Software Product Information

SPI Fabasoft app.telemetry 2015 Update Rollup 3

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1 Introduction

The optimization of critical business applications is increasingly becoming a key performance indicator in the effectiveness of organizations and the motivation of their staff.

Fabasoft app.telemetry products measure and document the objective service level of complex software applications in the form of codes such as response time behavior (performance) and availability.

Fabasoft app.telemetry creates a continuous and transparent dialogue and reporting structure between the use cases on the user side and the system-imposed processes and parameters on the application and services side. This takes place above all hardware and software levels of the participating systems.

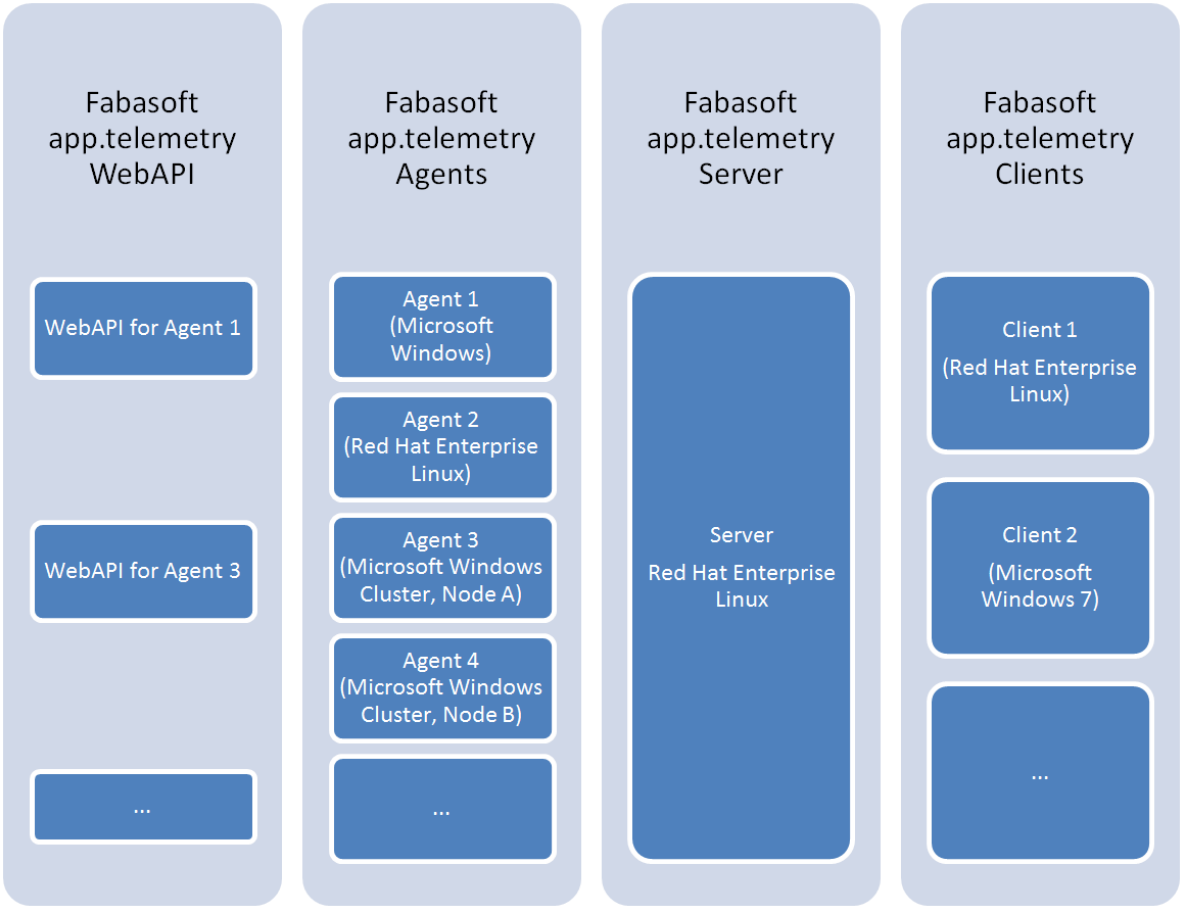
With unrivaled efficiency, effective optimization and anticipatory planning and company management, error limitation and repair are made easier and faster than ever. End user-focused support delivers a completely new standard through the common content discussion (use cases) between the user and the system specialist.

2 System Overview

A basic Fabasoft app.telemetry installation consists of the following components:

- one Fabasoft app.telemetry server,
- Fabasoft app.telemetry agents,
- Fabasoft app.telemetry WebAPI and
- Fabasoft app.telemetry clients.

