



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 five categories, which will be discussed in detail in the following guide:

- Differential Corrections Parameters
- Altitude and Geoid Model Parameters
- Datum Shift Parameters
- Alarm Parameters
- 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 Five 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 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 MDM disabled, 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.

<u>Key / Description</u>	<u>Type</u>	<u>Default</u>	<u>Notes</u>
<i>diffType</i> Specifies the source of differential correction	Integer		Supported values: 0 for NTRIP, 1 for DIP, 2 for Radio (Only for Android)
<i>diffHTTPEEnabled</i> Select between secure and unsecured connection to the IP address	Boolean	false	Supported values: true for HTTPS, false for HTTP
<i>diffIP</i> IP section of the Caster URL to connect	String		Example: eos-gnss.com 69.70.178.170
<i>diffPort</i> Port section of the Caster URL to connect	Integer		Supported values from 0 up to 65536 (According to RFC 793). Example: 10012101
<i>diffUserURLEnabled</i> Enable manual interaction of HTTPS enabled, IP and Port	Boolean	false	Supported values: true to allow user entry, false to deny user entry
<i>diffUsername</i> 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 éspecial Us3r N@m3]]
<i>diffPassword</i> 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'_"#\$\$%&/=?.;:]]
<i>diffUserCredentialsEnabled</i> Enables or disables user entry for Username and Password for the NTRIP connection	Boolean	false	Supported values: true to allow user entry, false to deny user entry
<i>diffMountpoint</i> 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[MöünT-{PöinT}ç\$]]>

Key / Description (continued)	Type	Default	Notes
<i>diffUserMountpointDisabled</i> Enables or disables user selection of the NTRIP Mountpoint	Boolean	false	Supported values: true to deny user selection, false to enable user Mountpoint selection
<i>diffAutoStartEnabled</i> 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
<i>diffCorpProfileName</i> 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}]]>
<i>diffUserProfileEnabled</i> 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
<i>diffUserConfigEnabled</i> 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)

2.1 Differential Corrections Examples

Below you will find examples of differential correction configurations.

2.1.1 Example 1: 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>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>diffAutoStartEnable</key>
    <false/>
    <key>diffCorpProfileName</key>
    <string>Chicago</string>
  </dict>
</plist>
```

2.1.2 Example 2: NTRIP Connection

The following example will establish an [editable NTRIP automatic connection](#) over [HTTPS](#) to the URL <https://69.70.178.170:44302> with an [editable Caster Username](#) [admin](#) and Caster Password [P@swörd!](#). to a switchable Mountpoint [DIP 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/PropertyList-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>diffUsername</key>
    <string>admin</string>
    <key>diffPassword</key>
    <string><![CDATA[P@swörd!.]]></string>
    <key>diffUserCredentialsEnabled</key>
    <true/>
    <key>diffMountpoint</key>
    <string><![CDATA[Dip 1]]></string>
    <key>diffUserConfigEnabled</key>
    <true/>
  </dict>
</plist>
```

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

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*.

<u>Key / Description</u>	<u>Type</u>	<u>Default</u>	<u>Notes</u>
<i>altReference</i> Specifies the desired altitude reference	Integer		Supported values: 0 for Receiver MSL, 1 for Orthometric, 2 for Ellipsoidal
<i>altGeoidModel</i> 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 USGEOID12B
<i>altUserConfigEnabled</i> 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

Country	Geoid Model / Vertical Datum (Horizontal Datum)	Value
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)	USGEOID12B USGEOID18

