



An Intellect Solution

Overview of Zaptic Integrations

Contents

Contents	2
Introduction	4
1. Use Cases	5
1a. Master Data Management	6
1b. Alerts and notifications	7
1c. Mobile Maintenance	8
1d. Report and analytics	9
1e. SOPs and Work Instructions	10
2. Integration Connectors	11
2a. Rest APIs	12
2b. Custom API endpoints	13
2c. API Push	13
2d. Flat File Transfer	14
2e. SQL Database Access	15
3. Security	16
3a. VPC Peering	17
3b. Edge Node Implementation	18
About Zaptic	19

Introduction

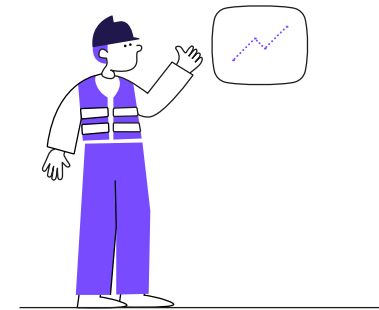
At Zaptic, we believe in connecting workers.

This means giving them access to the knowledge, data and best practice that is stored across the organisation. Part of the way we do this is through integrating Zaptic with other systems.

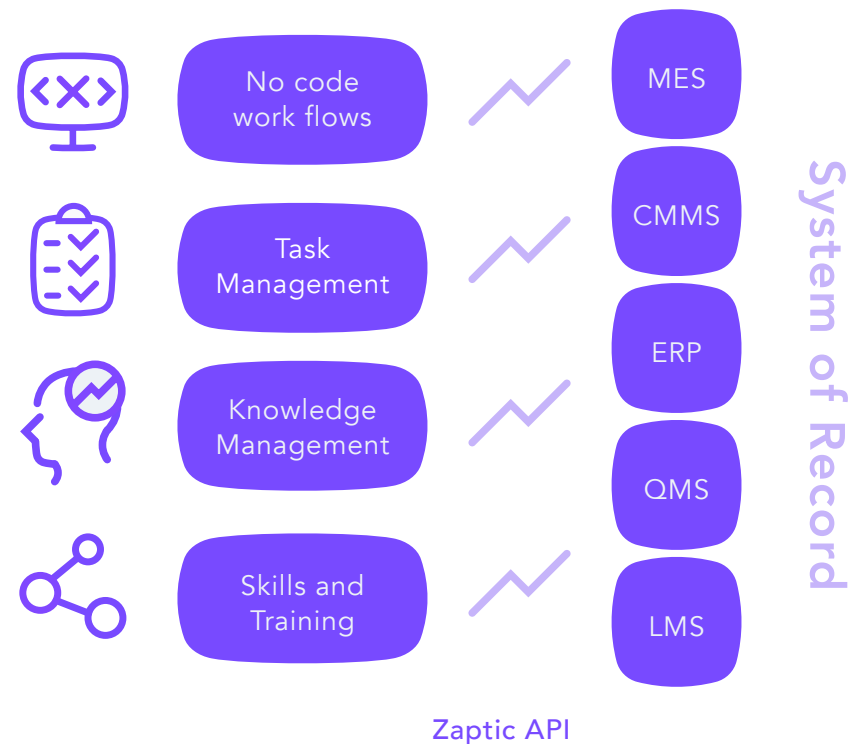
This document highlights the different types of integration available, the use cases for them and technical detail on how they can be made.

The first section of this document is aimed to be accessible for all audiences who want an understanding of the use cases for integrations and systems involved.

The last two sections area technical and security overviews of how Zaptic integrates.



Frontline workers





1

Use Cases

This section outlines some of the common systems we integrate with, and the use cases for those integrations.

1a

Master Data Management

ERP, MES



Data within Zaptic is structured using the organisation's core master data. Because of this, we recommend synchronising master data.

The table below shows the types of data that may be integrated, and the system we may pull this from - though this isn't always the case for all customers!