The following illustration shows an example of a Fabasoft app.telemetry system using a heterogeneous environment:



2.1 Fabasoft app.telemetry Server

The Fabasoft app.telemetry server is a Microsoft Windows service or a Linux daemon running on a dedicated management server. It is the central component of Fabasoft app.telemetry. The server stores the complete Fabasoft app.telemetry configuration, controls the configured Fabasoft app.telemetry agents, manages Software-Telemetry sessions and administrates the evaluation of counter checks and availability checks. The Fabasoft app.telemetry server can be accessed by clients through a web server like Apache or Microsoft Internet Information Services (the web server is running on the same server as the Fabasoft app.telemetry server). Supported authentication methods are Microsoft Windows integrated authentication (for Microsoft Windows platforms only) or basic authentication.

2.2 Fabasoft app.telemetry Agent

The Fabasoft app.telemetry agent is a Microsoft Windows service or Linux daemon that is responsible for providing counter values, availability information and Software-Telemetry data to the Fabasoft app.telemetry server. The Fabasoft app.telemetry agent must be installed on systems that potentially should provide data for Fabasoft app.telemetry.

2.3 Fabasoft app.telemetry WebAPI

The Fabasoft app.telemetry WebAPI is a web service hosted in Apache or Microsoft Internet Information Services that is responsible for the transfer of Software-Telemetry data from Java Script instrumentations to a Fabasoft app.telemetry agent. The Fabasoft app.telemetry WebAPI must be installed on systems that also host a Fabasoft app.telemetry agent. The Fabasoft app.telemetry WebAPI is a prerequisite for the use of the Fabasoft app.telemetry integration for Java Script and must be available to the respective web browsers.

2.4 Fabasoft app.telemetry Client

The Fabasoft app.telemetry client is a web-based client application, which can be accessed through any of the several modern web browser clients. The Fabasoft app.telemetry client provides the Fabasoft app.telemetry functionality to the users.

3 Application Service Level Management

3.1 Services

Fabasoft app.telemetry provides functionality for application service level management based on services. A service is a Fabasoft app.telemetry element that can be used to configure two kinds of checks, counter checks and availability checks. Based on the configured checks services can have the states OK, WARNING or CRITICAL.

Each service has a defined Fabasoft app.telemetry agent that is responsible for executing the configured checks.

3.2 Service Groups

Services can be organized in service groups. A service group is a Fabasoft app.telemetry element that can contain one or more services or service groups again. Based on the state of its services a service group can have the states OK, WARNING or CRITICAL.

3.3 Counter Checks

Fabasoft app.telemetry agents can be configured to periodically read system counters and to monitor the read counter values. Based on the counter value and configurable limits, a counter check can report the states OK, WARNING or CRITICAL.

For heterogeneous environments Fabasoft app.telemetry supports the use of counter definitions. A counter definition describes the retrieval of a counter for each supported operating system, so a counter check based on a counter definition is available for all operating systems considered in the counter definition.

3.3.1 Linux Platforms

Fabasoft app.telemetry agents running on Linux platforms (as described in chapter 7.1 Fabasoft app.telemetry Agent) support checks for the following local (on the server hosting the Fabasoft app.telemetry agent) accessible system counters:

3.3.1.1 SNMP counter check

A Fabasoft app.telemetry agent can read local available SNMP values and remote SNMP values provided by SNMP services. Access to remote SNMP values can be configured through proxy agents.

3.3.1.2 Linux /proc counter check

For running processes and processors available to the operating system Fabasoft app.telemetry agents support the counters "*% idle time*", "*% privileged time*", "*% processor time*" and "*% user time*" as long as those counters are available via the `/proc` file system.

3.3.1.3 Counter check using formula

Based on a simple formula (addition, subtraction, multiplication or division) the counter value can be dynamically computed using supported SNMP values, Linux `/proc` counter and/or counter definitions.

3.3.2 Microsoft Windows Platforms

Fabasoft app.telemetry agents running on Microsoft Windows platforms (as described in chapter 7.1 Fabasoft app.telemetry Agent) support checks for the following local (on the server hosting the Fabasoft app.telemetry agent) accessible system counters:

3.3.2.1 SNMP counter check

A Fabasoft app.telemetry agent can read local available SNMP values and remote SNMP values provided by SNMP services. Access to remote SNMP values can be configured through proxy agents.

3.3.2.2 Microsoft Windows performance counter check

A Fabasoft app.telemetry agent can read local available Microsoft Windows performance counters.

3.3.2.3 Counter check using formula

Based on a simple formula (addition, subtraction, multiplication or division) the counter value can be dynamically computed using Microsoft Windows performance counter and/or counter definitions.

3.4 Availability Checks

Fabasoft app.telemetry agents can be configured to periodically perform availability checks and to monitor the results. Based on the result, an availability check can report the states OK, WARNING or CRITICAL.

