ITD GIS Production (PROD) Infrastructure Current Environment 11/21/2019 **GeoHub portal** Open Data / Apps / Services / Maps **AGO** https://geohub.citvoftacoma.org **Geocortex Analytics** https://data-tacoma.opendata.arcgis.com nttps://tacoma.maps.arcgis.com **AGO External User** Internet WAB / Collector / Survey / Open GIS Data GitHub / Google / Bing / Yahoo https://tacoma.maps.arcgis.com WhatIsMyIP.com Zscaler **Security Web Gateway - SaaS** Zscaler Traffic - 192.103.238.5 165.225.50.165 Nicolas Peterson Firewall IP Check – Inbound Traffic Router **Web Requests** ISP (Click): Blocks any traffic coming from the Internet with routable IP address that falls into RFC 1918 (Private Address Space). GeoHub Private Address Space: The Internet Assigned Numbers Authority GRE F5 IP Proxy – Inbound Traffic **AGO** (IANA) has reserved the following three blocks of the IP address Inserts the X-Forwarded-For header into HTTP request with the user's client IP address. Internet space for private internets: (X-Forwarded-For default setting is disabled.) WAB (Prod) Note: Many servers/applications expect a single X-Forwarded-For header. However, the BIG-IP system 10.0.0.0 - 10.255.255.255 (10/8 prefix) **Geocortex Analytics** appends a new X-Forwarded-For header to the existing set of HTTP headers. 172.16.0.0 - 172.31.255.255 (172.16/12 prefix) X-Forwarded-For (XFF) HTTP header: a de facto standard for identifying the originating IP address of a client **Geocortex (Prod)** 192.168.0.0 - 192.168.255.255 (192.168/16 prefix) connecting to a Web server through an HTTP proxy or load balancer. Important: Corporate Firewall checks public "routable" IP Summary: F5 allows HTTP traffic through and enables X-Forwarded-For so applications can programmatically address, NOT private IP address. identify customer's local IP address. Floating Self IP / SNAT Pool IP ArcGISProd03 - 131.191.240.64 Router New DMZ Secure Network Address Analytics - 131.191.240.101 F5 Appliance/BIG-IP **T**ranslation Geocortex - 131.191.240.62 131.191.253.232 Cisco 7K 131.191.253.233 & 234 - ASGIS01 Certificate Web Apps - 131.191.240.68 Created to possibly address port Ken Wiebe The following 2 IPs 253.502.2226 exhaustion issue. are assigned to the internal interfaces: Firewall BIGIP1: 253.230 Bogdan Zuyev **Internal User** Nolan Jenson BIGIP2: 253.231 Router / Server 253.502.2236 **Public Facing** 253.591.5846 Active standby decision point for failove X-Forwarded-For Backside HTTP request: Internal Corporate enabled for HTTP traffic Network All HTTP traffic is allowed https://asga.cityoftacoma.org/Geocortex/Analytics/WebApplication/Relay through certain ports or URLs If internal user makes a Can access all https://asgis01/.../ HTTP request to an Caching / Port 443 **WARNING** GE Apps: https://asga.tacoma.lcl/Geocortex/Analytics/ClientRelay named servers using internal named server NAB Apps: https://asga.tacoma.lcl/Geocortex/Analytics/WebApplication/Relay the named URLs (non F5), that request is External customers with IPs in listed below without passed to another **Private Address Space** going through the 192.168.216/217 router and allowed corporate firewall or access to that named AND using the 30 Minute the F5. **Barracuda Web Security** server at this point. AND enabling the **Send Forwarded-For Header** Licensed: GIS Server Advanced Geocortex Analytics Server Version: 10.7.1 (build 11595) F3 HTTP requests from these Renew ELA license by **ASGA** 200, 203, 300, 301, and 410 HTTP responses. 