System	Data	Asset Based Use Cases ¹	Quality Use Cases ²	Safety Use Cases ³	Operations/ CI ⁴
ERP	→ Equipment Hierarchies	✓	✗	✗	✗
MES	→ Batch Information	✗	✓	✗	✗
ERP	→ Lines/Areas	✓	✓	✓	✓
ERP	→ SKUs/Products	✗	✓	✗	✗
ERP	→ Raw Materials	✗	✓	✗	✗

¹ E.g. Work instructions, Tags, CILs, breakdown reports, etc.

² E.g. batch records, quality incidents, hygiene audits, etc.

³ E.g. Near Miss, Incidents, Audits

⁴ E.g. Daily management systems, Gemba walks and boards, Kaizens

1b

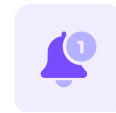
Alerts and Notifications

MES, IOT, SCADA

Within Zaptic, it's possible to push alerts and tasks to users based on real time events. Each event can be pushed into Zaptic, along with information about:

- Who should be notified (either specific users or groups of users, such as "Line 1 Operators")
- What should users do with the notification:
 - Just view it as an FYI
 - Confirm they've seen it and taken action
 - Complete a specific task related to it (e.g. filling out a breakdown report)
- By when should action be taken
- Meta information that goes with the alert (that can be fed directly to the worker to be displayed)

This functionality can be used for a long list of use cases, **Figure 1b.0** shows some common examples.

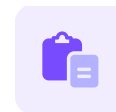


Use Case

Push breakdown notifications from MES directly to users to add a breakdown report task to the lines operators to complete

Benefits

- ✓ Capture reasons for breakdown in near real time
- ✓ Push tasks to operators on the line wherever they are
- ✓ Link downtime events in MES with specific operational insight



Trigger tasks in Zaptic based on warnings from MES/SCADA/IOT technology, such as preventative maintenance tasks.

- ✓ Fix problems before they cause a breakdown
- ✓ Upskill operators by automatically telling them what tasks need to be completed, along with work instructions, to resolve machine issues
- ✓ Increased mean time between breakdowns
- ✓ Turn insight generated by IOT based systems into real world action
- ✓ Create one interface for workers to access insight from multiple sources



Push product changeover events from MES in to Zaptic and automate certain tasks. E.g. each time there is a product changeover, trigger the line changeover and hygiene procedures.

- ✓ Reduce quality issues caused by changeovers

1c

Mobile Maintenance

ERP/PM

Using integrations it's possible to extend existing plant maintenance suites to the frontline. In Zaptic, users can create, receive, edit and update work orders. Master data integrations also allows users to view and consume spare parts as part of completing a work order.

This extends legacy maintenance solutions to the frontline in a user friendly way. The benefit of using Zaptic for this is maintenance activity can be displayed in one interface for end users, along with other shop floor activities that exist in Zaptic. Delivering one todo list and one pane of glass for frontline employees.



1d

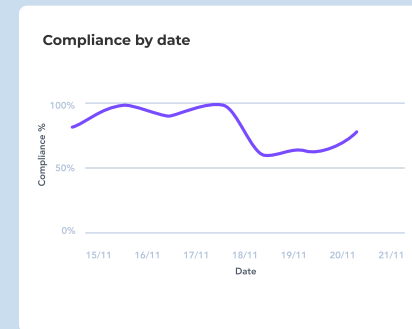
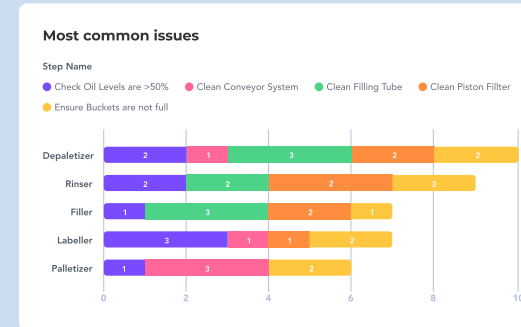
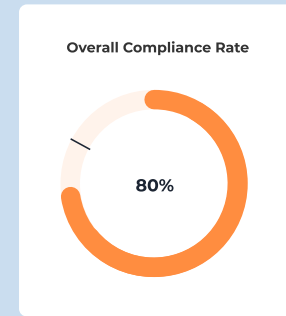
Report and Analytics

BI Suite, Office Software

Data that is captured in Zaptic can be easily pulled out of Zaptic into other systems. Commonly this is pulled into reporting solutions such as Power BI, Tableau, Yellowfin etc. It is also possible to pull data directly into Microsoft Excel for specific analysis.