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>
  </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:

```
<?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>1</integer>
    <key>altGeoidModel</key>
    <string>USGEOID12B</string>
    <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*.

<u>Key / Description</u>	<u>Type</u>	<u>Default</u>	<u>Notes</u>
<i>datumShiftLat</i> Offset on the vertical (y) axis (Latitude)	Real		Units: Degrees decimal. Supported values range from -1 to 1 degree with up to 8 decimals. Examples: <code>1.273234350</code> ; <code>.018</code>
<i>datumShiftLon</i> Offset on the horizontal (x) axis (Longitude)	Real		Units: Degrees decimal. Supported values range from -1 to 1 degree with up to 8 decimals. Examples: <code>1.456782730</code> ; <code>.018</code>
<i>datumShiftAlt</i> Offset on the depth (Z) axis (Altitude)	Real		Units: meters. Supported values in meters with up to 3 decimals. Example <code>-1.273</code> ; <code>.018</code>
<i>datumShiftEnabled</i> Activate datum shift, and on iOS also saves to the Arrow Receiver	Boolean	<code>false</code>	Supported values: <code>true</code> to enable datum shift, <code>false</code> to disable datum shift
<i>datumShiftCorpProfileName</i> The profile name that contains the default corporate deployment values for the Datum Shift group	String	<code>DatumShift Corp Config</code>	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 <code>[A-Za-z0-9 _]{255}</code> . For special characters use a CDATA block. Example: <code>Eos Shift Config, <![CDATA[Eös-Shift]]></code>
<i>datumShiftUserProfileEnabled</i> To allow or prevent user-created Datum Shift Profiles	Boolean	<code>false</code>	Supported values: <code>true</code> to allow user-created profiles, <code>false</code> to prevent user-created profiles
<i>datumShiftUserConfigEnabled</i> Disable user interaction with any of the Datum Shift settings	Boolean	<code>false</code>	Supported values: <code>true</code> to allow editing of values for individual parameters, <code>false</code> to disable user edits of all values for the entire Datum Shift group (overrides switches of individual parameters)

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/PropertyList-1.0.dtd">
<plist version="1.0">
  <dict>
    <key>datumShiftLat</key>
    <real>0.028</real>
  </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/PropertyList-1.0.dtd">
<plist version="1.0">
  <dict>
    <key>datumShiftLat</key>
    <real>0.028</real>
    <key>datumShiftLon</key>
    <real>-1.273</real>
    <key>datumShiftAlt</key>
    <real>1.228</real>
    <key>datumShiftEnabled</key>
    <true/>
    <key>datumShiftCorpProfileName</key>
    <string>Chicago</string>
    <key>datumShiftSwitchProfileEnabled</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.

<u>Key / Description</u>	<u>Type</u>	<u>Default</u>	<u>Notes</u>
<i>alarmMonitoringEnabled</i> Enable or disable monitoring of alarm conditions	Boolean		
<i>alarmDefaultProfile</i> 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)
<i>alarmUserDefaultProfileEnabled</i> 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
<i>alarmDiffStatus</i> 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
<i>alarmUserDiffStatusEnabled</i> Enable or disable user selection of the Differential Status setting (<i>alarmDiffStatus</i>)	Boolean		Supported values: true for enable manual Differential limit selection, false for loading no editable Differential limit selection
<i>alarm3DRMSValue</i> 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.
<i>alarmUser3DRMSEnabled</i> Enable or disable user input for the 3D RMS threshold value (<i>alarm3DRMSValue</i>)	Boolean		Supported values: true to enable user input of 3D RMS threshold values, false to disable user input
<i>alarmHRMSValue</i> 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.

<u>Key / Description (continued)</u>	<u>Type</u>	<u>Default</u>	<u>Notes</u>
<i>alarmUserHRMSEnabled</i> Enable or disable user input for the H RMS threshold value (<i>alarmHRMSValue</i>)	Boolean		Supported values: true to enable user input of H RMS threshold values, false to disable user input
<i>alarmPDOPValue</i> Set or override the alarm threshold value for PDOP	Integer		Supported values: integer from 0 to 10 centimeters with one decimal. Note: 0 means Off.
<i>alarmUserPDOPEnabled</i> Enable or disable user input for the PDOP threshold value (<i>alarmPDOPValue</i>)	Boolean		Supported values: true to enable user input of PDOP threshold values, false to disable user input
<i>alarmSatsValue</i> 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.
<i>alarmUserSatsEnabled</i> Enable or disable user input for the minimum number of satellites (<i>alamSatsValue</i>)	Boolean		Supported values: true to enable user input for the minimum number of satellites, false to disable user input
<i>alarmDiffAgeValue</i> 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.
<i>alarmUserDiffAgeEnabled</i> Enable or disable user input for Differential Age limit (<i>alarmDiffAgeValue</i>)	Boolean		Supported values: true to enable user input for the Differential Age limit, false to disable user input
<i>alarmLostConnectionEnabled</i> 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
<i>alarmContinuousAlertEnabled</i> 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
<i>alarmLocalNotificationEnabled</i> 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
<i>alarmUserConfigEnabled</i> 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

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 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/PropertyList-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 higher, 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. 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/PropertyList-1.0.dtd">
<plist version="1.0">
  <dict>
    <key>alarmMonitoringEnabled</key>
    <true/>
    <key>alarmDefaultProfile</key>
    <integer>3</integer>
    <key>alarmDiffAgeValue</key>
    <integer>5</integer>
    <key>alarmUserDiffAgeEnabled</key>
    <true/>
    <key>alarmContinuousAlertEnabled</key>
    <true/>
    <key>alarmLocalNotificationEnabled</key>
    <true/>
    <key>alarmRemoteConfigurationRequired</key>
    <true/>
  </dict>
</plist>
```

```
</dict>  
</plist>
```

The next section will cover MDM configurations for miscellaneous parameters ...

