
Fairfax Water RFP 18-18

*Addendum #2 Attachment #3 – SAP Early Watch
Report Package*



Service Report

EarlyWatch®Alert

Confidential

SAP System ID	ECC Production
Product	SAP ERP ENHANCE PACKAGE 6.08
Status	Productive
DB System	ORACLE 12.1.0.2
Customer	Fairfax County Water Authority FAIRFAX USA

Processed on	SAP Solution Manager
Release	SOLUTION MANAGER 7.2
Service Tool	720 SP10
Service Content Update on	03/07/2018

Analysis from	03/12/2018	Session No.	1000000006263
Until	03/18/2018	Installation No.	
		Customer No.	

This report contains confidential customer data and may be viewed only by SAP DBS employees, authorized SAP partners, and customer employees. Do not distribute it to other parties.

1 Service Summary



This EarlyWatch Alert session detected issues that could potentially affect your system.
Take corrective action as soon as possible.

CHECK OVERVIEW

Topic Rating	Topic	Subtopic Rating	Subtopic
⚠	SAP System Configuration		
		⚠	Database - Maintenance Phases
		⚠	SAP Kernel Release
✓	Performance Overview		
		✓	Performance Evaluation
✓	Workload Distribution		
		✓	Workload by Application Module
		✓	DB Load Profile
✓	SAP System Operating		
		✓	Availability based on Collector Protocols
		✓	Program Errors (ABAP Dumps)
		✓	Update Errors
		✓	Table Reorganization
✓	Hardware Capacity		
⚠	Database Performance		
		✓	Missing Indexes
		⚠	Database Key Performance Indicators
		✓	Setup of the Temporary Tablespace
		⚠	Database Parameters
		✓	Optimizer Statistics
✓	Database Administration		
		✓	Space Statistics
		✓	Backup Frequency
		✓	Archive Frequency
		✓	Freespace in Tablespaces
		✓	brconnect -f check (sapdba -check) schedule
		✓	Multibyte Character Sets
✓	Database Server Load From Expensive SQL Statements		
		⚠	TRANSACTION-SQLORA(02): Expensive SQL Statements
		✓	Database Server Load
✓	Software Change Management		

Topic Rating	Topic	Subtopic Rating	Subtopic
		✓	Number of Changes
		✓	Emergency Changes
		✓	Failed Changes
✓	Data Volume Management (DVM)		

Note: All recommendations in this report are based on our general experience. Test them before using them in your production system. Note that EarlyWatch Alert is an automatic service.

Note: If you have any questions about the accuracy of the checks in this report or the correct configuration of the SAP Solution Manager EarlyWatch Alert service, create a customer message under component SV-SMG-SER-EWA.

Note: If you require assistance in resolving any concerns about the performance of the system, or if you require a technical analysis of other aspects of your system as highlighted in this report, create a customer message on component SV-BO. For details of how to set the appropriate priority level, see [SAP Note 67739](#).

Performance Indicators for ECC Production

The following table shows the relevant performance indicators in various system areas.

Area	Indicators	Value	Trend
System Performance	Active Users (>400 steps)	121	↘
	Avg. Availability per Week	100 %	↗
	Avg. Response Time in Dialog Task	654 ms	↗
	Max. Dialog Steps per Hour	8628	↘
	Avg. Response Time at Peak Dialog Hour	567 ms	↗
	Avg. Response Time in RFC Task	2212 ms	➡
	Max. Number of RFCs per Hour	6014	↘
	Avg. RFC Response Time at Peak Hour	2067 ms	↗
Hardware Capacity	Max. CPU Utilization on DB Server	21 %	➡
	Max. CPU Utilization on Appl. Server	27 %	↗
Database Performance	Avg. DB Request Time in Dialog Task	240 ms	↗
	Avg. DB Request Time for RFC	401 ms	↗
	Avg. DB Request Time in Update Task	54 ms	↘
Database Space Management	DB Size	1039.42 GB	➡
	DB Growth Last Month	18.03 GB	➡

2 Configuration, Statistics, and Trends

This section contains information about system configuration, usage, and trend analysis for key performance indicators (KPIs). Diagrams are built weekly once the EarlyWatch Alert service is activated.

Historical data for "Transaction Activity" and "System Performance" is taken directly from workload monitor ST03 if data has been accumulated for fewer than 20 sessions.

2.1 Trend Analysis

This section contains the trend analysis for key performance indicators (KPIs). IF <> 'X' Diagrams are built weekly once the EarlyWatch Alert service is activated.

In this section, a "week" is from Monday to Sunday. The date displayed is the Sunday of the week.

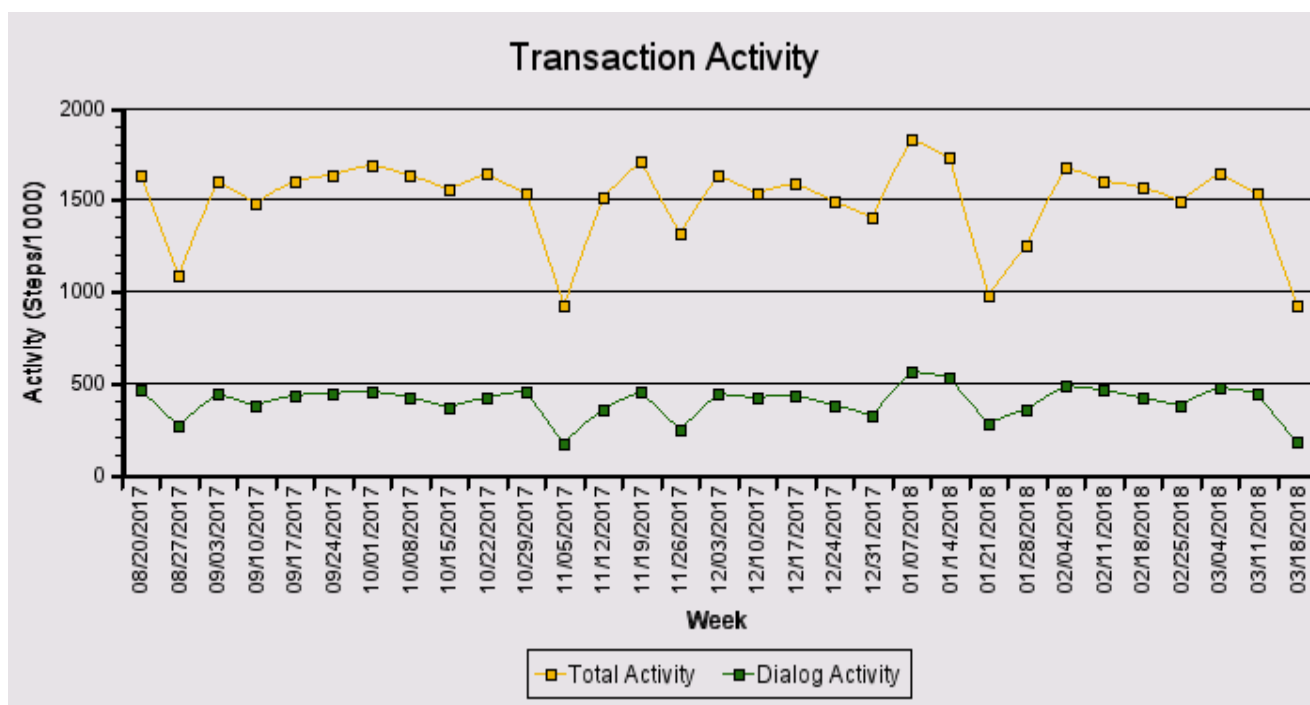
2.1.1 System Activity

The following diagrams show the system activity over time.

The "Transaction Activity" diagram below depicts transaction activity in the system over time.

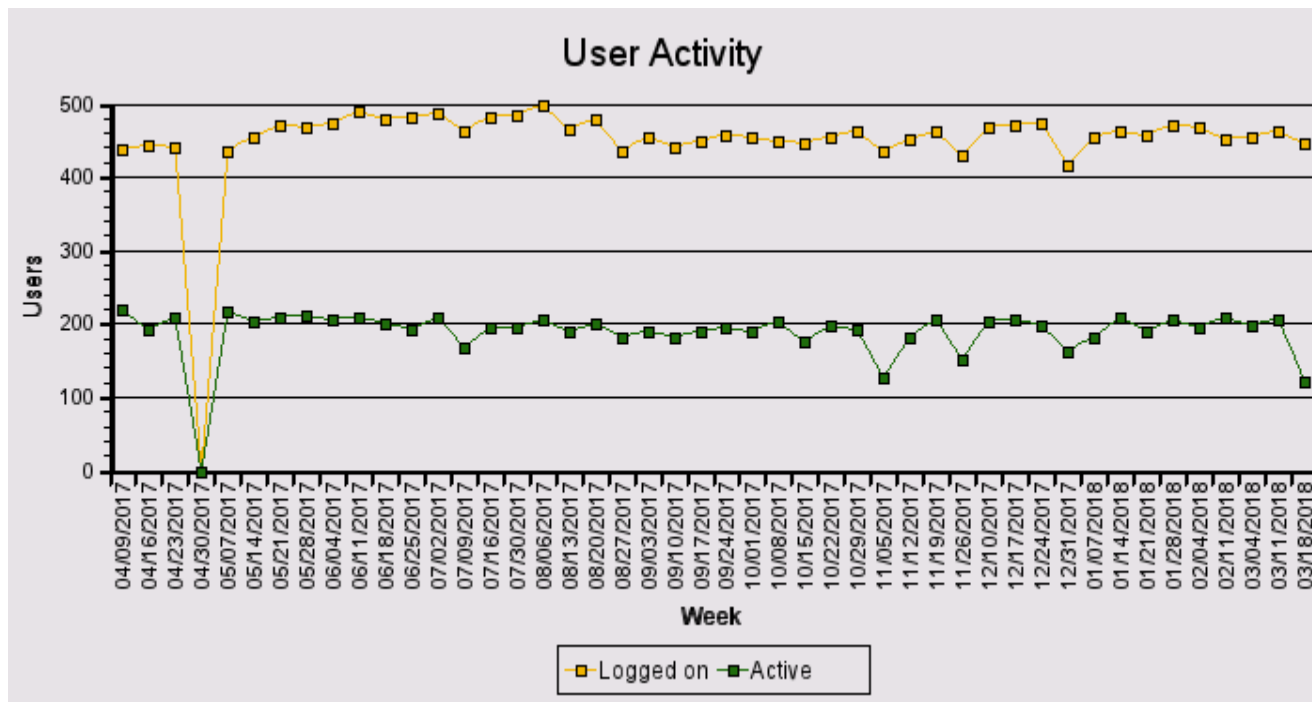
- **Total Activity:** Transaction steps performed each week (in thousands)
- **Dialog Activity:** Transaction steps performed in dialog task each week (in thousands)
- **Peak Activity:** Transaction steps (in thousands) during the peak hour; this peak hour is calculated as the hour with the maximum dialog activity in the ST03 time profile divided by 5 working days per week.

(Peak Activity is absent if "Activity Data" is taken from ST03 data directly).

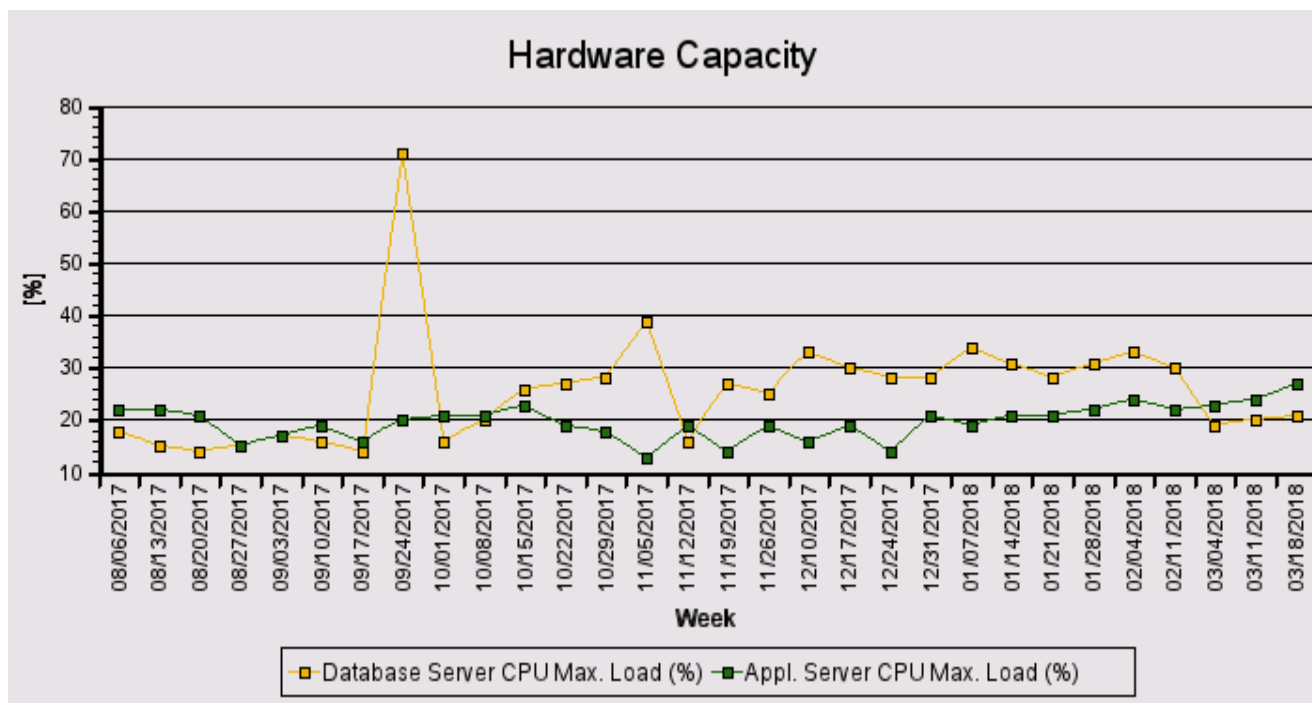


The "User Activity" diagram below shows the user activity on the system over time.

- **Total Users:** Total users that logged on in one week.
- **Active Users:** Users who performed more than 400 transaction steps in one week.

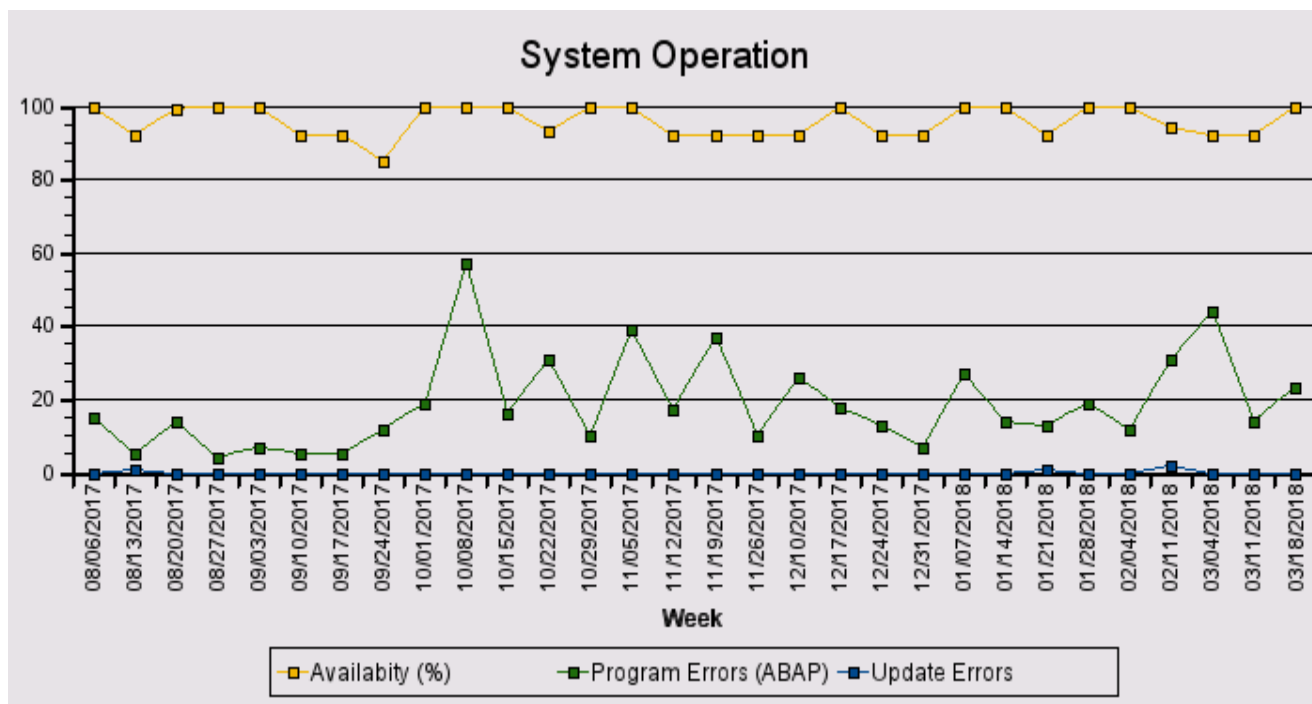


2.1.2 Hardware Capacity



2.1.3 System Operation

The following diagram or table shows important KPIs for system operation.