3.4.1 Linux Platforms

Fabasoft app.telemetry agents running on Linux platforms (as described in chapter 7.1 Fabasoft app.telemetry Agent) support the following local (on the server hosting the Fabasoft app.telemetry agent) accessible availability checks:

3.4.1.1 Linux process availability check

A Fabasoft app.telemetry agent can check the availability of a Linux process by querying the `/proc` file system for a configured command line.

3.4.1.2 Red Hat cluster suite service availability check

A Fabasoft app.telemetry agent can check the availability of a Red Hat cluster service by retrieving the cluster service's state from the Red Hat cluster manager.

3.4.1.3 Web service availability check

A Fabasoft app.telemetry agent can check the availability of a web service by sending an HTTP-request and checking the received HTTP status code.

Web service availability checks are supported for the authentication methods "*anonymous*", "*basic*" and "*certificate*" (X.509 certificates in PEM format).

3.4.1.4 TCP Ping availability check

A Fabasoft app.telemetry agent can test the connection to a TCP port on a remote system.

3.4.1.5 ICMP Ping availability check

A Fabasoft app.telemetry agent can test the availability of a remote system with an ICMP ping check.

3.4.2 Microsoft Windows Platforms

Fabasoft app.telemetry agents running on Microsoft Windows platforms (as described in chapter 7.1 Fabasoft app.telemetry Agent) support the following local (on the server hosting the Fabasoft app.telemetry agent) accessible availability checks:

3.4.2.1 Microsoft Windows service availability check

A Fabasoft app.telemetry agent can check the availability of a Microsoft Windows service by retrieving the service's state from Microsoft Windows service control manager.

3.4.2.2 Microsoft Windows cluster resource availability check

A Fabasoft app.telemetry agent can check the availability of Microsoft Windows cluster resource by retrieving the resource's state from Microsoft Windows cluster manager.

3.4.2.3 Web service availability check

A Fabasoft app.telemetry agent can check the availability of a web service by sending an HTTP-request and checking received the HTTP status code.

Web service availability checks are supported for the authentication methods "*anonymous*", "*basic*", "*certificate*" (X.509 certificates in PEM format) and "*Microsoft Windows integrated*".

3.4.2.4 TCP Ping availability check

A Fabasoft app.telemetry agent can test the connection to a TCP port on a remote system.

3.4.2.5 ICMP Ping availability check

A Fabasoft app.telemetry agent can test the availability of a remote system with an ICMP ping check.

3.4.3 Service Level Computation

Fabasoft app.telemetry can be configured to compute the percentage of availability within a configurable core time and within a configurable remaining time based on the result of an availability check. Configurable time periods (e.g. for maintenances windows) can be excluded from this computation.

3.5 Response Time Checks

Based on online Software-Telemetry logs (as described in chapter 6.1 Online Software-Telemetry Logs) Fabasoft app.telemetry can be configured to periodically compute the response time of requests received from applications using the Fabasoft app.telemetry integration and to monitor the results. Based on the configuration response time checks can have the states OK, WARNING or CRITICAL.

3.5.1 Average Response Time

Fabasoft app.telemetry supports a check for the computation of the average response time of requests. The average response time is computed for a configurable time frame.

3.5.2 Percentage of Requests within Threshold

Fabasoft app.telemetry supports a check for the computation of the percentage of requests showing a response time lower than a configurable threshold. The percentage of requests is computed for a configurable time frame.

3.6 Notifications

Fabasoft app.telemetry allows the configuration of notifications. Notifications can be configured using notification channels and notification contacts.

3.6.1 Notification Channels

A notification channel describes the transport used for notifications. Fabasoft app.telemetry supports the sending of notifications via SMTP on Microsoft Windows platforms or via a locally available “sendmail” installation on Linux platforms or the execution of a command line on the Fabasoft app.telemetry server as notification channels.

3.6.2 Notification Contacts

A notification contact is the receiver of a notification. Notification contacts can be defined for service groups, services, counter checks and availability checks. The notification contact will be notified each time the state of the defined service group, service, counter check or availability check changes.

Notification contacts can be defined for online Software-Telemetry logs (as described in chapter 6.1 Online Software-Telemetry Logs). The Notification contacts will be notified each time an application instrumented with the Fabasoft app.telemetry integration generates an automatic Software-Telemetry session (as described in chapter 4.4 Automatic Software-Telemetry Session).

4 Fabasoft app.telemetry Integration (SDK)

Fabasoft app.telemetry provides an SDK that enables applications to integrate into Fabasoft app.telemetry. Applications can integrate by registering themselves into Fabasoft app.telemetry and by providing information (events) used within Software-Telemetry sessions. The Fabasoft app.telemetry SDK provides the following integration possibilities:

4.1 Registration

Applications can register themselves into Fabasoft app.telemetry and therefore can help to reduce manual configuration efforts.

4.1.1 Application Registration

By providing an application name, a unique application-id, a tier name and a tier-id an application can register itself to show up in Fabasoft app.telemetry.

