserConfigEnabled</key>
            <true/>
            <!-- End Alarms -->
        </dict>
    </plist>
```

9.3 Example 3: Full Settings

The following example will intend to establish a non-user-editable automatic NTRIP connection over HTTPS to the URL https://ntrip.data.gnss.ga.gov.au:443 with Caster User Name eos-test.username1 and Caster Password H@rdP@ssw0rd!.$ connected to the Caster Mountpoint 4GLE00AUS0 - AUS with user selectable Mountpoint; the Differential Profile Name Diff Corp Config and user Differential Profile switching disabled; using an editable Orthometric Altitude Reference with a GEOID18 / NAVD88 (NAD83 2011) Geoid Model, a Datum Shift Offset of 1.45678273 degrees on longitude, -1.27323435 degrees on latitude and 1.228 meters on altitude with the Datum Shift Profile Name Datum Shift Corp Config that needs to be activated by the user, and no user-editable RTK (Differential equals to RTK Fixed; 3D RMS equals to 5cm or less, H RMS equals to 3cm or less, PDOP Mask equals to 3 or less, Number of Satellites equals to 4 or higher, a custom Differential Age equals to 3 seconds or less); Alarms monitoring configuration with local notifications; user-selectable Differential Age enabled; manual Alarm Default Profile switching disabled; and selected Esri ArcGIS Field Maps automatic launching after user opens ETP; and when the app is closed automatically disable receiver output with only Uncorrected Positions (1).

This example contains all the possible settings including the defaults.

```
<?xml version="1.0" encoding="UTF-8"?>
<!DOCTYPE plist PUBLIC "-//Apple//DTD PLIST 1.0//EN" "http://www.apple.com/DTDs/Propert
yList-1.0.dtd"><plist version="1.0">
    <dict>
        <!-- Start Differential -->
```

```
<key>diffType</key>
<integer>0</integer>
<key>diffHTTPSEnabled</key>
<true/>
<key>diffIP</key>
<string><![CDATA[ntrip.data.gnss.ga.gov.au]]></string>
<key>diffPort</key>
<integer>443</integer>
<key>diffUsername</key>
<string><![CDATA[eos-test.username1]]></string>
<key>diffPassword</key>
<string><![CDATA[H@rdP@ssw0rd!.$]]></string>
<key>diffUserCredentialsEnabled</key>
<true/>
<key>diffMountpoint</key>
<string><![CDATA[4GLE00AUS0 - AUS]]></string>
<key>diffUserMountpointDisabled</key>
<false/>
<key>diffAutoStartEnabled</key>
<true/>
<key>diffCorpProfileName</key>
<string>Diff Corp Config</string>
<key>diffUserProfileEnabled</key>
<false/>
<key>diffUserConfigEnabled</key>
<true/>
<!-- End Differential -->
<!-- Start Altitude -->
<key>altReference</key>
<integer>1</integer>
<key>altGeoidModel</key>
<string>USGEOID18</string>
<key>altUserConfigEnabled</key>
<true/>
<!-- End Altitude -->
<!-- Start Datum Shift -->
<key>datumShiftLon</key>
<real>1.45678273</real>
<key>datumShiftLat</key>
<real>-1.27323435</real>
<key>datumShiftAlt</key>
<real>1.228</real>
<key>datumShiftEnabled</key>
<false/>
<key>datumShiftCorpProfileName</key>
<string>Datum Shift Corp Config</string>
<key>datumShiftUserProfileEnabled</key>
<false/>
<key>datumShiftUserConfigEnabled</key>
<false/>
<!-- End Datum Shift -->
<!-- Start Alarms -->
<key>alarmMonitoringEnabled</key>
<true/>
<key>alarmDefaultProfile</key>
<integer>3</integer>
<key>alarmUserDefaultProfileEnabled</key>
```

```
        <false/>
        <key>alarmDiffStatus</key>
        <integer>3</integer>
        <key>alarmUserDiffStatusEnabled</key>
        <false/>
        <key>alarm3DRMSValue</key>
        <real>5</real>
        <key>alarmUser3DRMSEnabled</key>
        <false/>
        <key>alarmHRMSValue</key>
        <real>3</real>
        <key>alarmUserHRMSEnabled</key>
        <false/>
        <key>alarmPDOPValue</key>
        <integer>3</integer>
        <key>alarmUserPDOPEnabled</key>
        <false/>
        <key>alarmSatsValue</key>
        <integer>4</integer>
        <key>alarmUserSatsEnabled</key>
        <false/>
        <key>alarmDiffAgeValue</key>
        <integer>3</integer>
        <key>alarmUserDiffAgeEnabled</key>
        <true/>
        <key>alarmLostConnectionEnabled</key>
        <true/>
        <key>alarmContinuousAlertEnabled</key>
        <false/>
        <key>alarmLocalNotificationEnabled</key>
        <true/>
        <key>alarmUserConfigEnabled</key>
        <false/>
        <!-- End Alarms -->
        <!-- Start Miscellaneous -->
        <key>miscAppInUse</key>
        <integer>1</integer>
        <key>miscAppAutoLaunchEnabled</key>
        <true/>
        <key>miscReceiverOutputDisabled</key>
        <true/>
        <key>miscReceiverOutputDisabledValue</key>
        <integer>1</integer>
         <key>miscUserReceiverOutputDisabled</key>
        <false/>
        <key>miscUserConfigEnabled</key>
        <false/>
        <!-- End Miscellaneous -->
    </dict>
</plist>
```

9.4 Example 4: Full Settings Tilt Compensation and Skadi Smart Handle

The following will enable Skadi Tilt Compensation with a Range Pole Height of 2.037m, Tilt Angle Threshold of 45 degrees, Tilt Quality Threshold of 5cm, RTK Float Mode enabled with HRMS limit of 5cm and Differential Age limit of 60 seconds, and the Skadi Smart Handle enabled in Extensible Pole Mode not allowing Single Point Mode, switching to Invisible Pole Mode allowed by the user, maximum Extensible Tilt Angle of 75 degrees, maximum Invisible Tilt Angle of 40 degrees, Extensible and Invisible Mode Quality Threshold of 4cm, RTK Float Mode enabled with HRMS Limit of 5cm and Differential Age Limit of 60 seconds, with Skadi Voice notifications enabled for mode and status changes, establish a non-user-editable NTRIP automatic connection over HTTPS to the URL https://69.70.178.170:2101 with an editable Caster Username admin and Caster Password P@sword! to a switchable Mountpoint NTRIP 1 with the Profile name Diff Corp Config and user Differential Profile switching disabled.