2.2 Transaction Profile Check

The following tables show the response times and the number of dialog steps for the transactions that cause the heaviest workload in your system.

2.2.1 Transactions by Total Workload

The following tables list the activities with the highest contribution to the total workload.

WORKLOAD BY TRANSACTION (DIALOG/HTTP(S)/WS-HTTP)

Transaction	Type	Dialog Steps	Total Resp. Time in %	Avg. Resp. Time in ms	Avg. CPU Time in ms	Avg. DB Time in ms	Avg. GUI Time in ms
CIC0	DIA	58,896	3.7	485.1	239.7	95.9	131.4
ZPM_IW37N	DIA	10,515	2.0	1,451.5	532.0	773.0	196.4
ZMOB_ORDER_LIST	DIA	6,232	1.1	1,349.5	121.6	920.2	292.6
IW32	DIA	13,150	1.0	565.0	205.8	114.9	150.3
SESSION_MANAGER	DIA	9,181	0.8	687.0	67.0	24.5	509.4
IW33	DIA	6,275	0.6	689.7	234.8	206.1	209.8
IW37N	DIA	2,896	0.4	1,087.0	165.4	624.8	215.6
FPL9	DIA	8,001	0.3	329.4	179.1	157.5	3.7
IW47	DIA	337	0.3	6,111.0	588.7	5,279.4	402.3
ME2N	DIA	1,775	0.3	1,127.6	490.1	495.6	243.6

3.1% of the total response time in the above table is caused by customer transactions.

WORKLOAD BY TRANSACTION (BATCH)

Transaction	Dialog Steps	Total Resp. Time in %	Total Resp. Time in s	Total CPU Time in s	Total DB Time in s
ZCCS_CUSPORTAL_USAGE_IF	100	53.8	417,775.0	1,945.0	416,560.1
(BATCH)	26,869	3.1	23,715.0	698.0	1,173.2
RSBTC RTE	22,324	2.5	19,565.0	543.0	645.6
ZCCS_CUSPORTAL_ZIP_USAGE_IF	5	1.4	10,689.0	3.0	180.8
ZFI_UPDATE_FUNC_AREA_UP	162	1.3	10,354.0	1,863.0	9,340.5
RSDBAJOB	2	1.0	7,714.0	0.0	0.3
/SDF/HDB_SIZING	1	1.0	7,676.0	45.0	82.9
ZCCS_SEWER_LIEN_PMNT_R	6	0.9	7,117.0	11.0	7,102.0

Transaction	Dialog Steps	Total Resp. Time in %	Total Resp. Time in s	Total CPU Time in s	Total DB Time in s
RMMRP000	2	0.9	7,071.0	484.0	2,267.4
ZISDM_ITRMETER_DOWNLOAD	6	0.9	7,052.0	3,639.0	3,890.2

58.3% of the total response time in the above table is caused by customer transactions.

If response times are outside acceptable boundaries and you are unhappy with the performance of a transaction, contact your in-house developers about possible optimization potential and open a message under component SV-BO if required.

WORKLOAD BY WEB SERVICES

Service	Calls	Total Resp. Time in %	Avg. Resp. Time in ms	Avg. CPU Time in ms	Avg. DB Time in ms	Type
Total	4,012	100.0	209.9	146.5	17.2	
II_TIM_SE_EETMECAL_WTS_EE_QR	2,006	59.7	250.4	220.4	29.5	synchronous
II_TIM_SE_EETMEAGR_PWTP_EE_QR	2,006	40.3	169.4	72.6	4.8	synchronous

2.2.2 Transactions by DB Load

The following transaction profiles list the transactions that have the greatest share in the database load, sorted by percentage of total database access times.

DATABASE LOAD BY TRANSACTIONS (DIALOG/HTTP(S))

Transaction	Type	Dialog Steps	Total DB Time in %	Avg. DB Time in ms
ZPM_IW37N	DIA	10,515	1.5	773.0
ZMOB_ORDER_LIST	DIA	6,232	1.1	920.2
CIC0	DIA	58,896	1.0	95.9
ZCCS_MTRTMCHG	DIA	37	0.4	53,120.2
IW37N	DIA	2,896	0.3	624.8
IW47	DIA	337	0.3	5,279.4
IW32	DIA	13,150	0.3	114.9
ZDUN_BF_RPT	DIA	44	0.3	32,023.2
IP19	DIA	82	0.2	16,260.1
IW33	DIA	6,275	0.2	206.1

3.3% of the total database time in the above table is caused by customer transactions.

DATABASE LOAD BY TRANSACTIONS (BATCH)

Transaction	Dialog Steps	Total DB Time in %	Total DB Time in s
ZCCS_CUSPORTAL_USAGE_IF	100	77.4	416,560.0
ZFI_UPDATE_FUNC_AREA_UP	162	1.7	9,340.0
ZCCS_SEWER_LIEN_PMNT_R	6	1.3	7,102.0
SAPRSLOG	6	1.2	6,352.0
ZISDM_ITRMETER_DOWNLOAD	6	0.7	3,890.0
ZCCS_DUP_ADDR_R	1	0.6	3,182.0
RFKKABS1	6	0.6	3,128.0
RFKKZE02	20	0.6	3,005.0
SWNC_TCOLL_STARTER	1,267	0.5	2,788.0
RMMRP000	2	0.4	2,267.0

81.7% of the total database time in the above table is caused by customer transactions.

If average database times are outside acceptable boundaries and you are unhappy with the performance of a transaction, contact your in-house developers about possible optimization potential and open a message under component SV-BO if required.

2.2.3 Workload by transaction CIC0

Consider the following when evaluating the average response time for transaction CIC0:

The average response time for CIC0 often contains high roll in + wait times. These roll in + wait times are mainly due to:

- RFCs to other systems invoking a dialog transaction in another system through an action box
- RFCs to the CTI server signaling that the call center agent is ready to take the next incoming call

These long-lasting RFCs are normal. Unfortunately, these RFC times are included in the average response time and can cause 'distorted' RED performance ratings due to the increased response time.

To correct the response time ratings, the following assumption/calculation is made:

The average response time for transaction CIC0 is calculated as the sum of the average CPU time + average DB time + average GUI time. This "estimated" average response time is then compared to the reference values.

Note: The above assumption is not entirely absolute, since the delta time could also consist of a high processing time, high load and generation time, or high roll-in time indicating, for example, a CPU or memory bottleneck.

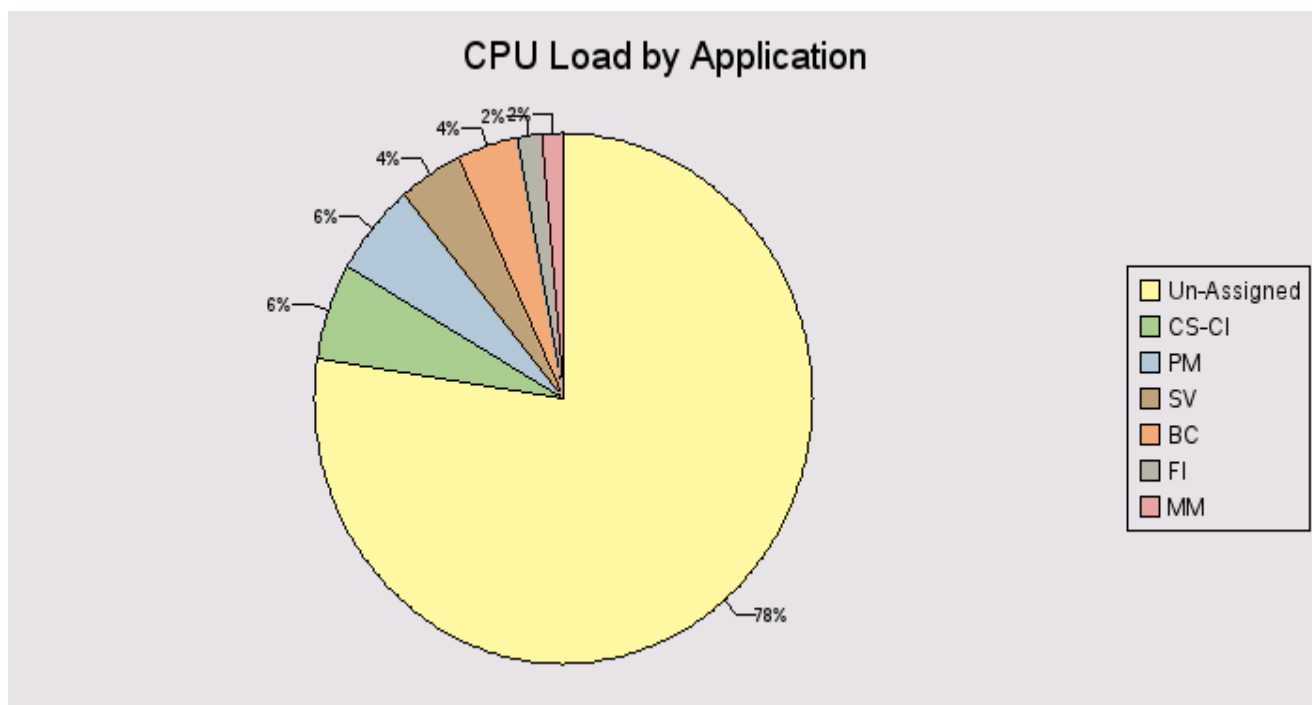
Transaction	Estimated Av. Resp. Time in ms	Av. CPU Time in ms	Av.DB Time in ms	Av. GUI Time in ms
CIC0	467.0	239.7	95.9	131.4

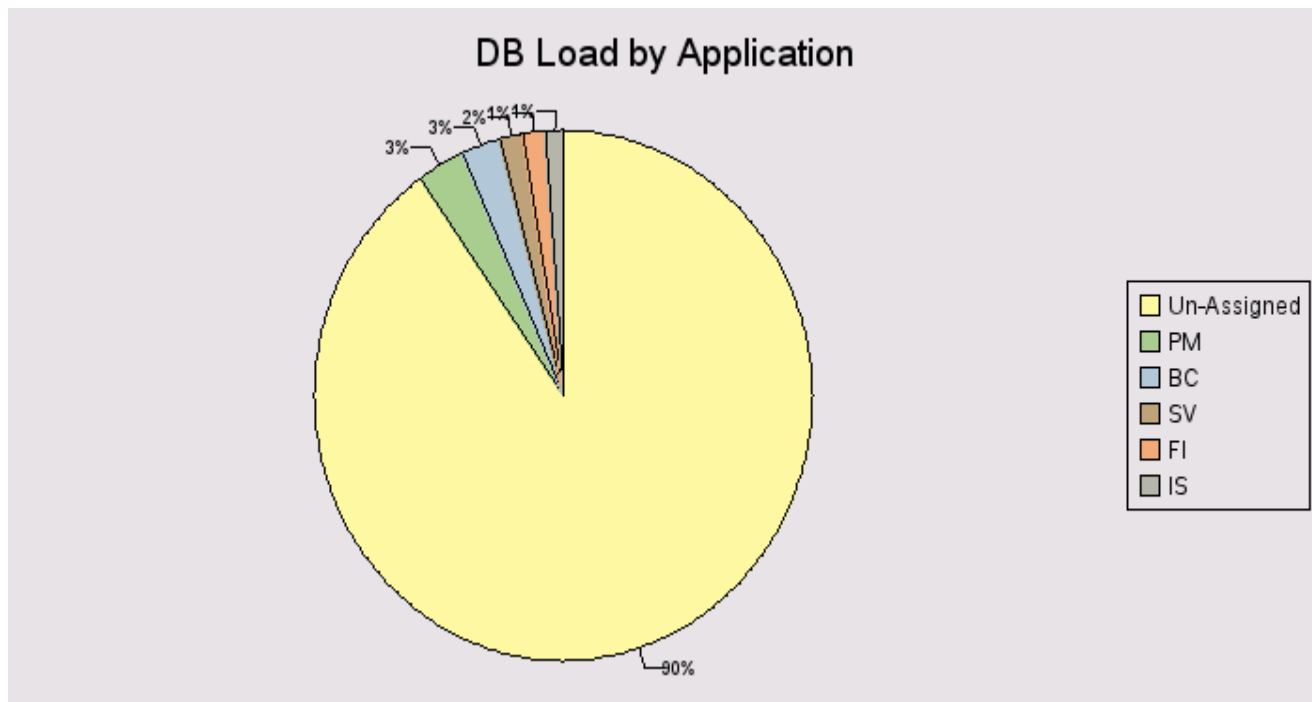
2.3 Workload by Application Module

The following diagrams show how each application module contributes to the total system workload. Two workload aspects are shown:

- CPU time: total CPU load on all servers in the system landscape
- Database time: total database load generated by the application

All programs that are not classified in the SAP Application Hierarchy (transaction SE81) are summarized in the "Un-Assigned" category. Customer programs, industry solutions, and third-party add-on developments fall into this category.





2.4 Hardware Configuration

HOST OVERVIEW

Host	Hardware Manufacturer	Model	CPU Type	CPU MHz	Virtualization	Operating System	CPUs	Cores	Memory in MB
App server 1	VMware, Inc.	VMware Virtual Platform	Xeon E5-2660	2200	VMWARE	SuSE Linux Enterprise Server 11 (x86_64)	2	2	15954
App server 2	VMware, Inc.	VMware Virtual Platform	Xeon E5-2660	2200	VMWARE	SuSE Linux Enterprise Server 11 (x86_64)	2	2	15954
Central instance	VMware, Inc.	VMware Virtual Platform	Xeon E5-2660	2200	VMWARE	SuSE Linux Enterprise Server 11 (x86_64)	8	8	100793

2.5 Software Configuration for ECC Production



We have listed recommendations concerning the current software configuration on your system.

Your system's software versions are checked. If known issues with the software versions installed are identified, they are highlighted.

2.5.1 SAP Application Release - Maintenance Phases

SAP Product Version	End of Mainstream Maintenance	Status
EHP8 FOR SAP ERP 6.0	12/31/2025	✓

In October 2014, SAP announced a maintenance extension for SAP Business Suite 7 core application releases to 2025. If you are running a relevant release, see SAP Note [1648480](https://support.sap.com/en/other/sap_note_1648480.html) for more details and applicable restrictions.

2.5.2 Support Package Maintenance - ABAP

The following table shows an overview of currently installed software components.

