

## Quarterly Statistics About the Availability and Performance of the PSD2 XS2A Interface (01.10.2023 until 31.12.2023)

## PSD2 Interface

	Avg. Response Time per Request (in ms)			Uptime	Downtime	Error Rate
	AIS	PIS	FCS	---	---	---
Total average of reponse time per request	1,138	880	*	---	---	---
Sunday, October 1, 2023	927	571	*	100.00%	0.00%	0.19%
Monday, October 2, 2023	987	698	*	100.00%	0.00%	0.32%
Tuesday, October 3, 2023	937	602	*	99.84%	0.16%	0.34%
Wednesday, October 4, 2023	1,033	708	*	99.99%	0.01%	0.31%
Thursday, October 5, 2023	1,330	1,168	*	99.93%	0.07%	0.32%
Friday, October 6, 2023	985	1,010	*	99.91%	0.09%	0.50%
Saturday, October 7, 2023	912	552	*	100.00%	0.00%	0.33%
Sunday, October 8, 2023	1,011	547	*	99.98%	0.02%	0.32%
Monday, October 9, 2023	1,049	730	*	99.99%	0.01%	0.29%
Tuesday, October 10, 2023	981	720	*	99.82%	0.18%	0.32%
Wednesday, October 11, 2023	995	727	*	100.00%	0.00%	0.26%
Thursday, October 12, 2023	978	679	*	100.00%	0.00%	0.24%
Friday, October 13, 2023	1,050	732	*	98.30%	1.70%	0.41%
Saturday, October 14, 2023	906	555	*	100.00%	0.00%	0.26%
Sunday, October 15, 2023	901	547	*	100.00%	0.00%	0.19%
Monday, October 16, 2023	968	701	*	100.00%	0.00%	0.22%
Tuesday, October 17, 2023	952	1,326	*	99.82%	0.18%	0.27%
Wednesday, October 18, 2023	933	673	*	99.98%	0.02%	0.20%
Thursday, October 19, 2023	933	688	*	99.72%	0.28%	0.53%
Friday, October 20, 2023	911	672	*	99.91%	0.09%	0.33%
Saturday, October 21, 2023	872	550	*	100.00%	0.00%	0.20%
Sunday, October 22, 2023	864	537	*	100.00%	0.00%	0.25%
Monday, October 23, 2023	922	684	*	99.99%	0.01%	0.22%
Tuesday, October 24, 2023	952	663	*	99.80%	0.20%	0.21%
Wednesday, October 25, 2023	938	531	*	64.44%	35.56%	0.24%
Thursday, October 26, 2023	942	657	*	64.44%	35.56%	0.22%
Friday, October 27, 2023	933	728	*	100.00%	0.00%	0.29%
Saturday, October 28, 2023	873	616	*	100.00%	0.00%	0.31%
Sunday, October 29, 2023	867	588	*	100.00%	0.00%	0.34%
Monday, October 30, 2023	970	767	*	99.97%	0.03%	0.34%
Tuesday, October 31, 2023	938	706	*	99.80%	0.20%	0.36%
Wednesday, November 1, 2023	955	739	*	99.99%	0.01%	0.32%
Thursday, November 2, 2023	977	888	*	100.00%	0.00%	0.32%
Friday, November 3, 2023	950	810	*	100.00%	0.00%	0.30%
Saturday, November 4, 2023	890	561	*	100.00%	0.00%	0.27%
Sunday, November 5, 2023	873	568	*	100.00%	0.00%	0.25%
Monday, November 6, 2023	963	745	*	99.97%	0.03%	0.28%
Tuesday, November 7, 2023	953	731	*	99.82%	0.18%	0.25%
Wednesday, November 8, 2023	979	709	*	100.00%	0.00%	0.31%
Thursday, November 9, 2023	944	737	*	100.00%	0.00%	0.21%
Friday, November 10, 2023	951	721	*	100.00%	0.00%	0.24%
Saturday, November 11, 2023	882	593	*	100.00%	0.00%	0.20%
Sunday, November 12, 2023	908	555	*	100.00%	0.00%	0.22%
Monday, November 13, 2023	1,018	768	*	94.24%	5.76%	1.80%
Tuesday, November 14, 2023	1,197	912	*	99.25%	0.75%	1.46%
Wednesday, November 15, 2023	1,023	748	*	96.94%	3.06%	0.32%
Thursday, November 16, 2023	1,000	723	*	99.99%	0.01%	0.29%
Friday, November 17, 2023	989	621	*	98.37%	1.63%	0.22%
Saturday, November 18, 2023	943	600	*	100.00%	0.00%	0.18%
Sunday, November 19, 2023	957	671	*	100.00%	0.00%	0.21%
Monday, November 20, 2023	4,475	2,330	*	99.84%	0.16%	3.65%
Tuesday, November 21, 2023	10,683	4,327	*	99.48%	0.52%	9.53%
Wednesday, November 22, 2023	1,024	810	*	100.00%	0.00%	0.23%
Thursday, November 23, 2023	1,044	816	*	100.00%	0.00%	0.28%
Friday, November 24, 2023	1,006	776	*	100.00%	0.00%	0.29%
Saturday, November 25, 2023	955	698	*	100.00%	0.00%	0.25%
Sunday, November 26, 2023	941	580	*	100.00%	0.00%	0.24%
Monday, November 27, 2023	1,123	1,198	*	99.76%	0.24%	0.99%
Tuesday, November 28, 2023	1,118	861	*	99.82%	0.18%	0.90%
Wednesday, November 29, 2023	1,080	823	*	100.00%	0.00%	0.85%
Thursday, November 30, 2023	1,081	797	*	99.98%	0.02%	0.86%
Friday, December 1, 2023	1,069	787	*	100.00%	0.00%	0.74%
Saturday, December 2, 2023	967	649	*	100.00%	0.00%	0.44%

