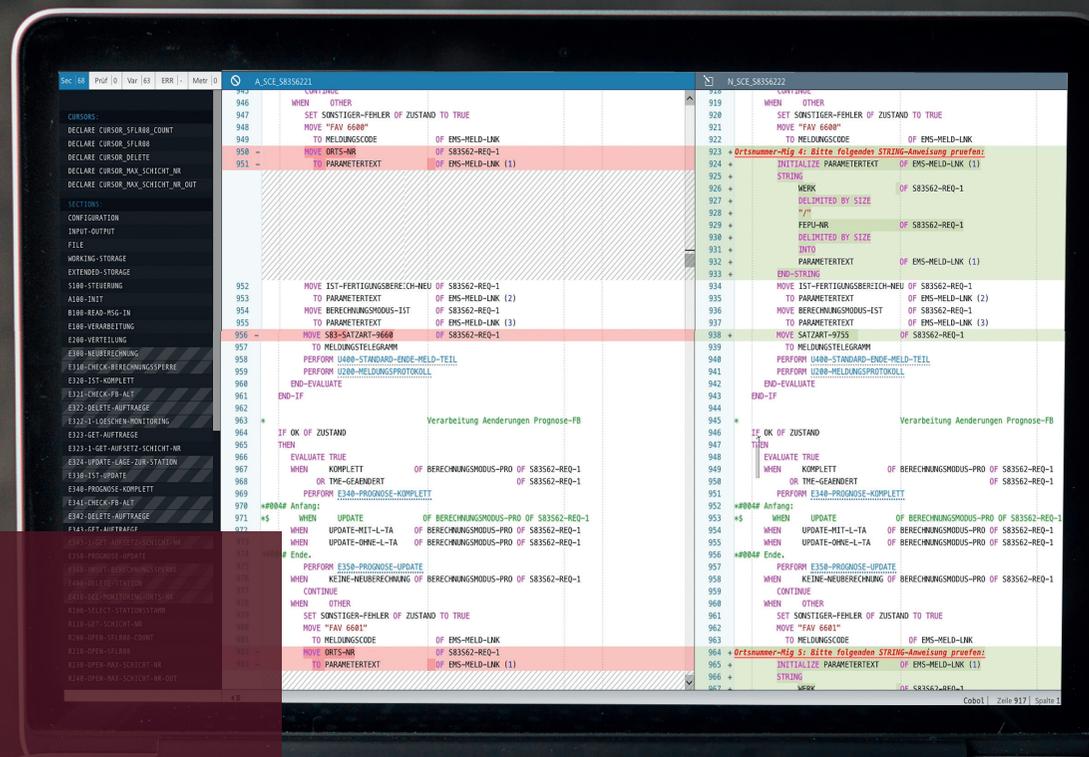


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Innovative software for companies with vision.

PRODUCTbroschure



eddy+

The first web-based IDE
for HPE NonStop

Product Vision

eddy+ is for HPE NonStop developers and allows them to easily and comfortably develop, deploy, debug, and maintain C and COBOL code. It is a web-based modern IDE, which simplifies communication with the HPE NonStop, wrapped in a user-friendly intuitive interface. Contrary to all competing alternatives, eddy+ is easily scalable and doesn't require costly and time intensive individual client configuration. Additionally, eddy+ offers an integrated user rights management, easy modification for customer specific needs, as well as supporting agile development processes.

Goals

Modernizing HPE NonStop software development with all customary conveniences available to other platforms and coding languages.

Target Group

C and COBOL developers for the HPE NonStop.

Area of Application

HPE NonStop application development for coding languages C and COBOL.

