Data Center Coordinator

Patrick Michael
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Overview of the Data Center Coordinator

• Patrick Michael
  • Assumed the position in 2021 after retirement of Carey Noll
  • Current manager of the Crustal Dynamics Data Information Systems (CDDIS)
• Main Responsibilities
  • Assist the Data Centers (DCs) to ensure IGS objectives are meet & maintained
    • Data collection, QC & validation, archival, robust availability, etc
    • Coordination of the collection & distribution of IGS data and analysis products
Jan – Oct
Users: 300,000+
Files: 1.5+ Billion
Bandwidth: 600TB
Countries: ~180

Global DC
Regional DC
<table>
<thead>
<tr>
<th>Data Type</th>
<th>Total Unique</th>
<th>Total RINEX V2</th>
<th>Total RINEX V3</th>
<th>Both V2 + V3</th>
<th>Only RINEX V2</th>
<th>Only RINEX V3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Daily</td>
<td>556</td>
<td>383</td>
<td>373</td>
<td>200</td>
<td>183</td>
<td>173</td>
</tr>
<tr>
<td>Hourly</td>
<td>405</td>
<td>268</td>
<td>328</td>
<td>191</td>
<td>77</td>
<td>137</td>
</tr>
<tr>
<td>High-rate</td>
<td>309</td>
<td>144</td>
<td>273</td>
<td>108</td>
<td>36</td>
<td>165</td>
</tr>
</tbody>
</table>
Progress since last AM Meeting (Dec 2019)

- IC charter changes to incorporate the old DCWG
- Movement from Z compression to gzip compress for data
- IGS Website – data centers and access information
- DC Guidelines document
  - QC requirements, data completion checks
  - Performance checks
- Termination of unencrypted ftp at CDDIS – Nov 2020
Future Work

• Remaining Z to gzip conversion for products
• DC guidelines document reviews and comments – Feb 2022
• Completion of GNSS high-rate consolidation by May 2022 (CDDIS)
• Real-time and DC IT security guidelines whitepaper - Apr 2022
• Survey of the community of the needs & wants from the DCs
• Long-term future work
  • Depreciation of unencrypted ftp as a protocol for data distribution
  • Implementation of syncing across the GDCs
  • IPv6 only architecture
Thank You!

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