30 Minute Caching / View Our GIS Infrastructure customers are viewed as February 24, 2022 10.200.0.91 Responses to HTTP GET requests. SAP/PI Process - PXI View what's happening now **Application Server INTERNAL** customers. Non-cacheable Content Examples: ESGIS02 • Examine changes over time **Geocortex Analytics** Synchronous web service URL endpoint: Data specified by the following Cache-Control ArcGISProd02 Dashboards to visualize Windows Server 2016 https://esb.tacoma.lcl/RESTAdapter/... ArcGISProd03 important data headers: private, no-store, no-cache. 8 Cores / 32 GB RAM Currently used in Geocortex apps for ArcGISProd04 · Get email notifications when Action-oriented HTTP methods such as HEAD, .NET 4.7.2 Framework **Certificate Authority (CA) ArcGISWFC** something goes wrong Equipment and Notifications IIS Cert (6/17/21) PUT, DELETE, TRACE, and CONNECT. The City of Tacoma issues signed Licensed: GeoEvent Server digital certificates that verifies **Expiration Date: Never** https://maps.cityoftacoma.org our identity on the Internet. ArcGISProd04 Contact person: Web Server Jimmie Farmer – 253.502.2202 SAP/PI ArcGIS Server Patch Updates GIS Application Server WSITD03 (Version 10.7.1 unless noted) 10.200.0.181 PI Process **Web Adapter Authentication** ASGIS01 1. General Geocoding Server 2012 R2 64 bit PXI WSITD01 4 Cores / 8 GB RAM 10.200.1.134 All web adapters named, "arcgis" 2. Text Drawing Application Server 10.200.1.106 Bryan Pierce .NET 4.7.2 Framework have anonymous authentication. 3. MS Windows (R) June 2019 (wspdsmap redirect) Windows Server 2012 R2 253.573.2494 Internal Apps Security Update Compatibility Server 2012 R2 64 bit 2 Cores / 16 GB RAM IIS Cert (12/3/20) Example URLs: 4 Cores / 8 GB RAM 4. Raster Analytics Patch Geocortex 4.9.1 .NET 4.7.2 Framework https://*.tacoma.lcl/arcgis/rest/ https Geocortex HTML5 2.10.1 5. Scene Service Performance https://arcgisprod04.tacoma.lcl:6443/arcgis/rest IIS Cert (6/12/20) Public Facing WAB Apps https://*.cityoftacoma.org/arcgis/ 6. Support for Oracle 19c https://arcgisprod04.tacoma.lcl/cots/rest IIS Cert (3/11/20) Geocortex IIS Cert (3/29/26) s://arcgisprod04.tacc/geoevent/rest/rece 7. Server Security 2019 Update 2 All web adapters named, "cots" https://esgis02.tacoma.lcl:6443/arcgis/rest 8. Server Unintended Service https://wsitd01.tacoma.lcl/arcgisprod03s/rest https://asgis01.tacoma.lcl/arcgisprod03s/rest use Windows authentication. https://esgis02.tacoma.lcl/arcgis/rest Restart https://apps.cityoftacoma.org/arcgisprod03s/rest https://maps.cityoftacoma.org/arcgisprod03s/rest https://esgis02.tacoma.lcl/cots/rest 9. Map Services Drawing Most other web adapters use 10. Insights for ArcGIS Create https://arcgisprod02.tacoma.lcl:6443/arcgis/rest https://arcgisprod03.tacoma.lcl:6443/arcgis/rest https://wsitdQA.tacoma.lcl/arcgisprod03s/rest anonymous authentication. https://arcgisprod02.tacoma.lcl/arcgis/rest https://arcgisprod03.tacoma.lcl/arcgis/rest .tacoma.lcl:6143 https://appsQA.cityoftacoma.org/arcgisprod03s/rest **Buffer Using Drive Times** https://arcgisprod02.tacoma.lcl/cots/rest https://arcgisprod03.tacoma.lcl/cots/rest ESGIS02 ArcGISProd02 ArcGIS Servers (Internal) ArcGISProd03 ArcGISProd04 ESGIS02 ArcGISProd02 ArcGISWFC ArcGISProd04 **ArcGISWFC** ArcGISProd03 10.200.1.206 10.200.0.185 10.200.0.89 10.200.1.31 131.191.129.130 Application Server Application