Quarterly Statistics About the Availability and Performance of the PSD2 XS2A Interface (01.10.2023 until 31.12.2023)

PSD2 Interface

	Avg. Response Time per Request (in ms)			Uptime	Downtime	Error Rate
Sunday, December 3, 2023	920	661	*	100.00%	0.00%	0.36%
Monday, December 4, 2023	1,032	873	*	100.00%	0.00%	0.40%
Tuesday, December 5, 2023	1,028	865	*	99.82%	0.18%	0.42%
Wednesday, December 6, 2023	1,037	1,045	*	100.00%	0.00%	0.50%
Thursday, December 7, 2023	989	1,104	*	100.00%	0.00%	0.38%
Friday, December 8, 2023	981	1,192	*	100.00%	0.00%	0.42%
Saturday, December 9, 2023	929	1,071	*	100.00%	0.00%	0.41%
Sunday, December 10, 2023	917	1,095	*	100.00%	0.00%	0.45%
Monday, December 11, 2023	1,206	1,455	*	73.75%	26.25%	1.95%
Tuesday, December 12, 2023	1,202	1,249	*	99.79%	0.21%	0.80%
Wednesday, December 13, 2023	1,089	1,005	*	100.00%	0.00%	0.46%
Thursday, December 14, 2023	1,046	937	*	100.00%	0.00%	0.43%
Friday, December 15, 2023	1,007	967	*	99.88%	0.12%	0.63%
Saturday, December 16, 2023	917	790	*	100.00%	0.00%	0.40%
Sunday, December 17, 2023	903	816	*	100.00%	0.00%	0.36%
Monday, December 18, 2023	1,012	1,019	*	100.00%	0.00%	0.42%
Tuesday, December 19, 2023	992	973	*	99.83%	0.17%	0.36%
Wednesday, December 20, 2023	978	926	*	100.00%	0.00%	0.34%
Thursday, December 21, 2023	981	968	*	100.00%	0.00%	0.37%
Friday, December 22, 2023	980	978	*	100.00%	0.00%	0.37%
Saturday, December 23, 2023	906	840	*	100.00%	0.00%	0.38%
Sunday, December 24, 2023	891	811	*	100.00%	0.00%	0.34%
Monday, December 25, 2023	888	810	*	100.00%	0.00%	0.36%
Tuesday, December 26, 2023	1,624	2,942	*	93.75%	6.25%	3.90%
Wednesday, December 27, 2023	1,456	1,135	*	99.99%	0.01%	1.02%
Thursday, December 28, 2023	1,068	998	*	100.00%	0.00%	0.38%
Friday, December 29, 2023	1,061	1,046	*	100.00%	0.00%	0.36%
Saturday, December 30, 2023	1,013	951	*	100.00%	0.00%	0.38%
Sunday, December 31, 2023	975	916	*	100.00%	0.00%	0.36%