Customer Benefits

- Save valuable time during code creation
- Improve quality by reducing manual steps
- Efficient onboarding
- Easy development team scaling

```
946 WHEN OTHER  
947 SET SONSTIGER-FEHLER OF ZUSTAND TO TRUE  
948 MOVE "FAV 660B"  
949 TO MELDUNGSCODE OF EMS-MELD-LNK  
950 - MOVE ORTS-NR OF S83562-REQ-1  
951 - TO PARAMETERTEXT OF EMS-MELD-LNK (1)  
952  
953 MOVE IST-FERTIGUNGSBEREICH-NEU OF S83562-REQ-1  
954 TO PARAMETERTEXT OF EMS-MELD-LNK (2)  
955 MOVE BERECHNUNGSMODUS-IST OF S83562-REQ-1  
956 - MOVE S83SATZART-9668 OF S83562-REQ-1  
957 TO MELDUNGSTELEGRAMM  
958 PERFORM U400-STANDARD-ENDE-MELD-TEIL  
959 PERFORM U200-MELDUNGS-PROTOKOLL  
960 END-EVALUATE  
961 END-IF  
962  
963 * Verarbeitung Aenderungen Prognose-FB  
964 IF OK OF ZUSTAND  
965 THEN  
966 EVALUATE TRUE  
967 WHEN KOMPLETT OF BERECHNUNGSMODUS-PRO OF S83562-REQ-1  
968 OR TME-GEAENDERT OF S83562-REQ-1  
969 PERFORM E340-PROGNOSE-KOMPLETT  
970 *#004# Anfang: UPDATE OF BERECHNUNGSMODUS-PRO OF S83562-REQ-1  
971 *$ WHEN UPDATE-MIT-L-TA OF BERECHNUNGSMODUS-PRO OF S83562-REQ-1  
972 WHEN UPDATE-OhNE-L-TA OF BERECHNUNGSMODUS-PRO OF S83562-REQ-1  
973 *#004# Ende.  
974 PERFORM E350-PROGNOSE-UPDATE  
975 KEINE-NEUBERECHNUNG OF BERECHNUNGSMODUS-PRO OF S83562-REQ-1  
976 WHEN  
977 CONTINUE  
978 WHEN OTHER  
979 SET SONSTIGER-FEHLER OF ZUSTAND TO TRUE  
980 MOVE "FAV 660I"  
981 TO MELDUNGSCODE OF EMS-MELD-LNK  
982 - MOVE ORTS-NR OF S83562-REQ-1  
983 - TO PARAMETERTEXT OF EMS-MELD-LNK (1)  
984 + Ortsnummer-Msg 4: Bitte folgenden STRING-Anweisung pruefen:  
985 + INITIALIZE PARAMETERTEXT OF EMS-MELD-LNK (1)  
986 + STRING  
987 + WERK OF S83562-REQ-1  
988 + DELIMITED BY SIZE  
989 + "/"  
990 + FEPU-NR OF S83562-REQ-1  
991 + DELIMITED BY SIZE  
992 + DOTO  
993 + PARAMETERTEXT OF EMS-MELD-LNK (1)  
994 + END-STRING  
995 MOVE IST-FERTIGUNGSBEREICH-NEU OF S83562-REQ-1  
996 TO PARAMETERTEXT OF EMS-MELD-LNK (2)  
997 MOVE BERECHNUNGSMODUS-IST OF S83562-REQ-1  
998 TO PARAMETERTEXT OF EMS-MELD-LNK (3)  
999 MOVE SATZART-9958 OF S83562-REQ-1  
1000 TO MELDUNGSTELEGRAMM  
1001 PERFORM U400-STANDARD-ENDE-MELD-TEIL  
1002 PERFORM U200-MELDUNGS-PROTOKOLL  
1003 END-EVALUATE  
1004 END-IF  
1005  
1006 * Verarbeitung Aenderungen Prognose-FB  
1007 IF OK OF ZUSTAND  
1008 THEN  
1009 EVALUATE TRUE  
1010 WHEN KOMPLETT OF BERECHNUNGSMODUS-PRO OF S83562-REQ-1  
1011 OR TME-GEAENDERT OF S83562-REQ-1  
1012 PERFORM E340-PROGNOSE-KOMPLETT  
1013 *#004# Anfang: UPDATE OF BERECHNUNGSMODUS-PRO OF S83562-REQ-1  
1014 *$ WHEN UPDATE-MIT-L-TA OF BERECHNUNGSMODUS-PRO OF S83562-REQ-1  
1015 WHEN UPDATE-OhNE-L-TA OF BERECHNUNGSMODUS-PRO OF S83562-REQ-1  
1016 *#004# Ende.  
1017 PERFORM E350-PROGNOSE-UPDATE  
1018 KEINE-NEUBERECHNUNG OF BERECHNUNGSMODUS-PRO OF S83562-REQ-1  
1019 WHEN  
1020 CONTINUE  
1021 WHEN OTHER  
1022 SET SONSTIGER-FEHLER OF ZUSTAND TO TRUE  
1023 MOVE "FAV 660I"  
1024 TO MELDUNGSCODE OF EMS-MELD-LNK  
1025 - MOVE ORTS-NR OF S83562-REQ-1  
1026 - TO PARAMETERTEXT OF EMS-MELD-LNK (1)  
1027 + Ortsnummer-Msg 5: Bitte folgenden STRING-Anweisung pruefen:  
1028 + INITIALIZE PARAMETERTEXT OF EMS-MELD-LNK (1)  
1029 + STRING  
1030 + WERK OF S83562-REQ-1
```

