Ultimate eCommerce Features and Technologies to Enhance Your Customers' Experience

Virto Commerce Webinar
March 2023

VIRTOCOMMERCE

Agenda

1. Virto Storefront - Splitting carts and orders by vendors and multi-step checkout capabilities

2. DB Agnostic Architecture in Virto Commerce

Virto Commerce Storefront

1. Order flow with single supplier cart
2. Order flow with multi-supplier cart
3. Q&A

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Language: EN Currency: USD

CART

VENDOR: B2B TEST ORGANIZATION

Product	Properties		Price per item	Quantity	Total
 TURANZA EL42	Aspect Ratio: Author: Color:	75 Black	$199.00	1 1471 in stock	$199.00
 TURANZA T005	Aspect Ratio: Author: Color:	70 Black	$149.00 ~~$255.00~~	1 135 in stock	$149.00

Subtotal: **$348.00**

VENDOR: FABRIKAM, INC.

Product	Properties		Price per item	Quantity	Total
 ULTRAC	Aspect Ratio: Author: Color:	65 Black	$139.00 ~~$245.00~~	1 1600 in stock	$139.00

Subtotal: **$139.00**

VENDOR: N/A

Product	Properties		Price per item	Quantity	Total
 Drone Footage of Wellington Monument at Sunset Clip 1,	Author: Color:	John Miller	$50.00	1	$50.00

ORDER SUMMARY

Subtotal	**$794.00**
Discount	- $212.00
Tax	+$58.20
Shipping cost	$0.00
Total	**$640.20**