SUPPORT PACKAGES

Software Component	Version	Patch Level	Latest Avail. Patch Level	Support Package	Component Description
EA-DFPS	618	7		SAPK-61807INEADFPS	
EA-FINSERV	618	7		SAPK-61807INEAFINSRV	
EA-GLTRADE	618	7		SAPK-61807INEAGLTRAD	
EA-HR	608	46	46	SAPK-60846INEAHR	SAP R/3 Enterprise Human Resource & Travel Extension 608
EA-IPPE	618	2		SAPK-61802INEAIPPE	
EA-PS	618	7		SAPK-61807INEAPS	
EA-RETAIL	618	7		SAPK-61807INEARETAIL	
ECC-DIMP	618	2		SAPK-61802INECCDIMP	
ECC-SE	605	16	16	SAPK-60516INECCSE	ESA FAST TRACK (ECC-SE) 605 -
ERECRUIT	617	12	12	SAPK-61712INERECRUIT	HCM E-Recruiting 617
FI-CA	618	7		SAPK-61807INFICA	
FI-CAX	618	2		SAPK-61802INFICAX	
FINBASIS	748	7		SAPK-74807INFINBASIS	
FSCM_CCD	618	7		SAPK-61807INFSCMCCD	
INSURANCE	618	2		SAPK-61802ININSURANC	
IS-CWM	618	2		SAPK-61802INISCWM	
IS-H	618	3		SAPK-61803INISH	
IS-M	618	2		SAPK-61802INISM	
IS-OIL	618	2		SAPK-61802INISOIL	
IS-PRA	618	7		SAPK-61807INISPR	
IS-PS-CA	618	2		SAPK-61802INISPSCA	
IS-UT	618	7		SAPK-61807INISUT	
IW_CBS	200	11	11	SAPK-20011INIWCBS	Information Worker Content Basis 2.0
IW_CNT	200	11	11	SAPK-20011INIWCNT	SAP IW CNT - Information Worker Content 2.0
IW_FNDGC	100	5	5	SAPK-10005INIWFNDGC	SAP IW FNDGC 100
IW_GIL	100	7	7	SAPK-10007INIWGIL	SAP IW Generic Interaction Layer 100
IW_PGW	100	9	9	SAPK-10009INIWPGW	Process Gateway enables exposition of processes as a resource
IW_SCS	200	11	11	SAPK-20011INIWSCS	Screen Scraping 200
IW_SPI	100	7	7	SAPK-10007INIWSPI	SAP IW Service Provider Infrastructure 100
LSOFE	617	11	11	SAPK-61711INLSOFE	Learning Solution - Front End 617
MDG_APPL	619	8		SAPK-61908INMDGAPPL	
MDG_FND	749	8		SAPK-74908INMDGFND	
MDG_MDC	100	8		SAPK-10008INMDGMDC	
MDG_UX	619	8		SAPK-61908INMDGUX	
PLMWUI	748	7		SAPK-74807INPLMWUI	

Software Component	Version	Patch Level	Latest Avail. Patch Level	Support Package	Component Description
SAP_ABA	750	8		SAPK-75008INSAPABA	
SAP_AP	750	5		SAPK-75005INSAPAP	
SAP_APPL	618	7		SAPK-61807INSAPAPPL	
SAP_BASIS	750	8		SAPK-75008INSAPBASIS	
SAP_BS_FND	748	7		SAPK-74807INSAPBSFND	
SAP_BW	750	8		SAPK-75008INSAPBW	
SAP_FIN	618	7		SAPK-61807INSAPFIN	
SAP_GWFND	750	8		SAPK-75008INSAPGWFND	
SAP_HR	608	46	46	SAPKE60846	SAP HR 6.08
SAP_UI	750	8		SAPK-75008INSAPUI	
SEM-BW	748	7		SAPK-74807INSEMBW	
ST-API	01S_731	3		SAPKITAB9T	
ST-PI	740	7	7	SAPK-74007INSTPI	Solution Tools Plugin 740
UMCERP01	604	10	10	SAPK-60410INUMCERP01	OData channel enablement for IS-U (ERP 6.04) and IS-PS (ERP 6.05)
WEBCUIF	748	7		SAPK-74807INWEBCUIF	

2.5.3 Database - Maintenance Phases

Database Version	End of Standard Vendor Support*	End of Extended Vendor Support*	Status	SAP Note
Oracle Database 12g Release 1	07/31/2018	07/31/2021		1174136

* Maintenance phases and duration for the DB version are defined by the vendor. Naming of the phases and required additional support contracts differ depending on the vendor. Support can be restricted to specific patch levels by the vendor or by SAP. Check in the referenced SAP Note(s) whether your SAP system requires a specific patch release to guarantee support for your database version.

The support status you receive in this report regarding your Oracle database version takes only the major release support dates into account and not whether the individual patch set level is outdated in terms of Oracle patch support. For this reason, verify in the corresponding patch set SAP Note whether the patch set you are currently using is still in the Oracle patch provisioning mode.

For more information, see the "Oracle Release" section of the "Database" section.

Recommendation: Standard vendor support for your database version has already ended / will end in the near future. Consider ordering extended vendor support from your database vendor or upgrading to a higher database version.

2.5.4 Operating System(s) - Maintenance Phases

Host	Operating System	End of Standard Vendor Support*	Status	SAP Note
3 Hosts	SuSE Linux Enterprise Server 11 (x86_64)	03/31/2019		936887

* Maintenance phases and duration for the OS version are defined by the vendor. Naming of the phases and required additional support contracts differ depending on the vendor. Support can be restricted to specific patch levels by the vendor or by SAP. Check in the referenced SAP Note(s) whether your SAP system requires a specific patch release to guarantee support for your operating system version.

2.5.5 SAP Kernel Release

The following table lists all information about your SAP kernel(s) currently in use.

Instance(s)	SAP Kernel Release	Patch Level	Age in Months	OS Family
3 instances	749	312	7	Linux (x86_64)

Kernel out of date

Your current SAP kernel release is probably not up to date.

Recommendation: Make sure that you are using the recommended SAP kernel together with the latest Support Package stack for your product.

Additional Remarks

SAP releases Support Package stacks (including SAP kernel patches) on a regular basis for most products (generally 2–4 times a year). We recommend that you base your software maintenance strategy on these stacks.

You should only consider using a more recent SAP kernel patch than that shipped with the latest Support Package Stack for your product if specific errors occur.

For more information, see SAP Service Marketplace at <https://support.sap.com/software/patches/stacks.html> (SAP Support Package Stack information) and <https://launchpad.support.sap.com/#/softwarecenter/support/index> (Support Packages & patch information).

For each patch there is an SAP Note in which all known regressions for this level are listed. Find it using the keyword [KRNL749PL312](#) in the SAP Note search. For detailed information, see SAP Note [1802333](#) - Finding information about regressions in the SAP kernel.

Service Data Quality

The service data is collected by the Service Data Control Center (SDCCN) or read from the Solution Manager's BW or Configuration and Change Database (CCDB).

This section comprehensively shows issues with the data quality and provides hints on how to resolve them.

EXPLANATION FOR 'PRIORITY' COLUMN IN TABLES BELOW

Prio.	Explanation: Impact of Missing or Erroneous Data
◇	Only checks of minor importance are affected.
	An optional check was skipped.

Quality of Data in Service Data Control Center (SDCC)

QUALITY OF SERVICE DATA IN ST-PI

Prio.	Report Area affected	Details and Related ST-PI Logical Function	SAP Note
◇	System Administration of Server (host) app server 1, app server 2, central instance	An incorrect name is returned for the SAP dispatcher service, probably due to 'Well Known Services' maintained in /etc/services module TH_SERVER_LIST. ST-PI function: TH_SERVER_LIST	2135427

Quality of Service Data in Solution Manager Diagnostics - BW

Prio.	Report Area affected	Details and Related Infocube	SAP Note
	Workload of ABAP System ECC Production	Reading performance data from BW returned neither data nor an error code. A timeout may have occurred. Infocube: OCCMSMTPH used in section ' Workload Overview '	1332428



Service Report

EarlyWatch®Alert

Confidential

SAP System ID	Gateway Production
Product	SAP NetWeaver 7.4
Status	Productive
DB System	ORACLE 12.1.0.2
Customer	Fairfax County Water Authority FAIRFAX USA

Processed on	SAP Solution Manager
Release	SOLUTION MANAGER 7.2
Service Tool	720 SP10
Service Content Update on	19.03.2018

Analysis from	19.03.2018	Session No.	1000000006280
Until	25.03.2018	Installation No.	
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		⚠	SAP Kernel Release
✓	Performance Overview		
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✓	Workload Distribution		
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		✓	Multibyte Character Sets
✓	Database Server Load From Expensive SQL Statements		
		⚠	TRANSACTION(02): Expensive SQL Statements
		✓	Database Server Load
		✓	System Recommendations (ABAP)

Topic Rating	Topic	Subtopic Rating	Subtopic
✓	Software Change Management		
		✓	Number of Changes
✓	Data Volume Management (DVM)		

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	Avg. Availability per Week	93 %	➡
	Avg. Response Time in Dialog Task	1240 ms	↗
	Avg. Response Time at Peak Dialog Hour	1240 ms	↗
	Avg. Response Time in RFC Task	271 ms	➡
	Max. Number of RFCs per Hour	1717	➡
	Avg. RFC Response Time at Peak Hour	280 ms	➡
Hardware Capacity	Max. CPU Utilization on DB Server	2 %	➡
	Max. CPU Utilization on Appl. Server	4 %	↗
Database Performance	Avg. DB Request Time in Dialog Task	76 ms	↗
	Avg. DB Request Time for RFC	4 ms	➡
Database Space Management	DB Size	44.06 GB	➡
	DB Growth Last Month	0.19 GB	➡

2 Configuration, Statistics, and Trends

This section contains information about system configuration, usage, and trend analysis for key performance indicators (KPIs). Diagrams are built weekly once the EarlyWatch Alert service is activated.

Historical data for "Transaction Activity" and "System Performance" is taken directly from workload monitor ST03 if data has been accumulated for fewer than 20 sessions.

2.1 Trend Analysis

This section contains the trend analysis for key performance indicators (KPIs). IF <> 'X' Diagrams are built weekly once the EarlyWatch Alert service is activated.

In this section, a "week" is from Monday to Sunday. The date displayed is the Sunday of the week.

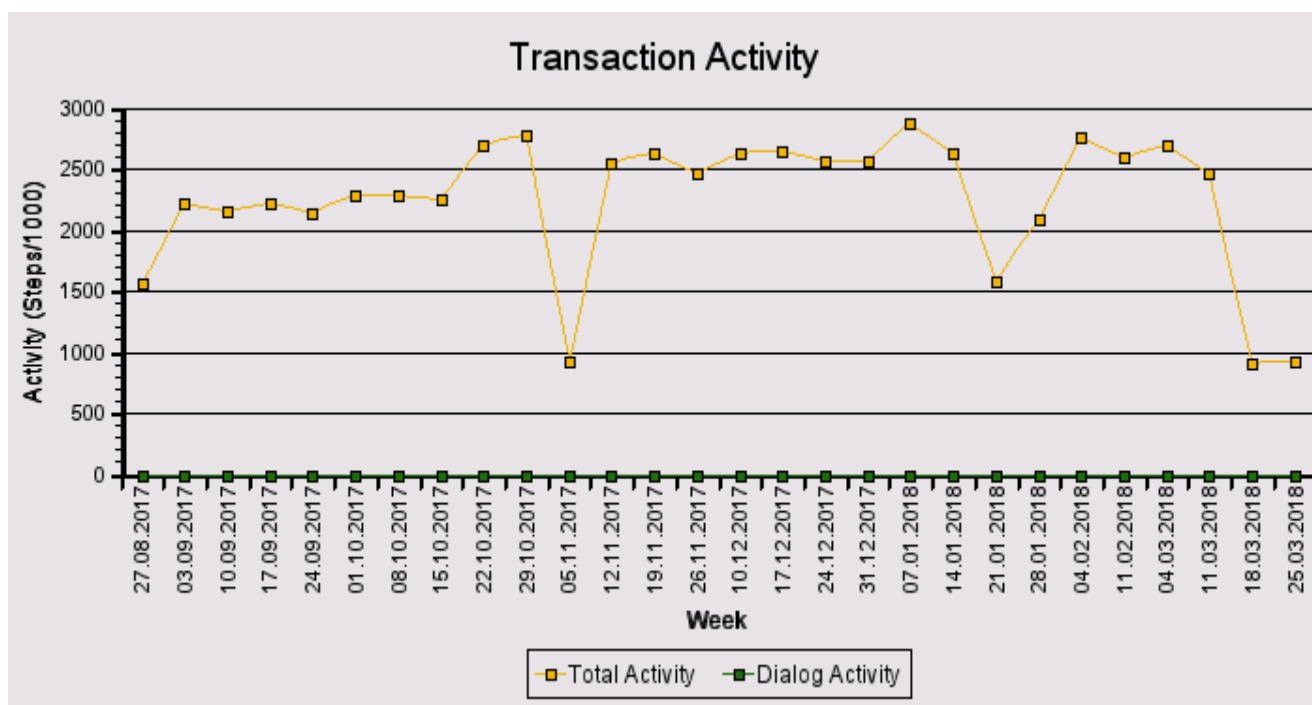
2.1.1 System Activity

The following diagrams show the system activity over time.

The "Transaction Activity" diagram below depicts transaction activity in the system over time.

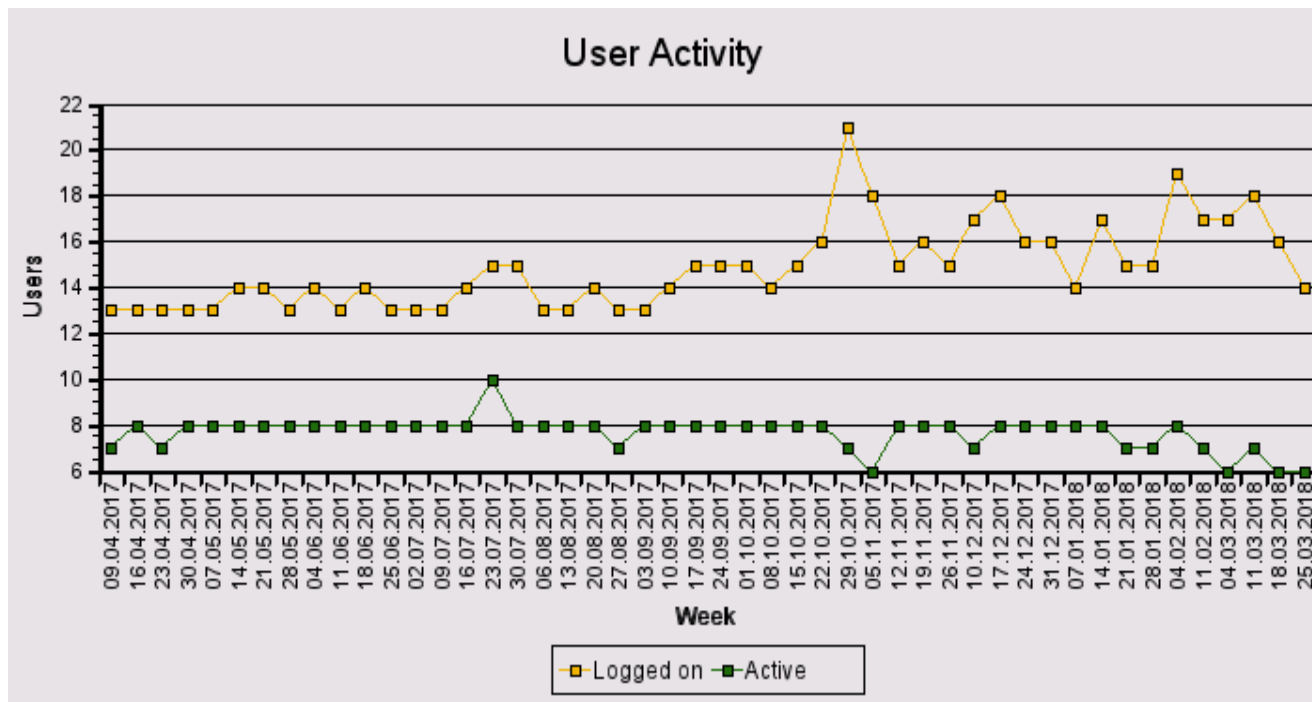
- **Total Activity:** Transaction steps performed each week (in thousands)
- **Dialog Activity:** Transaction steps performed in dialog task each week (in thousands)
- **Peak Activity:** Transaction steps (in thousands) during the peak hour; this peak hour is calculated as the hour with the maximum dialog activity in the ST03 time profile divided by 5 working days per week.

(Peak Activity is absent if "Activity Data" is taken from ST03 data directly).

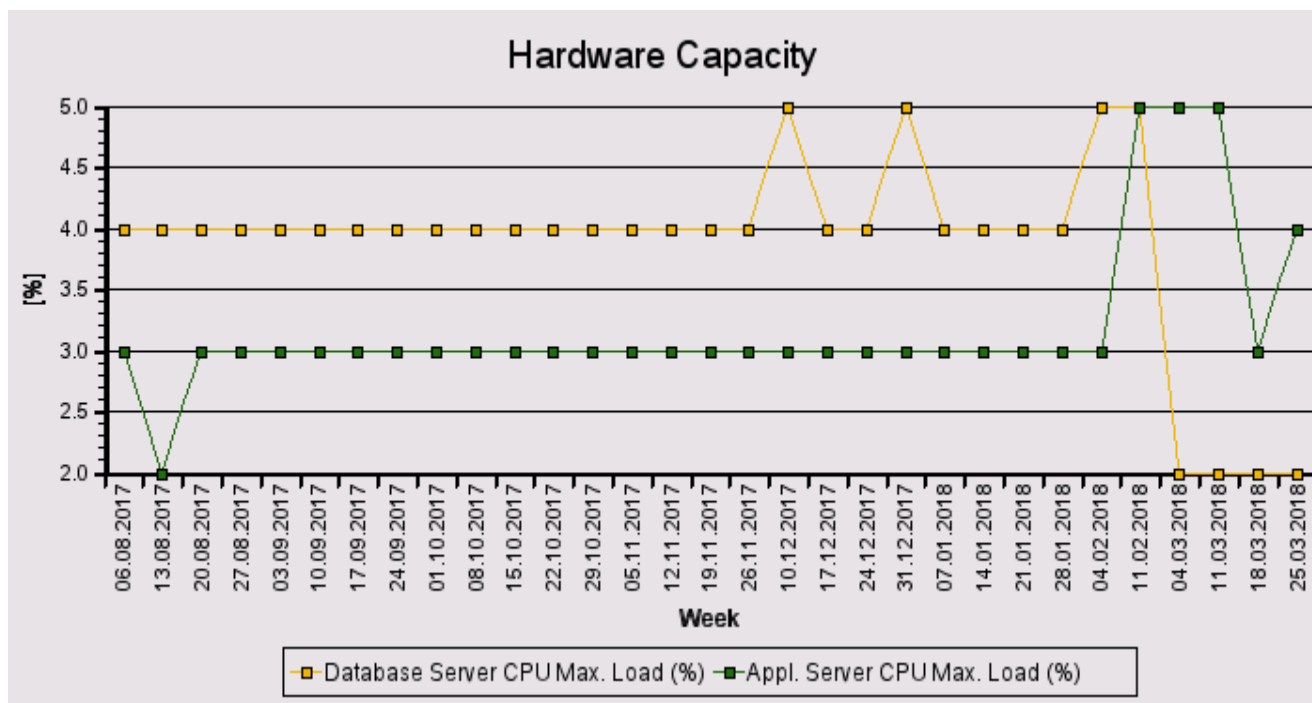


The "User Activity" diagram below shows the user activity on the system over time.