Powerful C and COBOL editor with compare function



Functions

Features	Function	Description
File Explorer	Navigation	Navigation through directories and files on an HPE NonStop with the file systems GUARDIAN or OSS.
	File operations	Basic operations (create, copy, delete) with files on an HPE NonStop with the file systems GUARDIAN or OSS.
	File-View	Open one or more selected files to view the content (read only) with automatic syntax recognition.

File Editor	Syntax highlighting	Syntax highlighting for coding languages C and COBOL.
	Tab capability	Open multiple files in different tabs.
	Single view	View and edit files in an editor tab.
	Split view	View and edit two files simultaneously in an editor tab.
	Compare mode	Compare two selected file contents including difference highlighting.
	Navigate through COBOL source code	Navigate through COBOL source code over sections and cursors.
	Navigate through C source code	Navigate through C source code over functions.
	COBOL source code hyperlinks	Navigate through COBOL source code hyperlinks to their corresponding sections and cursors.
	Tab stops for COBOL source files	Vertical editor tab stops (read only and write) for COBOL source files.
	Auto complete	Auto complete functions for reserved words for coding languages C and COBOL.
	Search	Search and replace predefined file contents.
	Hotkeys	Predefined key bindings for standard operations during source code development.

Features	Function	Description
Compile	One click compile	Start the proprietary NonStop compiler over the web app.
	Compile error visualization	Visualize compile errors in relation to source code.
	Compile error navigation	Navigation through source code via error list.
Debug	Initiate the native NonStop debugger	Initiation of the native NonStop debugger via the web interface.
	Control the native NonStop debugger	Interaction with the native NonStop debugger via the web interface.
	Visualization	Visual indicator of the current position in the source code.
	Watches	Monitoring and manipulation of variable contents in a separate area of the web interface.
	Breakpoints	Monitoring and control of breakpoints in a separate area of the web interface.
Terminal emulator	Communication with the HPE NonStop	Enter any TACL command via the web interface.
Austauschbare Services	Additional functionalities	Interface for customer specific add-ons.

S31S20

print SATZART-6271 OF S31S20-REQ-9

EXEC continue step next finish list kill info breakpoints

SCE_S31S2009

```

2801 */ TR-Cod. HS: Konvertierung SA-6271 in SA-6263
2802 */-----
2803
2804 *
2805 INITIALIZE S31S20-RPL-8           Reply initialisieren
2806
2807 MOVE SATZART-6271                 OF S31S20-REQ-9
2808 TO MELDUNGSTELEGRAMM
2809
2810 *
2811 IF OK OF ZUSTAND                 Belegung der Felder der RPL-1
2812 THEN
2813 PERFORM EF10-BELEGEN-SA6263
2814 END-IF
2815
2816 *
2817 RPL-HDR und RPL-VERTEILHEADER in
2818 Abhaengigkeit von ZUSTAND belegen
2819
2820 EVALUATE TRUE
2821 *
2822 WHEN OK                           OF ZUSTAND
2823 MOVE 8                             TO RPLCD
2824 MOVE "VI200034" TO MELDUNGSCODE OF EMS-MELD-LNK
2825 MOVE SATZART-6271                 OF S31S20-REQ-9
2826 TO PARAMETERTEXT                 OF EMS-MELD-LNK(1)
2827 MOVE SATZART-6263                 OF S31S20-RPL-8
2828 TO PARAMETERTEXT                 OF EMS-MELD-LNK(2)
2829
2830 PERFORM U400-STANDARD-ENDE-MELD-TEIL
2831 PERFORM U200-MELDUNGSPROTOKOLL
2832 *
2833 WHEN OTHER                         TO RPLCD
2834 MOVE 8888                          TO RPLCD
2835 MOVE "VI201999" TO MELDUNGSCODE OF EMS-MELD-LNK
2836 SET TMF-ABORT OF TMFSW             OF RPL-HDR TO TRUE
2837 PERFORM U400-STANDARD-ENDE-MELD-TEIL
2838 PERFORM U200-MELDUNGSPROTOKOLL
2839
2840 END-EVALUATE
2841
2842 EF00-EXIT.
2843 EXIT.