4.1.2 Filter Registration

Fabasoft app.telemetry provides the functionality of Software-Telemetry sessions. A Software-Telemetry session can be started by selecting a registered application, by selecting one of the supported recording levels and by choosing an application specific filter value. The SDK provides the possibility for applications to register their application specific filter values.

4.1.3 Module Registration

In a Software-Telemetry session applications provide information that help analyzing the route of a request. Software-Telemetry requests are partitioned into applications and servers as well as processes or threads. The SDK provides the possibility for applications to detail these partitions by using modules. A module is a part of an application that allows a better view of the request's route within the application itself.

4.1.4 Event Registration

In Software-Telemetry requests registered applications provide information by using events. Each event consists of an id (unique id within an application module) and a text description. To reduce the amount of transferred Software-Telemetry data, the SDK provides the possibility for applications to register their application specific events (id and text) so applications only have to pass the event id to the Software-Telemetry SDK.

4.2 Events

In Software-Telemetry requests registered applications provide information by using events. By sending events applications can provide the following information to Fabasoft app.telemetry:

- The request enters a specific area in the application
- The request leaves a specific area in the application
- Debug or trace information to provide more details

Applications provide recording level information (standard, detail or debug) for each event sent. Depending on the selected recording level of the current Software-Telemetry session, only events matching that selected recording level get transported to the Fabasoft app.telemetry server.

4.3 Context

In a Software-Telemetry session a request can be tracked through multiple threads, processes or services of integrated applications. The Fabasoft app.telemetry SDK provides the possibility for applications, to pass the therefore required information to Fabasoft app.telemetry. Applications can allocate a context to start the recording of a request and release a context to end the recording of a request. To pass a context between threads or processes applications get the current context on the calling side, transport the context and attach to that context on the called side. The transfer of the context must be implemented by the application.

4.4 Automatic Software-Telemetry Session

Fabasoft app.telemetry allows applications to combine requests into a Software-Telemetry session. The Software-Telemetry session includes the last requests received from the application.

5 Fabasoft app.telemetry Integration (JVMTI)

Fabasoft app.telemetry can receive information (events) from applications running in an Oracle Java runtime environment 6 or 7 through the JVMTI interface. Fabasoft app.telemetry allows configuration of events in form of Java package-, object class- and method-signatures.

In order to use this Fabasoft app.telemetry integration the Fabasoft app.telemetry modules have to be explicitly loaded at startup of the Java runtime.

6 Software-Telemetry

Using the Fabasoft app.telemetry integration possibilities (as described in chapter 4 Fabasoft app.telemetry Integration (SDK)), applications can provide log, trace and/or debug information to Fabasoft app.telemetry.

Fabasoft app.telemetry can be used to follow and analyze single requests through a complex and heterogeneous infrastructure of those integrated applications.

6.1 Online Software-Telemetry Logs

Fabasoft app.telemetry can be configured to display requests received from applications using the Fabasoft app.telemetry integration. Each request is displayed as a single line together with general information like start time, duration or the Fabasoft app.telemetry agent that received the request first.

6.2 Software-Telemetry Sessions

6.2.1 Explicit Software-Telemetry session

Fabasoft app.telemetry provides a list of applications available for an explicit Software-Telemetry session in the “Start Software-Telemetry Session” dialog window. An explicit Software-Telemetry session can be started by selecting the appropriate application, by choosing one of the filter values provided by the application, by selecting one of the supported recording levels (standard, detail or debug) and by specifying a session description.

An explicit Software-Telemetry session can by stopped using the “Stop Software-Telemetry Session” dialog window. After a Software-Telemetry session has been stopped, all available Software-Telemetry data is automatically transferred from the Fabasoft app.telemetry agents to the Fabasoft app.telemetry server where the data is processed and stored as session. The Software-Telemetry session can then be loaded in the Fabasoft app.telemetry client, by whereby the session is prepared by the webserver and graphically displayed in the client.

An active Software-Telemetry session has impact on the analyzed systems. The impact depends e.g. on the selected recording level, the filter selectivity or the information passed by the instrumented applications.

6.2.2 Implicit Software-Telemetry session

Fabasoft app.telemetry can be configured to collect Software-Telemetry data permanently (without explicit start and stop) for selected applications. Active permanent Software-Telemetry collection has impact on the analyzed systems. The impact depends e.g. on the selected recording level or the information passed by the instrumented applications.

6.2.3 Analyzing a Software-Telemetry session

Stopped explicit Software-Telemetry sessions can be easily loaded and analyzed with the app.telemetry client as already described above.

Software-Telemetry data received from implicit Software-Telemetry sessions can be analyzed by selecting the appropriate request from the Online Software-Telemetry Logs.

Software-Telemetry data received from automatic Software-Telemetry sessions (as described in chapter 4.4 Automatic Software-Telemetry Session) can be analyzed by selecting the appropriate request from the Software-Telemetry session.