- **Total Users:** Total users that logged on in one week.
- **Active Users:** Users who performed more than 400 transaction steps in one week.

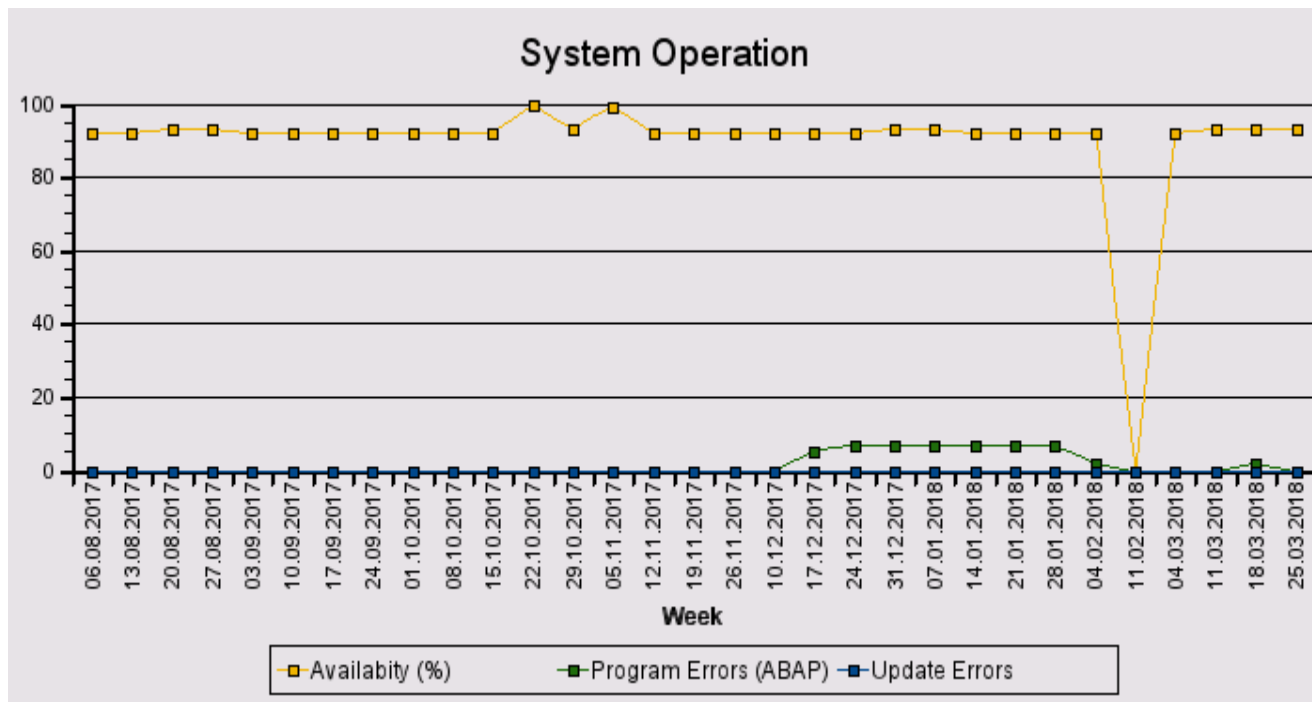


2.1.2 Hardware Capacity



2.1.3 System Operation

The following diagram or table shows important KPIs for system operation.



2.2 Transaction Profile Check

The following tables show the response times and the number of dialog steps for the transactions that cause the heaviest workload in your system.

2.2.1 Transactions by Total Workload

The following tables list the activities with the highest contribution to the total workload.

WORKLOAD BY TRANSACTION (DIALOG/HTTP(S)/WS-HTTP)

Transaction	Type	Dialog Steps	Total Resp. Time in %	Avg. Resp. Time in ms	Avg. CPU Time in ms	Avg. DB Time in ms	Avg. GUI Time in ms
SAPMHTTP	HTTP	678,640	92.8	233.3	9.6	1.3	0.0

WORKLOAD BY TRANSACTION (BATCH)

Transaction	Dialog Steps	Total Resp. Time in %	Total Resp. Time in s	Total CPU Time in s	Total DB Time in s
SWNC_TCOLL_STARTER	936	2.7	4,664.0	1,492.0	1,810.6
/IWFND/R_SM_CLEANUP	18	1.0	1,629.0	15.0	144.5
(BATCH)	5,566	0.7	1,212.0	51.0	16.2
/IWFND/R_METERING_AGGREGATE	6	0.6	1,021.0	63.0	126.0
/IWFND/R_METERING_DELETE	6	0.6	1,004.0	1.0	44.0
RSBTC RTE	1,954	0.5	920.0	21.0	9.9
RSAL_BATCH_TOOL_DISPATCHING	61	0.3	493.0	182.0	54.7
/BDL/TASK_SCHEDULER	61	0.2	346.0	1.0	0.5
RSWSMANAGEMENT	61	0.2	331.0	6.0	6.4
RS_UCON_MANAGEMENT	61	0.0	66.0	2.0	1.5

2.2.2 Transactions by DB Load

The following transaction profiles list the transactions that have the greatest share in the database load, sorted by percentage of total database access times.

DATABASE LOAD BY TRANSACTIONS (DIALOG/HTTP(S))

Transaction	Type	Dialog Steps	Total DB Time in %	Avg. DB Time in ms
SAPMHTTP	HTTP	678,640	27.9	1.3

DATABASE LOAD BY TRANSACTIONS (BATCH)

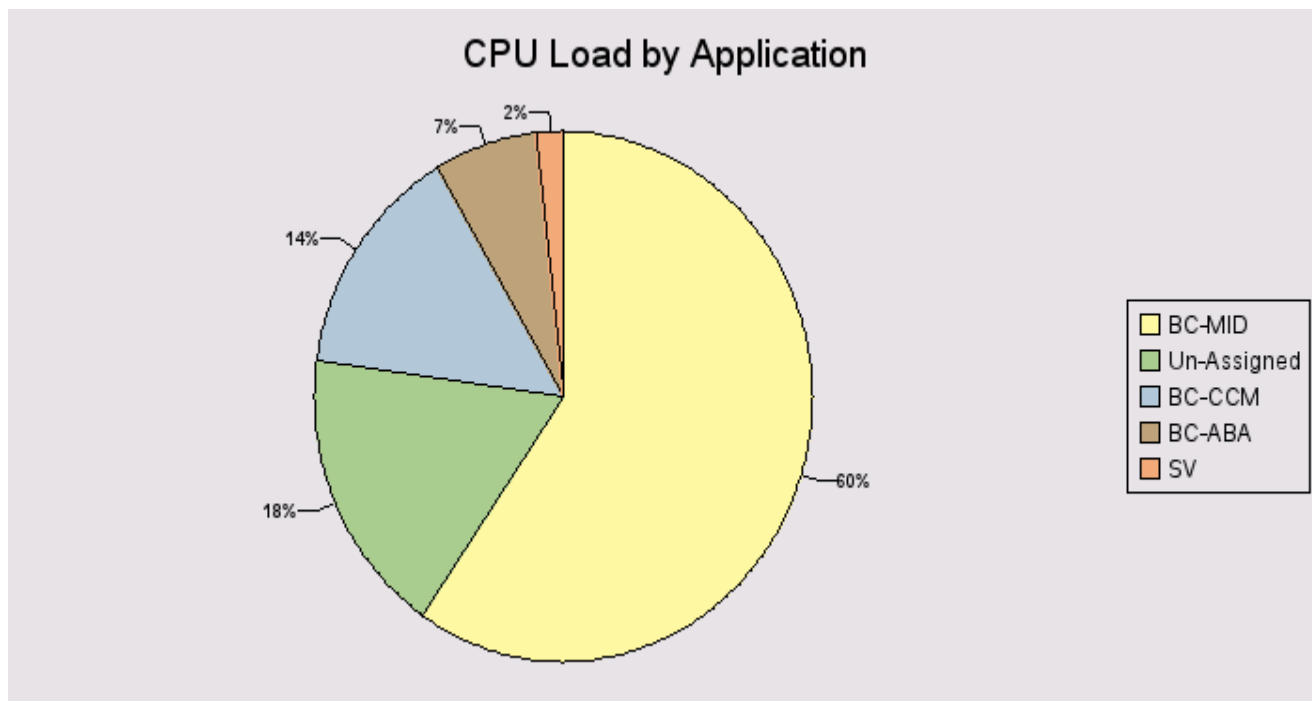
Transaction	Dialog Steps	Total DB Time in %	Total DB Time in s
SWNC_TCOLL_STARTER	936	58.8	1,811.0
/IWFND/R_SM_CLEANUP	18	4.7	145.0
/IWFND/R_METERING_AGGREGATE	6	4.1	126.0
RSAL_BATCH_TOOL_DISPATCHING	61	1.8	55.0
/IWFND/R_METERING_DELETE	6	1.4	44.0
(BATCH)	5,566	0.5	16.0
RSBTCRTE	1,954	0.3	10.0
RSWSMANAGEMENT	61	0.2	6.0
RS_UCON_MANAGEMENT	61	0.0	1.0
RS_AC_TOOLS_SCHEDULER	61	0.0	1.0

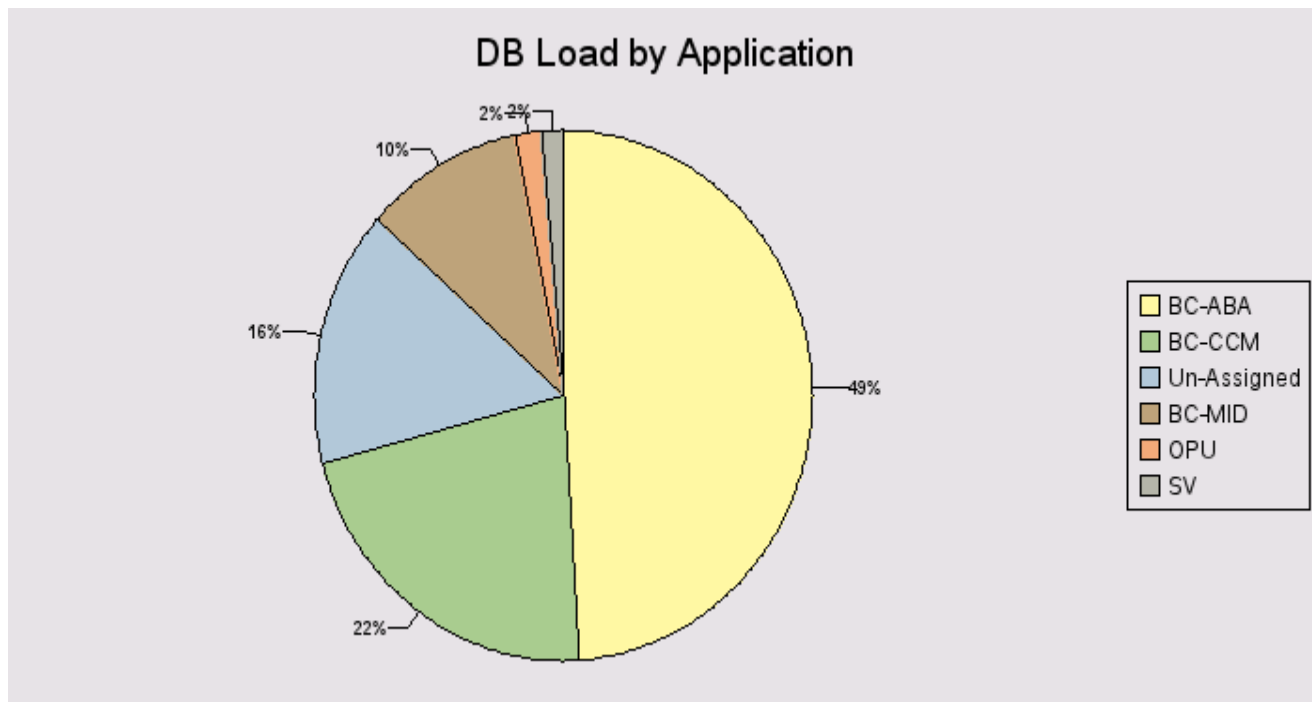
2.3 Workload by Application Module

The following diagrams show how each application module contributes to the total system workload. Two workload aspects are shown:

- CPU time: total CPU load on all servers in the system landscape
- Database time: total database load generated by the application

All programs that are not classified in the SAP Application Hierarchy (transaction SE81) are summarized in the "Un-Assigned" category. Customer programs, industry solutions, and third-party add-on developments fall into this category.





2.4 Hardware Configuration

HOST OVERVIEW

Host	Hardware Manufacturer	Model	CPU Type	CPU MHz	Virtualization	Operating System	CPUs	Cores	Memory in MB
Application server 1	VMware, Inc.	VMware Virtual Platform	Xeon E5-4620 v2	2600	VMWARE	SuSE Linux Enterprise Server 11 (x86_64)	2	2	15954
Application server 2	VMware, Inc.	VMware Virtual Platform	Xeon E5-4620 v2	2600	VMWARE	SuSE Linux Enterprise Server 11 (x86_64)	2	2	15954
Central instance	VMware, Inc.	VMware Virtual Platform	Xeon E5-4650L	2600	VMWARE	SuSE Linux Enterprise Server 11 (x86_64)	4	4	32114

2.5 Software Configuration for Gateway Production



We have listed recommendations concerning the current software configuration on your system.

Your system's software versions are checked. If known issues with the software versions installed are identified, they are highlighted.

2.5.1 SAP Application Release - Maintenance Phases

SAP Product Version	End of Mainstream Maintenance	Status
SAP NETWEAVER 7.4	12/31/2020	✓

In October 2014, SAP announced a maintenance extension for SAP Business Suite 7 core application releases to 2025. If you are running a relevant release, see SAP Note [1648480](#) for more details and applicable restrictions.

2.5.2 Support Package Maintenance - ABAP

The following table shows an overview of currently installed software components.

SUPPORT PACKAGES

Software Component	Version	Patch Level	Latest Avail. Patch Level	Support Package	Component Description
PI_BASIS	740	8	8	SAPK-74008INPIBASIS	Basis Plug-In 7.40
SAP_ABA	740	8	8	SAPKA74008	SAP Anwendungsbasis 7.40
SAP_BASIS	740	8	8	SAPKB74008	SAP Basis Component 7.40
SAP_BW	740	8	8	SAPKW74008	SAP Business Warehouse 7.40
SAP_GWFND	740	11	11	SAPK-74011INSAPGWFND	SAP NetWeaver Gateway Foundation 7.40
SAP_UI	740	13	13	SAPK-74013INSAPUI	User Interface Technology 7.40
ST-A/PI	01S_731	1		SAPKITAB9R	
ST-PI	740	5	5	SAPK-74005INSTPI	Solution Tools Plugin 740
UMCUI501	100	4	4	SAPK-10004INUMCUI501	Utilities multi channel UI 100

2.5.3 Database - Maintenance Phases

Database Version	End of Standard Vendor Support*	End of Extended Vendor Support*	Status	SAP Note
Oracle Database 12g Release 1	07/31/2018	07/31/2021		1174136

* Maintenance phases and duration for the DB version are defined by the vendor. Naming of the phases and required additional support contracts differ depending on the vendor. Support can be restricted to specific patch levels by the vendor or by SAP. Check in the referenced SAP Note(s) whether your SAP system requires a specific patch release to guarantee support for your database version.

The support status you receive in this report regarding your Oracle database version takes only the major release support dates into account and not whether the individual patch set level is outdated in terms of Oracle patch support. For this reason, verify in the corresponding patch set SAP Note whether the patch set you are currently using is still in the Oracle patch provisioning mode.

For more information, see the "Oracle Release" section of the "Database" section.