By pulling operational data from Zaptic into an analytics solution it makes it possible to cross-reference feedback from the frontline with other sources of data such as MES or IOT solutions, creating one whole holistic picture.

Although Zaptic has support for all major analytics solutions, we have the deepest support for Microsoft Power BI. With full support for Power BI embedded it's possible for customers to embed dashboards directly into Zaptic, making them more accessible to workers.



Compliance by Machine

LINE	MACHINE	MISSED STEPS	COMPLETION %	COMPLETI
Line 1	Filler	Clean Filling Tube	100%	332
Line 1	Rinser	Clean Filling Tube	70%	221
Line 1	Palletizer	Clean Filling Tube	0%	345
Line 1	Shrink Machine	Clean Filling Tube	100%	432

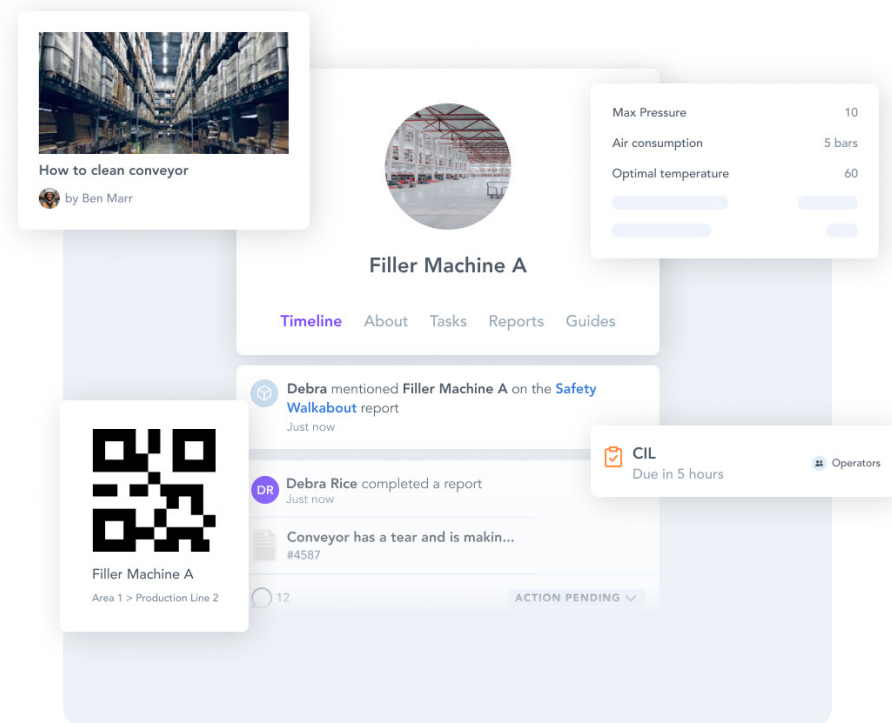
1e

SOPs and Work Instructions

LMS, DMS, QMS

Within Zaptic it's possible to embed work instructions, SOPs and training materials directly into the workflow for end users. This can be done in the portal by either uploading existing content or creating the content in Zaptic. However, for a lot of customers, this content most likely already exists in either a DMS (e.g. SharePoint) or a QMS (e.g. Intelex). It's possible to set up integrations in Zaptic that will ensure the documentation made available to users is automatically kept in sync with the source of truth.

By linking Zaptic to these systems, it gives confidence that workers are accessing and following the correct procedures on the line. As users complete tasks in Zaptic, they are one click away from the approved work instructions or SOPs, upskilling workers and minimising procedure non-compliance.