6.3 Persistent Software-Telemetry Logs

Fabasoft app.telemetry can be configured to store all requests received from applications using the Fabasoft app.telemetry integration in a relational database. The relational databases are not part of Fabasoft app.telemetry. Each request is stored together with general information like start time, duration or the Fabasoft app.telemetry agent that received the request first. Supported relational databases are described in chapter 7.3.4 Supported Database Systems.

6.4 Software-Telemetry Log Analysis

Fabasoft app.telemetry can be configured to prepare all requests received from applications using the Fabasoft app.telemetry integration for analysis. Within this configuration, application specific Software-Telemetry log columns can be defined that are used for the computation of aggregations like number of requests, total request time or average request time. Computed values can be displayed grouped by one of the defined columns. Based on that computation, Fabasoft app.telemetry allows the selection of a column value as a filter and an additional grouping by other corresponding columns (drill down).

Requirements for Software-Telemetry log analysis are persistent Software-Telemetry logs and a relational database for storing aggregated values. The relational databases are not part of Fabasoft app.telemetry. Supported relational databases are described in chapter 7.3.4 Supported Database Systems.

6.5 Service Desk Integration

Fabasoft app.telemetry can be configured to send selected requests or a selected Software-Telemetry session to the Fabasoft Support service desk. This configuration requires access to the Fabasoft Support service desk based on a Fabasoft Support agreement. A Fabasoft Support agreement is not part of Fabasoft app.telemetry.

6.6 Syslog Integration Module

Fabasoft app.telemetry can be configured to capture Linux syslog entries as Software-Telemetry requests in a Software-Telemetry log pool. This configuration requires a Fabasoft app.telemetry agent as well as the Fabasoft app.telemetry Syslog Forwarder module to be installed on the target system. For a list of supported platforms see chapter 7.5.4 Fabasoft app.telemetry Integration for Syslog.

6.7 Telemetry Raw Data Inspection

Since Version 2014 Fall Release Fabasoft app.telemetry provides a specific view to analyze the telemetry raw data collected from instrumented applications. Specify the reporting time range and the resolution and you can start analyzing the telemetry data, but be careful the data processing may have an impact on the server load especially when using a long time range, a small resolution or when working on a big data set with massive telemetry data.

7 Supported Platforms and System Requirements

7.1 Fabasoft app.telemetry Agent

7.1.1 Supported Platforms

Fabasoft app.telemetry agents are supported on the following platforms:

Operating System	Architecture
Microsoft Windows Server 2008 R2 SP1	x64
Microsoft Windows Server 2012 Microsoft Windows Server 2012 R2	x64
Red Hat Enterprise Linux 6.1 – 6.6, Community ENTerprise Operating System 6.0, 6.2 – 6.6	x64
Red Hat Enterprise Linux 7.1, Community ENTerprise Operating System 7.1	x64

7.1.2 System Requirements

Fabasoft app.telemetry agents have the following minimum system requirements for exclusive use:

- CPU: 1 GHz
- Hard disk: 20 MB
- Memory: 100 MB

Software-Telemetry caching or intense check definitions impact those system requirements and might cause appropriate adaptations.

7.1.3 Prerequisites

Fabasoft app.telemetry agents have the following prerequisites:

Operating System	Prerequisite
Red Hat Enterprise Linux 6.1 – 6.6, Community ENTerprise Operating System 6.0, 6.2 – 6.6	RPM curl 7.19.7 RPM net-snmp 5.5 RPM net-snmp-libs 5.5 RPM libxml2-2.7.6 RPM libgcrypt-1.4.5
Red Hat Enterprise Linux 7.0, Community ENTerprise Operating System 7.0	RPM curl 7.29.0 RPM net-snmp 5.7.2 RPM net-snmp-libs 5.7.2 RPM libxml2-2.9.1 RPM libgcrypt-1.5.3

7.2 Fabasoft app.telemetry WebAPI

7.2.1 Supported Platforms

Fabasoft app.telemetry WebAPI is supported on the following platforms:

Operating System	Architecture
Microsoft Windows Server 2008 R2 SP1	x64
Microsoft Windows Server 2012 Microsoft Windows Server 2012 R2	x64
Red Hat Enterprise Linux 6.1 – 6.6, Community ENTerprise Operating System 6.0, 6.2 – 6.6	x64
Red Hat Enterprise Linux 7.1, Community ENTerprise Operating System 7.1	x64

7.2.2 System Requirements

Fabasoft app.telemetry WebAPI has the following minimum system requirements for exclusive use:

- CPU: 1 GHz
- Hard disk: 20 MB
- Memory: 100 MB

Software-Telemetry caching impacts those system requirements and might cause appropriate adaptations.