```

CMD: print SATZART-6271 OF S31S20-REQ-9

```

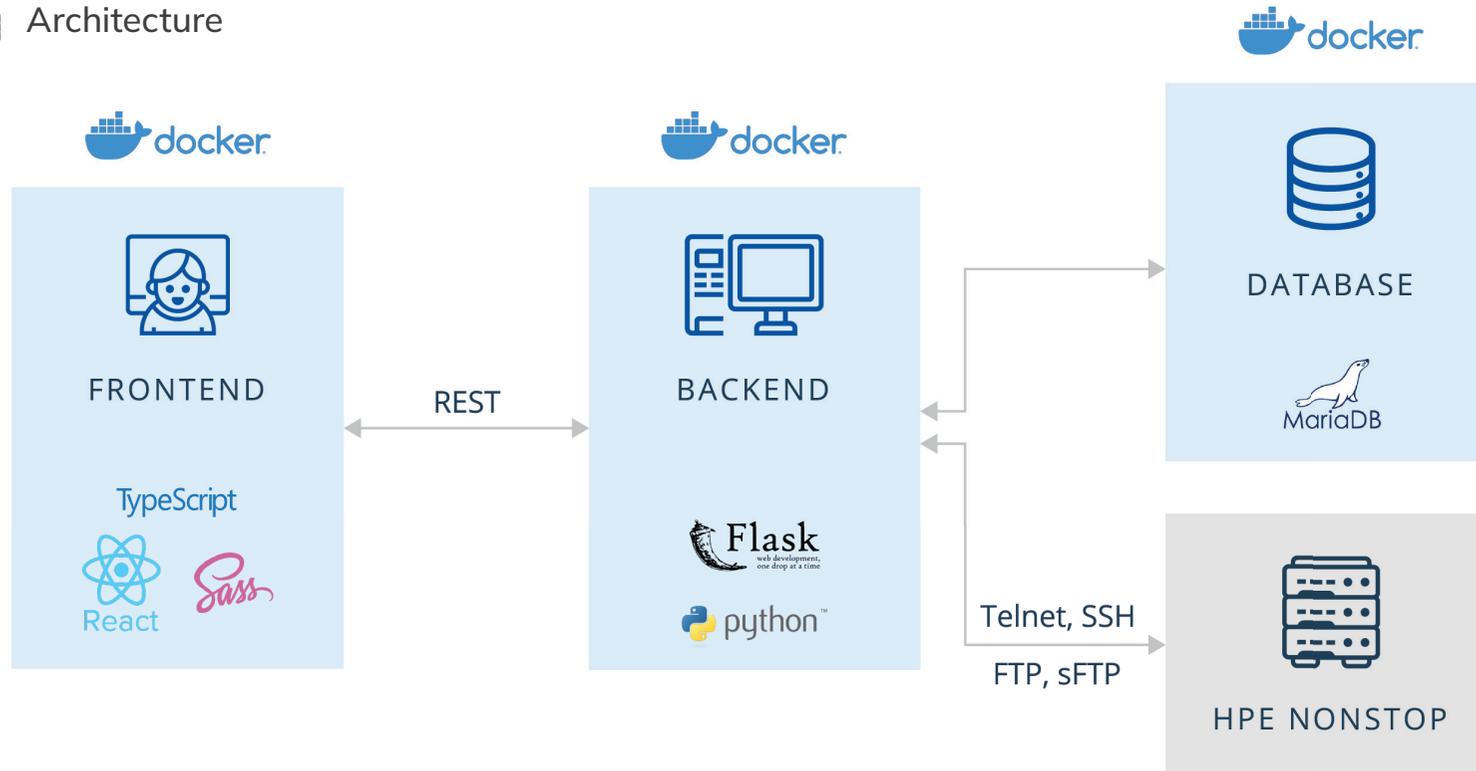
$7 =
ANWENDUNGSHEADER =
SATZART = " 6271 "
LAENGE = 213
VERARBEITUNGSKENNUNG = " 005 "
BEZUGSOBJEKT =
PRODUKTIONS-NR = 4000488
DATEN =
RECORD-6271 =
FERTIGUNGSORT =
WERK = " 0050 "
FERTIGUNGSPUNKT = 00002705
TERMIN =
DATUM-8 =
JAHR-4 = 2020
MONAT = 03
TAG = 17
ZEIT-HHMMSS =
STUNDE = 13
MINUTE = 00
SEKUNDE = 00
ZEIT-TTMM =
TAUSENDSTEL-SEKUNDE = 999

MILLIONSTEL-SEKUNDE = 999
TERMIN-UTC =
UTC-DATETIME = ' 1 <repeats 32 times> '
(
xInspect 1,1181):(xInspect 1,1181):
TRACE
OK OF ZUSTAND:print OK OF ZUSTAND
$8 = T
(
xInspect 1,1181):