Recommendation: Standard vendor support for your database version has already ended / will end in the near future. Consider ordering extended vendor support from your database vendor or upgrading to a higher database version.

2.5.4 Operating System(s) - Maintenance Phases

Host	Operating System	End of Standard Vendor Support*	Status	SAP Note
3 Hosts	SuSE Linux Enterprise Server 11 (x86_64)	03/31/2019		936887

* Maintenance phases and duration for the OS version are defined by the vendor. Naming of the phases and required additional support contracts differ depending on the vendor. Support can be restricted to specific patch levels by the vendor or by SAP. Check in the referenced SAP Note(s) whether your SAP system requires a specific patch release to guarantee support for your operating system version.

2.5.5 SAP Kernel Release

The following table lists all information about your SAP kernel(s) currently in use.

Instance(s)	SAP Kernel Release	Patch Level	Age in Months	OS Family
3 instances	742	300	29	Linux (x86_64)

Kernel out of date

Your current SAP kernel release is probably not up to date.

Recommendation: Make sure that you are using the recommended SAP kernel together with the latest Support Package stack for your product.

Additional Remarks

SAP releases Support Package stacks (including SAP kernel patches) on a regular basis for most products (generally 2–4 times a year). We recommend that you base your software maintenance strategy on these stacks.

You should only consider using a more recent SAP kernel patch than that shipped with the latest Support Package Stack for your product if specific errors occur.

For more information, see SAP Service Marketplace at <https://support.sap.com/software/patches/stacks.html> (SAP Support Package Stack information) and <https://launchpad.support.sap.com/#/softwarecenter/support/index> (Support Packages & patch information).

For each patch there is an SAP Note in which all known regressions for this level are listed. Find it using the keyword [KRNL742PL300](#) in the SAP Note search. For detailed information, see SAP Note [1802333](#) - Finding information about regressions in the SAP kernel.

Service Data Quality

For this service, only data of minor importance is missing.

The service data is collected by the Service Data Control Center (SDCCN) or read from the Solution Manager's BW or Configuration and Change Database (CCDB).

This section comprehensively shows issues with the data quality and provides hints on how to resolve them.

EXPLANATION FOR 'PRIORITY' COLUMN IN TABLES BELOW

Prio.	Explanation: Impact of Missing or Erroneous Data
	Some important check could not be processed. The report can be rated green nevertheless.
	Only checks of minor importance are affected.
	An optional check was skipped.

Quality of Data in Service Data Control Center (SDCC)

QUALITY OF SERVICE DATA IN ST-PI

Prio.	Report Area affected	Details and Related ST-PI Logical Function	SAP Note
	System Administration of Server (host) app server 1, appserver 2 and central instance	An incorrect name is returned for the SAP dispatcher service, probably due to 'Well Known Services' maintained in /etc/services module TH_SERVER_LIST. ST-PI function: TH_SERVER_LIST	2135427

QUALITY OF SERVICE DATA IN ST-A/PI

Prio.	Report Area affected	Details and Related ST-A/PI Module	SAP Note
	Parameterization of DB Instance	Because of incomplete data, this report does not use the DL script for the "Database Parameters" section. Ensure that your ST-A/PI is up to date and collecting data correctly. used in section ' Database Performance '	1171650

Quality of Service Data in Solution Manager Diagnostics - BW

Prio.	Report Area affected	Details and Related Infocube	SAP Note
	Workload of ABAP System	Reading performance data from BW returned neither data nor an error code. A timeout may have occurred. Infocube: OCCMSMTPH used in section 'Workload Overview '	1332428



Service Report

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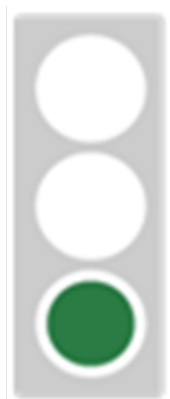
SAP System ID	AS Java Production
Product	SAP NetWeaver 7.4
Status	PRODUCTIVE
DB System	ORACLE 12.1.0.2
Customer	Fairfax County Water Authority FAIRFAX USA

Processed on	SAP Solution Manager
Release	SOLUTION MANAGER 7.2
Service Tool	720 SP10
Service Content Update on	19.03.2018

Analysis from	19.03.2018	Session No.	1000000006282
Until	25.03.2018	Installation No.	
		Customer No.	

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1 Service Summary



We did not detect any critical problems during the EarlyWatch Alert service.

CHECK OVERVIEW

Topic Rating	Topic	Subtopic Rating	Subtopic
⚠	SAP System Configuration		
⚠	Database Oracle		
		⚠	Database Support Tools
		⚠	Database Parameters
		✓	System Recommendations (JAVA)
		⚠	Invoker Servlet
⚠	Software Change Management		
✓	Java System Data		
		✓	Java VM Memory Performance
		✓	Java Workload Overview
		✓	Java Application Performance
		✓	Java System Errors

Note: All recommendations in this report are based on our general experience. Test them before using them in your production system. Note that EarlyWatch Alert is an automatic service.

Note: If you have any questions about the accuracy of the checks in this report or the correct configuration of the SAP Solution Manager EarlyWatch Alert service, create a customer message under component SV-SMG-SER-EWA.

Note: If you require assistance in resolving any concerns about the performance of the system, or if you require a technical analysis of other aspects of your system as highlighted in this report, create a customer message on component SV-BO. For details of how to set the appropriate priority level, see [SAP Note 67739](#).

2 Configuration, Statistics, and Trends

This section contains information about system configuration, usage, and trend analysis for key performance indicators (KPIs). Diagrams are built weekly once the EarlyWatch Alert service is activated.

Historical data for "Transaction Activity" and "System Performance" is taken directly from workload monitor ST03 if data has been accumulated for fewer than 20 sessions.

2.1 Hardware Configuration

HOST OVERVIEW

Host	Hardware Manufacturer	CPU Type	CPU MHz	Operating System	CPUs	Memory in MB
	VMware, Inc.	Intel(R) Xeon(R) CPU E5-2660 0 @ 2.20GHz	2194	SuSE Linux Enterprise Server 11 (x86_64)	2	16

2.2 Software Configuration for AS JAVA Production



We have listed recommendations concerning the current software configuration on your system.

Your system's software versions are checked. If known issues with the software versions installed are identified, they are highlighted.

2.2.1 SAP Application Release - Maintenance Phases

SAP Product Version	End of Mainstream Maintenance	Status
SAP NETWEAVER 7.4	12/31/2020	✓

In October 2014, SAP announced a maintenance extension for SAP Business Suite 7 core application releases to 2025. If you are running a relevant release, see SAP Note [1648480](#) for more details and applicable restrictions.

2.2.2 Support Package Maintenance - JAVA

The following table shows an overview of currently installed Java stack software components.

SUPPORT PACKAGES

Component	Version	SP	Latest Available SP
ADSSAP	7.40	5	8
AJAX-RUNTIME	7.40	5	8
BI-WDALV	7.40	5	8
SAP_BUILD	7.40	5	8
DI_CLIENTS	7.40	5	8
ENGINEAPI	7.40	5	8
ESREG-BASIC	7.40	5	8
ESREG-SERVICES	7.40	5	8
UDDI	7.40	5	8
ESP_FRAMEWORK	7.40	5	8
WSRM	7.40	5	8
ESI-UI	7.40	5	8
FRAMEWORK-EXT	7.40	5	8
J2EE-APPS	7.40	5	8
BASETABLES	7.40	5	8

Component	Version	SP	Latest Available SP
CORE-TOOLS	7.40	5	8
ENGFACADE	7.40	5	8
J2EE-FRMW	7.40	5	8
LM-CORE	7.40	5	8
SERVERCORE	7.40	5	8
FRAMEWORK	7.40	5	8
JSPM	7.40	5	8
LMCFG	7.40	5	8
LMCTC	7.40	5	8
LM-CTS	7.40	5	8
LM-CTS-UI	7.40	5	8
LM-MODEL-BASE	7.40	5	8
LM-MODEL-NW	7.40	5	8
LMNWABASICAPPS	7.40	5	8
LMNWABASICMBEAN	7.40	5	8
LMNWACDP	7.40	5	8
LMNWATOOLS	7.40	5	8
LMNWAUIFRMRK	7.40	5	8
LM-SLD	7.40	5	8
LMNWABASICCOMP	7.40	5	8
MESSAGING	7.40	5	8
EP-BASIS-API	7.40	5	8
ODATA-CXF-EXT	7.40	5	8
SUPPORTTOOLS	7.40	5	8
UISAPUI5_JAVA	7.40	5	8
SECURITY-EXT	7.40	5	8
SOAMONBASIC	7.40	5	8
SR-UI	7.40	5	8
UMEADMIN	7.40	5	8
WD-ADOBE	7.40	5	8
WD-APPS	7.40	5	8
WD-RUNTIME	7.40	5	8
WD-RUNTIME-EXT	7.40	5	8
SAP-XI3RDPARTY	7.40	5	8
CFG_ZA	7.40	5	8
CFG_ZA_CE	7.40	5	8

JDK VERSION

Hostname	Instance	VM Vendor	VM Version
		SAP AG	6.1.059 24.45-b08

2.2.3 Operating System(s) - Maintenance Phases

Host	Operating System	End of Standard Vendor Support*	Status	SAP Note
	SuSE Linux Enterprise Server 11 (x86_64)	03/31/2019	✓	936887

* Maintenance phases and duration for the OS version are defined by the vendor. Naming of the phases and required additional support contracts differ depending on the vendor. Support can be restricted to specific patch levels by the vendor or by SAP. Check in the referenced SAP Note(s) whether your SAP system requires a specific patch release to guarantee support for your operating system version.

Service Data Quality

For this service, only data of minor importance is missing.

The service data is collected by the Service Data Control Center (SDCCN) or read from the Solution Manager's BW or Configuration and Change Database (CCDB).

This section comprehensively shows issues with the data quality and provides hints on how to resolve them.

EXPLANATION FOR 'PRIORITY' COLUMN IN TABLES BELOW

Prio.	Explanation: Impact of Missing or Erroneous Data
	Some important check could not be processed. The report can be rated green nevertheless.

Quality of Data in Service Data Control Center (SDCC)

QUALITY OF SERVICE DATA IN ST-A/PI

Prio.	Report Area affected	Details and Related ST-A/PI Module	SAP Note
	Parameterization of Remote Database Instance ~JAVA	Because of incomplete data, this report does not use the DL script for the "Database Parameters" section. Ensure that your ST-A/PI is up to date and collecting data correctly. used in section ' Database '	1171650

Quality of Service Data in Configuration And Change Database

Prio.	Report Area affected	Details and Related CCDB Store	SAP Note
	Security of Java System	The store is missing. CCDB Store: servlet_jsp used in section ' Security '	1777751



Service Report

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SAP System ID	Solution Manager Production
Product	SAP Solution Manager 7.2
Status	PRODUCTIVE
DB System	ORACLE 12.1.0.2
Customer	Fairfax County Water Authority

Processed on	SAP Solution Manager
Release	SOLUTION MANAGER 7.2
Service Tool	720 SP10
Service Content Update on	07.03.2018

Analysis from	12.03.2018	Session No.	1000000010361
Until	18.03.2018	Installation No.	
		Customer No.	

This report contains confidential customer data and may be viewed only by SAP DBS employees, authorized SAP partners, and customer employees. Do not distribute it to other parties.

1 Service Summary



This EarlyWatch Alert session detected issues that could potentially affect your system.

Take corrective action as soon as possible.

CHECK OVERVIEW

Topic Rating	Topic	Subtopic Rating	Subtopic
⚠	SAP System Configuration		
		⚠	Database - Maintenance Phases
		⚠	SAP Kernel Release
✓	Performance Overview		
✓	Workload Distribution		
		✓	Workload by Application Module
		✓	DB Load Profile
✓	SAP System Operating		
		✓	Availability based on Collector Protocols
		✓	Program Errors (ABAP Dumps)
		✓	Update Errors
		✓	Table Reorganization
✓	Hardware Capacity		
⚠	Database Performance		
		✓	Database Key Performance Indicators
		✓	Locally managed Temp Tablespace
		⚠	Database Parameters
		⚠	Optimizer Statistics
⚠	Database Administration		
		✓	Space Statistics
		✓	Freespace in Tablespaces
		⚠	brconnect -f check (sapdba -check) schedule
		✓	Multibyte Character Sets
⚠	BW Checks		
		⚠	BW Administration & Design
		⚠	BW Reporting & Planning
		⚠	BW Warehouse Management
✓	Database Server Load From Expensive SQL Statements		
		⚠	TRANSACTION-SQLORA(01): Expensive SQL Statements
		✓	Database Server Load
✓	Software Change Management		

Topic Rating	Topic	Subtopic Rating	Subtopic
		✓	Number of Changes
✓	Data Volume Management (DVM)		

Note: All recommendations in this report are based on our general experience. Test them before using them in your production system. Note that EarlyWatch Alert is an automatic service.

Note: If you have any questions about the accuracy of the checks in this report or the correct configuration of the SAP Solution Manager EarlyWatch Alert service, create a customer message under component SV-SMG-SER-EWA.

Note: If you require assistance in resolving any concerns about the performance of the system, or if you require a technical analysis of other aspects of your system as highlighted in this report, create a customer message on component SV-BO. For details of how to set the appropriate priority level, see [SAP Note 67739](#).

Performance Indicators for Solution Manager Production

The following table shows the relevant performance indicators in various system areas.

Area	Indicators	Value	Trend
System Performance	Active Users (>400 steps)	18	↘
	Avg. Availability per Week	100 %	→
	Avg. Response Time in Dialog Task	779 ms	↘
	Max. Dialog Steps per Hour	25	↘
	Avg. Response Time at Peak Dialog Hour	322 ms	↘
	Avg. Response Time in RFC Task	1644 ms	↗
	Max. Number of RFCs per Hour	4522	→
	Avg. RFC Response Time at Peak Hour	2066 ms	↗
Hardware Capacity	Max. CPU Utilization on DB Server	12 %	→
Database Performance	Avg. DB Request Time in Dialog Task	225 ms	↘
	Avg. DB Request Time for RFC	73 ms	→
	Avg. DB Request Time in Update Task	180 ms	↗
Database Space Management	DB Size	235.51 GB	→
	DB Growth Last Month	1.81- GB	→

2 Configuration, Statistics, and Trends

This section contains information about system configuration, usage, and trend analysis for key performance indicators (KPIs). Diagrams are built weekly once the EarlyWatch Alert service is activated.

Historical data for "Transaction Activity" and "System Performance" is taken directly from workload monitor ST03 if data has been accumulated for fewer than 20 sessions.

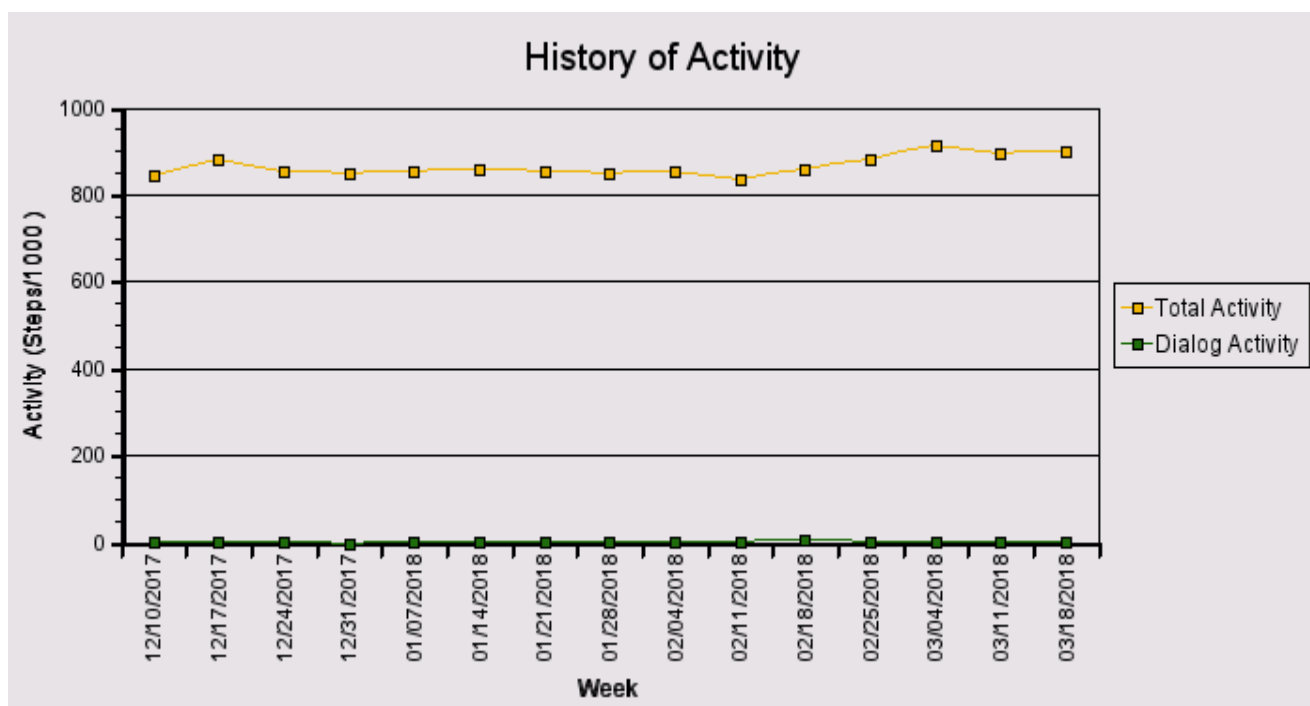
2.1 Trend Analysis

This section contains the trend analysis for key performance indicators (KPIs). IF <> 'X' Diagrams are built weekly once the EarlyWatch Alert service is activated.