Legend

\*The service has not been used. As a result, no average parameters can be shown.

Notes

- Currently, the PSD2 interface is not yet fully used by all third-party service providers as Commerzbank PSD2 API is subject to wide market usage period. As a result, there are larger time windows with little or no usage. The error rate is calculated as the rate of failed requests across all requests. This can lead to high error rates during periods of relatively low usage, even though the service is functionally available.
- There was a relatively high error rate on 17.10.2023 in PIS services due to short service interruptions due to a backend release.
- The relatively high downtime was caused by interruptions due to unavailability of internal services on 25.10.2023 and 26.10.2023.
- There was a relatively high error rate for instant payment on 09.11.2023. due to high response times from a backend system.
- The downtime on 13.11.2023 was caused by data base issues occurring during a planned release.
- The relatively high error rates on 14.11.2023 and 15.11.2023 were caused by an error in a central backend component.
- On 17.11.2023 there was a downtime for PIS due to failure with authentication against the backend systems.
- Erroneous calls causing explicitly high traffic, resulting in some requests to fail between 20.11.2023 and 21.11.2023.
- High downtime observed for standing order retrievals due to error in authentication against a backend system between 27.11.2023 and 01.12.2023.
- The downtime on 11.12.2023 was related to a relatively high failure rate in backend services on various channels including online portal and also the xs2a interface.
- The relatively low performance, high downtime and error rates on 26.12.2023 was due to a network incident that occurred on the XS2A side on that day.

Quarterly Statistics About the Availability and Performance of the Online Portal (01.10.2023 until 31.12.2023)