2

Integration Connectors

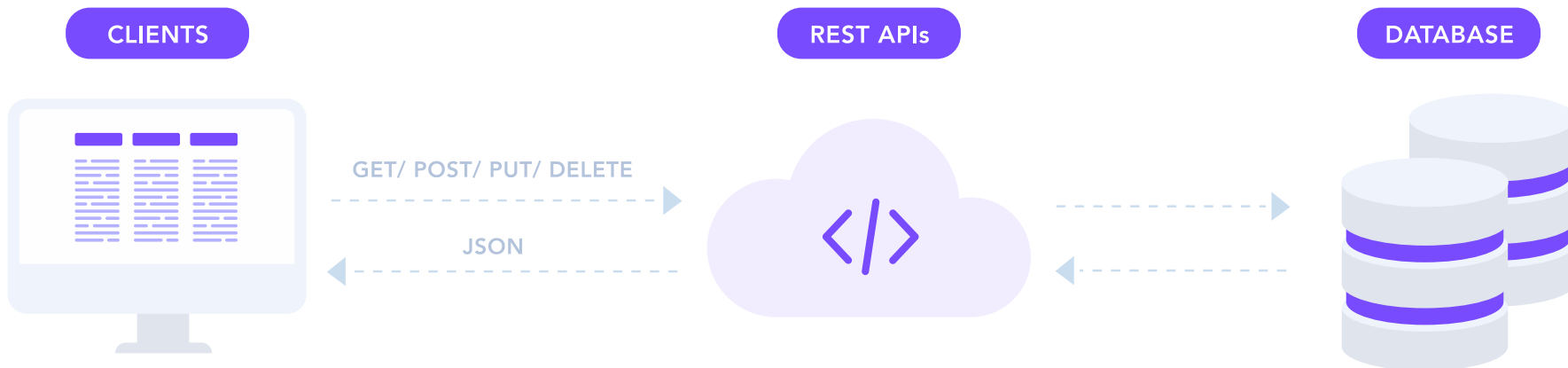
Zaptic has developed a variety of connectors that can be used to make these integrations while working with customers.

We've developed an integration framework that makes it easier for us to add new connectors in the future should we need to.

2a

Rest APIs

Zaptic has a suite of standard APIs for common tasks that can be used to build integrations between systems, which is our preferred method of integration. The APIs use a REST API structure and return data as JSON over HTTPS. These APIs are used if Zaptic is to be the passive actor in an integration (although we're always happy to offer support!)



2b

Custom API Endpoints

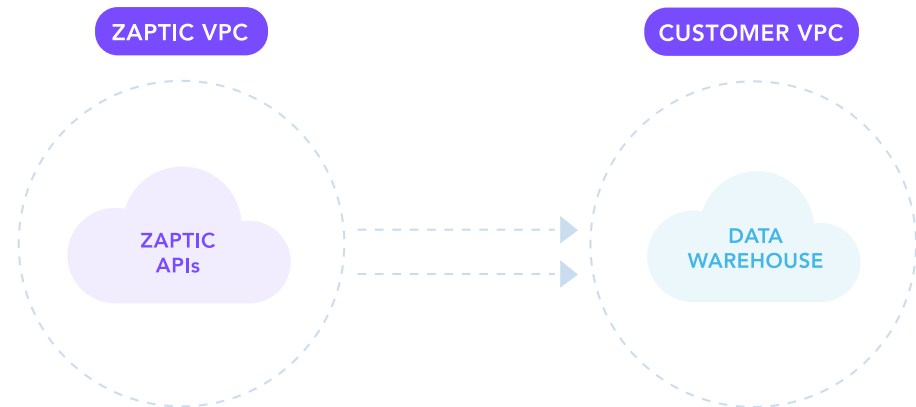
Sometimes we will also spin up new API endpoints for specific purposes. For instance if there is an already implemented integration that is posting data in a specific format we can create a new API endpoint that will slot in using the same format.