```

Intuitive native NonStop debugger interface

Architecture



eddy+ is a web application based on the client-server principle. No local installation is required.

Frontend	
Framework	React
Editor Core	Monaco Editor
UI Components	React Bootstrap, Material UI
Programming Language	TypeScript
Documentation	TypeDoc
Test Framework	Selenium

Backend	
Communication Interface	REST-API
Documentation of the REST-API	OpenAPI
Programming Language	Python 3
Test Framework	PyTest
Persistence	MariaDB

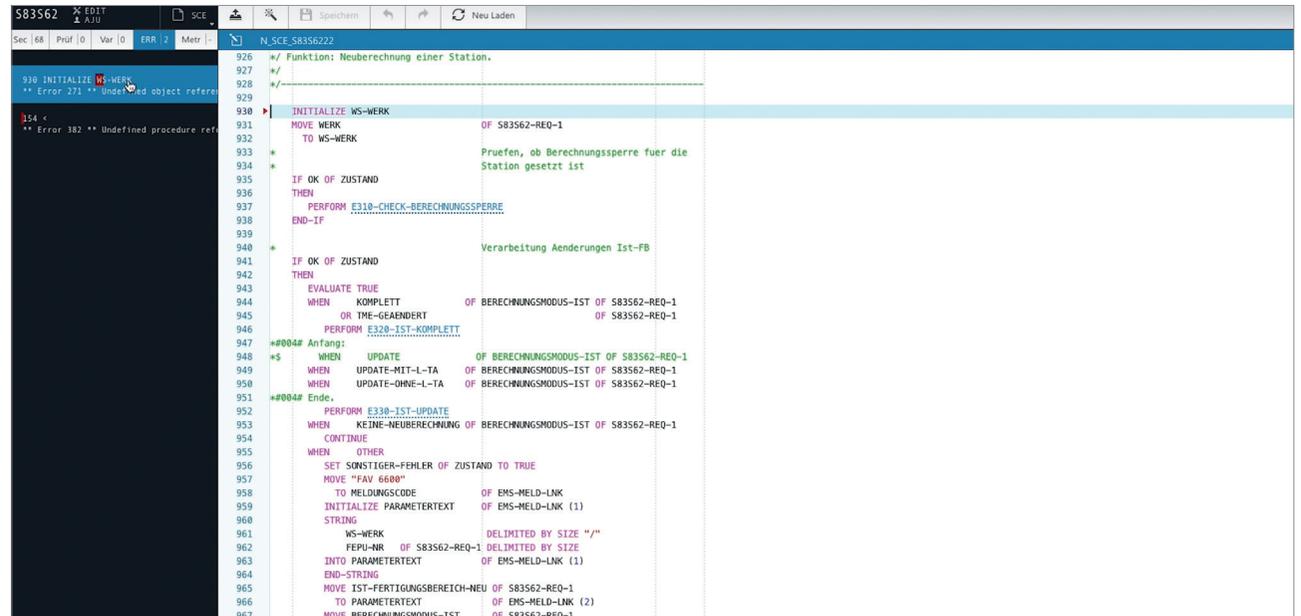
Communication with the HPE NonStop	
Network Protocol	Telnet, SSH
File Transfer Protocol	FTP, SFTP