Portal Interface

	Avg. Response Time per Request (in ms)			Uptime	Downtime	Error Rate
Day	AIS	PIS	FCS	--	--	--
Total average of reponse time per request	1,038	1,204	*	--	--	--
Sunday, October 1, 2023	846	1,033	*	100.00%	0.00%	0.11%
Monday, October 2, 2023	1,299	1,515	*	100.00%	0.00%	0.26%
Tuesday, October 3, 2023	854	1,164	*	100.00%	0.00%	0.28%
Wednesday, October 4, 2023	1,199	1,176	*	100.00%	0.00%	0.55%
Thursday, October 5, 2023	1,281	1,267	*	100.00%	0.00%	0.55%
Friday, October 6, 2023	700	865	*	100.00%	0.00%	0.39%
Saturday, October 7, 2023	719	806	*	100.00%	0.00%	0.19%
Sunday, October 8, 2023	854	924	*	100.00%	0.00%	0.13%
Monday, October 9, 2023	1,023	1,095	*	100.00%	0.00%	0.90%
Tuesday, October 10, 2023	1,144	1,267	*	100.00%	0.00%	0.18%
Wednesday, October 11, 2023	841	1,008	*	100.00%	0.00%	0.33%
Thursday, October 12, 2023	798	909	*	100.00%	0.00%	0.29%
Friday, October 13, 2023	879	1,019	*	100.00%	0.00%	0.37%
Saturday, October 14, 2023	926	1,202	*	100.00%	0.00%	0.28%
Sunday, October 15, 2023	977	1,123	*	100.00%	0.00%	0.06%
Monday, October 16, 2023	1,024	1,264	*	100.00%	0.00%	0.12%
Tuesday, October 17, 2023	1,087	1,261	*	100.00%	0.00%	0.13%
Wednesday, October 18, 2023	1,268	1,347	*	100.00%	0.00%	0.43%
Thursday, October 19, 2023	623	744	*	100.00%	0.00%	0.22%
Friday, October 20, 2023	979	1,104	*	100.00%	0.00%	0.70%
Saturday, October 21, 2023	582	633	*	100.00%	0.00%	0.21%
Sunday, October 22, 2023	855	1,046	*	100.00%	0.00%	0.12%
Monday, October 23, 2023	901	1,014	*	100.00%	0.00%	0.35%
Tuesday, October 24, 2023	838	932	*	100.00%	0.00%	0.15%
Wednesday, October 25, 2023	1,244	1,208	*	100.00%	0.00%	0.34%
Thursday, October 26, 2023	1,024	1,197	*	100.00%	0.00%	0.25%
Friday, October 27, 2023	1,015	1,117	*	100.00%	0.00%	0.35%
Saturday, October 28, 2023	1,016	1,087	*	100.00%	0.00%	0.11%
Sunday, October 29, 2023	762	889	*	100.00%	0.00%	0.08%
Monday, October 30, 2023	1,203	1,360	*	100.00%	0.00%	0.23%
Tuesday, October 31, 2023	1,016	1,214	*	100.00%	0.00%	0.09%
Wednesday, November 1, 2023	1,121	1,378	*	93.75%	6.25%	0.34%
Thursday, November 2, 2023	1,037	1,144	*	100.00%	0.00%	0.42%
Friday, November 3, 2023	971	1,076	*	100.00%	0.00%	0.14%
Saturday, November 4, 2023	940	1,187	*	100.00%	0.00%	0.08%
Sunday, November 5, 2023	946	1,132	*	100.00%	0.00%	0.20%
Monday, November 6, 2023	1,010	1,074	*	100.00%	0.00%	0.13%
Tuesday, November 7, 2023	1,023	1,142	*	67.71%	32.29%	0.12%
Wednesday, November 8, 2023	759	869	*	64.58%	35.42%	0.09%
Thursday, November 9, 2023	1,072	1,347	*	100.00%	0.00%	0.08%
Friday, November 10, 2023	939	1,074	*	100.00%	0.00%	0.14%
Saturday, November 11, 2023	874	1,159	*	100.00%	0.00%	0.10%
Sunday, November 12, 2023	1,082	1,112	*	100.00%	0.00%	0.09%
Monday, November 13, 2023	1,040	1,229	*	100.00%	0.00%	0.12%
Tuesday, November 14, 2023	1,357	1,547	*	92.50%	7.50%	2.04%
Wednesday, November 15, 2023	1,096	1,326	*	100.00%	0.00%	0.11%
Thursday, November 16, 2023	1,070	1,149	*	100.00%	0.00%	0.15%
Friday, November 17, 2023	1,404	1,514	*	100.00%	0.00%	0.24%
Saturday, November 18, 2023	1,074	1,183	*	100.00%	0.00%	0.34%
Sunday, November 19, 2023	1,047	1,153	*	100.00%	0.00%	0.12%
Monday, November 20, 2023	1,056	1,097	*	100.00%	0.00%	0.10%
Tuesday, November 21, 2023	1,117	1,299	*	100.00%	0.00%	0.32%
Wednesday, November 22, 2023	1,320	1,501	*	100.00%	0.00%	0.12%
Thursday, November 23, 2023	794	916	*	100.00%	0.00%	0.97%
Friday, November 24, 2023	1,337	1,414	*	62.57%	37.43%	0.15%
Saturday, November 25, 2023	1,190	1,338	*	100.00%	0.00%	0.08%
Sunday, November 26, 2023	1,048	1,303	*	100.00%	0.00%	0.29%
Monday, November 27, 2023	783	936	*	100.00%	0.00%	0.35%
Tuesday, November 28, 2023	1,399	1,570	*	100.00%	0.00%	0.09%
Wednesday, November 29, 2023	1,167	1,425	*	100.00%	0.00%	0.14%
Thursday, November 30, 2023	1,317	1,551	*	100.00%	0.00%	0.15%
Friday, December 1, 2023	1,213	1,318	*	100.00%	0.00%	0.15%
Saturday, December 2, 2023	1,033	1,294	*	100.00%	0.00%	0.10%
Sunday, December 3, 2023	1,067	1,229	*	100.00%	0.00%	0.12%