2c

API Push

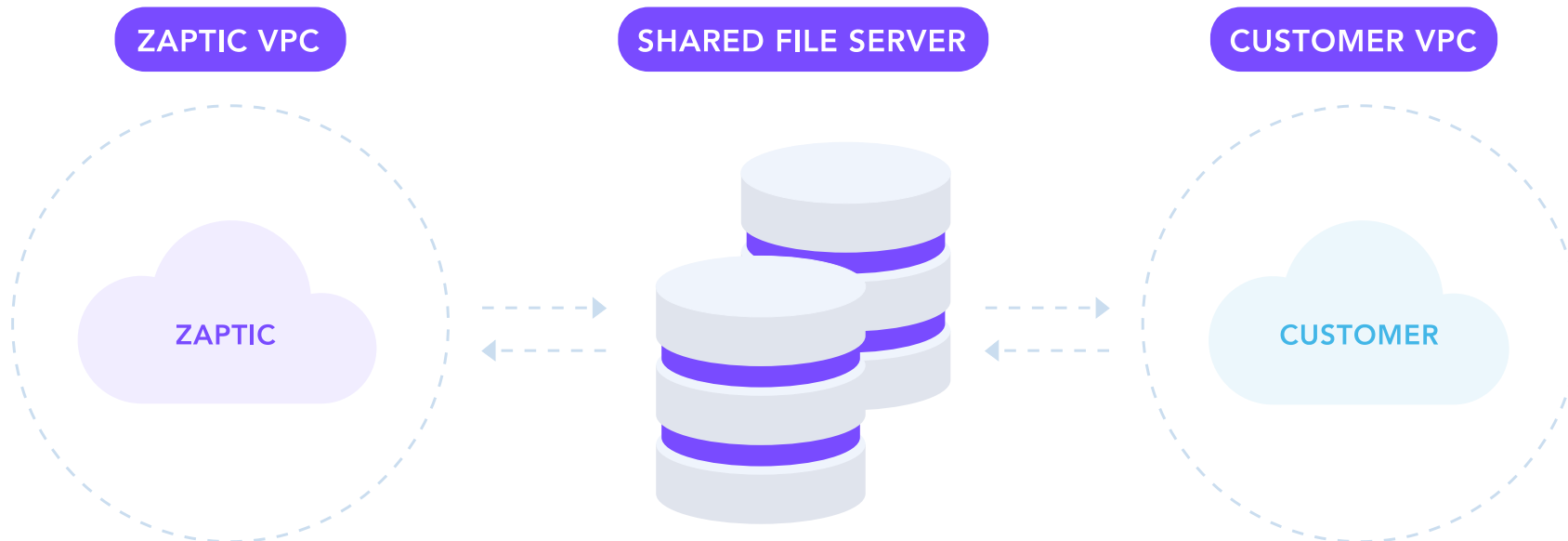
When it makes more sense for Zaptic to be the active actor in an integration (such as pushing data submitted in Zaptic to a different system) then Zaptic can also call external APIs. APIs can be called either on a fixed frequency, or based on events in Zaptic such as every time a user completes a task.