7.2.3 Prerequisites

Fabasoft app.telemetry WebAPI has the following prerequisites

Operating System	Prerequisite
Microsoft Windows Server 2008 R2 SP1	Microsoft Internet Information Services 7.5
Microsoft Windows Server 2012	Microsoft Internet Information Services 8.0
Microsoft Windows Server 2012 R2	Microsoft Internet Information Services 8.5
Red Hat Enterprise Linux 6.1 – 6.6, Community ENTerprise Operating System 6.0, 6.2 – 6.6	RPM curl 7.19.7 RPM httpd 2.2.15 RPM apr 1.3.9 RPM apr-util 1.3.9
Red Hat Enterprise Linux 7.1, Community ENTerprise Operating System 7.1	RPM curl 7.29.0 RPM httpd 2.4.6 RPM apr 1.4.8 RPM apr-util 1.5.2

7.3 Fabasoft app.telemetry Server

7.3.1 Supported Platforms

Fabasoft app.telemetry servers are supported on the following platforms:

Operating System	Architecture
Microsoft Windows Server 2008 R2 SP1	x64
Microsoft Windows Server 2012 R2	x64
Red Hat Enterprise Linux 6.6, Community ENTerprise Operating System 6.6	x64
Red Hat Enterprise Linux 7.1, Community ENTerprise Operating System 7.1	x64

7.3.2 System Requirements

Fabasoft app.telemetry servers have the following minimum system requirements for exclusive use:

- CPU: 1 GHz
- Hard disk: 200 MB
- Memory: 1 GB

Software-Telemetry caching, implicit and/or explicit Software-Telemetry sessions intense check definitions impact those system requirements and might cause appropriate adaptations.

7.3.3 Prerequisites

Fabasoft app.telemetry servers have the following prerequisites:

Operating System	Prerequisite
Microsoft Windows Server 2008 R2 SP1	Microsoft Core XML Services 6.0 Microsoft Internet Information Services 7.5 including the following security role services: Anonymous Authentication, Basic Authentication, Windows Authentication, IP and Domain Restriction, Request Filtering and URL Authorization
Microsoft Windows Server 2012 R2	Microsoft Core XML Services 6.0 Microsoft Internet Information Services 8.5 including the following security role services: Anonymous Authentication, Basic Authentication, Windows Authentication, IP and Domain Restriction, Request Filtering and URL Authorization
Red Hat Enterprise Linux 6.6, Community ENTerprise Operating System 6.6	RPM httpd 2.2.15 RPM apr 1.3.9 RPM apr-util 1.3.9 RPM net-snmp 5.5 RPM net-snmp-libs 5.5 RPM postgresql-libs-8.4.20 RPM libxml2-2.7.6

	RPM libgcrypt-1.4.5 RPM minizip-1.2.3
Red Hat Enterprise Linux 7.0, Community ENTerprise Operating System 7.0	RPM httpd 2.4.6 RPM apr 1.4.8 RPM apr-util 1.5.2 RPM net-snmp 5.7.2 RPM net-snmp-libs 5.7.2 RPM postgresql-libs-9.2.7 RPM libxml2-2.9.1 RPM libgcrypt-1.5.3 RPM minizip-1.2.7

7.3.4 Supported Database Systems

Fabasoft app.telemetry server supports the following relational database systems to store Software-Telemetry request information:

Fabasoft app.telemetry Server Operating System	Database System
Microsoft Windows Server 2008 R2 SP1	Microsoft SQL Server 2008 R2 SP2 PostgreSQL 9.2
Microsoft Windows Server 2012 R2	Microsoft SQL Server 2012 SP2 PostgreSQL 9.4
Red Hat Enterprise Linux 6.6, Community ENTerprise Operating System 6.6	PostgreSQL 8.4.20
Red Hat Enterprise Linux 7.1, Community ENTerprise Operating System 7.1	PostgreSQL 9.2

7.4 Fabasoft app.telemetry Client

7.4.1 Supported Platforms

Fabasoft app.telemetry clients are supported on the following platforms and web browsers:

Operating System	Architecture	Web Browser
Microsoft Windows 7 SP1	x86 and x64	Mozilla Firefox 38 ESR Microsoft Internet Explorer 10 Google Chrome 44
Microsoft Windows 8.1	x86 and x64	Mozilla Firefox 38 ESR Microsoft Internet Explorer 11 Google Chrome 44
Microsoft Windows Server 2008 R2 SP1	x64	Mozilla Firefox 38 ESR Microsoft Internet Explorer 10 Google Chrome 44
Microsoft Windows Server 2012 R2	x64	Mozilla Firefox 38 ESR Microsoft Internet Explorer 11 Google Chrome 44
Red Hat Enterprise Linux 6.6, Community ENTerprise Operating System 6.6	x64	Mozilla Firefox 38 ESR
Red Hat Enterprise Linux 7.1, Community ENTerprise Operating System 7.1	x64	Mozilla Firefox 38 ESR
Ubuntu 14.10	x86	Mozilla Firefox 38 ESR
Mac OS-X 10.10	x64	Mozilla Firefox 38 ESR Apple Safari 8 Google Chrome 44