```
<?xml version="1.0" encoding="UTF-8"?>
<!DOCTYPE plist PUBLIC "-//Apple//DTD PLIST 1.0//EN" "http://www.apple.com/DTDs/Propert yList-1.0.dtd">
<plist version="1.0">
    <dict>
        <!-- Start Differential -->
        <key>diffType</key>
        <integer>0</integer>
        <key>diffHTTPSEnabled</key>
        <true/>
        <key>diffIP</key>
        <string>69.70.178.170</string>
        <key>diffPort</key>
        <integer>2101</integer>
        <key>diffUserURLEnabled</key>
        <false/>
        <key>diffUsername</key>
        <string>admin</string>
        <key>diffPassword</key>
        <string>P@sword!</string>
        <key>diffUserCredentialsEnabled</key>
        <true/>
        <key>diffMountpoint</key>
        <string>Ntrip 1</string>
        <key>diffUserMountpointDisabled</key>
        <false/>
        <key>diffAutoStartEnabled</key>
        <true/>
        <key>diffCorpProfileName</key>
        <string>Diff Corp Config</string>
        <key>diffUserProfileEnabled</key>
        <false/>
        <key>diffUserConfigEnabled</key>
        <true/>
        <!-- End Differential -->
        <!-- Start Alarms -->
        <key>alarmSkadiVoiceEnabled</key>
        <true/>
        <!-- End Alarms -->
        <!-- Start Tilt -->
        <key>skadiTiltEnabled</key>
        <true>
        <key>skadiUserTiltEnabled </key>
        <false/>
        <key>skadiPoleHeight</key>
        <real>2.037</real>
        <key>skadiUserPoleHeightEnabled</key>
        <false>
        <key>skadiTiltAngleValue</key>
        <integer>45</integer>
        <key>skadiUserTiltAngleEnabled</key>
```

```
        <false>
        <key>skadiTiltQualityValue</key>
        <real>5</real>
        <key>skadiUserTiltQualityEnabled</key>
        <false>
        <key>skadiFloatModeEnabled</key>
        <true>
        <key>skadiUserFloatModeEnabled</key>
        <false>
        <key>skadiFloatHRMSValue</key>
        <real>5</real>
        <key>skadiUserFloatHRMSEnabled</key>
        <false>
        <key>skadiFloatDiffAgeValue</key>
        <integer>60</integer>
        <key>skadiUserFloatDiffAgeEnabled</key>
        <false>
        <key>skadiUserConfigEnabled</key>
        <true>
        <!-- End Tilt -->
        <!-- Start Smart Handle -->
        <key> smartHandleEnabled</key>
        <true>
        <key> smartHandleUserEnabled</key>
        <false/>
        <key> smartHandleMode</key>
        <integer>0</integer>
        <key> smartHandleUserModeEnabled</key>
        <true/>
        <key> smartHandleSinglePointEnabled</key>
        <false/>
        <key> smartHandleUserSinglePointEnabled</key>
        <false/>
        <key> smartHandleExtensibleAngleValue</key>
        <integer>75</integer>
        <key> smartHandleUserExtensibleAngleEnabled</key>
        <false/>
        <key> smartHandleInvisibleAngleValue</key>
        <integer>40</integer>
        <key> smartHandleUserInvisibleAngleEnabled</key>
        <false/>
        <key> smartHandleExtensibleQualityValue</key>
        <real>4</real>
        <key> smartHandleUserExtensibleQualityEnabled</key>
        <false/>
        <key> smartHandleInvisibleQualityValue</key>
        <real>4</real>
        <key> smartHandleUserInvisibleQualityEnabled</key>
        <false/>
        <key> smartHandleFloatModeEnabled</key>
        <true/>
        <key> smartHandleUserFloatModeEnabled</key>
        <false/>
        <key> smartHandleFloatHRMSValue</key>
        <real>5</real>
        <key> smartHandleUserFloatHRMSEnabled</key>
        <false/>
        <key> smartHandleFloatDiffAgeValue</key>
        <integer>60</integer>
        <key> smartHandleUserFloatDiffAgeEnabled</key>
        <false/>
        <key> smartHandleUserConfigEnabled</key>
        <true/>
        <!-- End Smart Handle -->
    </dict>
</plist>
```

Thank you for completing this MDM guide. For specific questions regarding your MDM deployment of Eos Tools Pro (ETP), please contact our technical support team:

https://eos-gnss.com/technical-support