2d

Flat File Transfer

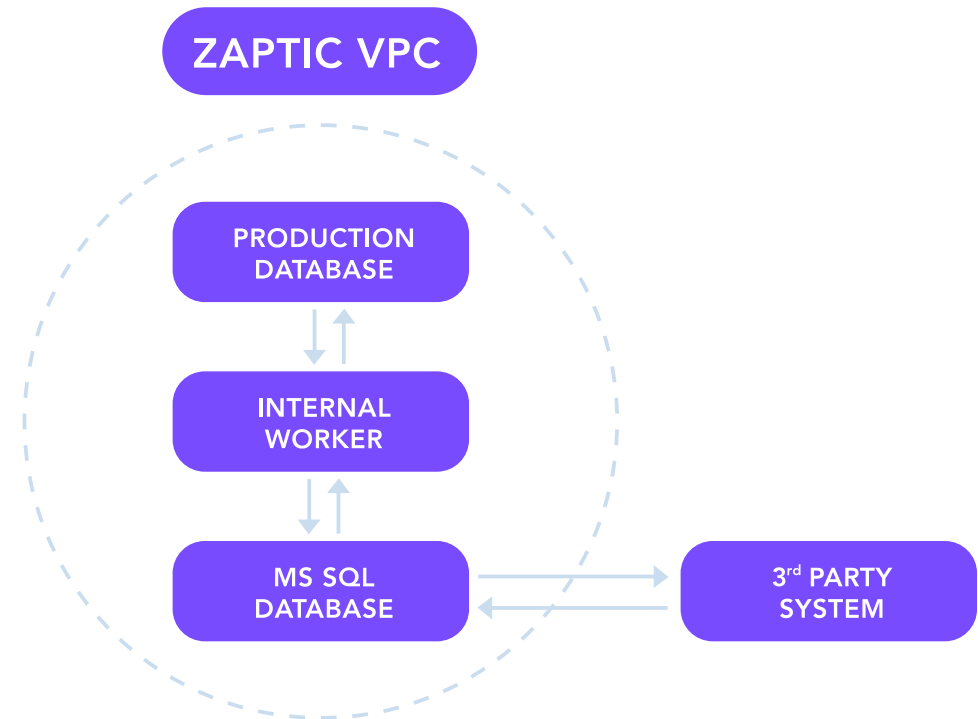
Although we don't normally recommend it, in some cases it does make sense to transfer data by uploading/downloading flat files on a shared file server. To do this we support SFTP and typically we use a CSV as the file format, though can be flexible on this.



2d

SQL Database Access

Sometimes customers want to pull data from Zaptic into systems which don't support using API endpoints. To enable this we have the ability to spin up a database (MS SQL, PostgreSQL or other) that can be accessed. We never give out direct access to the production databases, instead data is replicated by integrations in Zaptic from the production database into the cloned analytics database.





3

Security

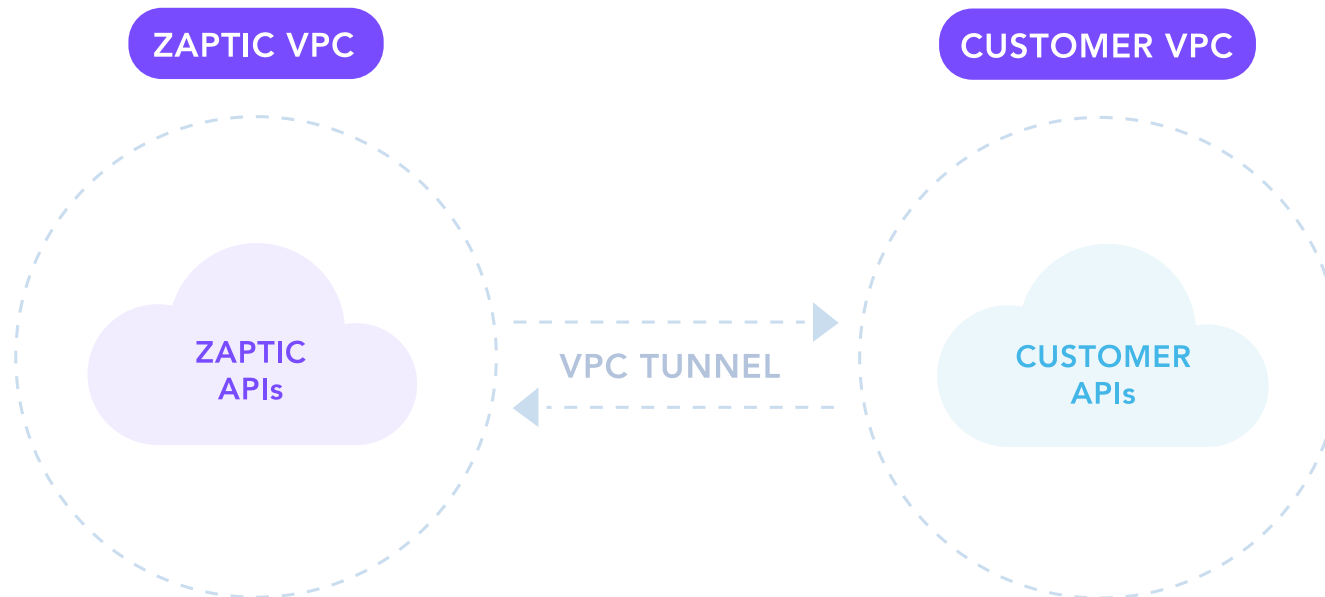
Zaptic has developed a variety of connectors that can be used to Zaptic has flexibility to set-up varying degrees of security for customers, depending on the security goals and sensitivity of the data that is being transferred.