6. 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.

<u>Key /Description</u>	<u>Type</u>	<u>Default</u>	<u>Notes</u>
<i>miscAppInUse</i> 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
<i>miscAppAutoLaunchEnabled</i> Enable or disable automatic launching of <i>miscAppInUse</i> app after opening ETP	Boolean	false	Supported values: true Launch app selected in <i>miscAppInUse</i> after launching ETP, false to disable automatic launch of <i>miscAppInUse</i>
<i>miscUserConfigEnabled</i> 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

6.1 Miscellaneous Examples

Below are examples of various potential miscellaneous key configurations:

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

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

```
<?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>miscAppInUse</key>
    <integer>1</integer>
    <key>miscAppAutoLaunchEnabled</key>
    <true/>
  </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 five categories ...

7. Full MDM Deployment Examples

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

7.1 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 Switching enabled and the Differential Profile Name `Diff Corp Config`, using an MSL Altitude Reference, applying a horizontal (X-axis) Datum Shift Offset of `0.028` degrees with the Datum Shift Profile Name `DatumShift Corp Config`, and no MDM Alarms configuration. 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/PropertyList-1.0.dtd">
<plist version="1.0">
  <dict>
    <!-- Start Differential -->
    <key>diffType</key>
    <integer>0</integer>
    <key>diffHTTPEnabled</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>datumShiftLat</key>
    <real>0.028</real>
    <key>datumShiftLon</key>
    <real>0.0</real>
    <key>datumShiftAlt</key>
    <real>0.0</real>
    <key>datumShiftEnabled</key>
    <true/>
    <!-- End Datum Shift -->
  </dict>
</plist>
```

7.2 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@sswOrd!.$` 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 Datum Shift Profile switching `enabled`; and editable Subfoot (Differential equals to `RTK Fixed/Float`, 3D RMS equals to `50 cm or less`, H RMS equals to `30 cm 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/PropertyList-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@sswOrd!.$]]></string>
    <key>diffUserCredentialsEnabled</key>
    <true/>
    <key>diffMountpoint</key>
    <string>240600NZL0</string>
    <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>datumShiftLat</key>
    <real>-1.27323435</real>
    <key>datumShiftLon</key>
    <real>0.028</real>
```



```

<key>datumShiftAlt</key>
<real>1.456</real>
<key>datumShiftCorpProfileName</key>
<string>Chicago</string>
<key>datumShiftSwitchProfileEnabled</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>
<false/>
<!-- End Alarms -->
</dict>
</plist>

```

7.3 Example 3: Full Settings

The following example will intend to establish a non-user-editable automatic NTRIP connection over HTTP to the URL <https://ntrip.data.gnss.ga.gov.au:443> with Caster User Name `eos-test.username1` and Caster Password `H@rdP@sswOrd!.$` 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 `DatumShift Corp Config` that needs to be activated by the user, and no user-editable RTK (Differential equals to `RTK Fixed`; 3D RMS equals to `5 cm 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.

NOTE: 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/PropertyList-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>diffAutoStartEnable</key>
    <true/>
    <key>diffCorpProfileName</key>
    <string>Diff Corp Config</string>
    <key>diffUserProfileEnabled</key>
    <false/>
    <key>diffUserConfigEnabled</key>
    <false/>
    <!-- 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>datumShiftLat</key>
    <real>-1.27323435</real>
    <key>datumShiftLon</key>
    <real>1.45678273</real>
    <key>datumShiftAlt</key>
    <real>1.228</real>
    <key>datumShiftEnabled</key>
    <false/>
    <key>datumShiftCorpProfileName</key>
    <string>DatumShift Corp Config</string>
    <key>datumShiftSwitchProfileEnabled</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>miscUserConfigEnabled</key>
<false/>
<!-- End Miscellaneous -->
</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>