Promotion code

Enter promo-coupon

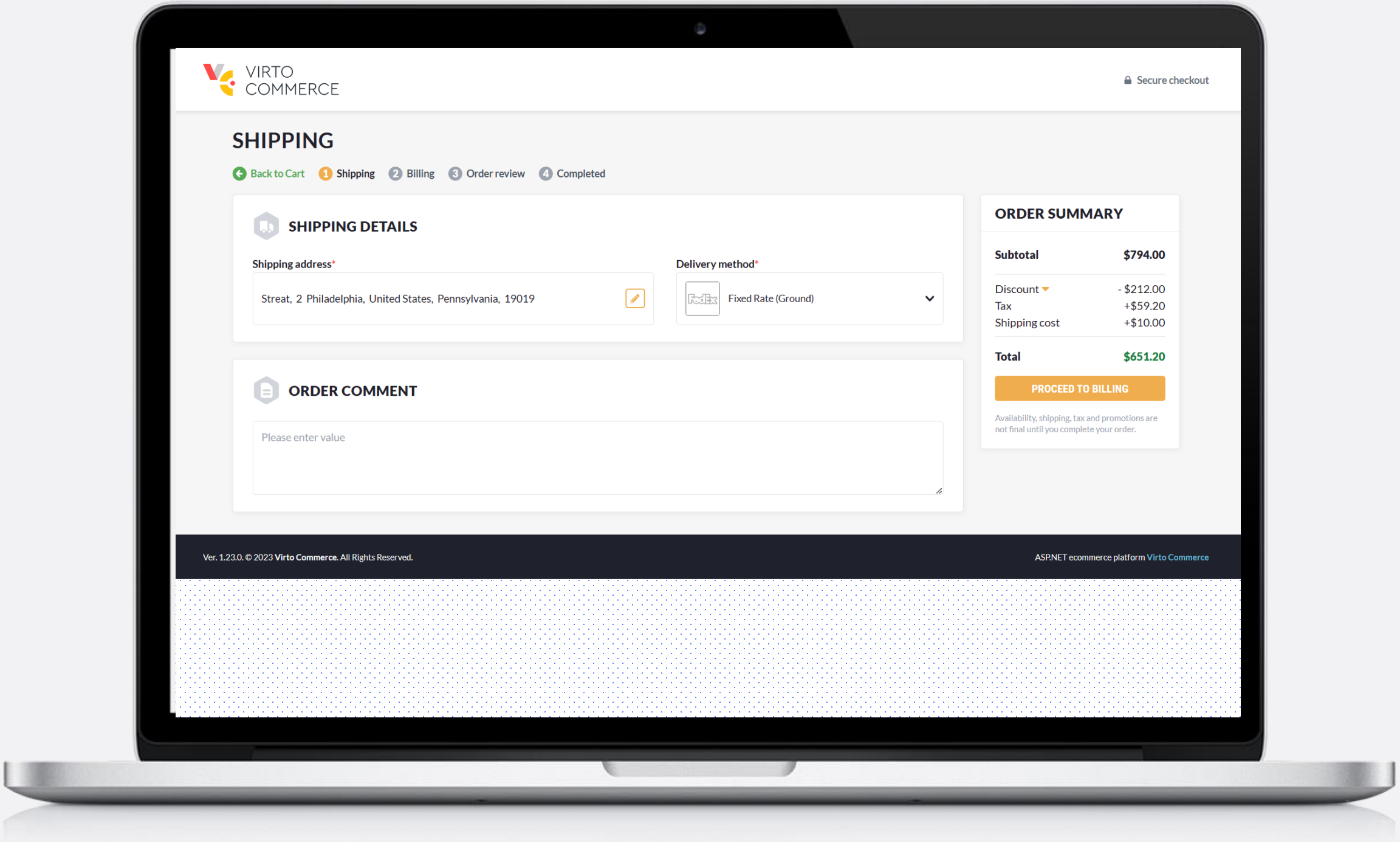
PROCEED TO CHECKOUT

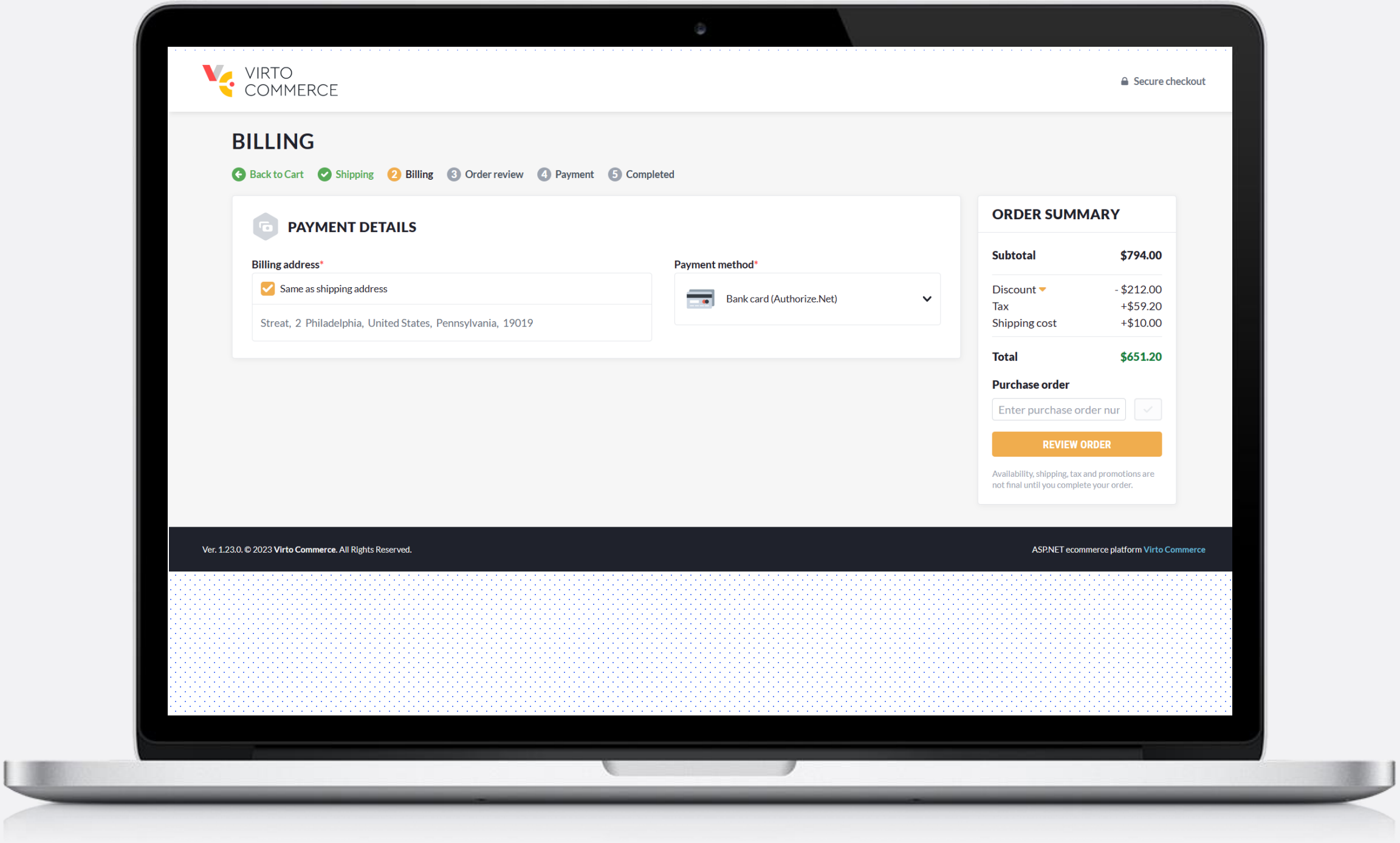
Availability, shipping, tax and promotions are not final until you complete your order.

QUOTE REQUEST

You can request items in your cart through a special service

ADD CART ITEMS TO QUOTE





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Secure checkout

ORDER REVIEW

Back to Cart · Shipping · Billing · 3 Order review · 4 Payment · 5 Completed

PLEASE REVIEW YOUR ORDER

VENDOR: B2B TEST ORGANIZATION

Product	Properties	Price per item	Quantity	Total
 TURANZA EL42	Aspect Ratio: 75 Author: Color: Black	$199.00	1	$199.00
 TURANZA T005	Aspect Ratio: 70 Author: Color: Black	$149.00	1	$149.00

Subtotal: $348.00

VENDOR: FABRIKAM, INC.

Product	Properties	Price per item	Quantity	Total
 ULTRAC	Aspect Ratio: 65 Author: Color: Black	$139.00	1	$139.00

Subtotal: $139.00

VENDOR: N/A

Product	Properties	Price per item	Quantity	Total

ORDER SUMMARY

Subtotal	**$794.00**
Discount	- $212.00
Tax	+$59.20
Shipping cost	+$10.00
Total	**$651.20**

PLACE ORDER

Availability, shipping, tax and promotions are not final until you complete your order.

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Product	Properties		Price per item	Quantity	Total
 ULTRAC	Aspect Ratio: Author: Color:	65 Black	$139.00	1	$139.00

Subtotal: $139.00

VENDOR: N/A

Product	Properties		Price per item	Quantity	Total
 Drone Footage of Wellington Monument at Sunset Clip 1, Wellington Monument, Somerset	Author: Color: County:	John Miller Somerset	$50.00	1	$50.00
 Close Up of Wildflower and Grassland Habitat of Large Blue Butterfly, Minchinhampton and Rodborough Commons, Gloucestershire	Author: Color: County:	Nick Upton Green Gloucesterhire	$45.00	1	$45.00

Subtotal: $95.00

Shipping address

Streat, 2 Philadelphia, United States, Pennsylvania, 19019

Delivery method

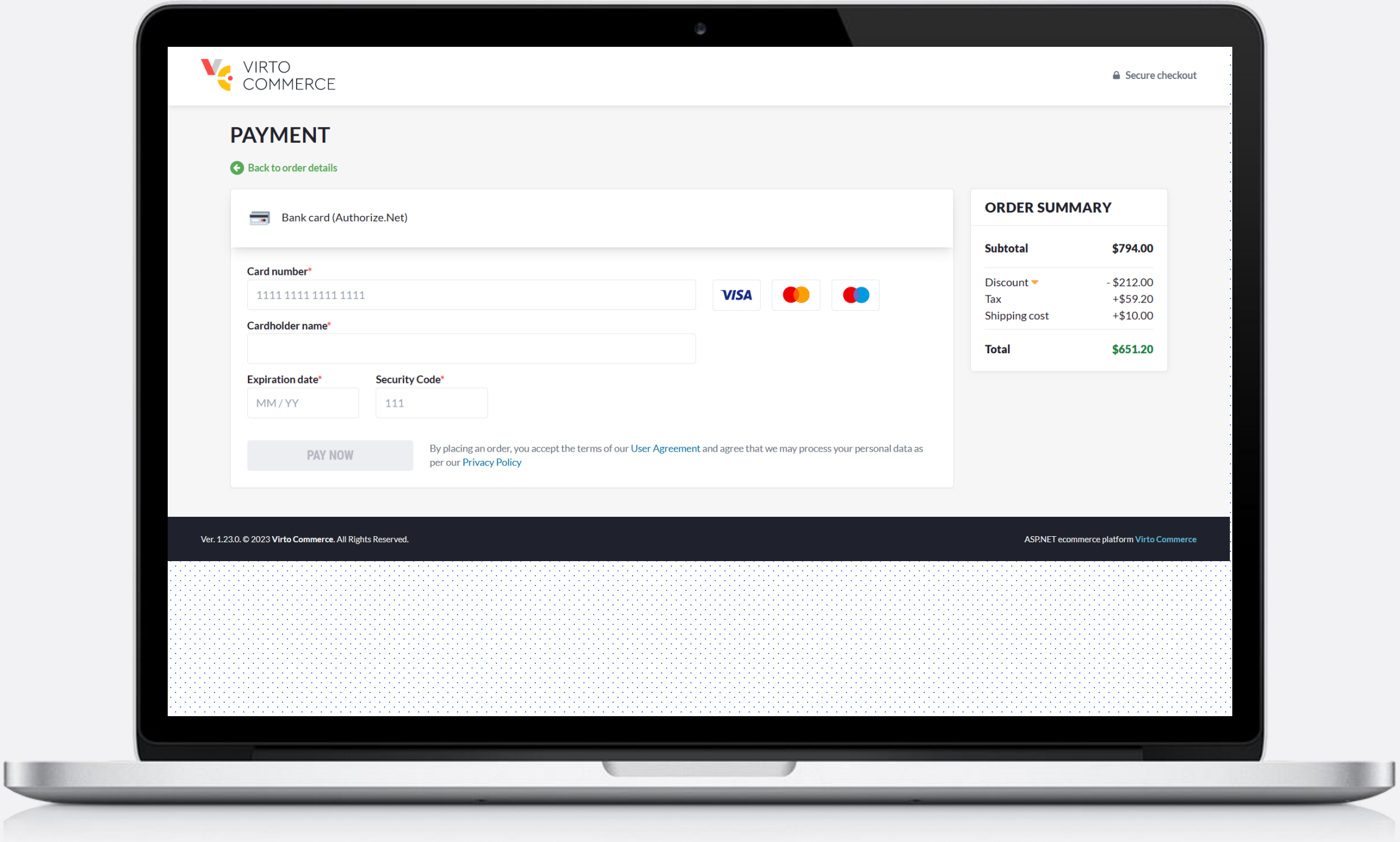
Fixed Rate (Ground)