All APIs are secured using token authentication, SSL encryption and user level access control as standard. However on top of this, we can offer additional security if desired.

3a

VPC Peering

To avoid needing to make any API endpoints publicly accessible, we support implementing VPC peering. This means that a secure link can be created from the Zaptic environment into the customer VPC. This means all communication is encrypted and not publicly accessible.



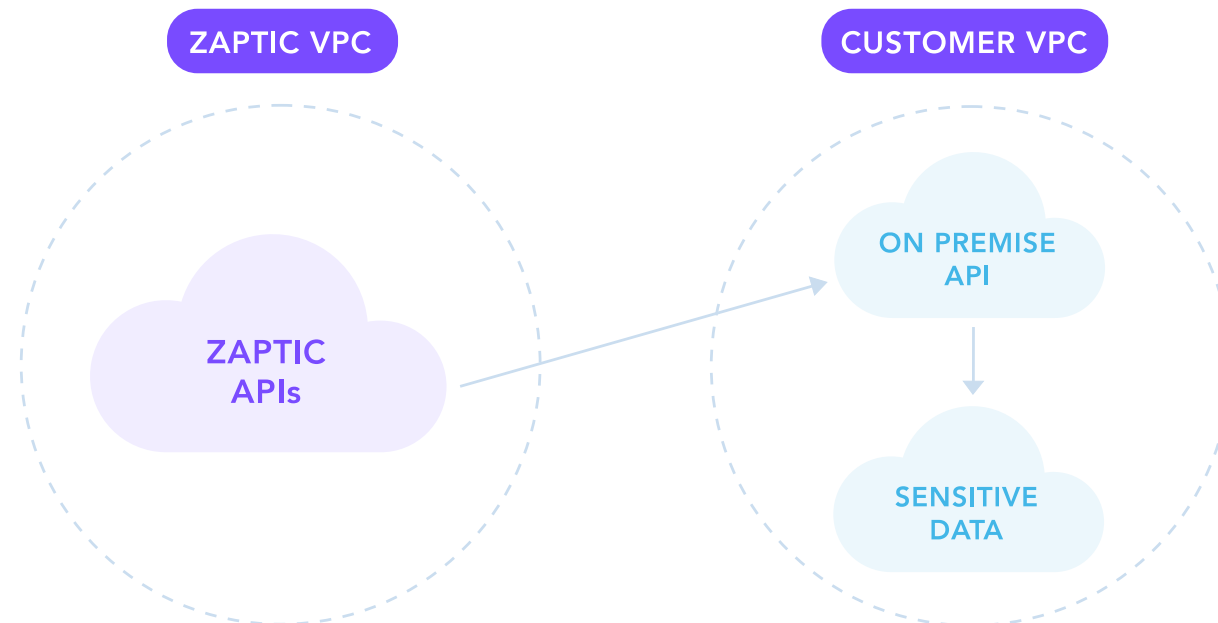
3b

Edge Node Implementation



In cases where data is being pulled from on-premise systems or equipment, it may not be preferable to make those endpoints accessible to 3rd parties.

To manage this Zaptic supports the installation of an edge node inside the customer environment. This edge node can be given restricted access to the specific data required.





Zaptic is a connected worker platform

providing job instruction and collaboration for frontline teams, and a no-code toolkit designed to accelerate digital transformation of daily operations.

Using Zaptic, global manufacturing and service organisations are closing an industry 4.0 blindspot by moving daily operations out of spreadsheets, paper and tribal knowledge. By doing so, they not only unlock measurable improvements in productivity, quality and safety, but also enable a smooth transfer of knowledge between the retiring and new generation of workers to improve market resiliency.

Find us on



www.zaptic.com