In this section, a "week" is from Monday to Sunday. The date displayed is the Sunday of the week.

2.1.1 History of Activity and Average Response Times

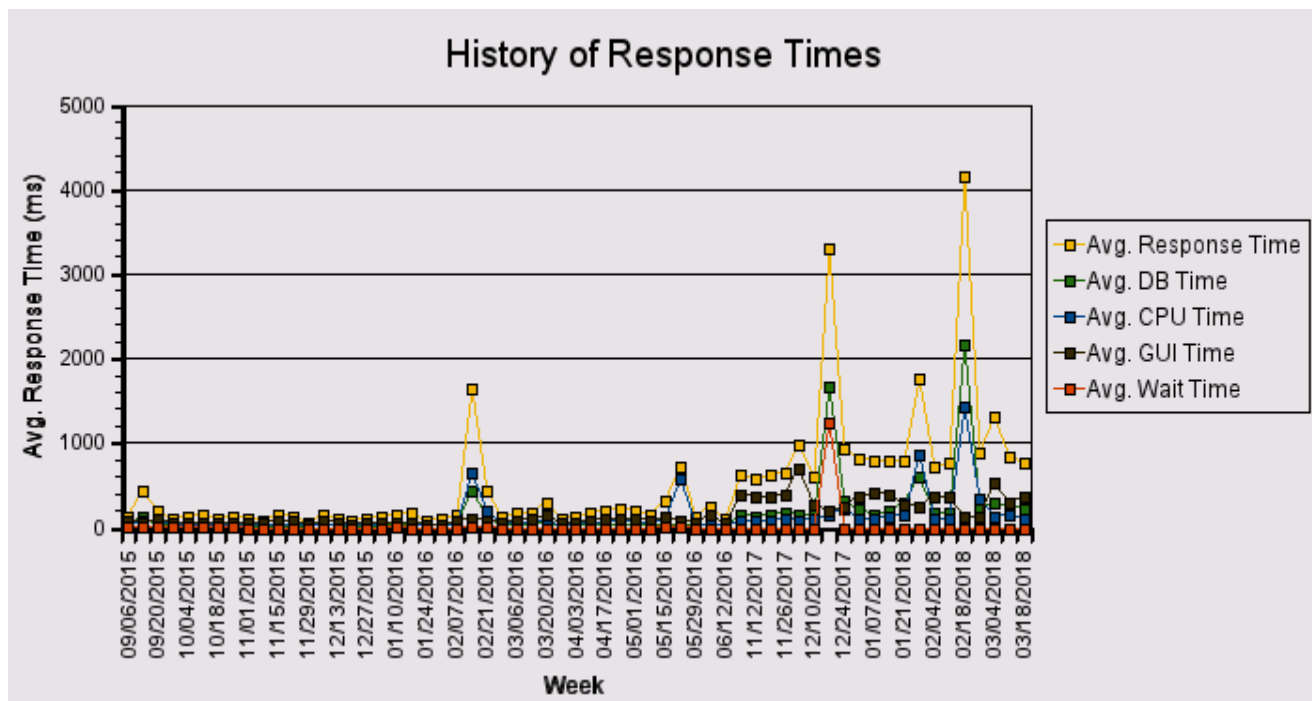
The following diagrams show the system activity, which is the number of dialog steps and the average response times recorded using transaction ST03N.



Week	Total Activity	Dialog Activity
12/10/2017	847	1
12/17/2017	884	3
12/24/2017	853	1
12/31/2017	851	1
01/07/2018	856	1
01/14/2018	858	1
01/21/2018	855	1
01/28/2018	851	1
02/04/2018	856	1
02/11/2018	835	1
02/18/2018	861	6
02/25/2018	881	3
03/04/2018	917	2
03/11/2018	897	1

Week	Total Activity	Dialog Activity
03/18/2018	899	1

The table and graphic above compares the total system activity to the dialog activity in the time window specified.



Week	Avg. Response Time	Avg. DB Time	Avg. CPU Time	Avg. GUI Time	Avg. Wait Time
09/06/2015	129	20	35	72	1
09/13/2015	428	121	82	69	1
09/20/2015	211	43	64	96	1
09/27/2015	108	21	33	52	1
10/04/2015	120	17	32	70	1
10/11/2015	146	26	43	65	1
10/18/2015	118	22	36	60	1
10/25/2015	137	27	37	66	1
11/01/2015	102	17	27	57	0
11/08/2015	91	18	22	49	0
11/15/2015	163	15	26	86	0
11/22/2015	132	23	31	79	0
11/29/2015	67	11	18	35	0
12/06/2015	151	30	47	72	0
12/13/2015	110	21	33	53	0
12/20/2015	81	15	24	43	0
12/27/2015	109	23	30	49	0
01/03/2016	123	20	30	63	0
01/10/2016	153	28	48	62	1
01/17/2016	178	26	37	66	0
01/24/2016	91	16	23	46	0
01/31/2016	114	29	39	47	0
02/07/2016	156	32	40	79	0
02/14/2016	1,639	443	655	117	2
02/21/2016	441	140	204	72	1
02/28/2016	139	24	32	63	0

Week	Avg. Response Time	Avg. DB Time	Avg. CPU Time	Avg. GUI Time	Avg. Wait Time
03/06/2016	181	39	57	74	0
03/13/2016	169	27	33	102	0
03/20/2016	302	57	96	149	0
03/27/2016	95	18	19	57	0
04/03/2016	126	25	35	66	0
04/10/2016	176	37	53	85	0
04/17/2016	197	38	53	104	0
04/24/2016	222	23	78	111	0
05/01/2016	198	27	57	106	0
05/08/2016	153	28	43	78	0
05/15/2016	312	47	115	126	1
05/22/2016	721	37	586	75	1
05/29/2016	124	22	32	62	0
06/05/2016	249	33	32	161	0
06/12/2016	107	20	21	60	0
11/05/2017	621	146	87	381	0
11/12/2017	588	137	83	361	0
11/19/2017	627	159	86	368	0
11/26/2017	663	180	95	381	0
12/03/2017	972	157	86	699	0
12/10/2017	596	155	112	284	0
12/17/2017	3,300	1,671	150	190	1,234
12/24/2017	938	314	228	251	0
12/31/2017	816	218	107	363	0
01/07/2018	788	162	101	418	0
01/14/2018	785	202	127	381	0
01/21/2018	801	296	156	276	0
01/28/2018	1,771	613	854	255	0
02/04/2018	718	171	97	366	0
02/11/2018	780	182	107	374	0
02/18/2018	4,155	2,167	1,427	136	0
02/25/2018	893	244	343	139	0
03/04/2018	1,313	307	135	522	0
03/11/2018	837	256	146	295	0
03/18/2018	779	225	95	365	0

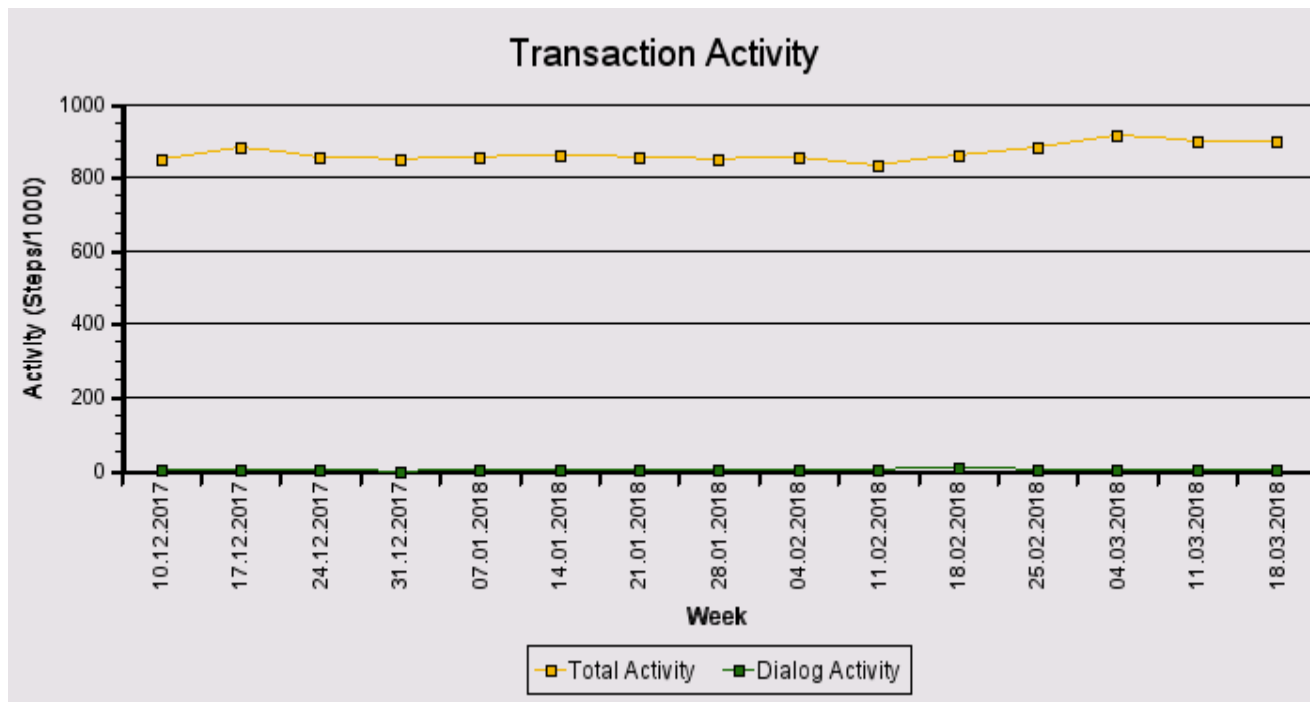
The table and graphic above compare the average DB, CPU, GUI, and wait times as parts of the average response time for dialog tasks in the time window specified.

2.1.2 System Activity

The following diagrams show the system activity over time.

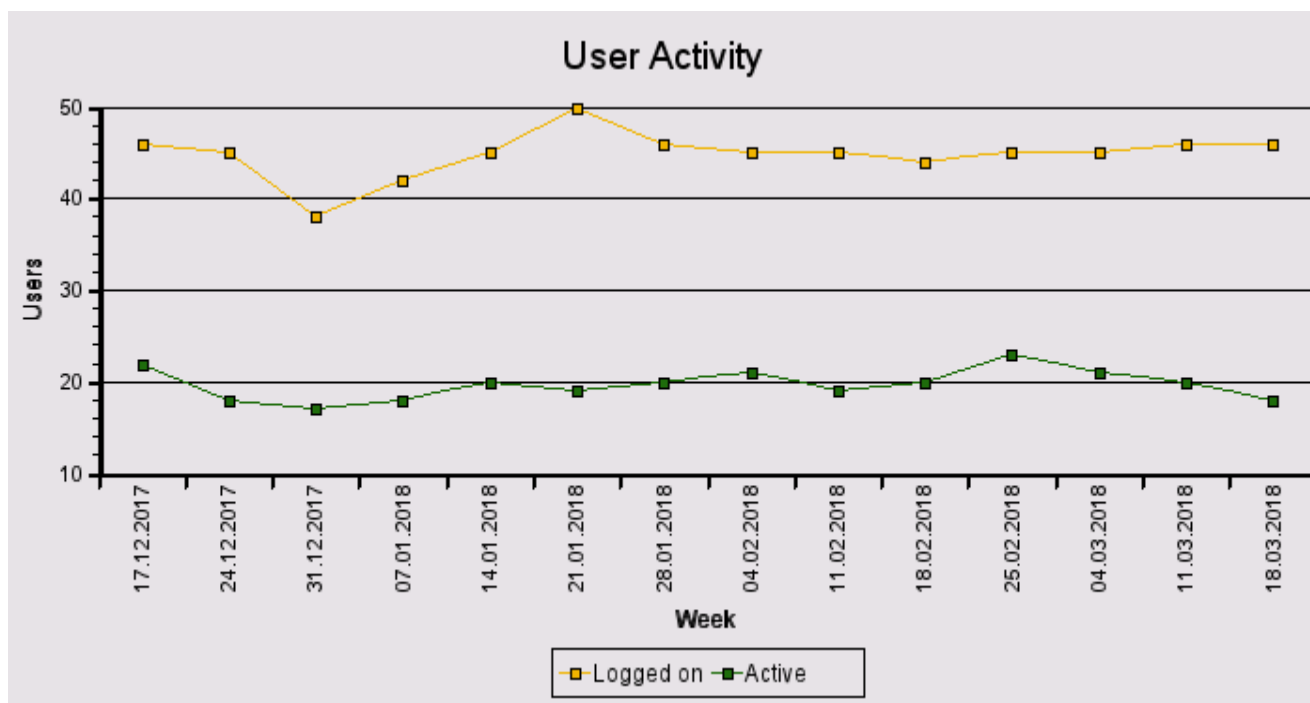
The "Transaction Activity" diagram below depicts transaction activity in the system over time.

- **Total Activity:** Transaction steps performed each week (in thousands)
 - **Dialog Activity:** Transaction steps performed in dialog task each week (in thousands)
 - **Peak Activity:** Transaction steps (in thousands) during the peak hour; this peak hour is calculated as the hour with the maximum dialog activity in the ST03 time profile divided by 5 working days per week.
- (Peak Activity is absent if "Activity Data" is taken from ST03 data directly).



The "User Activity" diagram below shows the user activity on the system over time.

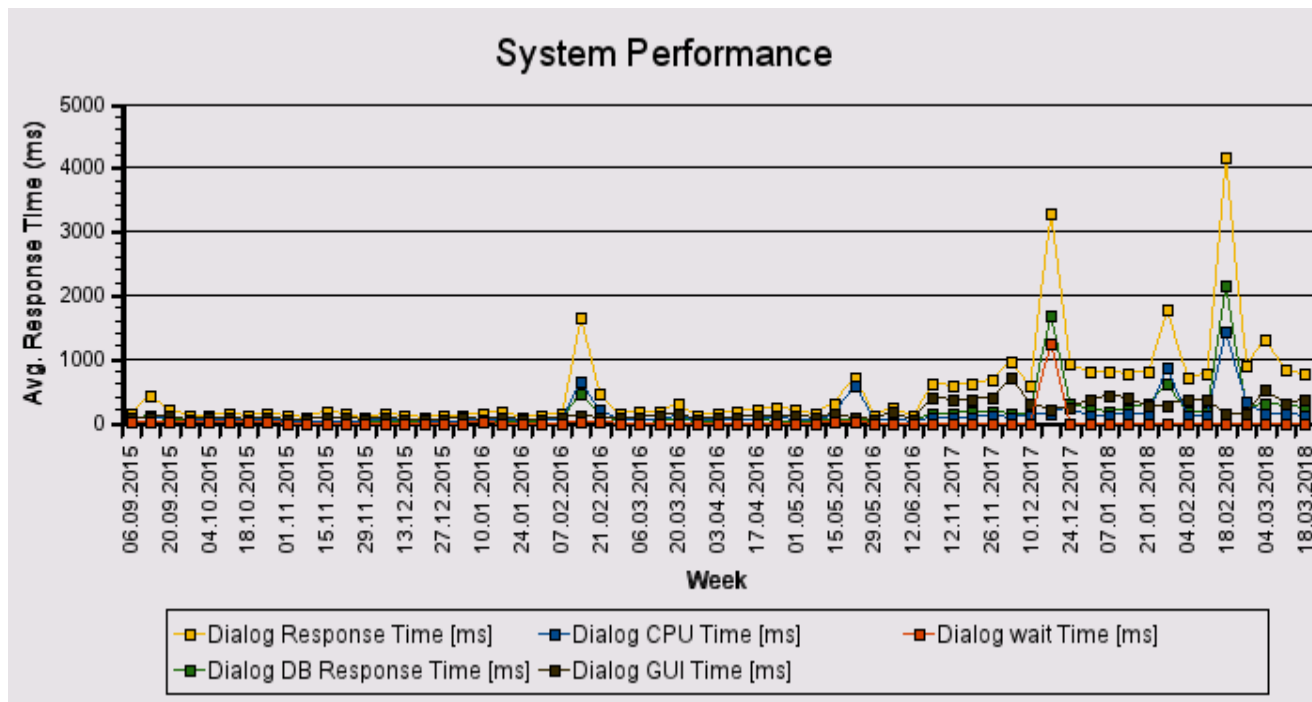
- **Total Users:** Total users that logged on in one week.
- **Active Users:** Users who performed more than 400 transaction steps in one week.