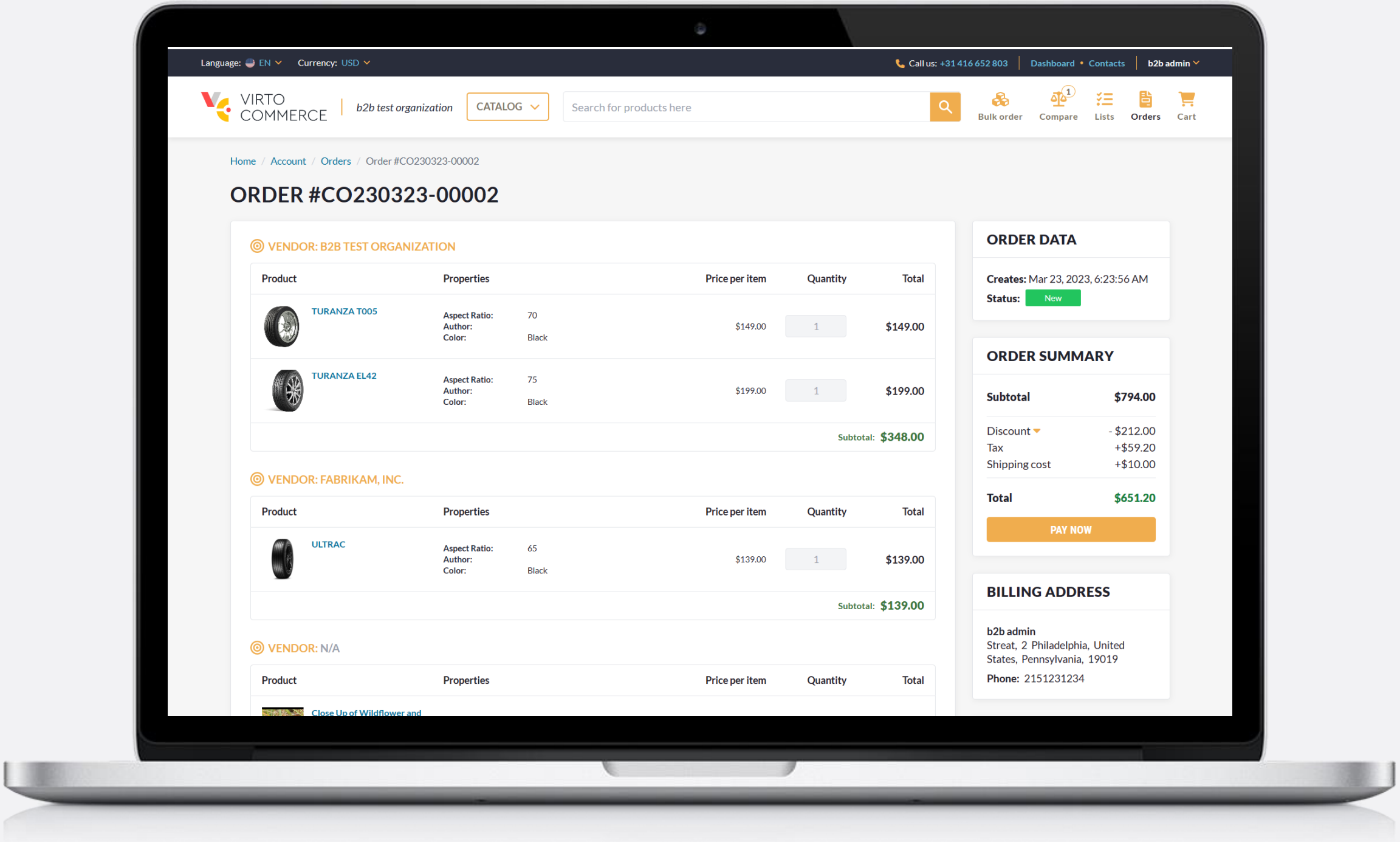
Billing address

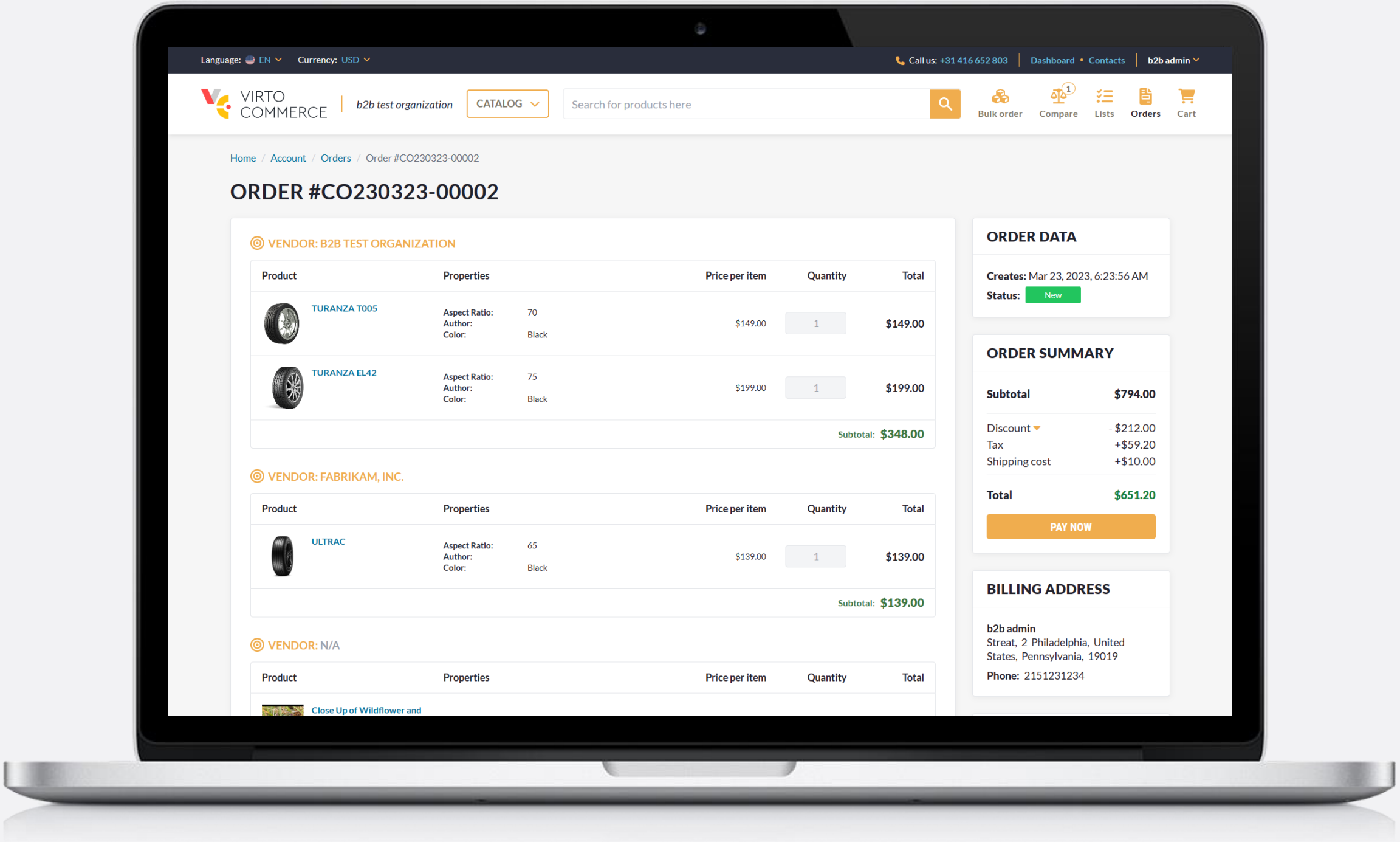
Streat, 2 Philadelphia, United States, Pennsylvania, 19019