Server **Application Server** Application Server **Application Server** Windows Server 2016 GeoEvent 10.7.1 Windows Server 2012 R2 Clevest Windows Server 2012 R2 License Server 4 Cores / 32 GB RAM Windows Server 2012 R2 4 Cores / 32 GB RAM Windows Server 2016 4 Cores / 32 GB RAM Web Adapter 10.7.1 4 Cores / 12 GB RAM Web Adapter 10.7.1 8 Cores / 32 GB RAM Web Adapter 10.7.1 ArcGIS for Server 10.7.1 **ASGISLM** ArcGIS for Server 10.7.1 Web Adapter 10.7.1 Web Adapter 10.7.1 ArcGIS for Server 10.7.1 ArcGIS Desktop 10.7.1 10.200.0.90 ArcGIS for Server 10.7 ArcGIS for Server 10.7.1 **Active Directory Active Directory** ArcGIS Pro 2.4.1 Windows Server 2016 IIS Cert (4/5/20) **Active Directory Active Directory** IIS Cert (5/6/21) **Active Directory** 2 Cores / 4 GB RAM IIS Cert (5/6/21) ArcGIS Cert (4/5/20) IIS Cert (5/6/21) ArcGIS Cert (5/6/21) IIS Cert (6/17/21) ArcGIS License Mgr ArcGIS Cert (5/6/21 ArcGIS Cert (5/6/21) Accela Site VPN Access ArcGIS Cert (6/17/21) (2019.1) ver 10.7.1 **Oracle Database FME Server** MS SQL Server Database File Server **Process Connectors** This -> That Next ITDAS01 DBMSQL60 FS005 DBGIS01 Output feeds Input Day FME Process MS SQL Database Oracle Database NAS 10.200.1.76 GeoPub oraGIS **EMC Isilon Filer** Windows Server 2012 131.191.129.127 131.191.130.37 File Geodatabase Vindows Server 2012 Std Win Server 2008 R2 SP1 4 Cores / 16 GB RAM Son of Shadow Feature Service to Database Updates ArcGIS Desktop 10.6.1 SQL Server 2012 Std 2 Cores / 8 GB RAM **GIS Config Store** https://arcgisprod04.tacoma.lcl:6443/arcgis/rest/.../.. 4 Cores / 32 GB RAM FME 2019.0.2 (32/64 bit) Oracle SE 11.2.0.4 10.201.11.34 https://arcgisprod03.tacoma.lcl:6443/arcgis/rest/.../... Https://arcgisprod02.tacoma.lcl:6443/arcgis/rest/.../.. FME Process for ES Data Only Aerial Photography Map Services Related Data - Prod03 Map Services Related Data - Prod02 The Store GIS SharePoint Site 哥 Original Tiled Tiff \\fs005\ArcGISStore http://cityshare/Teams/ Locators IT/wrkgrps/GIS_Support **Important** \\asgovme01\Ortho \\arcgisprod03\Locators \\fs005\ArcGISStore-Data GADS Projects Network File Data (geodatabases) \\fs005\ced\GADS \\fs005\Orthos \\arcgisprod03\ArcGISProdData File Data (geodatabases) Locations \\arcgisprod02\ArcGISProdData GeoPub Staging Area Project folders Esri Tiled Cache \\fs005\ArcGISStore\data \\fs005\ITD\ArcGIS\ArcGISProd\ \\ITDAS01\GeoPub \\fs005\ITGIS\Projects arcgisserver\directories\arcgiscache **Production Server Maintenance Schedule** ArcGISProd02, ArcGISProd03, ArcGISProd04, In an attempt to streamline maintenance and minimize disruption to the GIS server environment, these servers have now been set to AutoPM 1x a month (PM = Preventative Maintenance /OS security patches). These servers will now only be restarted 1x a month on the ArcGISWFC, ASGIS01, WSITD01, WSITD03, ASGISLM, ASGA, (ITDAS01 on hold) following schedule: On the 3rd Thursday of the month during the maintenance window of 8pm to midnight. Note: No one can be logged into these servers or the AutoPM will not work. Make sure that you are logged out of these machines (not just disconnected) before the scheduled maintenance window. To view when datasets are scheduled to be refreshed in GeoPub, view the following two XLS documents: GIS Scheduled Tasks GeoPub Data Catalog These two documents can be found in the GIS Data Administration SharePoint site, http://cityshare/Teams/IT/wrkgrps/GIS_Support/geodata/