Quarterly Statistics About the Availability and Performance of the Online Portal (01.10.2023 until 31.12.2023)

Portal Interface

	Avg. Response Time per Request (in ms)			Uptime	Downtime	Error Rate
Monday, December 4, 2023	1,006	1,260	*	100.00%	0.00%	0.11%
Tuesday, December 5, 2023	833	989	*	100.00%	0.00%	0.67%
Wednesday, December 6, 2023	1,075	1,376	*	100.00%	0.00%	0.23%
Thursday, December 7, 2023	1,106	1,299	*	100.00%	0.00%	0.20%
Friday, December 8, 2023	1,191	1,393	*	100.00%	0.00%	0.55%
Saturday, December 9, 2023	1,066	1,248	*	100.00%	0.00%	0.35%
Sunday, December 10, 2023	1,130	1,258	*	100.00%	0.00%	0.36%
Monday, December 11, 2023	1,437	1,625	*	75.00%	25.00%	2.99%
Tuesday, December 12, 2023	1,352	1,559	*	97.57%	2.43%	0.52%
Wednesday, December 13, 2023	1,111	1,317	*	100.00%	0.00%	0.35%
Thursday, December 14, 2023	1,010	1,127	*	100.00%	0.00%	0.18%
Friday, December 15, 2023	1,091	1,318	*	100.00%	0.00%	0.32%
Saturday, December 16, 2023	1,013	1,315	*	100.00%	0.00%	0.19%
Sunday, December 17, 2023	1,004	1,244	*	100.00%	0.00%	0.09%
Monday, December 18, 2023	1,080	1,254	*	100.00%	0.00%	0.44%
Tuesday, December 19, 2023	977	1,113	*	100.00%	0.00%	0.18%
Wednesday, December 20, 2023	1,240	1,450	*	100.00%	0.00%	0.39%
Thursday, December 21, 2023	1,201	1,418	*	100.00%	0.00%	0.13%
Friday, December 22, 2023	1,049	1,212	*	100.00%	0.00%	0.16%
Saturday, December 23, 2023	1,023	1,235	*	100.00%	0.00%	0.17%
Sunday, December 24, 2023	1,107	1,332	*	100.00%	0.00%	0.08%
Monday, December 25, 2023	781	910	*	100.00%	0.00%	0.16%
Tuesday, December 26, 2023	976	1,125	*	100.00%	0.00%	0.17%
Wednesday, December 27, 2023	1,170	1,699	*	84.24%	15.76%	0.18%
Thursday, December 28, 2023	984	1,271	*	100.00%	0.00%	0.66%
Friday, December 29, 2023	1,146	1,402	*	100.00%	0.00%	0.14%
Saturday, December 30, 2023	840	957	*	100.00%	0.00%	0.15%
Sunday, December 31, 2023	1,064	1,260	*	100.00%	0.00%	0.11%

Legend

\* The comparative values for the FCS in the online portal are not given, as this service is not offered in the Commerzbank portal.

Notes

1. The measured values reflect figures of the Online Banking Portal (Web Access) and are based on the process of obtaining the same information from the PSD2 interface.  
The KPIs do not reflect the actual performance of the entire Commerzbank online portal, but rather reflect the comparable end-to-end process of the respective service to the PSD2 interface.
2. Since the respective services do not differ between online and mobile banking, in terms of back-end processing and thus the measuring points, we do not disclose the statistics separately.
3. Within maintenance windows, customer processes may not be finalized and end in time-outs. These increased process durations are included in the reported figures.
4. Figures for downtimes also include maintenance work, time windows with significant failure response rates, and significantly increased average durations.
- Maintenance work usually takes place in time slots with very little customer usage. This can lead to high error rates during periods of relatively low usage, even though the service is functionally available.