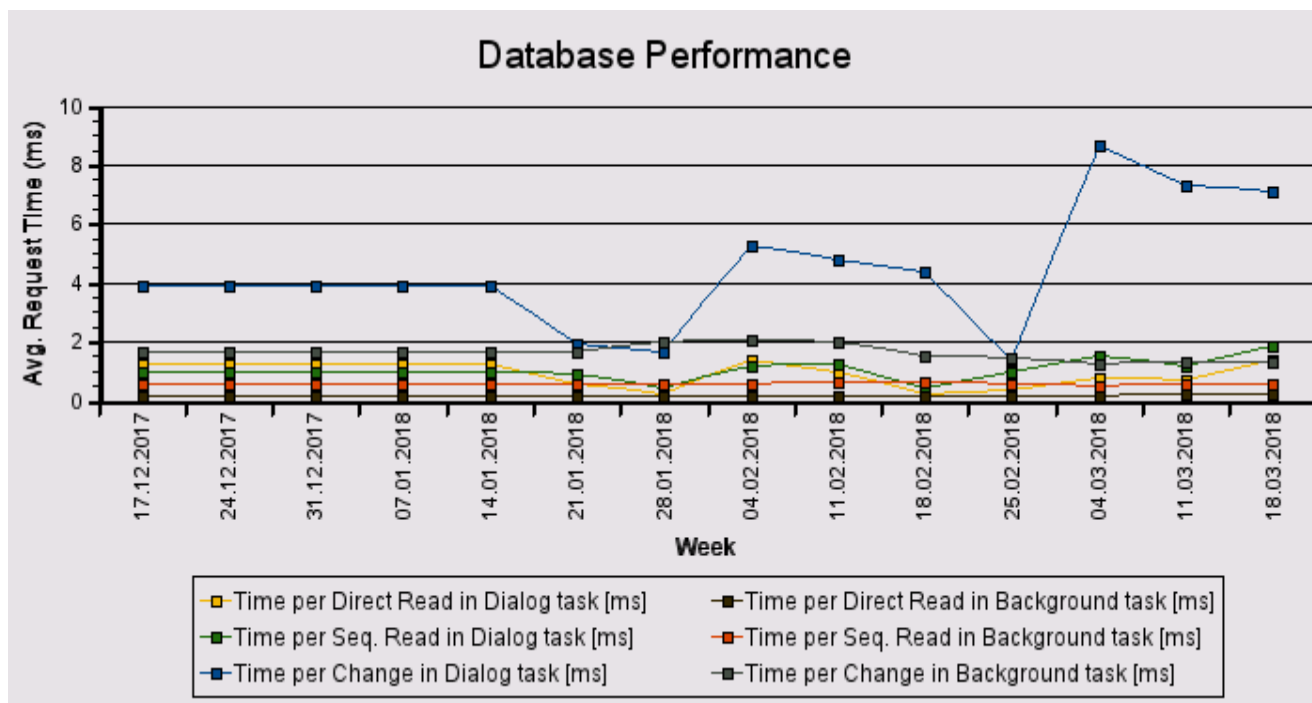
2.1.3 Response Times

The following diagrams show how the response time varies over time.

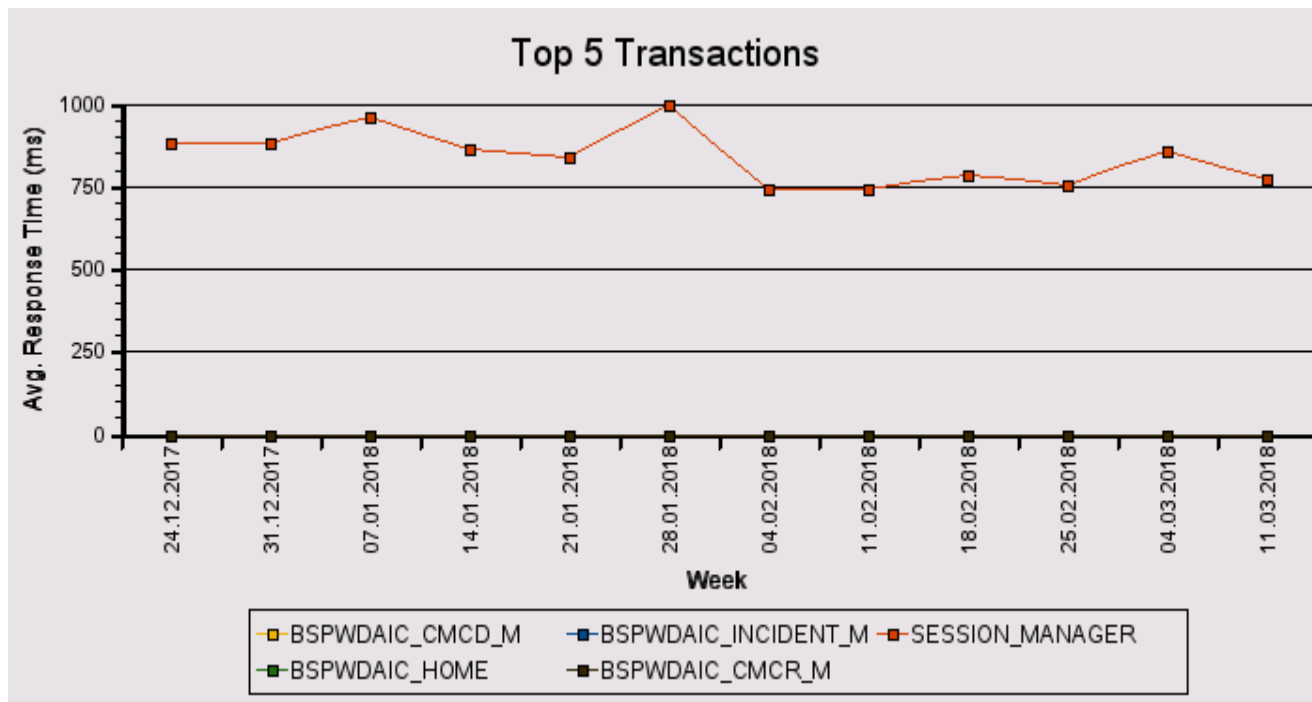
The "System Performance" diagram below shows the average response time in dialog tasks for the previous week.



The "Database Performance" diagram below shows the average DB response time in dialog tasks.

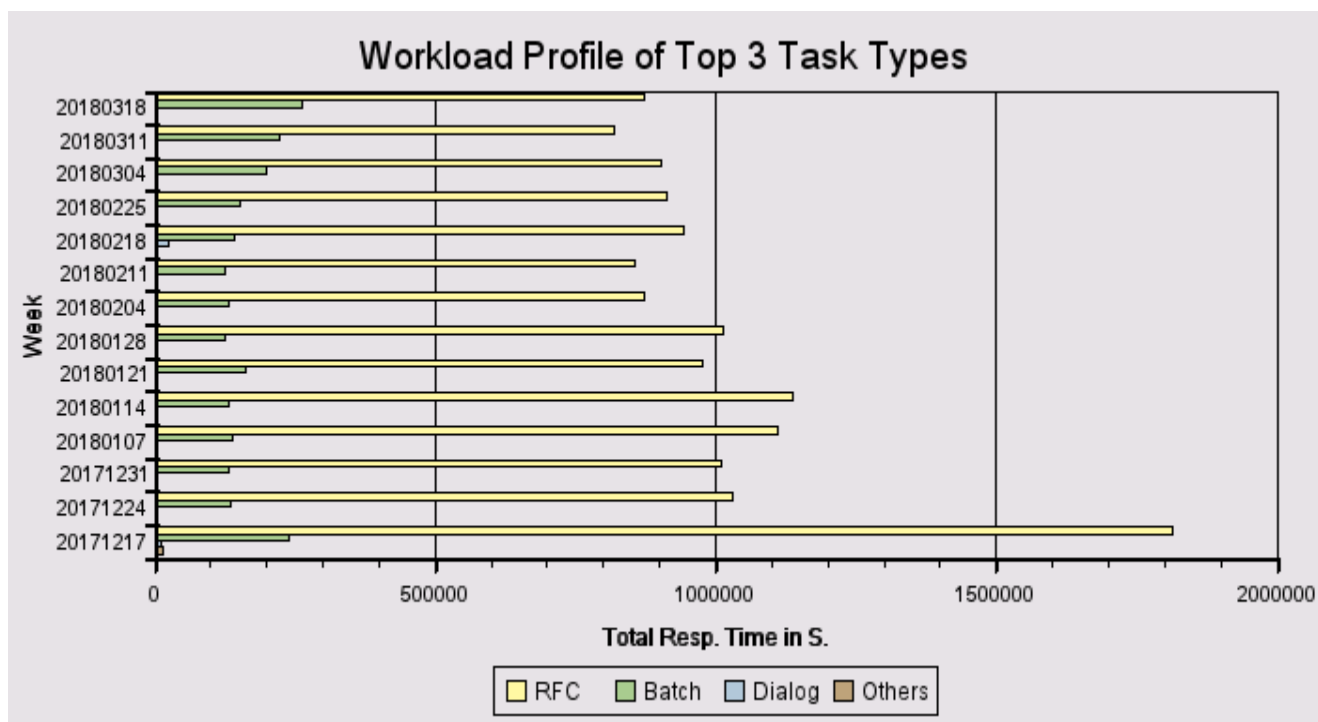


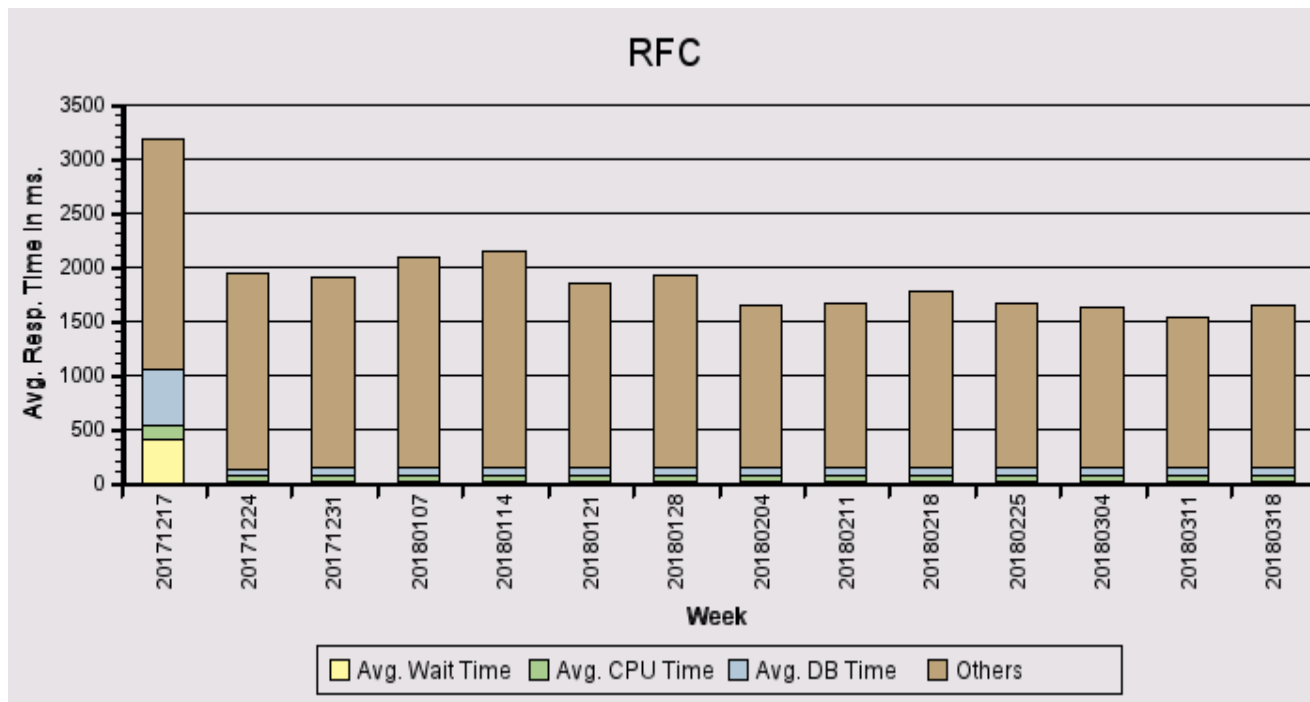
The "Top 5 transactions" diagram below shows the average response time in dialog tasks for the top 5 transactions.



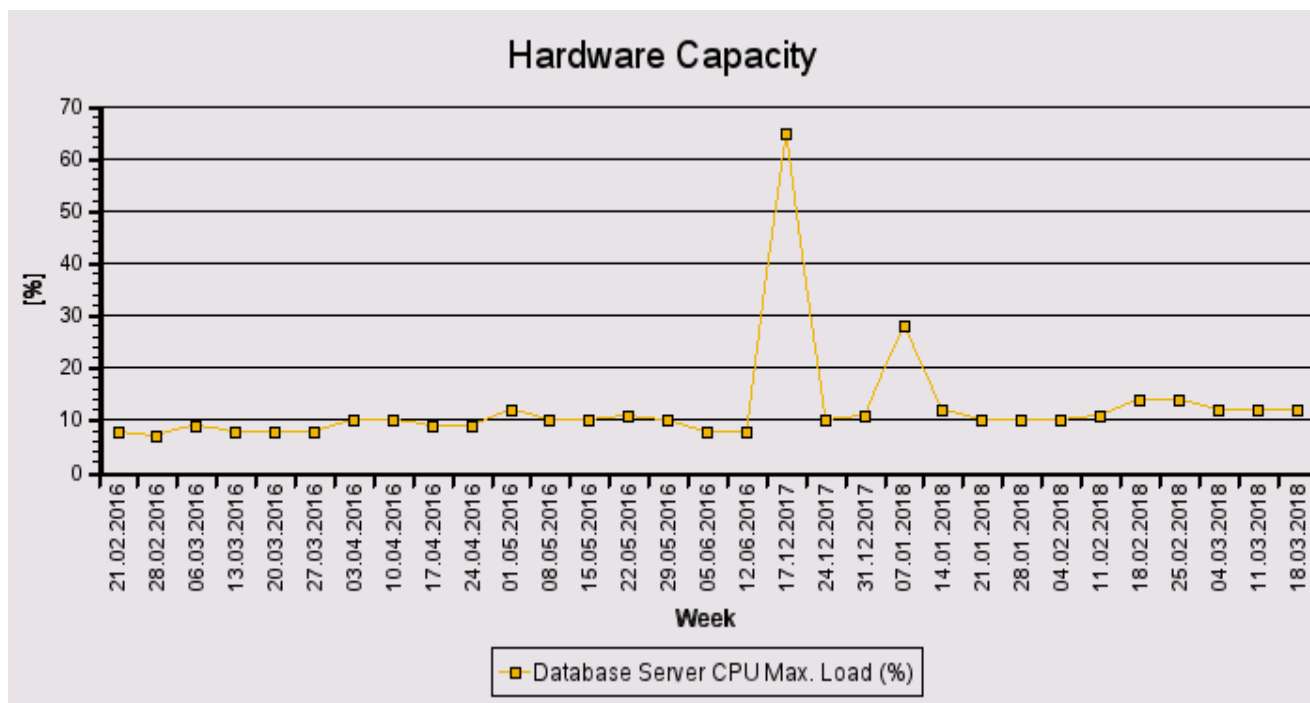
The "Transaction Code" table below shows the load percentage caused by the top 5 transactions.