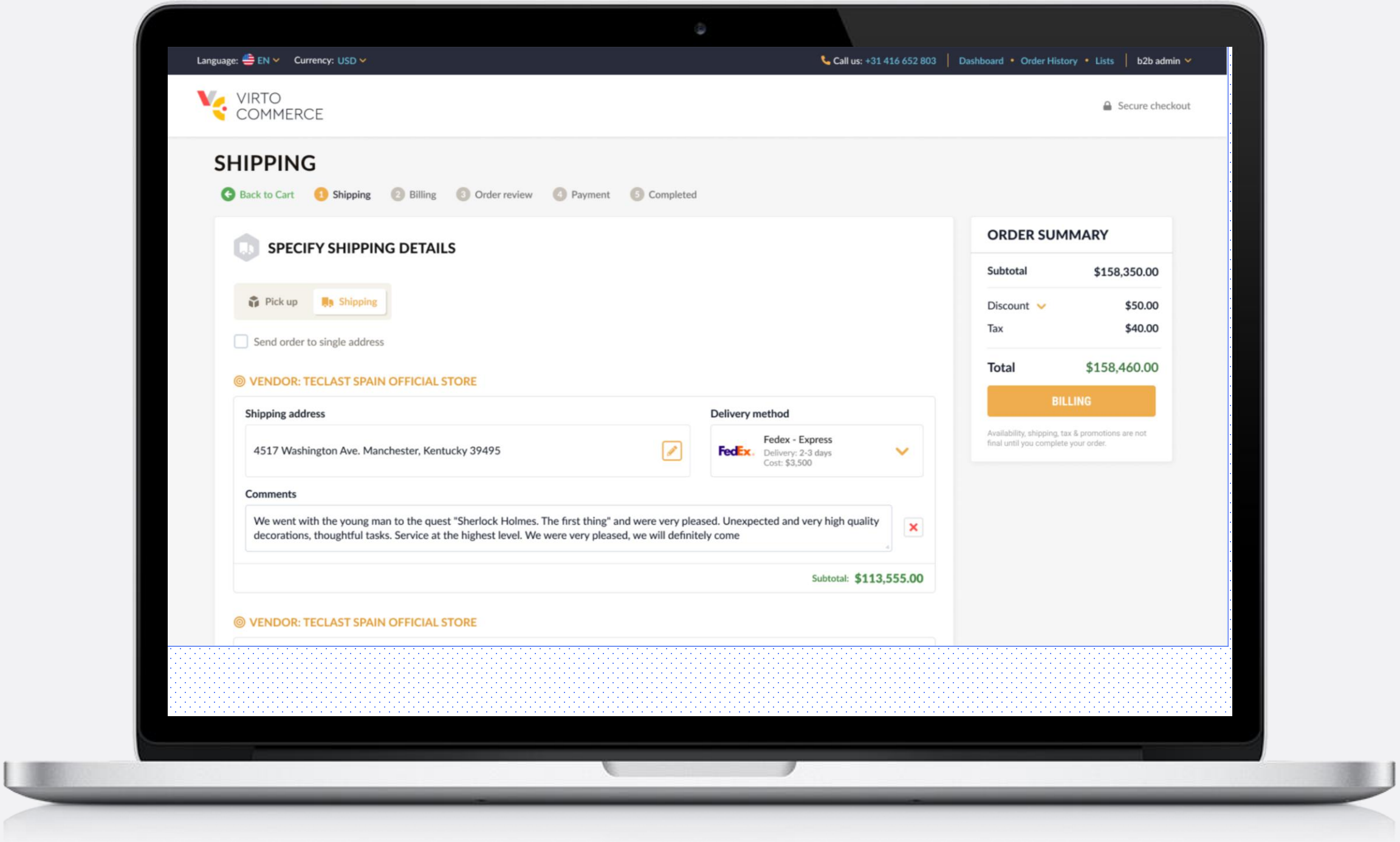
Payment method

Bank card (Authorize.Net)









DB Agnostic Architecture in Virto Commerce

Unleash the power of multiple apps

1. DB Agnostic Architecture Overview
2. Lab: Virto Commerce with PostgreSql
3. Lab: How to create a DB Agnostic Module
4. Q&A

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DB Agnostic

What does this mean for your business?

Unlimited Scalability	Enhanced Performance	Cost Savings	OOTB Providers
Our platform adapts to your growing needs, no matter the size of your operations.	Experience a more efficient eCommerce solution, tailored to your specific requirements.	Cut operational costs by choosing the ideal database engine for your unique scenario.	• Microsoft SQL Server 2019+ • MySql 5.7+ • PostgreSql 12+

Any Custom …

Architecture Principles

1. No Braking Changes
2. Built with Entity Framework 6
3. Database Provider Isolation on Project Level
4. Support Customization and Specific