Summary

eddy+ is a web application that simplifies the development process for HPE NonStop. The application essentially covers the following requirements:

- Functions of a modern IDE especially for the programming languages C and COBOL
- Tools for automating of the entire development process
- Visualization of the interaction with various proprietary HPE NonStop applications

eddy+ does not replicate the functions of individual HPE NonStop applications, but makes it easier to use them. In addition, the system structures and automates individual steps that are necessary for development on the HPE NonStop. eddy+ hereby represents an easily scalable IDE (Integrated Development Environment) for software development on the HPE NonStop.



```
926 /* Funktion: Neuberechnung einer Station.
927 */
928
929
930 INITIALIZE WS-WERK
931 MOVE WERK OF S83562-REQ-1
932 TO WS-WERK
933 *
934 * Pruefen, ob Berechnungssperre fuer die
935 * Station gesetzt ist
936
937 IF OK OF ZUSTAND
938 THEN
939 PERFORM E310-CHECK-BERECHNUNGSPERRE
940 END-IF
941
942 *
943 * Verarbeitung Aenderungen Ist-FB
944
945 IF OK OF ZUSTAND
946 THEN
947 EVALUATE TRUE
948 WHEN KOMPLETT OF BERECHNUNGSMODUS-IST OF S83562-REQ-1
949 OR TME-GEAENDERT OF S83562-REQ-1
950 PERFORM E320-IST-KOMPLETT
951 *****
952 ##004# Anfang:
953 WHEN UPDATE OF BERECHNUNGSMODUS-IST OF S83562-REQ-1
954 WHEN UPDATE-MIT-L-TA OF BERECHNUNGSMODUS-IST OF S83562-REQ-1
955 WHEN UPDATE-OMNE-L-TA OF BERECHNUNGSMODUS-IST OF S83562-REQ-1
956 ##004# Ende.
957 PERFORM E330-IST-UPDATE
958 WHEN KEINE-NEUBERECHNUNG OF BERECHNUNGSMODUS-IST OF S83562-REQ-1
959 CONTINUE
960 WHEN OTHER
961 SET SONSTIGER-FEHLER OF ZUSTAND TO TRUE
962 MOVE "FAV 6600"
963 TO MELDUNGSCODE OF EMS-MELD-LNK
964 INITIALIZE PARAMETERTEXT OF EMS-MELD-LNK (1)
965 STRING
966 WS-WERK DELIMITED BY SIZE "/"
967 FEPU-NR OF S83562-REQ-1 DELIMITED BY SIZE
968 INTO PARAMETERTEXT OF EMS-MELD-LNK (1)
969 END-STRING
970 MOVE IST-FERTIGUNGSBEREICH-NEU OF S83562-REQ-1
971 TO PARAMETERTEXT OF EMS-MELD-LNK (2)
972 MOVE_BERECHNUNGSMODUS-IST OF S83562-REQ-1
```

Compile error visualization

ABOUT US

abat

The abat Group, founded in 1998, is an SAP service provider, innovative software developer and provider of complete solutions for software-supported process op-

timization - primarily for the core industries of automotive and discrete manufacturing as well as in logistics processes and production control.

At its Bremen site, the company provides consulting services in all phases of IT service management - starting with the alignment of IT with business processes and in-house developments through to the implementation and maintenance of standard solutions. abat in St. Ingbert, Saarland, is an expert in digital high availability solutions for production control in the complex manufacturing industry. In addition, the abat Group's portfolio includes app development, cloud services, information security, artificial intelligence, sustainability, PLM, and xReality.

More than 800 employees in Bremen, Munich, Oldenburg, St. Ingbert, Walldorf, Wolfsburg as well as in Minsk (Belarus), Vilnius (Lithuania), Puebla (Mexico), Atlanta, GA (USA) and Beijing (China) generated sales of approximately 80 million euros in 2021. The abat Group's customers include Audi, BMW, Boehringer Ingelheim, Bosch, Brose, DHL, Ineos, MAN, Mercedes-Benz, nobilia, Porsche, Tchibo, thyssenkrupp, and Volkswagen.

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