Transaction Code	Load (%)
BSPWDAIC_CMCD_M	38.0
BSPWDAIC_HOME	14.7
BSPWDAIC_INCIDENT_M	12.4
BSPWDAIC_CMCR_M	9.6
SESSION_MANAGER	2.7



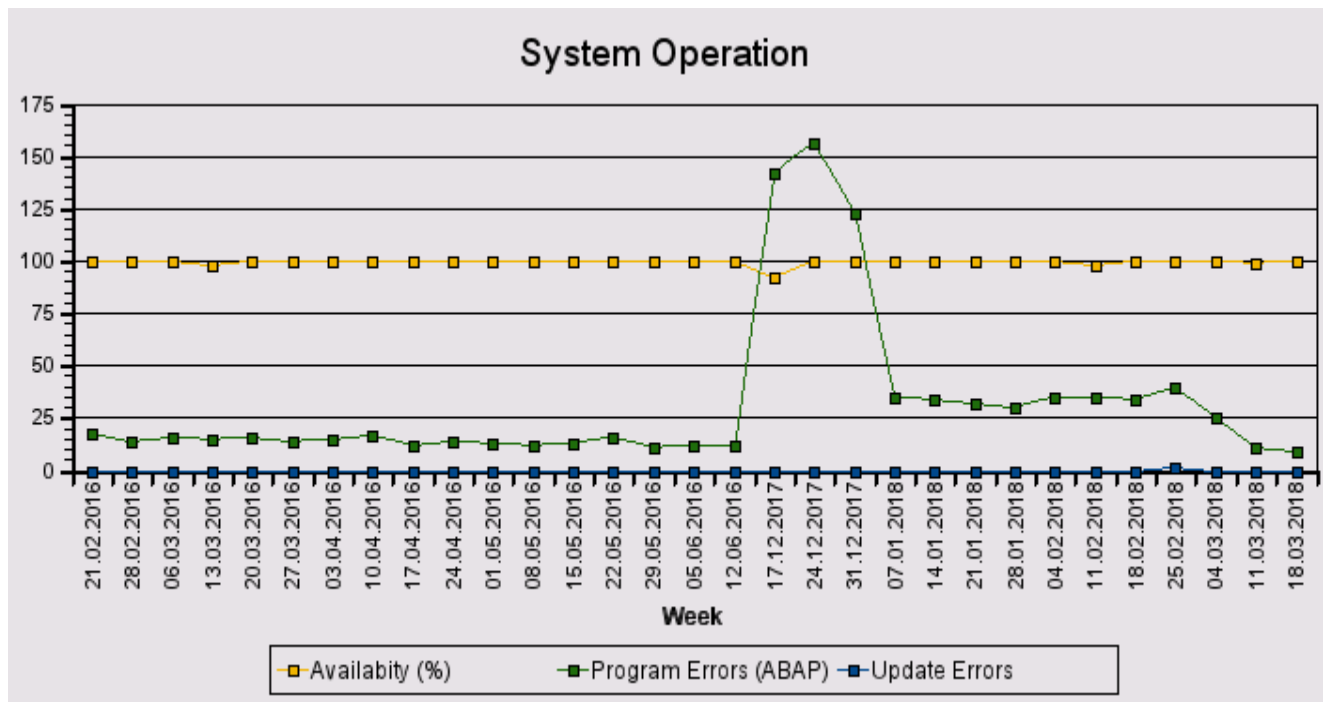


2.1.4 Hardware Capacity



2.1.5 System Operation

The following diagram or table shows important KPIs for system operation.

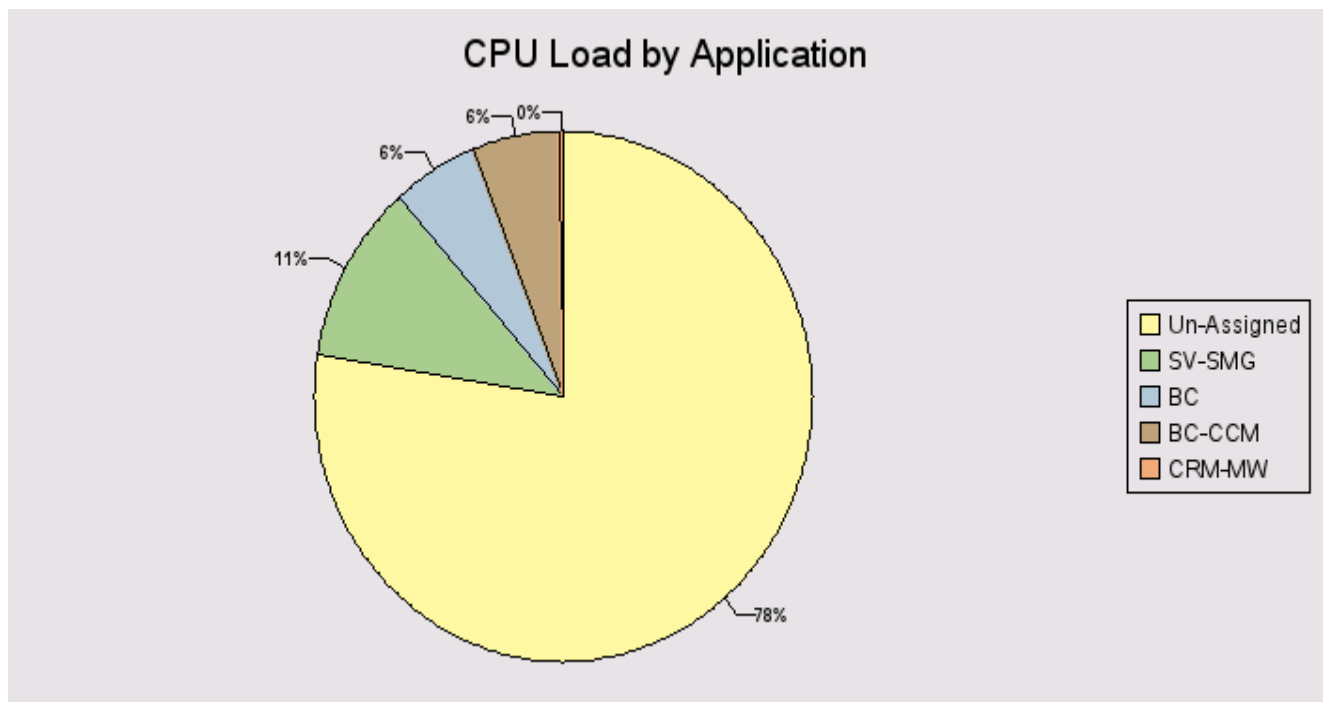


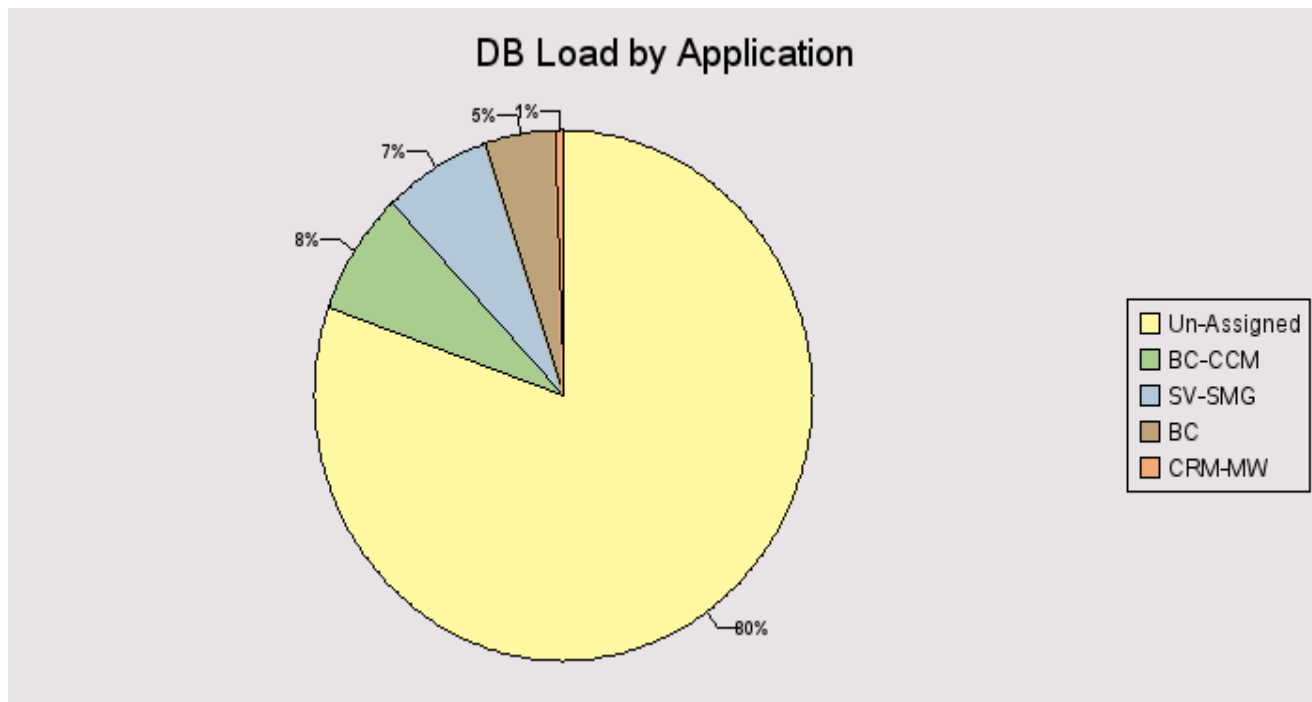
2.2 Workload by Application Module

The following diagrams show how each application module contributes to the total system workload. Two workload aspects are shown:

- CPU time: total CPU load on all servers in the system landscape
- Database time: total database load generated by the application

All programs that are not classified in the SAP Application Hierarchy (transaction SE81) are summarized in the "Un-Assigned" category. Customer programs, industry solutions, and third-party add-on developments fall into this category.





2.3 Hardware Configuration

HOST OVERVIEW

Host	Hardware Manufacturer	Model	CPU Type	CPU MHz	Virtualization	Operating System	CPUs	Cores	Memory in MB
	VMware, Inc.	VMware Virtual Platform	Xeon E5-2660	2200	VMWARE	SuSE Linux Enterprise Server 11 (x86_64)	6	6	52313

2.4 Software Configuration for Solution Manager Production



We have listed recommendations concerning the current software configuration on your system.

Your system's software versions are checked. If known issues with the software versions installed are identified, they are highlighted.

2.4.1 SAP Application Release - Maintenance Phases

SAP Product Version	End of Mainstream Maintenance	Status
SAP SOLUTION MANAGER 7.2	12/31/2025	✓

In October 2014, SAP announced a maintenance extension for SAP Business Suite 7 core application releases to 2025. If you are running a relevant release, see SAP Note [1648480](#) for more details and applicable restrictions.

2.4.2 Support Package Maintenance - ABAP

The following table shows an overview of currently installed software components.

SUPPORT PACKAGES

Software Component	Version	Patch Level	Latest Avail. Patch Level	Support Package	Component Description
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Software Component	Version	Patch Level	Latest Avail. Patch Level	Support Package	Component Description
BBPCRM	713	13	15	SAPKU71313	SAP CRM ABAP Server Component SAP CRM ABAP 7.13
BI_CONT	757	14	16	SAPK-75714INBICONT	BI CONT SAP NW 7.40 ADDON 7.57
CPRXRPM	610_740	8	9	SAPK-61008INCPRXRPM	SAP Portfolio and Project Management (ABAP) 610_740
CTS_PLUG	200	23	23	SAPK-20023INCTSPLUG	CTS Plug-in 200
IW_FNDGC	100	5	5	SAPK-10005INIWFNDGC	SAP IW FNDGC 100
IW_GIL	100	7	7	SAPK-10007INIWGIL	SAP IW Generic Interaction Layer 100
MDG_FND	747	13	15	SAPK-74713INMDGFND	MDG Foundation 747
PI_BASIS	740	17	19	SAPK-74017INPIBASIS	Basis Plug-In 7.40
RTCISM	100	0			Integration into SAP IT Infrastructure Management 1.0 Vendor: Realtech AG
SAP_ABA	740	17	19	SAPKA74017	SAP Anwendungsbasis 7.40
SAP_AP	700	34	36	SAPKNA7034	SAP Application Platform 7.00
SAP_BASIS	740	17	19	SAPKB74017	SAP Basis Component 7.40
SAP_BS_FND	747	13	15	SAPK-74713INSAPBSFND	SAP Business Suite Foundation 747
SAP_BW	740	17	19	SAPKW74017	SAP Business Warehouse 7.40
SAP_GWFND	740	18	19	SAPK-74018INSAPGWFND	SAP NetWeaver Gateway Foundation 7.40
SAP_UI	751	4	5	SAPK-75104INSAPUI	User Interface Technology 7.50
ST	720	6	6	SAPK-72006INSTMAIN	SAP Solution Manager 7.2
ST-A/PI	01S_731	3	3	SAPKITAB9T	ST-A/PI 01S_731
ST-BCO	720	6	6	SAPK-72006INSTBCO	BI Content for SAP Solution Manager 7.2
ST-ICC	200	2	2	SAPK-20002INSTICC	Innovation Control Center 200
ST-PI	740	7	7	SAPK-74007INSTPI	Solution Tools Plugin 740
ST-SER	720	10	11	SAPK-72010INSTSER	SAP Solution Manager Service Tools 720
ST-UI	100	5	5	SAPK-10005INSTUI	SAP Fiori for SAP Solution Manager 1.0
WEBCUIF	747	13	15	SAPK-74713INWEBCUIF	SAP Web UIF 747

2.4.3 Database - Maintenance Phases

Database Version	End of Standard Vendor Support*	End of Extended Vendor Support*	Status	SAP Note
Oracle Database 12g Release 1	07/31/2018	07/31/2021		1174136

* Maintenance phases and duration for the DB version are defined by the vendor. Naming of the phases and required additional support contracts differ depending on the vendor. Support can be restricted to specific patch levels by the vendor or by SAP. Check in the referenced SAP Note(s) whether your SAP system requires a specific patch release to guarantee support for your database version.

The support status you receive in this report regarding your Oracle database version takes only the major release support dates into account and not whether the individual patch set level is outdated in terms of Oracle patch support. For this reason, verify in the corresponding patch set SAP Note whether the patch set you are currently using is still in the Oracle patch provisioning mode.

For more information, see the "Oracle Release" section of the "Database" section.

Recommendation: Standard vendor support for your database version has already ended / will end in the near future. Consider ordering extended vendor support from your database vendor or upgrading to a higher database version.

2.4.4 Operating System(s) - Maintenance Phases

Host	Operating System	End of Standard Vendor Support*	Status	SAP Note
	SuSE Linux Enterprise Server 11 (x86_64)	03/31/2019		936887

* Maintenance phases and duration for the OS version are defined by the vendor. Naming of the phases and required additional support contracts differ depending on the vendor. Support can be restricted to specific patch levels by the vendor or by SAP. Check in the referenced SAP Note(s) whether your SAP system requires a specific patch release to guarantee support for your operating system version.

2.4.5 SAP Kernel Release

The following table lists all information about your SAP kernel(s) currently in use.

Instance(s)	SAP Kernel Release	Patch Level	Age in Months	OS Family
	749	301	8	Linux (x86_64)

Kernel out of date

Your current SAP kernel release is probably not up to date.

Recommendation: Make sure that you are using the recommended SAP kernel together with the latest Support Package stack for your product.

Additional Remarks

SAP releases Support Package stacks (including SAP kernel patches) on a regular basis for most products (generally 2–4 times a year). We recommend that you base your software maintenance strategy on these stacks.

You should only consider using a more recent SAP kernel patch than that shipped with the latest Support Package Stack for your product if specific errors occur.

For more information, see SAP Service Marketplace at <https://support.sap.com/software/patches/stacks.html> (SAP Support Package Stack information) and <https://launchpad.support.sap.com/#/softwarecenter/support/index> (Support Packages & patch information).

For each patch there is an SAP Note in which all known regressions for this level are listed. Find it using the keyword [KRNL749PL301](#) in the SAP Note search. For detailed information, see SAP Note [1802333](#) - Finding information about regressions in the SAP kernel.

Service Data Quality

The service data is collected by the Service Data Control Center (SDCCN) or read from the Solution Manager's BW or Configuration and Change Database (CCDB).

This section comprehensively shows issues with the data quality and provides hints on how to resolve them.

EXPLANATION FOR 'PRIORITY' COLUMN IN TABLES BELOW

Prio.	Explanation: Impact of Missing or Erroneous Data
◇	Only checks of minor importance are affected.
	An optional check was skipped.

Quality of Data in Service Data Control Center (SDCC)

QUALITY OF SERVICE DATA IN ST-PI

Prio.	Report Area affected	Details and Related ST-PI Logical Function	SAP Note
◇	System Administration of Server (host)	An incorrect name is returned for the SAP dispatcher service, probably due to 'Well Known Services' maintained in /etc/services module TH_SERVER_LIST. ST-PI function: TH_SERVER_LIST	2135427

Quality of Service Data in Solution Manager Diagnostics - BW

Prio.	Report Area affected	Details and Related Infocube	SAP Note
	Workload of ABAP System	Reading performance data from BW returned neither data nor an error code. A timeout may have occurred. Infocube: OCCMSMTPH used in section 'Workload Overview'	1332428