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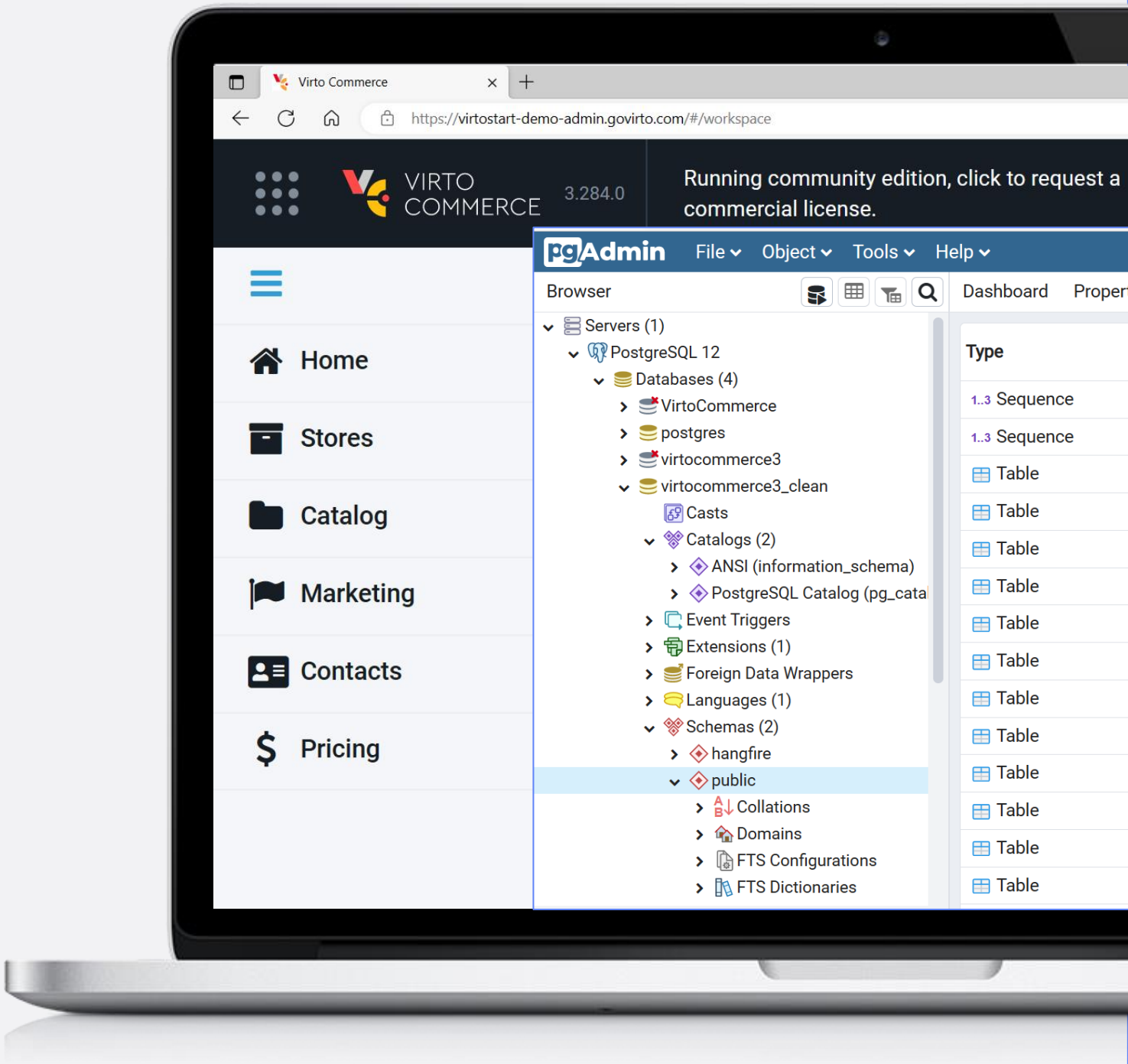
Virto Commerce with PostgreSql

PostgreSql DB



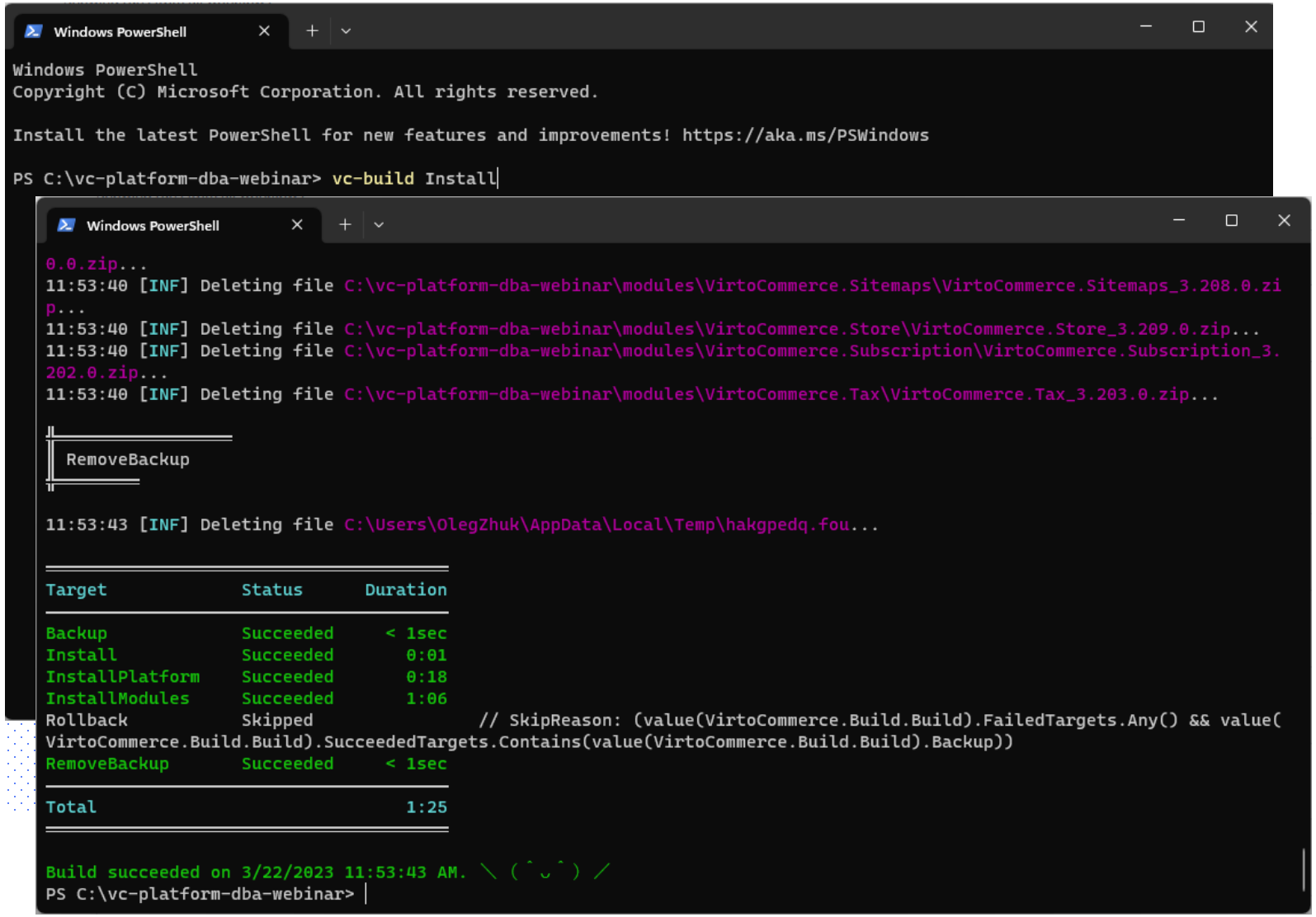
Prerequisites

Virto Commerce with PostgreSql

1. PostgreSQL 12+
2. Virto Commerce CLI (VC-BUILD) 3.12+
3. Virto Commerce Platform 3.293+

Step 1. Install Virto Commerce

Virto Commerce with PostgreSql



Actions

Power Shell

- Create a new folder.
- Run vc-build Install power shell Command to install Virto Commerce with Commerce bundle.

