Architecture proposal for application scale-out

This question is intended to give you an opportunity to show what knowledge you have in web system architecture, including cloud or hosting solutions. There is no model answer - we are interested in what details you focus on and what solutions you propose, along with justification of your proposals.

The below image depicts a simple web application, running on a host, supported by an application database, running on a separate host. Each have their own block-based file storage. A firewall protects the web app server, limiting public inbound traffic to HTTP/S. You can assume that the web app is Python-based.
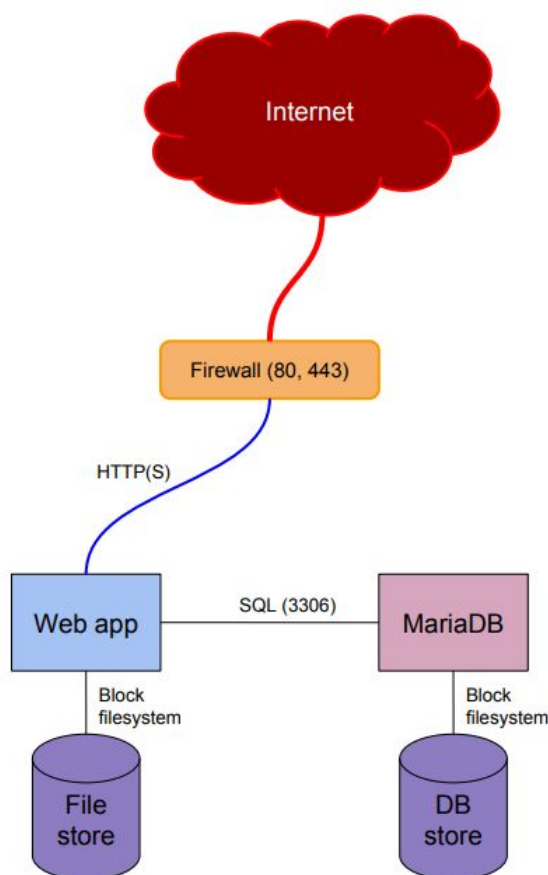
The setup works, but is reaching a point where it must expand in order to support higher traffic and more storage. There is also a concern about high-availability, including hardware failures and downtime during security and software updates.

Using *any* hosting method or platform type of your choice, propose how the scalability and availability of this application stack could be improved. Try to consider technical, practical and cost aspects in your answer.