

WHAT'S NEW IN N4 RELEASE 3.6

N4 3.6 hits a new milestone for performance and scalability to support mega terminals up to 12M TEU and includes important overall system performance improvements related to live data cache use. Navis continues to invest in rail and AGV enhancements to contribute driving our customer's productivity higher.

In this release, Navis N4 has reached an important benchmark with its next-generation user interface (UI). The HTML UI is now complete and can be accessed through multiple modes, including desktop and laptop.

Several new features are available in N4 3.6 to provide customers with a quicker and more reliable upgrade process. N4 3.6 has redesigned the built-in Business Intelligence Portal user experience focusing on optimal query performance and standard dashboards for gate and yard operations.

The following provides an overview of all the key enhancements and new features in N4 3.6. For more technical details on this release, please consult the N4 3.6 Release Notes.

NEW FEATURES & ENHANCEMENTS

OPERATIONAL PERFORMANCE

Scheduler Improvements. Navis is focused on delivering new features to enable our customers to operate more effectively and efficiently by investing in rail and AGV enhancements to drive productivity. In this release, we improved the Rail Scheduler to reduce the average gantry distance to increase moves. In addition, the horizontal transport has been improved to reduce idling time both for AGV and AutoShuttle equipment types.

N4 Decking Consolidation. Support for multiple decking strategy sets and additional penalties for N4 intrablock and rehandling decker are delivered with N4 3.6. Improvements include support for differentiating transshipment containers from exports and additional intrablock and rehandle decking penalties.

Block Impact Minimizer. The Block Impact Minimizer is no longer dependent on the Live Data Cache (LDC). It will use the Live Data Cache if present; otherwise, it will retrieve data from the database. Additional constraints have been added to BIM to exclude containers affected by Men Working stacks, hazardous containers, live reefers, damaged containers or containers that are part of a twin pair.

Rail Autostow can now plan rail containers using Advanced Work Patterns NSBT, SNBT, NSB/SNT and SNB/NST (N=North, S=South, B=Bottom Tier, T=Top Tier). Rail AutoStow can validate whether Tier 2 containers are a safe weight and can encourage loading containers that have higher dwell times using AutoStow penalties. It is also possible now to view and select tracks by tier.

SYSTEM MANAGEMENT

Performance Improvements. A number of improvements to the Live Data Cache (LDC) hardening and monitoring are available with N4 3.6, including a new MBEANS to monitor the LDC cache, counting objects in a cache, per node, per yard, per cache data for average message size, as well as LDC in queue count and approximate cache size.

Further improvements include auto-integrity checks, enablement and disablement of the LDC on individual nodes, slow subscribe fails in isolation and live list views in the LDC. In addition, N4 3.6 also provides code extension caching to avoid fetching it from the database each time and the option to set separate configurations for ECI mule nodes.

Library Upgrades/Changes. The N4 3.6 release has upgraded Tomcat with the latest security patches for versions 2.6 to 3.6. Further library improvements include an AMQ library upgrade, removal of library common-dpcp.jar and removal of dependency on the spring library for SOAP web services.

Certification/Decertification. In order to provide customers with the most accurate and up-to-date support, N4 3.6 includes updated certifications to Microsoft SQL Server 2016, Microsoft Windows Server 2016 and Oracle Database 12c Release 2 and decertifications for PostgreSQL.

Database Improvements. N4 3.6 provides an advisor to the Oracle DB partition and an average time column for Purge view to track and monitor performance.

Upgrade Improvements. Enabling customers with a quicker and more reliable upgrade process is crucial to delivering value without causing disruptions. Several new features are available to improve our customers' upgrade experience, including better upgrade data logging and statistics collection with clear upgrade actions, such as START, END, UPGRADE COMPLETE, NODE READY AND NODE ACTIVATED displayed. During an upgrade, users can create the n4-upgrade.log file in addition to the navis-apex, log file to record errors that occur in the N4 nodes. Users can configure the log4j.properties file to write a file appender that only logs upgrade errors.

Performance Testing Improvements/Runs. N4 3.6 hits a new milestone for performance and scalability to support mega-terminals up to 12 million TEU. Tests have been performed with and without LDC features enabled in environments of 30 nodes. Certification will be extended to support up to 60 nodes.

USER EXPERIENCE

HTML UI Release. User experience will be a recurring theme with more focus given to streamlining workflows and creating more intuitive interactions. The Administration & Configuration menus and overall improvements in usability complete the full support of UI and the transition from ULC UL to the HTML UI. N4 3.6 focuses on establishing a consistent look-and-feel with subdued colors that better showcase importance and focus and ensuring application behaviors are consistent with browsers and desktop apps. Customers are advised to use the HTML UI in Google Chrome only; Navis will be testing and certifying HTML UI in other browsers in the coming releases.

BUSINESS INTELLIGENCE PORTAL

BI Portal User Experience. With Operations Monitoring focusing on near real-time KPI's, the BI Portal Analytics dashboards have been redesigned to focus on delivering operational insights for executives and operations team members. All changes meet performance criteria of <10 seconds rendering time per dashboard. The user experience is focused on a simple workflow and grouping of dashboards, optimal analytics and querying and the latest advancements in the Birst visualizer and DB2.0 framework.

BI Portal Analytics. In N4 3.6, Navis has redesigned standard gate and yard dashboards for better insights and redesigned gate and yard data models for optimal query performance, redesigned the ETL to support the new data model and optimize metric calculations.

BI Portal Ops Monitoring. The data model and the dashboards have been updated for better usability and performance. The enhancements, available with N4 1.6, include Vessel Visit Berth ID, QC-level ETC and remaining move count, code refactoring to decouple resource pool allocation from N4 and code refactoring to handle multi-threaded operations and prevent "stale" thread updates and inaccuracies.

User Documentation. Continuing the efforts to provide documentation organized by operational area that simplifies user navigation and interpretation, this 3.6 release focuses on refactoring the purge documentation, improving the usability of the Release Note Search and publishing online help as HTML on the NCC.

OTHER

Vessel Locking. A vessel can now be marked as locked in XPS so any change in the inventory of the vessel, like rerouting containers to or from the vessel, creating appointments or gating new containers against the vessel manually or through EDI messages are prevented. This functionality aims to address confusion in operations teams around last minute changes after the plan is finalized.



55 HARRISON STREET, STE. 600, OAKLAND, CA 94607, USA

WWW.NAVIS.COM TEL: +1 510 267 5000 FAX: +1 510 267 5100 EMAIL: INFO@NAVIS.COM

Navis provides operational technologies that unlock greater performance and efficiency for our customers, the world's leading terminal operators. The Navis N4 terminal operating system (TOS) represents more than 25 years of experience and innovation that enables terminals to optimize their operations and move cargo smarter, faster and more efficiently. As an industry leading technology, more than 250 container terminals worldwide have partnered with Navis to improve performance, reduce costs and minimize risk.