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Step 2. Change DB Provider

Virto Commerce with PostgreSql

```
{
  // Supported Values: SqlServer (default), MySql, PostgreSql
  "DatabaseProvider": "PostgreSql",
  "ConnectionStrings": {
    "VirtoCommerce": "User ID=postgres;Password=aAllllll;Host=localhost;Port=5432;Databa
    //"RedisConnectionString": "127.0.0.1:6379,ssl=False"
  },
  "Logging": {
    "IncludeScopes": true,
    "LogLevel": {
      "Default": "Information"
    }
  },
  "VirtoCommerce": {
    "LicenseActivationUrl": "https://license.virtocommerce.org/api/licenses/activate/",
    "SampleDataUrl": "http://virtocommerce.azureedge.net/sample-data",
    //Relative or absolute file system path  where platform will discover installed modu
    "DiscoveryPath": "./modules",
    //This options controls how the OpenID Connect
    //server (ASOS) handles the incoming requests to arriving on non-HTTPS endpoints sho
    //mitigate man-in-the-middle attacks.
    "AllowInsecureHttp": false,
    "Hangfire": {
      "JobStorageType": "Database",
      //Set value to false to stop processing the background jobs.
      "UseHangfireServer": true,
      "AutomaticRetryCount": 2,
      //"WorkerCount": 11,
      //"Queues": [
      //    "alpha", "beta", "default"
      //],
      "SqlServerStorageOptions": {
        "CommandBatchMaxTimeout": "00:05:00",
        "SlidingInvisibilityTimeout": "00:05:00",
        "QueuePollInterval": "00:00:00",
```

Actions

Configuration

- Create a new Database in PostgreSql
- Open appsettings.json
- Change DatabaseProvider to PostgreSql
- Change Connection String

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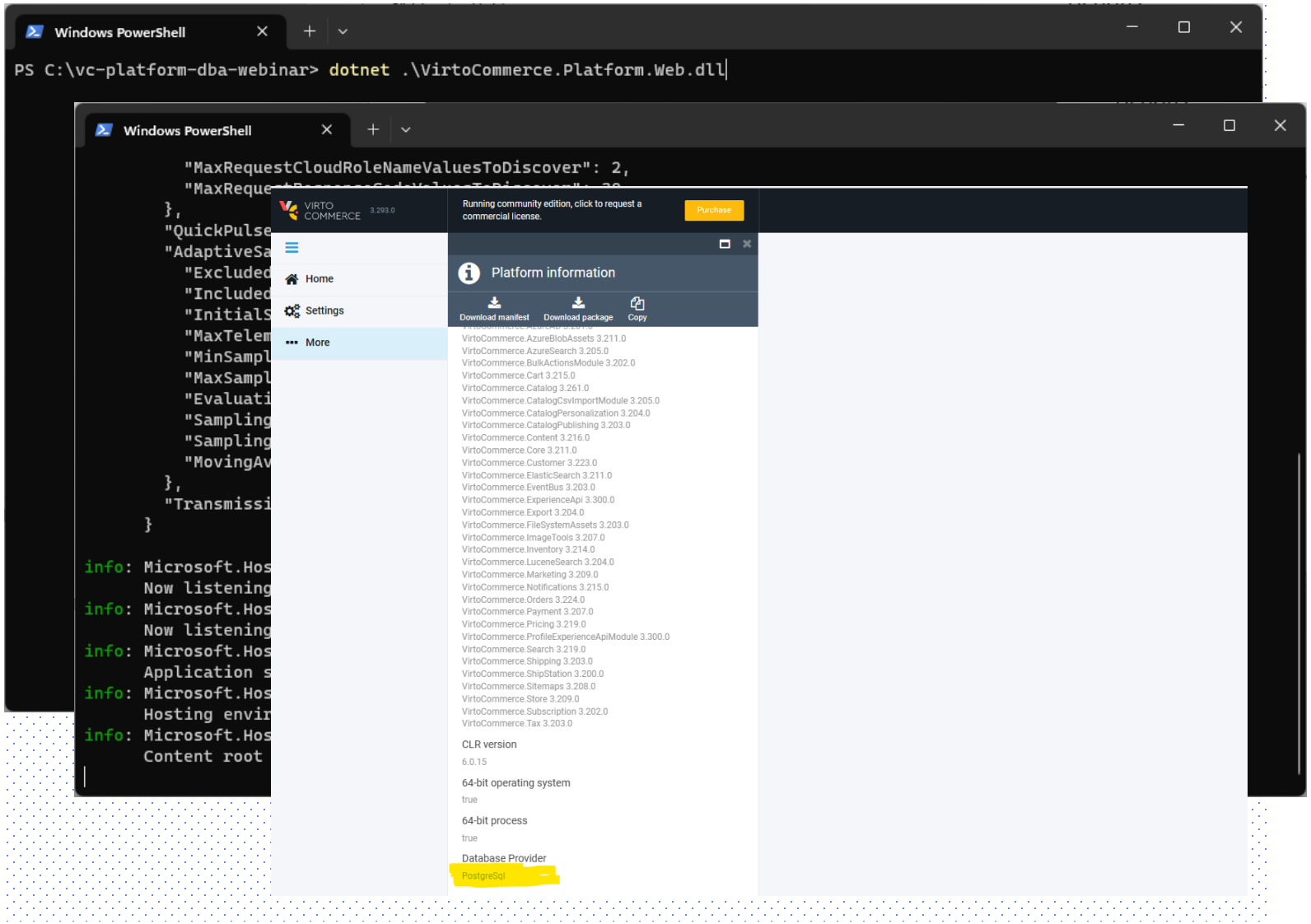
Step 3. Run Virto Commerce