Operating System	Mobile Device	Web Browser
Apple iOS 8.1	Apple iPad, Apple iPhone	Apple Safari
Android 4.4	Android Tablet, Android Phone	Android Web Browser

7.4.2 System Requirements

Fabasoft app.telemetry clients have the following minimum system requirements for exclusive use:

- CPU: 1 GHz
- Hard disk: 100 MB
- Memory: 512 MB

Software-Telemetry analysis, intense check definitions, dashboards or large infrastructure definitions impact those system requirements and might cause appropriate adaptations.

7.5 Fabasoft app.telemetry Integration

The Fabasoft app.telemetry integration (Software-Telemetry SDK) is only supported on a Fabasoft app.telemetry agent platform. For a list of supported agent platforms see chapter 7.1.1 Supported Platforms.

7.5.1 Fabasoft app.telemetry Integration for C++, C#, Java

Fabasoft app.telemetry integration for C++, C# and Java is supported on the following platforms and interfaces:

Operating System	Environment
Microsoft Windows Server 2008 R2 SP1	Microsoft Visual Studio 2012 (C++) Microsoft Visual Studio 2012 (C#) Oracle Java Development Kit (JDK) 6, 7 and 8
Microsoft Windows Server 2012 Microsoft Windows Server 2012 R2	Microsoft Visual Studio 2012 (C++) Microsoft Visual Studio 2012 (C#) Oracle Java Development Kit (JDK) 6, 7 and 8
Community ENTerprise Operating System 6.0	gcc 4.4.4 (C++) Oracle Java Development Kit (JDK) 6, 7 and 8
Red Hat Enterprise Linux 6.1	gcc 4.4.5 (C++) Oracle Java Development Kit (JDK) 6, 7 and 8
Red Hat Enterprise Linux 6.2 – 6.4, Community ENTerprise Operating System 6.2 – 6.4	gcc 4.4.6 (C++) Oracle Java Development Kit (JDK) 6, 7 and 8
Red Hat Enterprise Linux 6.5 – 6.6, Community ENTerprise Operating System 6.5 – 6.6	gcc 4.4.7 (C++) Oracle Java Development Kit (JDK) 6, 7 and 8
Red Hat Enterprise Linux 7.1, Community ENTerprise Operating System 7.1	gcc 4.8.3 (C++) Oracle Java Development Kit (JDK) 6, 7 and 8

7.5.2 Fabasoft app.telemetry Integration for Java Script

Fabasoft app.telemetry integration for Java Script supports the Java Script interfaces with the listed features of the following web browsers:

Supported Web Browser	JavaScript SDK	Feedback Dialogs	HTML5 Screenshot	Navigation Timing
Microsoft Internet Explorer 7 – 8	Yes	-	-	-
Microsoft Internet Explorer 9 – 11	Yes	Yes	Yes	Yes
Mozilla Firefox 38 – 40	Yes	Yes	Yes	Yes
Google Chrome 44	Yes	Yes	Yes	Yes
Apple Safari 6 – 7	Yes	Yes	Yes	-
Apple Safari 8	Yes	Yes	Yes	Yes

7.5.3 Fabasoft app.telemetry Integration for JVMTI

Fabasoft app.telemetry integration for JVMTI supports the following platforms and Java runtime environments:

Operating System	Environment
Microsoft Windows Server 2008 R2 SP1	Oracle Java Runtime Environment (JRE) 6 and 7 – x86 and x64
Microsoft Windows Server 2012 Microsoft Windows Server 2012 R2	Oracle Java Runtime Environment (JRE) 6 and 7 – x86 and x64
Red Hat Enterprise Linux 6.1 – 6.6, Community ENTerprise Operating System 6.0, 6.2 – 6.6	Oracle Java Runtime Environment (JRE) 6 and 7 – x64
Red Hat Enterprise Linux 7.1, Community ENTerprise Operating System 7.1	Oracle Java Runtime Environment (JRE) 6 and 7 – x64

7.5.4 Fabasoft app.telemetry Integration for Syslog

Fabasoft app.telemetry integration for Syslog is only available on Linux for “rsyslog” and supports the following platforms:

Operating System	Prerequisite
Red Hat Enterprise Linux 6.3 – 6.6, Community ENTerprise Operating System 6.3 – 6.6	rsyslog >= 5.8.10
Red Hat Enterprise Linux 7.1, Community ENTerprise Operating System 7.1	rsyslog >= 7.4.7

7.5.5 Fabasoft app.telemetry Support Matrix

The following support matrix lists the major features of the Fabasoft app.telemetry Integration (Software-Telemetry SDK) with the initial product version, when the feature was introduced and support starts:

Fabasoft app.telemetry SDK Features	Introduced/Supported with Product Version
Base SDK	Fabasoft app.telemetry 2008
Software-Telemetry sessions	Fabasoft app.telemetry 2008
Online Software-Telemetry logs, reported sessions	Fabasoft app.telemetry 2009
JavaScript SDK / End-2-End Software-Telemetry	Fabasoft app.telemetry 2009 Summer Release
Feedback button	Fabasoft app.telemetry 2010 Spring Release
Feedback button with screenshot	Fabasoft app.telemetry 2010 Summer Release
Dynamic Java Instrumentation (JVMTI)	Fabasoft app.telemetry 2011 Winter Release

SDK for Android (Java) and Apple iOS	Fabasoft app.telemetry 2013 Winter Release
Feedback dialog screenshot preview with editing features	Fabasoft app.telemetry 2013 Summer Release
Designed on-premise forms usable as replacement for SDK report dialog – resources loaded via WebAPI	Fabasoft app.telemetry 2013 Fall Release
Multi-Language feedback forms	Fabasoft app.telemetry 2014 Winter Release
Speedtest jQuery control JavaScript API loads CSS-images via WebAPI	Fabasoft app.telemetry 2014 Spring Release
Customizable event displayname mapping via module_registration.xml package file	Fabasoft app.telemetry 2014 Summer Release
Improved SDK for Android (Java) and Apple iOS	Fabasoft app.telemetry 2015

This version (current) of Fabasoft app.telemetry SDK is only supported on the defined Fabasoft app.telemetry agent platforms (see chapter 7.1.1 Supported Platforms).

7.6 Additional Conditions

The installation of Fabasoft app.telemetry services in a heterogeneous operating system environment is supported as long as each Fabasoft app.telemetry service is installed on a supported platform.

The installation of Fabasoft app.telemetry services of different versions on a single computer is not supported.

The installation of Fabasoft app.telemetry services of different versions within one Fabasoft app.telemetry installation is not supported.

Fabasoft app.telemetry agents can connect to one Fabasoft app.telemetry server only.

The documented system requirements (processor, free memory and free hard disk) are minimum requirements for a demo environment or a small installation.

The supported platforms, system requirements and software prerequisites for any future version of this product may differ from current ones of this version.

A certain version of a third-party product integrated into any Fabasoft app.telemetry software product is supported by Fabasoft R&D GmbH as long as the software product itself is supported by the third-party itself. For instance a particular version of an integrated Microsoft software product is only supported by Fabasoft R&D GmbH until the date on which the Microsoft “Extended Support Phase” for this product version ends.

Third-party products that are required or supported by Fabasoft app.telemetry products, proper licensing and installation of them, necessary tests for product release as well as corresponding manufacturer support are not included in the scope of supply and services and therefore they are not subject to warranty of Fabasoft R&D GmbH regarding functionality, mode of operation or features. Fabasoft R&D GmbH is not responsible for errors or malfunction, which are caused by third-party software products and/or products that are not included in the scope of supply and services.

8 Conditions of Use

All statements contained in this software product information concerning the intended use and conditions of operation of the program are understood as information only on principle. To ensure and guarantee the intended use and conditions of operation in everyday use of the program, expert training by specially qualified staff is recommended in any case.

Performance and reaction time of app.telemetry software products significantly depend on the used infrastructure. For layout, configuration and sizing of the infrastructure we refer to the information, recommendations and specifications of the particular manufacturers.

This program is intended for customary commercial use. This does not include usage that demands special requirements (like controlling of vehicles, machines and facilities, real-time applications).

9 Scope of Fabasoft app.telemetry

The following points, in particular, help to clarify what is and what is not included in the scope of Fabasoft app.telemetry.

- The standard Fabasoft app.telemetry product contains no adjustments to meet the specific needs of individual data centers.
- Through integration of third-party products and operating system functions, Fabasoft app.telemetry supports particular user login methods in accordance with the software product information for Fabasoft app.telemetry. The technical implementation of a selected and supported login method, the licensing and installation of third-party products and integration in the network infrastructure are not part of the product's range of functions.
- Through integration of third-party products and operating system functions, Fabasoft app.telemetry supports particular e-mail systems in accordance with the software product information for Fabasoft app.telemetry. The licensing, installation and maintenance of these systems is not part of the product's range of functions.
- The technical implementation concept for a scalable solution, as well as the required dimensioning of the servers and the accompanying technical and organizational measures are not part of the product's range of functions.
- When setting up a production environment, comprehensive infrastructure tests are required, particularly in the areas of scalability, stability, system reliability, availability, performance, backup and recovery, disaster recovery and security.
- The definition and implementation of Service Level Agreements (SLAs) is not part of the product's range of functions.