Virto Commerce with PostgreSql



Actions

Run

- Apply other configurations
- Run Virto Commerce

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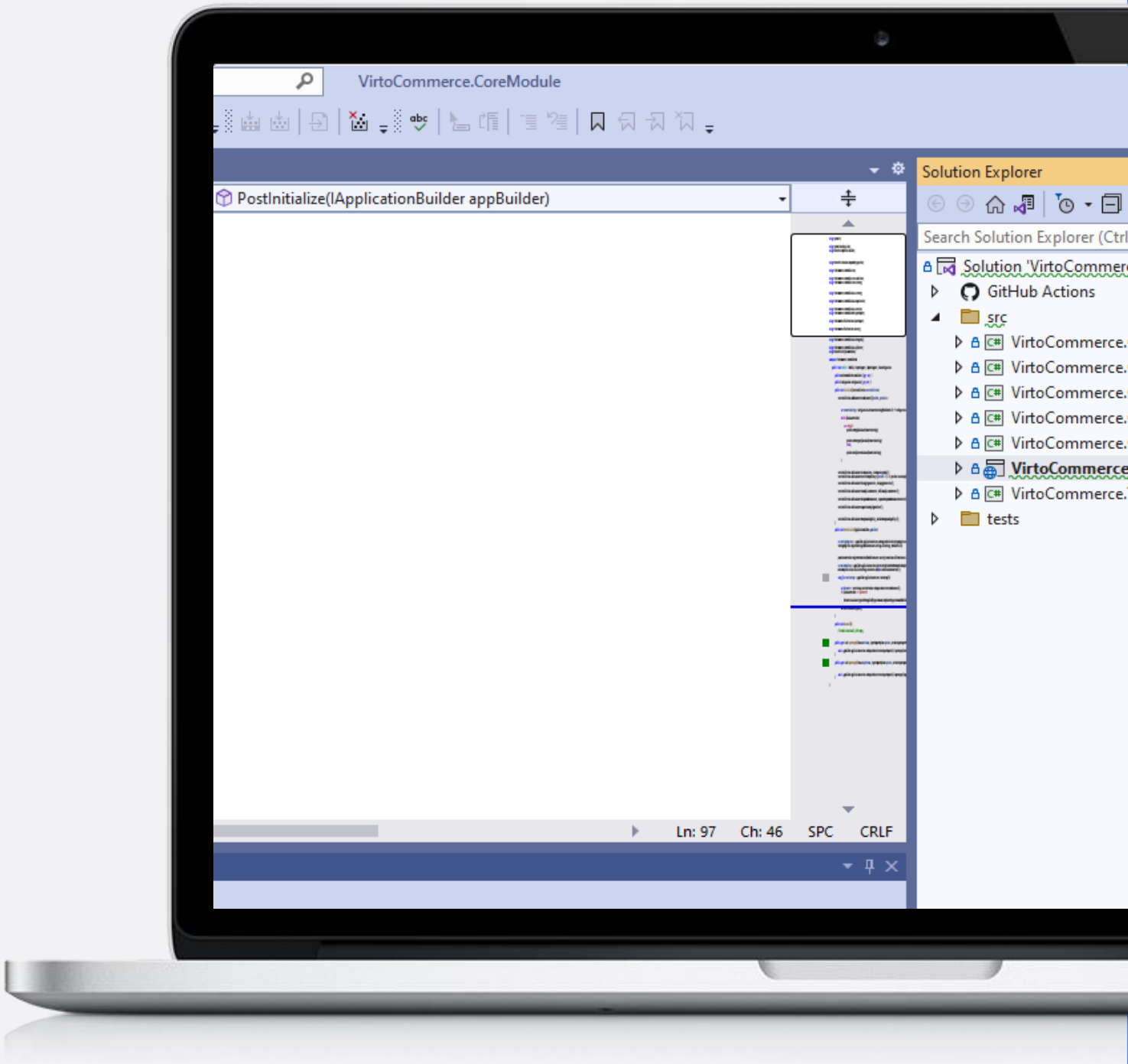
Virto Commerce with PostgreSql

Create a Custom Module with DB Agnostic Approach

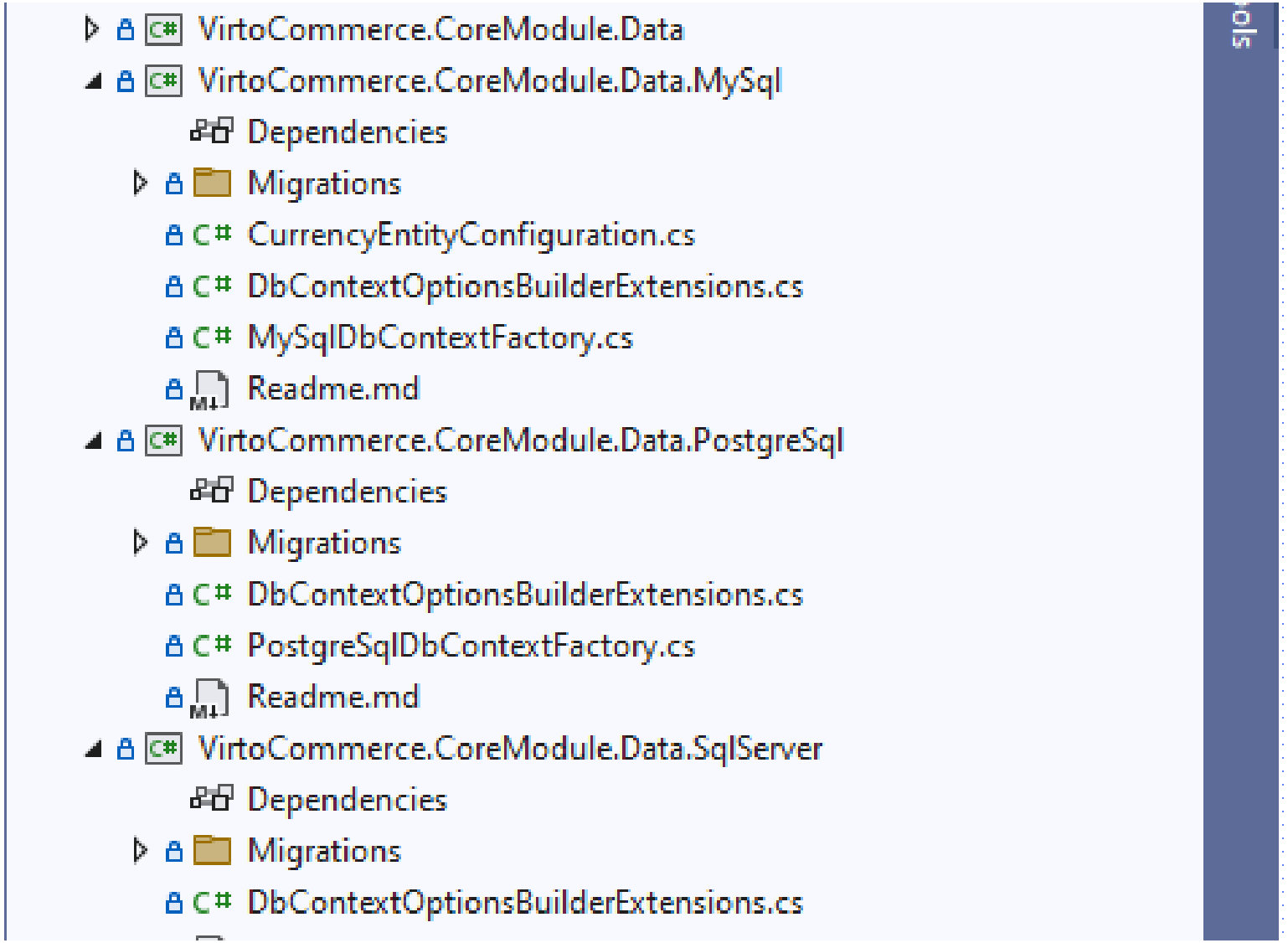


Overview

1. Data and Data.[Provider] projects.
2. Data.[Provider] projects structure.
3. AddDbContext in Module.Initialize.
4. OnModelCreating extension for customization and allow configuration for an entity type for different database types.
5. VirtoCommerce/vc-cli-module-template – Help to create a new Virto Commerce module with DB Agnostic support.
6. How to transform custom module to support MySql or PostgreSql.

Step 1. Data Projects

DB Agnostic Approach



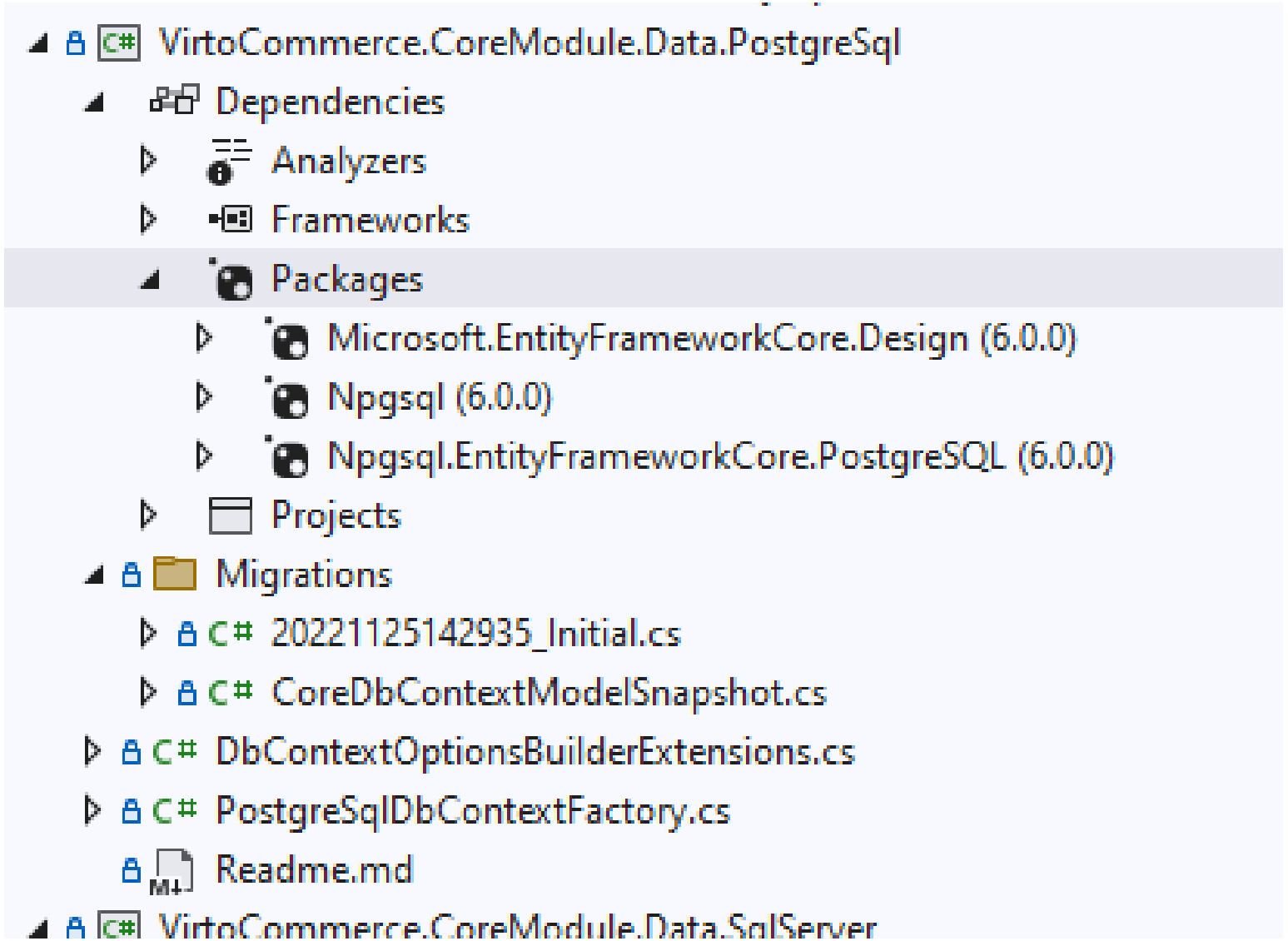
VC Module

Projects

- Module.Data
- Module. Data.MySql
- Module. Data.PostgreSql
- Module. Data.SqlServer

Step 2.Data.[Provider] Project

DB Agnostic Approach



VC Module

Project

- **Packages**
- **Migrations**
- DbContextOptionsBuilderExtensions.cs
- PostgreSqlDbContextFactory.cs
- Readme.md

Step 3. AddDbContext in Module.Initialize

DB Agnostic Approach

```
40
41      public void Initialize(IServiceCollection serviceCollection)
42      {
43          serviceCollection.AddDbContext<CoreDbContext>((provider, options) =>
44          {
45              var databaseProvider = Configuration.GetValue("DatabaseProvider", "SqlS
46              var connectionString = Configuration.GetConnectionString(ModuleInfo.Id)
47
48              switch (databaseProvider)
49              {
50                  case "MySql":
51                      options.UseMySqlDatabase(connectionString);
52                      break;
53                  case "PostgreSql":
54                      options.UsePostgreSqlDatabase(connectionString);
55                      break;
56                  default:
57                      options.UseSqlServerDatabase(connectionString);
58                      break;
59              }
60          });
```

VC Module

Project

- Replace default Context registration with this code.

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Step 4. Customize Code-First Model Migrations

DB Agnostic Approach

```
            base.OnModelCreating(modelBuilder);

            // Allows configuration for an entity type for different database types.
            // Applies configuration from all <see cref="IEntityTypeConfiguration{TE
            switch (this.Database.ProviderName)
            {
                case "Pomelo.EntityFrameworkCore.MySql":
                    modelBuilder.ApplyConfigurationsFromAssembly(Assembly.Load("Virt
                    break;
                case "Npgsql.EntityFrameworkCore.PostgreSQL":
                    modelBuilder.ApplyConfigurationsFromAssembly(Assembly.Load("Virt
                    break;
                case "Microsoft.EntityFrameworkCore.SqlServer":
                    modelBuilder.ApplyConfigurationsFromAssembly(Assembly.Load("Virt
                    break;
            }
        }
    }
```

VC Module

Project

- Add this code into OnModelCreating to allow configuration for an entity type for different database types.
- Applies configuration from all IEntityTypeConfiguration<T> from VirtoCommerce.CoreModule.Data.XXX projects.

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Step 5. How to Transform a Custom Module to Support DB Agnostic Approach.

1. Add new Data.[Provider] projects.
2. Add Project references.
3. Add Packages for Specific Database Provider:
    1. MySql - Pomelo.EntityFrameworkCore.MySql 6.0.0
    2. PostgreSql - Npgsql.EntityFrameworkCore.PostgreSQL 6.0.0
    3. Sql Server - Microsoft.EntityFrameworkCore.SqlServer
4. Copy and Update DbContextOptionsBuilderExtensions.cs, PostgreSqlDbContextFactory.cs and Readme.md.
5. Add DB Agnostic AddDbContext in Module.Initialize.
6. Add customization extension OnModelCreating to allow configuration for an entity type for different database types.
7. Refactor and Isolate Raw Sql Server Code.
8. Copy Migrations from Data to SqlServer.
9. Create a new Migrations.
10. Compile, Compress and Test.

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Contact Us

sales@virtocommerce.com

https://virtocommerce.com/request-demo

Additionally, you can put here presenter's details like

LinkedIn account, phone number, etc.

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Thank You

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